

FRIGA-BOHN®

NC

Centrifugal unit cooler
Industrial range

CO2 50bar

WG

HFC



|||| 5 - 95 kW



- # With many options available, the **NC adapts to the needs of your application as closely as possible.**
- # **Adaptable**, you can choose to install the NC on the floor or ceiling, depending on the requirements of the environment, thanks to its 4 modular blowing positions.
- # **Easy maintenance** with easy access to all components.

CASING

- # Robust, made of white pre-painted galvanized sheet steel.
- # Limited condensation: presence of an exterior drain pan and an aluminium intermediate drain pan.

OPTIONS

IPH	Noise insulation (M1*).
FLA	Suction filters (M1*).
CFA	Suction filter box (M1*).
ECB	Wooden crate packaging.

* M1: Non-flammable.



COILS

- # Aluminium fins with 4.23 or 6.35 mm spacing.
- # Combined with copper tubes, the coils are very efficient and compact.
- # Versions available:
 - Multi-refrigerant HFCs.
 - CO2 (50 bar).
 - WCO (glycol water, coolant).

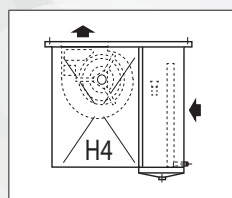
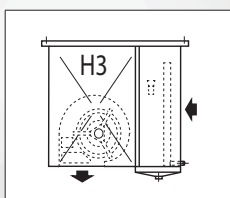
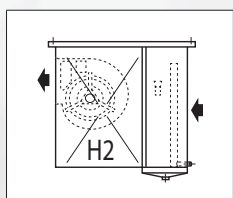
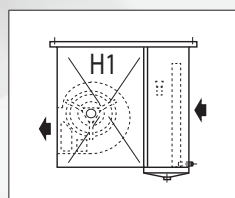
OPTIONS

HGT	Hot gases (coil and drain pan).
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Select your coil treatment to extend your unit cooler's lifespan!
Contact us.

PRODUCT ADVANTAGES

- # Can be installed on the floor or ceiling.
- # 4 blowing positions (H1 to H4) can be selected; can be easily changed at a later date.

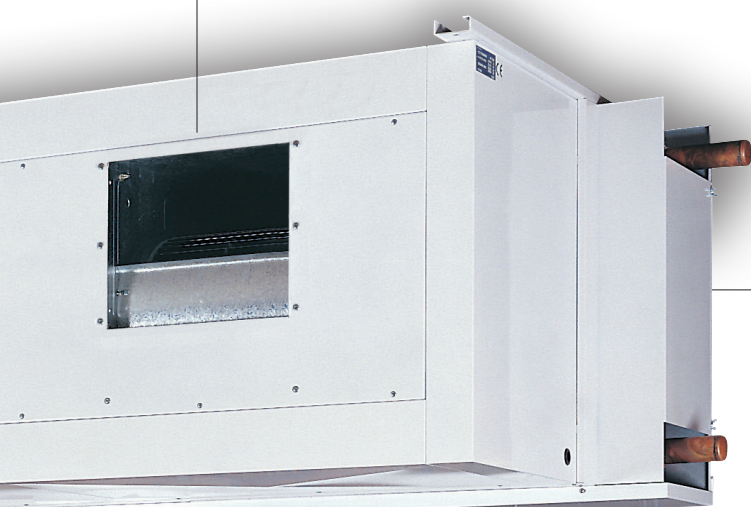


VENTILATION

- # Double inlet direct drive centrifugal motor fans.
- # "Power/noise level" pair can be optimized by adding an optional variable speed drive, available factory-fitted or as a kit (VVU/VVK).
- # Enclosed motors with built-in thermal protection, IP 54 class F, designed for environments from -40 °C to +70 °C.
- # Pressure available up to 200 pascal.
- # Speed of rotation 1,000 rpm.

OPTIONS

CMU	Factory motor wiring.	
VG	Textile duct shell.	KIT TO INSTALL
VVU	Variable speed drive.	CONTACT US
VVK	Variable speed drive.	KIT TO INSTALL CONTACT US



DEFROST

OPTIONS

EIU	Light electric defrost.	
HGB	Hot gas defrost (coil only).	CONTACT US

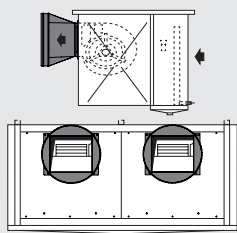
OPTION APPLICATIONS

Application requiring the installation of a textile duct

VG

Circular shell for connection of a textile duct (duct not supplied).

