

FRIGA-BOHN

CCV

Centrifugal fan condenser
Commercial range



HFC



|||| 60 - 290 kW



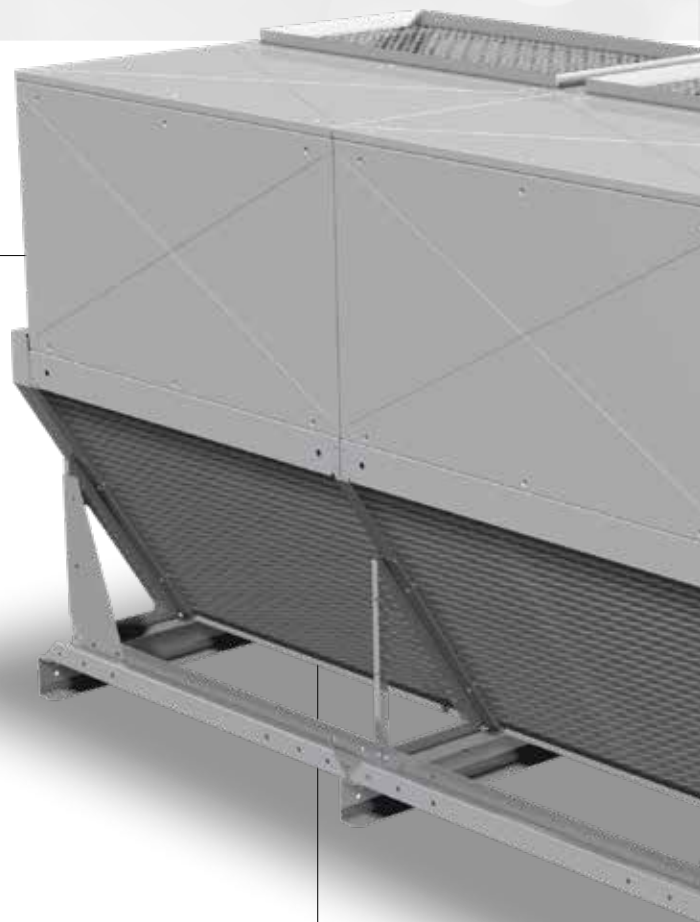
- # Fully removable for **easy installation** in cramped or hard-to-reach areas.
- # Easy access to all components for **easy maintenance**.
- # **Improved energy efficiency** and **low noise levels** through the integration of EC motors.

CASING

- # Robust, made of galvanized sheet steel.
- # Elbows and manifolds protected by removable sheet metal.
- # Interchangeable sheet metal panels, 5 possible air outlet combinations.

OPTIONS

PEI	White paint.
IPH	Noise insulation.
ECB	Wooden crate packaging.



Select your coil treatment to extend your unit cooler's lifespan!
Contact us.

COILS

- # The condensers in the CCV range are equipped with two high-performance coils arranged in a "V", made from profiled aluminium fins with 2.12 mm spacing, set on copper tubes arranged in staggered rows, optimizing the exchange coefficient.
- # Two coils, but only one inlet and one outlet.
- # Coil accessible by simply removing two removable panels for easy cleaning.

OPTIONS

MCI	Multi-circuit.
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VENTILATION



- # Centrifugal motor fans: pressure available up to 200 pascal, adapted performance.
- # Three-phase, Ø 630 mm, IP 54, 380-480V/3/50Hz, 1,200 rpm.
- # Electronically commutated (EC) motor fans as standard.
- # Electrical connections made in the factory, in an easily accessible box.
- # Each turbine is separated by a partition wall to prevent air bypassing.

OPTIONS

VPS

Blower louver shutters (kit to install).

CSC

Signal comparator (multi-circuit coil).

PT1

Condensing pressure sensor (voltage 0-10V) (kit to install).



Electronically commutated (EC) motors provide optimum regulation of condensing pressure for improved energy efficiency and reduced noise levels.



PRODUCT ADVANTAGES

- # Easy handling: the structure of the frame makes it easier to use a pallet truck for transport (1).
- # Can be fully disassembled in 3 parts, the elements of the CCV allow passage through a standard 80 cm door.
- # Compact device, 2 "V" shaped coils optimizing the space in the machine room.
- # Possibility of installing the condenser on a refrigeration unit for a minimal footprint.
- # Quick commissioning: one inlet/outlet manifold for the 2 coils requiring only one connection, either on the left or on the right (2).

