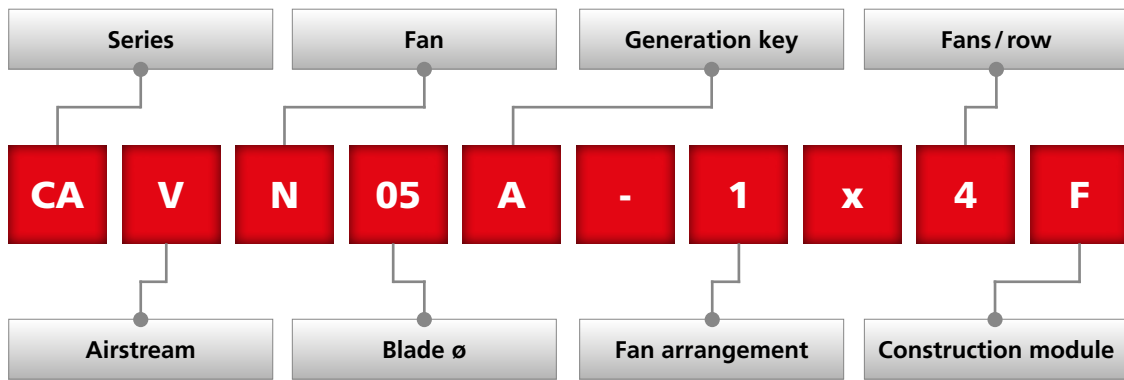




# CAV / H

## Construction

### Nomenclature



<b>Series:</b>	CA = Frigen GA = Glykol NA = NH <sub>3</sub>
<b>Airstream:</b>	V = vertical H = horizontal
<b>Fan:</b>	N = normal L = quiet S = very quiet
<b>Blade ø:</b>	05 = 500 mm 06 = 650 mm 08 = 800 mm 09 = 910 mm 10 = 1,000 mm
<b>Generation key:</b>	A, B, C, ...

<b>Fan arrangement:</b>	1 = 1-range 2 = 2-range
<b>Fans/row:</b>	1 = 1 fan/row 2 = 2 fans/row 3 = 3 fans/row 4 = 4 fans/row 5 = 5 fans/row 6 = 6 fans/row 7 = 7 fans/row
<b>Construction module:</b>	F, G = 1,100 mm H, I = 1,450 mm A = 1,400 mm B = 1,700 mm C = 2,000 mm D = 2,300 mm

### Application

- **Nominal capacity:**  
R404A CA. from 11 to 1,041 kW at  $\Delta t=15K$  ( $t_{l1} = 25^{\circ}C$ ,  $t_c = 40^{\circ}C$ )
- **Suitable refrigerants:**  
Frigene (e.g. R134a, R404A, R407C, R507, etc.)  
Calculation see section "Capacity" and in acc. with EDP  
Calculation in acc. with GEA Küba selection software.
- All 828 types are designed for **external installation**.
- **Possible fields of application:**
  - Industrial plants
  - Supermarkets
  - Cold rooms

The low noise level of the S models allows installation in **noise-sensitive areas** such as:

  - Office complexes
  - Hospitals
  - Residential areas

### Sound pressure levels

The sound pressure level  $L_{PA}$  indicated is the mean measurement area sound pressure level computed from Sound Power Level  $L_{WA}$  upon the parallel piped measuring surface squared around the condenser (reference square) at a distance of 10m and finishing off upon the reflecting level. The sound pressure levels  $L_{PA}$  indicated are for external installations above a reflecting level. The sound pressure level will increase if reflecting bordering surfaces other than reflecting installation surface exist. Acoustic power is measured using the enveloping surface method in accordance with EN 13487 and/or DIN EN ISO 3741 or DIN EN ISO 3744. The total acoustic power level is calculated by adding up the total acoustic pressure levels on the sectional measuring surfaces (DIN EN 13487).

Start-up, switching and control noise is ignored. Beat frequencies of up to 3 dB (A) may occur in apparatus with several fans.