- diameter 400 mm (models 831 | 1622 | 2393)
- diameter 550 mm (models 1591 | 3162 | 4693 | 6294)



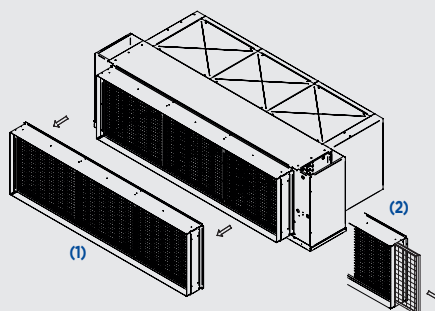
Air filtration and duct on suction

FLA

Gravimetric air filter on suction.

CFA (1)

Box for connecting a suction duct; the filter can be removed from the side of the box for easy maintenance (2).



Power, adapted noise level and thermal insulation

VVU / VVK

Voltage variation variable speed drive. Provides acoustic comfort at low and medium speeds when staff are present.



IPH

10 mm thick insulation to attenuate vibrations and provide thermal insulation of the device limiting the effects of condensation.

NCP^(A) 831^(B) H3^(C)

(A) Fin spacing: **NCP** = 4.23 mm (positive)
NCN = 6.35 mm (negative)

(B) Model

(C) Air direction

The NC is available with CO₂,
HFCs and glycol water.
For more information, please
consult our software.

			NCP  4,23 mm							
100 Pa (1)	CONDITIONS	REFRIGERANTS	NCP ...	831	1622	1591	2393	3162	4693	6294
	SC1 (2)	CO ₂ - 50 bar (3)	kW	12,1	23,6	23,4	35,2	44,1	68,9	88,1
		R449A	kW	11,6	22,3	22,3	32,8	45,0	66,9	87,7
		R404A	kW	10,9	21,1	21,8	31,0	42,3	62,9	84,3
	SC2 (2)	CO ₂ - 50 bar (3)	kW	8,2	16,2	16,0	24,2	29,7	47,3	59,6
		R449A	kW	7,5	14,6	15,1	21,5	29,7	43,9	59,2
		R404A	kW	7,1	13,9	14,5	20,4	28,2	41,7	56,2
Airflow		m ³ /h	3200	6310	6680	9420	13270	19870	26460	
Acoustics	Lp 4 m (4)	dB(A)	44	47	55	49	58	59	61	
	Lw	dB(A)	74	77	85	79	88	89	91	
150 Pa (1)	CONDITIONS	REFRIGERANTS	NCP ...	831	1622	1591	2393	3162	4693	6294
	SC1 (2)	CO ₂ - 50 bar (3)	kW	10,8	21,2	22,5	31,5	42,5	66,1	84,8
		R449A	kW	10,2	19,8	21,5	29,1	42,6	64,1	84,4
		R404A	kW	9,6	18,6	20,8	27,3	40,5	60,3	80,7
	SC2 (2)	CO ₂ - 50 bar (3)	kW	7,4	14,6	15,4	21,8	28,7	45,5	57,4
		R449A	kW	6,7	12,9	14,6	19,0	28,5	42,3	57,0
		R404A	kW	6,3	12,3	14,0	18,1	27,1	40,1	54,1
Airflow		m ³ /h	2740	5400	6280	8060	12460	18640	24820	
Acoustics	Lp 4 m (4)	dB(A)	42	45	53	46	56	58	59	
	Lw	dB(A)	72	75	83	76	86	88	89	
200 Pa (1)	CONDITIONS	REFRIGERANTS	NCP ...	831	1622	1591	2393	3162	4693	6294
	SC1 (2)	CO ₂ - 50 bar (3)	kW	-	-	21,2	-	40,2	62,2	80,1
		R449A	kW	-	-	20,3	-	40,3	60,2	79,8
		R404A	kW	-	-	19,6	-	38,1	56,7	76,0
	SC2 (2)	CO ₂ - 50 bar (3)	kW	-	-	14,5	-	27,2	42,8	54,4
		R449A	kW	-	-	13,8	-	26,9	39,9	53,7
		R404A	kW	-	-	13,1	-	25,6	37,9	51,0
Airflow		m ³ /h	-	-	5740	-	11380	17000	22630	
Acoustics	Lp 4 m (4)	dB(A)	-	-	51	-	54	56	57	
	Lw	dB(A)	-	-	81	-	84	86	87	
			NCP ...	831	1622	1591	2393	3162	4693	6294
Surface area			m ²	47,0	86,6	75,2	126,2	142,0	208,8	275,6
Circuit volume			dm ³	9,1	16,8	14,5	24,4	27,5	40,4	53,3
			Nb	1	2	1	3	2	3	4
Turbine	230V/1/50 Hz	W	670	1340	-	2010	-	-	-	-
		A max (5)	2,9	5,8	-	8,7	-	-	-	-
	230-400V/3/50 Hz	W	-	-	1300	-	2600	3900	5200	
		A max (5)	-	-	3,4	-	6,8	10,2	13,6	
Connections	Inlet	Ø	5/8"	5/8"	7/8"	7/8"	7/8"	1"1/8	1"1/8	
R404A	Outlet	Ø	7/8"	1"1/8	1"1/8	1"3/8	1"3/8	1"5/8	2"1/8	
Net weight			kg	88	151	118	200	241	305	463