1.

2.

2.

2.



CCV 1_(A) V1_(B)

(A) Number of fans
(B) Air direction

The CCV is available with HFCs.
For more information, please
consult our software.

CCV ... - 1,200 rpm*

 2.12 mm

CONDITIONS			
DT = 15K (1)	R449A	kW	
Power consumption		kW	
Airflow		m³/h	
Acoustics	Lp (3)	dB(A)	
	Lw	dB(A)	

0 Pa (2)

CCV 1			CCV 2			CCV 3			CCV 4		
V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3
69,3	73,2	76,0	138,0	146,4	151,9	206,1	218,1	227,3	277,7	293,8	302,9
2,55	2,37	2,23	5,10	4,74	4,46	7,65	7,11	6,69	10,20	9,48	8,92
13800	14850	15700	27600	29700	31400	41400	44550	47100	55200	59400	62800
55	56	57	57	58	59	59	60	61	60	61	62
86	87	88	89	90	91	91	92	93	92	93	94

CONDITIONS			
DT = 15K (1)	R449A	kW	
Power consumption		kW	
Airflow		m³/h	
Acoustics	Lp (3)	dB(A)	
	Lw	dB(A)	

50 Pa (2)

CCV 1			CCV 2			CCV 3			CCV 4		
V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3
68,3	71,9	74,8	136,6	144,1	148,3	204,0	216,0	223,3	274,2	286,4	300,4
2,59	2,43	2,29	5,18	4,86	4,58	7,77	7,29	6,87	10,36	9,72	9,16
13500	14500	15350	27000	29000	30700	40500	43500	46050	54000	58000	61400
54	56	57	56	58	59	58	60	61	59	61	62
85	87	88	88	90	91	90	92	93	91	93	94

CONDITIONS			
DT = 15K (1)	R449A	kW	
Power consumption		kW	
Airflow		m³/h	
Acoustics	Lp (3)	dB(A)	
	Lw	dB(A)	

100 Pa (2)

CCV 1			CCV 2			CCV 3			CCV 4		
V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3
67,1	70,3	73,5	134,3	139,5	147,1	201,0	212,5	219,2	267,1	281,6	295,3
2,65	2,49	2,35	5,30	4,98	4,70	7,95	7,47	7,05	10,60	9,96	9,40
13150	14150	14950	26300	28300	29900	39450	42450	44850	52600	56600	59800
54	56	56	56	58	58	58	60	60	59	61	61
85	87	87	88	90	90	90	92	92	91	93	93

CONDITIONS			
DT = 15K (1)	R449A	kW	
Power consumption		kW	
Airflow		m³/h	
Acoustics	Lp (3)	dB(A)	
	Lw	dB(A)	

150 Pa (2)

CCV 1			CCV 2			CCV 3			CCV 4		
V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3
64,9	69,5	71,9	130,4	138,5	144,4	197,4	206,9	216,4	262,7	279,5	286,9
2,71	2,53	2,42	5,42	5,06	4,84	8,13	7,59	7,26	10,84	10,12	9,68
12800	13900	14550	25600	27800	29100	38400	41700	43650	51200	55600	58200
53	55	56	55	57	58	57	59	60	58	60	61
84	86	87	87	89	90	89	91	92	90	92	93

CONDITIONS			
DT = 15K (1)	R449A	kW	
Power consumption		kW	
Airflow		m³/h	
Acoustics	Lp (3)	dB(A)	
	Lw	dB(A)	

200 Pa (2)

CCV 1			CCV 2			CCV 3			CCV 4		
V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3
63,7	68,6	70,3	127,4	137,0	139,5	190,0	204,8	212,5	256,6	275,9	281,6
2,78	2,58	2,49	5,56	5,16	4,98	8,34	7,74	7,47	11,12	10,32	9,96
12350	13600	14150	24700	27200	28300	37050	40800	42450	49400	54400	56600
53	54	56	55	56	58	57	58	60	58	59	61
84	85	87	87	88	90	89	90	92	90	91	93

* Technical specifications given at full speed (1,200 rpm)

(1) DT = difference between the ambient temperature and the condensing temperature considered to be equal to the pressure equivalent at the condenser inlet.