## Construction

### Casing

**Self-supporting construction, fan sections individually partitioned.**

- Casing and legs from galvanized sheet steel
- Temperature- and UV-radiation resistant powder coating RAL 7032 pebble gray
- Lifting hangers standard

### Heat exchanger

**Standard tube arrangement lengthwise, staggered, in special copper.**

- Material:
  - Tubes: Ripple Fin, SF-Cu
  - Fins: AL with closed dimpled fins
  - Fin spacing: 2.2 mm
- Multi-circuiting possible
- Fluid connections:
  - Brazed copper connection vertical
  - (can be used with vertical and horizontal airflow)
- maximum allowable pressure PS = 32 bar

### Axial fans

**Compact unit without external pressure, weather resistant: Motor with fans, Fan guard in accordance with DIN EN ISO 13857 and assembly brackets.**

- Fan blades  $\varnothing$  500, 650, 800, 910, 1000 mm, balanced in two levels according to a DIN EN ISO 1940 standard
- Motors, threephase current  $400 \pm 10\%V$ , 50 Hz, 2 speeds,  $\Delta$ -Y-connections, Protection: IP 54
- variable speed control by reduction of voltage
- Proof to frequency changes (maximum fan pitch  $dU/dt=500V/\mu s$ ;  $U_{peak} < 1000V$ ,  $f_{max} < 60Hz$ )
- Standard protection of motor by thermocouples
- For outdoor installation and ambient motor temperatures of  $-30^{\circ}C$  up to  $+60^{\circ}C$
- Please contact Küba for special voltages
- CA. 05 and 06: Fans 230V 1, (no surcharge)
- All fans ErP 2015 compliant

**Container type (CCAV/H) and other designs available in our Küba Select selection program!**



## Power: $\Delta t$ , R134a, R22, R404A, R407A, R407C, R507

### Calculation of Condenser capacity

The condenser capacity is based on a temperature difference  $\Delta t = 15\text{K}$  between the air inlet temperature  $t_{l1}$  at the condenser

( $t_{l1} = 25^\circ\text{C}$ ) and the condensing temperature  $t_c$  at the condenser inlet ( $t_c = 40^\circ\text{C}$ ) with R404A and is valid only for the standard version.

$$Q_{C(N)} = \frac{Q_C}{F_1 \times F_2 \times F_3}$$

$Q_{C(N)}$  = Nominal capacity condenser (at  $\Delta t = 15\text{K}$ , R404A)  
 $Q_C$  = Condenser capacity  
 $F_1$  = Correction factor for refrigerant  
 $F_2$  = Correction factor for temperature difference  
 $F_3$  = Correction factor for height above sea level

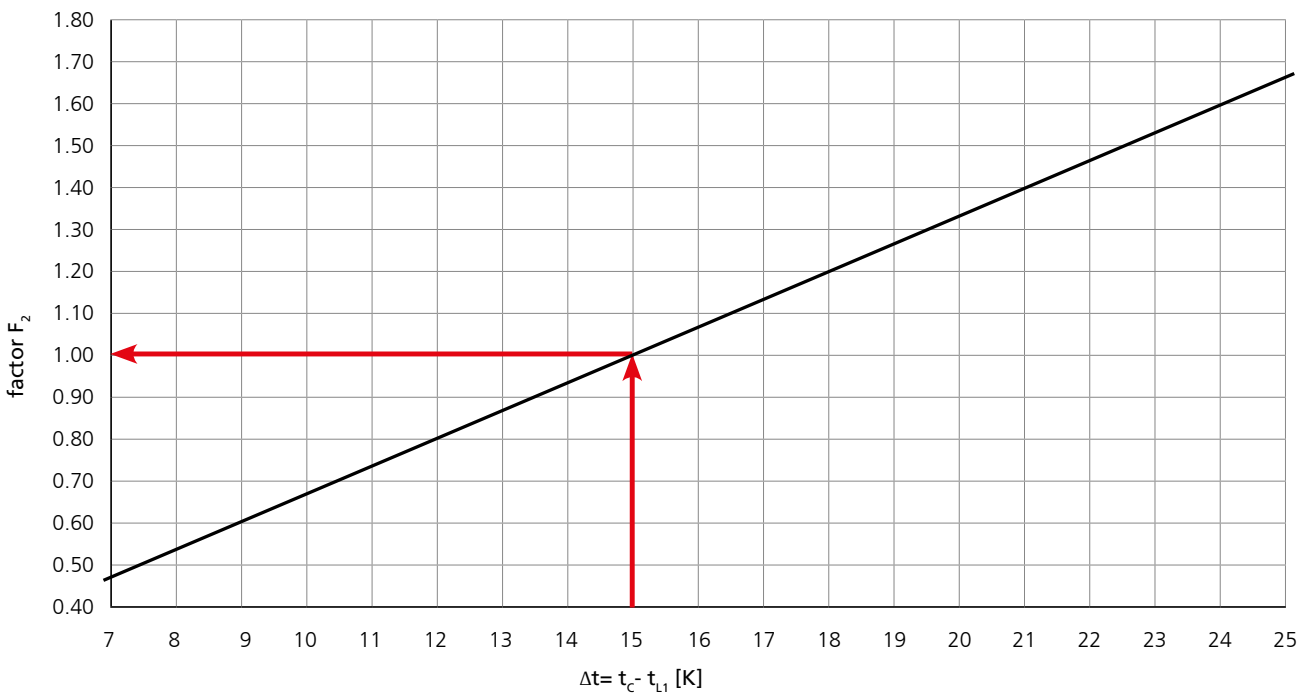
#### Correction factor for refrigerant (factor $F_1$ )