(1) Additional available air pressure in pascals.

(2) Standard conditions:

SC1 / +10 °C (air inlet temp.) / 0 °C (evaporating temp.) / DTM = 10K

SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DTM = 8K

(3) Operating pressure - Specific coil - Connection diameters to be defined when ordering.

(4) Average sound pressure level in dB(A) calculated at 4 m, level with the turbines, in a free field over a reflecting plane, given as an indication only.

(5) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti")

to obtain the approximate value of the intensity after the room has been brought up to temperature.

R404A is a refrigerant only available for non-EU markets. Not compatible with F-Gas.

NCP^(A) 831^(B) H3^(C)

(A) Fin spacing: **NCP** = 4.23 mm (positive)
NCN = 6.35 mm (negative)

(B) Model

(C) Air direction

The NC is available with CO₂,
HFCs and glycol water.
For more information, please
consult our software.

100 Pa (1)	CONDITIONS	REFRIGERANTS	NCN ...
	SC2 (2)	CO₂ - 50 bar (3)	kW
		R449A	kW
		R404A	kW
	Airflow		m ³ /h
	Acoustics	Lp 4 m (4) Lw	dB(A) dB(A)

150 Pa (1)	CONDITIONS	REFRIGERANTS	NCN ...
	SC2 (2)	CO₂ - 50 bar (3)	kW
		R449A	kW
		R404A	kW
	Airflow		m ³ /h
	Acoustics	Lp 4 m (4) Lw	dB(A) dB(A)

200 Pa (1)	CONDITIONS	REFRIGERANTS	NCN ...
	SC2 (2)	CO₂ - 50 bar (3)	kW
		R449A	kW
		R404A	kW
	Airflow		m ³ /h
	Acoustics	Lp 4 m (4) Lw	dB(A) dB(A)

		NCN ...
Surface area		m ²
Circuit volume		dm ³
Turbine	230V/1/50 Hz	Nb
		W
	230-400V/3/50 Hz	A max (5)
		W
Electric defrost EIU (6)	Coil + drain pan	Nb
	230-400V/3/50 Hz	W total
		A total
Connections	Inlet	Ø
R404A	Outlet	Ø
Net weight		kg

(1) Additional available air pressure in pascals.

(2) Standard conditions:

SC1 / +10 °C (air inlet temp.) / 0 °C (evaporating temp.) / DTM = 10K

SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DTM = 8K

(3) Operating pressure - Specific coil - Connection diameters to be defined when ordering.

(4) Average sound pressure level in dB(A) calculated at 4 m, level with the turbines, in a free field over a reflecting plane, given as an indication only.

(5) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti")

to obtain the approximate value of the intensity after the room has been brought up to temperature.

(6) Electric defrost option.

R404A is a refrigerant only available for non-EU markets (not compatible with F-Gas).