(2) Additional available pressure in pascals.

(3) Sound pressure in dB(A) measured at 10 m, parallelepiped measuring surface, in a free field over a reflecting plane, given as an indication only.

CCV 1_(A) V1_(B)

(A) Number of fans
(B) Air direction

The CCV is available with HFCs.
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consult our software.

CCV ... - 1,200 rpm*

 2.12 mm

			CCV 1			CCV 2			CCV 3			CCV 4		
Surface area	m²		206	206	206	411	411	411	617	617	617	822	822	822
Circuit volume	dm³		18,4	18,4	18,4	36,8	36,8	36,8	55,2	55,2	55,2	73,6	73,6	73,6
	Nb		1	1	1	2	2	2	3	3	3	4	4	4
Turbine	380-480V/3	W max	2900	2900	2900	5800	5800	5800	8700	8700	8700	11600	11600	11600
	3/50-60 Hz	A max	4,6	4,6	4,6	9,2	9,2	9,2	13,8	13,8	13,8	18,4	18,4	18,4
Inlet	Ø		1"1/8	1"1/8	1"1/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8
Outlet	Ø		1"1/8	1"1/8	1"1/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8
Net weight	kg		270	270	270	450	450	450	650	650	650	830	830	830

* Technical specifications given at full speed (1,200 rpm)