R 134a	$F_1 = 0.93$	R 407A	$F_1 = 0.83$
R 22	$F_1 = 0.96$	R 407C	$F_1 = 0.87$
R 404A	$F_1 = 1.00$	R 507	$F_1 = 1.00$

#### Correction factor for height above sea level (factor $F_3$ )

0 ft above sea level	$F_3 = 1.00$	4,921 ft above sea level	$F_3 = 0.87$
1,640 ft above sea level	$F_3 = 0.96$	6,562 ft above sea level	$F_3 = 0.83$
3,281 ft above sea level	$F_3 = 0.91$	8,202 ft above sea level	$F_3 = 0.80$

#### Correction factor for temperature difference (factor $F_2$ )



$t_c$  = Condensing temperature  
 $t_{l1}$  = Air inlet temperature

For  $\Delta t$  between 7K and 25K:  
 Capacity at  $\Delta t$  = catalogue capacity \*  $\Delta t / 15$

# Fans

## Standard construction

### CA. 05 - 06

- 400V±10% 3, 50 Hz with speed reduction Δ-Y-change-over
- Protection: IP54
- Range of application: -30°C bis +60°C

### CA. 08 - 10

- 400V±10% 3, 50 Hz with speed reduction Δ-Y-change-over
- Protection: IP54
- Range of application: -30°C bis +60°C

Module	Fan	Fan blade Ø	N°. Pols	Label data						Operating values per fan					
				n [min <sup>-1</sup> ]		P [W]		I [A]		n [min <sup>-1</sup> ]		P [W]		I [A]	
				Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y
05-	N	500	4	1,330	940	830	550	1.5	1.0	1,360	1,060	680	490	1.3	0.9
	L		4	1,300	1,025	770	490	1.7	0.8	1,320	1,060	660	430	1.6	0.8
	S		6	870	590	290	150	0.7	0.4	900	640	240	140	0.6	0.3
06-	N	650	4	1,380	1,160	2,000	1,450	3.9	2.5	1,400	1,190	1,850	1,390	3.8	2.3
	L		6	950	850	720	530	2.8	1.2	950	870	680	500	2.8	1.1
	S		8	710	630	350	240	1.7	0.6	710	640	340	220	1.6	0.6
08-	N	800	6	890	690	1,800	1,150	3.8	2.2	910	730	1,770	1,210	3.9	2.2
	L		6	900	690	1,400	940	2.7	1.7	890	640	1,380	830	2.8	1.6
	S		12	450	370	270	170	0.8	0.4	450	360	290	180	0.8	0.4
09-	N	900	6	840	660	2,500	1,600	5.0	2.7	850	660	2,850	1,750	5.6	3.0
	L		6	840	630	1,850	1,050	3.8	1.9	860	660	1,650	990	3.6	1.8
	S		8	660	500	900	540	2.1	1.1	670	530	840	530	2.2	1.1
10-	N	1000	6	820	620	2,700	1,600	5.3	2.8	850	650	2,520	1,550	5.1	2.7
	L		8	690	570	1,550	1,150	3.3	2.0	700	590	1,380	1,050	3.2	1.9
	S		10	560	480	940	660	2.9	1.4	570	500	860	600	2.9	1.3

- Fans are rated for continuous operation S1. Fan motors have to be operated for at least two hours per month.
- Other motors will change performance and Sound Pressure Levels quoted.
- Operation with frequency converter only possible with sinusoidal filter on all phases.

- According to nameplate, the motors are designed for continuous operation (S1 or S2). This defines the operating conditions and switching frequency pursuant to the DIN EN 60034-1 standard.