NCN

 **6,35 mm**

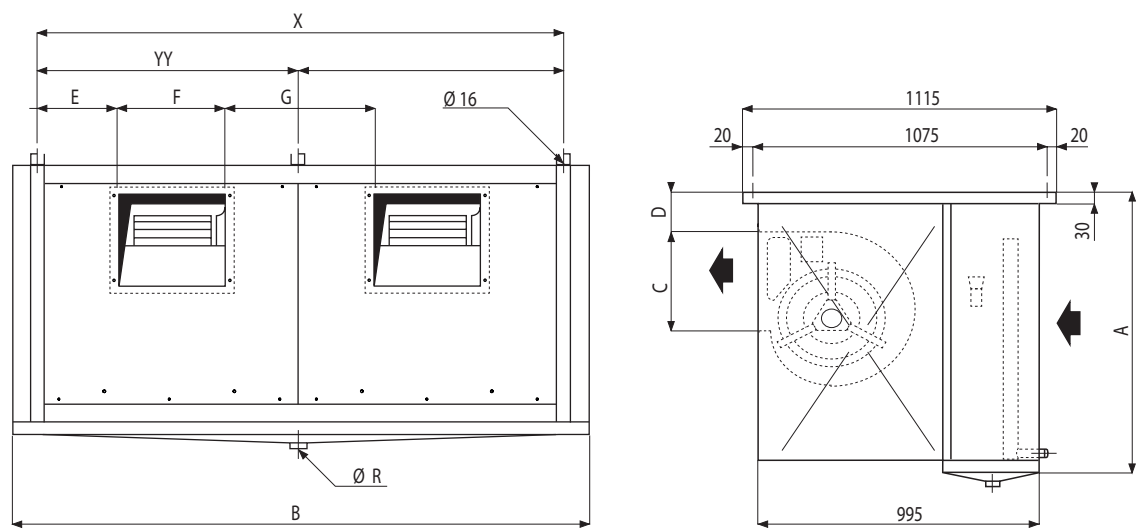
831	1622	1591	2393	3162	4693	6294
7,2	14,1	13,6	20,9	25,8	40,0	51,3
6,5	12,5	12,6	18,4	24,7	36,9	48,5
6,2	12,0	12,0	17,7	23,8	35,4	47,4
3270	6470	6770	9680	13490	20200	26910
44	47	55	49	58	60	61
74	77	85	79	88	90	91

831	1622	1591	2393	3162	4693	6294
6,6	12,8	13,2	19,0	25,0	38,7	49,7
5,8	11,2	12,2	16,5	23,9	35,8	47,2
5,5	10,7	11,6	15,7	23,0	34,2	45,7
2810	5560	6390	8310	12720	19040	25360
42	45	54	47	57	58	59
72	75	84	77	87	88	89

831	1622	1591	2393	3162	4693	6294
-	-	12,6	-	23,8	36,8	47,4
-	-	11,6	-	22,8	34,1	44,7
-	-	11,0	-	21,9	32,5	43,5
-	-	5880	-	11680	17470	23260
-	-	52	-	55	56	58
-	-	82	-	85	86	88

831	1622	1591	2393	3162	4693	6294
32,3	59,6	51,7	86,8	97,7	143,6	189,6
9,1	16,8	14,5	24,4	27,5	40,4	53,3
1	2	1	3	2	3	4
670	1340	-	2010	-	-	-
2,9	5,8	-	8,7	-	-	-
-	-	1300	-	2600	3900	5200
-	-	3,4	-	6,8	10,2	13,6
5+1	5+1	5+1	5+1	5+1	5+1	5+1
3900	6600	5400	9600	9600	17100	22800
9.8/5.6	16.6/9.5	13.6/7.8	24.1/13.9	24.1/13.9	42.9/24.7	57.2/32.9
5/8"	5/8"	5/8"	7/8"	7/8"	1"1/8	1"1/8
7/8"	1"1/8	1"1/8	1"3/8	1"3/8	1"5/8	2"1/8
88	151	118	200	241	305	463

NC



		831	1622	1591	2393	3162	4693	6294
A	mm	760	760	870	765	875	880	880
B	mm	1170	1810	1490	2450	2450	3410	4370
C	mm	290	290	342	290	342	342	342
D	mm	152	152	197	152	197	197	197
E	mm	234	234	363	234	363	363	363
F	mm	331	331	395	331	395	395	395
G	mm	-	306	-	306	564	564	564
X	mm	790	1430	1110	2070	2070	3030	3990
Y	mm	-	-	-	-	-	-	1995
Ø R	mm	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"

NC | Blower positions