CCV ... - 1,200/900/600 rpm

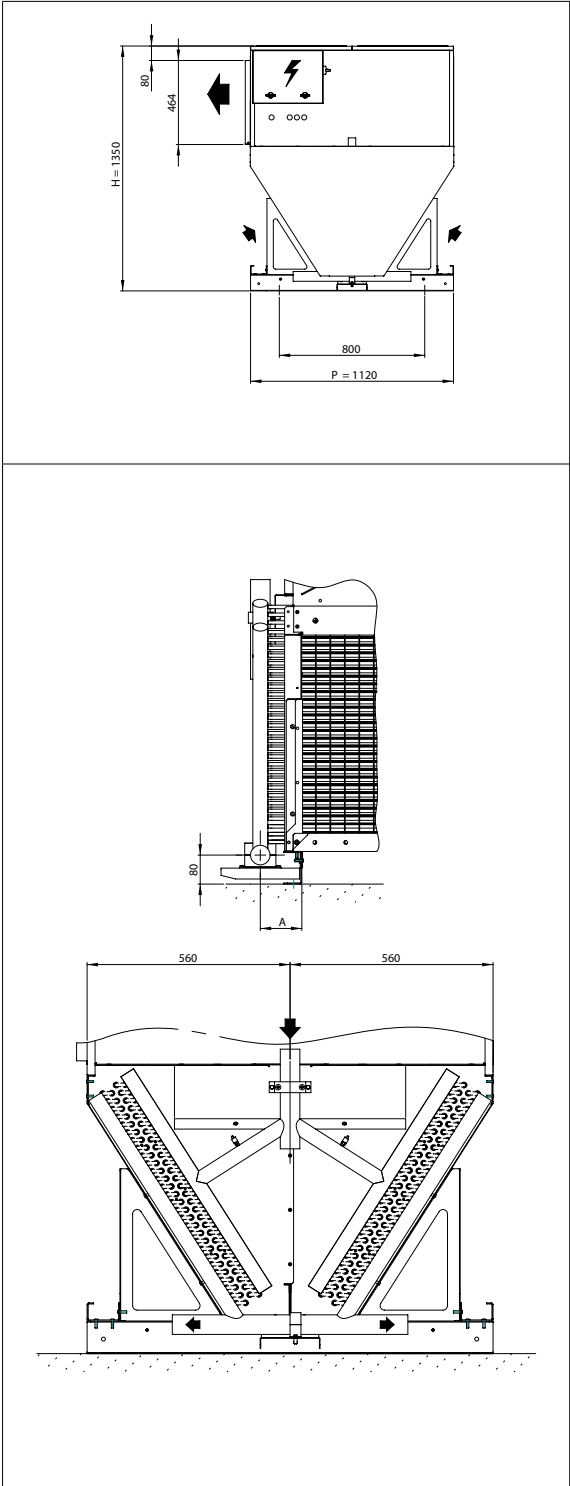
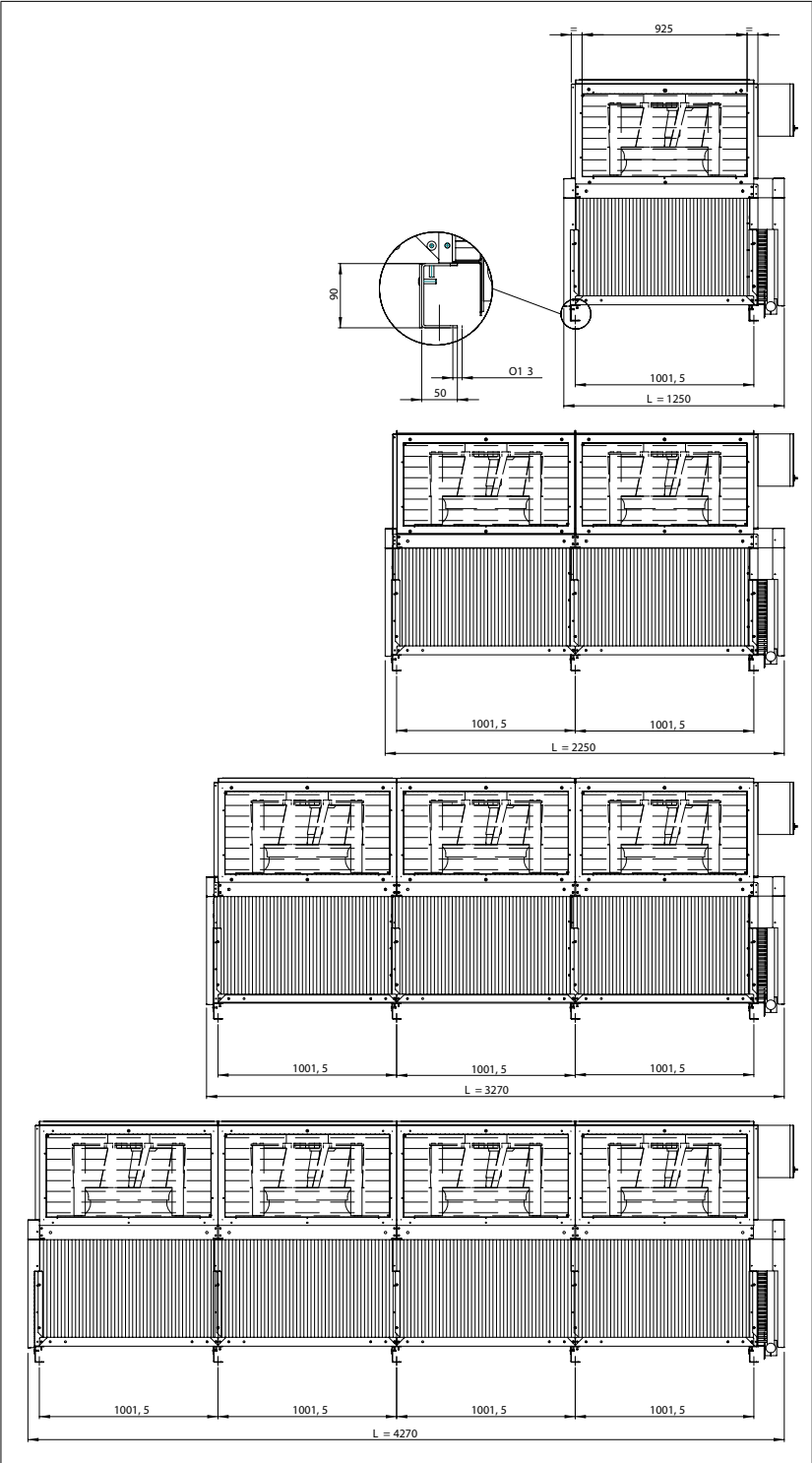
 2.12 mm

Noise level**

			CCV 1			CCV 2			CCV 3			CCV 4		
			V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3
			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Speed of rotation	100 %	1,200 rpm	54	55	56	57	58	59	59	60	61	60	61	62
	75 %	900 rpm	47	48	49	50	51	52	52	53	54	53	54	55
	50 %	600 rpm	37	38	39	40	41	42	42	43	44	43	44	45

** Noise level given for different rotation speeds as an indication only (for 0 Pa)

CCV



CCV | Airflow direction