GEA Küba CAV/H Fans

## Fans

### Speed actuator and control operation

#### Speed control by decrease of the effective voltage

Single-phase and three-phase motors can be speed controlled via voltage reduction. During partial speed, substantial losses occur in the rotor, since slip power is transformed into heat. The voltage decrease can be accomplished by a transformer or by phase control.

When using phase control, the voltage has a greater harmonic content, resulting in additional losses and causing additional heat in the motor.

Depending on installation conditions, the noise level may increase with electronic speed control by voltage reduction through phase angle control. The current may furthermore be higher than given on the nameplate.

#### Speed control by frequency converters

The standard AC fans are suitable for operation with frequency converters within 30 - 100% of rated motor frequency. For reduction of peak voltages, speed voltage increase and motor noise (at reduced speed) manufacturers of frequency converters recommend the use of all pole sinus filters.

Axial fans are suited for operation by frequency converters provided the following points are observed:

Sinus filters to ensure sinusoidal supply voltage between phases and between phase and protective earth, as offered by some converter manufacturers, must be fitted between frequency converter and motor.

du/dt filters (also called motor or damping filters) must not be used instead of sinus filters.

When using sinus filters it may be unnecessary to use screened motor supply cables, metal terminal boxes and a second earth wire connection on the motor.

If the operational leakage current of 3.5 mA is exceeded, the earthing requirements as set out in DIN VDE 0160/5.88, Section 6.5.2.1, must be complied with.

#### Manufacturers instructions must be observed!

### Motor Protection

A current-dependent motor protection facility (motor circuitbreaker or bimetal tripping device) is not provided and it must be noted that protection by thermocouples TK should be wired.

Thermocouples are temperature-dependent elements which are insulated such that they are embedded in the windings of the motors. They open an electrical contact as soon as the maximum permissible permanent temperature is exceeded. They should be integrated in the control circuit of contactors in such a way, that in case of failure no automatic reactivation occurs.

Thermocouples fulfil the conditions for protecting devices with electric motor drive (IEC VDE 0730) against overloading.

## Sound Data

### Sound Power Levels

The A-grade total sound power level  $L_{WA}$  has been determined by way of sound measurements in accordance with DIN EN ISO 3744 for one fan.

DIN EN ISO 3744 describes the measuring method with precision class 2 with a standard deviation (acoustic power) of  $\leq 2$ dB.

### Sound Pressure Level for several fans at nominal speed rating

Fans per condenser	2	3	4	5	6	8	10	12	14
Increase $L_{pA}$ [dB(A)]	+3	+5	+6	+7	+8	+9	+10	+11	+11

Sound Power Level for one fan at nominal speed rating

Module	Fan	Fan blade Ø	Sound Power Level		Sound Power Level $L_{WA}$ [dB(A)] at Octave band centre frequency $f$ [Hz], A-rated																	
			$L_{WA}$		63 Hz		125 Hz		250 Hz		500 Hz		1 kHz		2 kHz		4 kHz		8 kHz		16 kHz	
			Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y
05-	N	500	83	77	49	45	71	64	72	66	76	70	79	72	77	72	72	64	62	53	50	39
	L		82	76	49	44	70	63	71	66	75	69	78	72	76	69	71	64	61	53	48	39
	S		72	63	43	48	59	50	63	56	65	58	68	57	65	54	59	46	49	35	36	27
06-	N	650	94	90	54	52	74	69	85	81	86	82	89	85	89	85	86	81	75	69	63	58
	L		84	82	50	48	63	61	75	73	76	74	80	77	79	77	73	70	62	59	52	49
	S		77	74	48	46	64	62	67	64	69	66	72	70	71	68	63	59	53	50	43	40
08-	N	800	85	78	56	60	71	64	75	69	78	72	81	74	77	71	72	65	64	57	53	46
	L		86	78	56	56	70	64	75	65	78	71	81	73	80	73	77	68	68	58	57	47
	S		65	60	44	41	53	48	56	54	60	53	60	54	57	50	49	42	41	35	31	27
09-	N	900	92	85	64	59	74	71	81	74	84	77	87	81	87	80	83	75	75	65	62	53
	L		85	78	56	56	71	65	78	69	79	72	81	73	77	69	72	65	66	58	55	45
	S		79	72	59	50	66	60	71	65	71	65	74	66	70	63	66	59	59	50	46	36
10-	N	1000	87	80	62	54	75	72	80	72	82	74	82	74	79	70	74	65	67	59	55	45
	L		82	77	58	53	73	70	75	72	76	71	76	71	71	66	66	61	60	54	46	40
	S		76	72	55	60	68	64	68	64	70	66	70	66	66	62	60	56	54	48	39	34

GEA Küba CAV/H  
Sound Data

Sound pressure correction values  $L_{PA}$  for other distances

For other distances, the change in sound pressure measured with the enveloping surface method depends on the dimensions of the equipment. The sound pressure level  $L_{PA}$  can be calculated exactly using the GEA KÜBA Selection Software.

Ø	Number	Distance [in m]	1	2	3	4	5	7	10	15	20	30	50
500	1 to 2 motors	$\Delta L_{PA}$ [in dB (A)]	+16	+12	+9	+7	+5	+3	0	-3	-6	-9	-14
	3 to 6 motors	$\Delta L_{PA}$ [in dB (A)]	+15	+11	+9	+7	+5	+3	0	-3	-6	-9	-13
650	1 to 2 motors	$\Delta L_{PA}$ [in dB (A)]	+16	+12	+9	+7	+5	+3	0	-3	-6	-9	-13
	3 to 6 motors	$\Delta L_{PA}$ [in dB (A)]	+14	+11	+9	+7	+5	+3	0	-3	-6	-9	-13
800	1 to 2 motors	$\Delta L_{PA}$ [in dB (A)]	+15	+11	+9	+7	+5	+3	0	-3	-6	-9	-13
	3 to 10 motors	$\Delta L_{PA}$ [in dB (A)]	+13	+10	+8	+6	+5	+3	0	-3	-5	-9	-13
910	1 to 2 motors	$\Delta L_{PA}$ [in dB (A)]	+15	+11	+9	+7	+5	+3	0	-3	-6	-9	-13
	3 to 10 motors	$\Delta L_{PA}$ [in dB (A)]	+13	+10	+8	+6	+5	+3	0	-3	-5	-9	-13
1,000	1 to 2 motors	$\Delta L_{PA}$ [in dB (A)]	+14	+11	+8	+7	+5	+3	0	-3	-6	-9	-13
	3 to 10 motors	$\Delta L_{PA}$ [in dB (A)]	+13	+10	+8	+6	+5	+3	0	-3	-5	-9	-13

The stated correction values  $\Delta L_{PA}$  are approximate values.

## Selection table 1-range (N + L)

 GEA Küba CAV/H  
Selection table 1-range

CAV/H N ..-1x ..							CAV/H L ..-1x ..							CA. N+L			
Type	Nominal capacity Q <sub>c</sub>		Airflow		Sound pressure L <sub>PA</sub> =10m		Type	Nominal capacity Q <sub>c</sub>		Airflow		Sound pressure L <sub>PA</sub> =10m		Number of Circuits	Surface	Tube volume	Weight
	Δ	Y	Δ	Y	Δ	Y		Δ	Y	Δ	Y	Δ	Y				
CA.	[kW]		[m <sup>3</sup> /h]		[dB(A)]		CA.	[kW]		[m <sup>3</sup> /h]		[dB(A)]					
<b>N05A-1x1F</b>	19.6	16.4	6,410	4,940	52	45	<b>L05A-1x1F</b>	19.3	16.6	6,260	5,030	50	44	4	42	6.8	86
<b>N05A-1x1G</b>	25.2	20.3	6,020	4,640	52	45	<b>L05A-1x1G</b>	24.6	20.4	5,840	4,680	50	44	8	84	13.5	97
<b>N05A-1x2F</b>	39.5	33.2	12,830	9,880	55	48	<b>L05A-1x2F</b>	38.9	33.6	12,510	10,050	53	47	6	84	13.3	116
<b>N05A-1x2G</b>	50.7	42.2	12,040	9,280	55	48	<b>L05A-1x2G</b>	49.5	42.2	11,680	9,350	53	47	12	167	26.6	158
<b>N05A-1x3F</b>	59.3	49.9	19,240	14,820	57	50	<b>L05A-1x3F</b>	58.4	50.5	18,770	15,080	55	49	8	125	19.9	172
<b>N05A-1x3G</b>	76.3	62.1	18,050	13,920	57	50	<b>L05A-1x3G</b>	74.4	62.4	17,520	14,030	55	49	16	251	39.6	228
<b>N06A-1x1F</b>	36.1	32.7	14,650	12,310	63	59	<b>L06A-1x1F</b>	28.5	26.8	9,820	8,900	53	51	4	55	9.2	128
<b>N06A-1x1G</b>	48.3	42.1	12,700	10,600	63	59	<b>L06A-1x1G</b>	34.9	32.0	8,360	7,530	53	51	8	110	18.3	150
<b>N06A-1x1H</b>	41.4	37.6	15,430	13,170	63	59	<b>L06A-1x1H</b>	32.0	30.1	10,250	9,350	53	51	8	73	12.0	142
<b>N06A-1x1I</b>	54.3	48.8	13,670	11,960	62	58	<b>L06A-1x1I</b>	40.4	37.1	9,470	8,570	52	50	13	146	23.8	176
<b>N06A-1x2F</b>	72.6	65.7	29,300	24,630	66	62	<b>L06A-1x2F</b>	57.2	53.7	19,630	17,790	56	54	8	110	18.4	208
<b>N06A-1x2G</b>	96.7	84.2	25,390	21,190	65	61	<b>L06A-1x2G</b>	69.7	64.0	16,720	15,050	55	53	16	221	35.8	255
<b>N06A-1x2H</b>	84.1	76.2	30,860	26,340	66	62	<b>L06A-1x2H</b>	64.9	61.0	20,500	18,700	56	54	11	146	23.8	242
<b>N06A-1x2I</b>	109.2	98.2	27,340	23,910	65	61	<b>L06A-1x2I</b>	81.1	74.6	18,940	17,140	55	53	21	291	47.0	299
<b>N06A-1x3F</b>	108.7	98.4	43,950	36,940	68	64	<b>L06A-1x3F</b>	85.8	80.7	29,450	26,690	58	56	11	166	27.3	300
<b>N06A-1x3G</b>	145.3	126.6	38,090	31,790	67	63	<b>L06A-1x3G</b>	104.9	96.2	25,080	22,580	57	55	21	331	53.3	370
<b>N06A-1x3H</b>	126.2	114.5	46,290	39,510	68	64	<b>L06A-1x3H</b>	97.4	91.6	30,750	28,050	58	56	16	218	35.5	357
<b>N06A-1x3I</b>	163.8	147.3	41,020	35,870	67	63	<b>L06A-1x3I</b>	121.7	111.9	28,400	25,700	57	55	32	437	70.5	418
<b>N08A-1x1A</b>	64.1	52.9	16,500	12,900	52	46	<b>L08A-1x1A</b>	61.0	46.1	15,470	10,890	53	46	12	158	25.9	290
<b>N08A-1x1B</b>	71.6	57.9	18,100	13,850	52	46	<b>L08A-1x1B</b>	67.7	51.5	16,840	12,010	53	46	18	191	31.5	320
<b>N08A-1x1C</b>	77.0	62.5	18,900	14,630	52	46	<b>L08A-1x1C</b>	73.7	56.0	17,880	12,830	53	46	18	225	36.7	340
<b>N08A-1x2A</b>	128.4	105.8	33,000	25,790	54	49	<b>L08A-1x2A</b>	122.2	92.2	30,940	21,770	56	49	24	315	51.2	500
<b>N08A-1x2B</b>	144.6	116.8	36,200	27,700	54	49	<b>L08A-1x2B</b>	136.7	103.7	33,690	24,020	56	49	24	383	61.7	570
<b>N08A-1x2C</b>	154.1	125.1	37,790	29,250	54	49	<b>L08A-1x2C</b>	147.5	112.0	35,760	25,660	56	49	36	450	72.1	620
<b>N08A-1x3A</b>	192.6	158.8	49,500	38,690	56	51	<b>L08A-1x3A</b>	183.3	138.3	46,410	32,660	58	51	36	473	76.6	730
<b>N08A-1x3B</b>	217.0	175.2	54,290	41,540	56	51	<b>L08A-1x3B</b>	205.1	155.6	50,530	36,030	58	51	36	574	92.4	840
<b>N08A-1x3C</b>	232.6	188.8	56,690	43,880	56	51	<b>L08A-1x3C</b>	222.5	162.0	53,640	38,480	58	51	36	675	108.1	920
<b>N08A-1x4A</b>	257.7	212.7	66,000	51,580	57	52	<b>L08A-1x4A</b>	245.3	185.3	61,880	43,540	59	52	36	630	102.2	970
<b>N08A-1x4B</b>	286.5	231.6	72,390	55,390	57	52	<b>L08A-1x4B</b>	270.8	205.9	67,380	48,040	59	52	72	765	123.0	1,110
<b>N08A-1x4C</b>	308.3	250.2	75,580	58,510	57	52	<b>L08A-1x4C</b>	295.0	224.1	71,520	51,310	59	52	72	901	144.0	1,220
<b>N08A-1x5A</b>	319.3	263.4	82,510	64,480	58	53	<b>L08A-1x5A</b>	303.8	229.6	77,350	54,430	60	53	72	788	126.5	1,180
<b>N08A-1x5B</b>	360.5	291.0	90,490	69,240	57	52	<b>L08A-1x5B</b>	340.7	258.6	84,220	60,050	59	52	72	957	154.3	1,340
<b>N08A-1x5C</b>	387.3	314.1	94,480	73,140	57	52	<b>L08A-1x5C</b>	370.4	270.4	89,400	64,140	59	52	72	1,126	180.5	1,480

Continued on next page →

Nominal capacity Q<sub>c</sub>: R404A; Δt=15K; t<sub>i</sub>= 25°C; t<sub>c</sub>=40°C  
 Sound pressure: Enveloping surface method, in acc. with DIN EN ISO 13487  
 Δ: Valid at high rpm  
 Y: Valid at low rpm

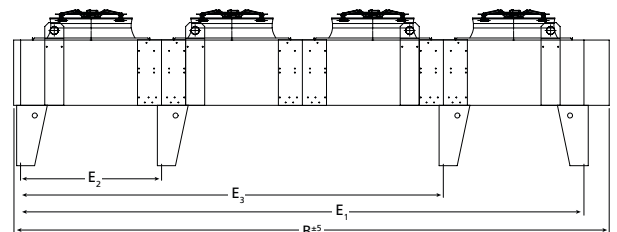
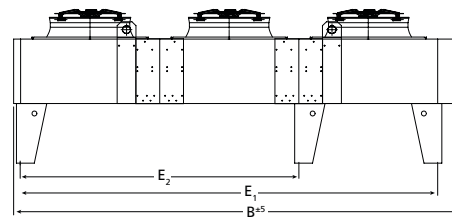
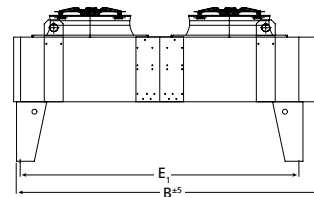
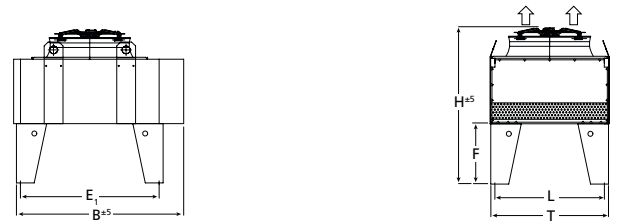
Container type (CCAV/H) and other designs available in our GEA Küba Select selection program!



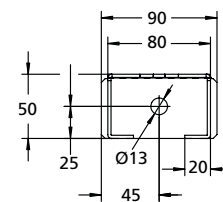
## Dimensions 1-range (CAV)

 GEA Küba CAV/H  
Dimensions 1-range

Type	CAV...-1x... Dimensions [mm]							
CA.	H	B	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>	F	T	L
05A-1x1F	1,000	1,410	960	-	-	500	900	850
05A-1x1G	1,000	1,410	960	-	-	500	900	850
05A-1x2F	1,000	2,512	2,062	-	-	500	900	850
05A-1x2G	1,000	2,512	2,062	-	-	500	900	850
05A-1x3F	1,000	3,613	3,163	1,102	-	500	900	850
05A-1x3G	1,000	3,613	3,163	1,102	-	500	900	850
06A-1x1F	1,030	1,410	960	-	-	500	1,153	1,103
06A-1x1H	1,030	1,760	1,310	-	-	500	1,153	1,103
06A-1x1G	1,030	1,410	960	-	-	500	1,153	1,103
06A-1x1I	1,030	1,760	1,310	-	-	500	1,153	1,103
06A-1x2F	1,030	2,512	2,062	-	-	500	1,153	1,103
06A-1x2H	1,030	3,212	2,762	-	-	500	1,153	1,103
06A-1x2G	1,030	2,512	2,062	-	-	500	1,153	1,103
06A-1x2I	1,030	3,212	2,762	-	-	500	1,153	1,103
06A-1x3F	1,030	3,613	3,163	1,102	-	500	1,153	1,103
06A-1x3H	1,030	4,663	4,213	1,452	-	500	1,153	1,103
06A-1x3G	1,030	3,613	3,163	1,102	-	500	1,153	1,103
06A-1x3I	1,030	4,663	4,213	1,452	-	500	1,153	1,103
08A-1x1A	1,555	1,730	1,403	-	-	600	1,190	1,098
08A-1x1B	1,555	2,030	1,703	-	-	600	1,190	1,098
08A-1x1C	1,555	2,330	2,003	-	-	600	1,190	1,098
08A-1x2A	1,555	3,130	2,805	-	-	600	1,190	1,098
08A-1x2B	1,555	3,730	3,405	-	-	600	1,190	1,098
08A-1x2C	1,555	4,335	4,005	-	-	600	1,190	1,098
08A-1x3A	1,555	4,535	4,206	2,803	-	600	1,190	1,098
08A-1x3B	1,555	5,435	5,106	3,403	-	600	1,190	1,098
08A-1x3C	1,555	6,335	6,006	4,002	-	600	1,190	1,098
08A-1x4A	1,555	5,935	5,608	1,402	4,205	600	1,190	1,098
08A-1x4B	1,555	7,135	6,808	1,702	5,105	600	1,190	1,098
08A-1x4C	1,555	8,335	8,008	2,002	6,005	600	1,190	1,098
08A-1x5A	1,555	7,335	7,009	2,805	4,205	600	1,190	1,098
08A-1x5B	1,555	8,835	8,509	3,403	5,105	600	1,190	1,098
08A-1x5C	1,555	10,335	10,004	4,003	6,005	600	1,190	1,098
09A-1x1A	1,570	1,730	1,403	-	-	600	1,190	1,098
09A-1x1B	1,570	2,030	1,703	-	-	600	1,190	1,098
09A-1x1C	1,570	2,330	2,003	-	-	600	1,190	1,098
09A-1x1D	1,820	2,630	2,303	-	-	600	1,190	1,098
09A-1x2A	1,570	3,130	2,805	-	-	600	1,190	1,098
09A-1x2B	1,570	3,730	3,405	-	-	600	1,190	1,098
09A-1x2C	1,570	4,335	4,005	-	-	600	1,190	1,098
09A-1x2D	1,820	4,930	4,605	-	-	600	1,190	1,098
09A-1x3A	1,570	4,535	4,206	2,803	-	600	1,190	1,098
09A-1x3B	1,570	5,435	5,106	3,403	-	600	1,190	1,098
09A-1x3C	1,570	6,335	6,006	4,002	-	600	1,190	1,098
09A-1x3D	1,820	7,235	6,906	4,603	-	600	1,190	1,098
09A-1x4A	1,570	5,935	5,608	1,402	4,205	600	1,190	1,098
09A-1x4B	1,570	7,135	6,808	1,702	5,105	600	1,190	1,098
09A-1x4C	1,570	8,335	8,008	2,002	6,005	600	1,190	1,098
09A-1x4D	1,820	9,535	9,208	2,302	6,905	600	1,190	1,098
09A-1x5A	1,570	7,335	7,009	2,805	4,205	600	1,190	1,098
09A-1x5B	1,570	8,835	8,509	3,403	5,105	600	1,190	1,098
09A-1x5C	1,570	10,335	10,004	4,003	6,005	600	1,190	1,098
10A-1x1B	1,830	2,030	1,703	-	-	850	1,635	1,543
10A-1x1C	1,830	2,330	2,003	-	-	850	1,635	1,543
10A-1x1D	1,830	2,630	2,303	-	-	850	1,635	1,543
10A-1x2B	1,830	3,730	3,405	-	-	850	1,635	1,543
10A-1x2C	1,830	4,330	4,005	-	-	850	1,635	1,543
10A-1x2D	1,830	4,930	4,605	-	-	850	1,635	1,543
10A-1x3B	1,830	5,435	5,106	3,403	-	850	1,635	1,543
10A-1x3C	1,830	6,335	6,006	4,003	-	850	1,635	1,543
10A-1x3D	1,830	7,235	6,906	4,603	-	850	1,635	1,543
10A-1x4B	1,830	7,135	6,805	1,702	5,105	850	1,635	1,543
10A-1x4C	1,830	8,335	8,008	2,002	6,005	850	1,635	1,543
10A-1x4D	1,830	9,535	9,109	2,302	6,905	850	1,635	1,543
10A-1x5B	1,830	8,835	8,509	3,402	5,105	850	1,635	1,543
10A-1x5C	1,830	10,335	10,004	4,003	6,005	850	1,635	1,543



Feet CAV 05/06



Feet CAV 08/09/10

