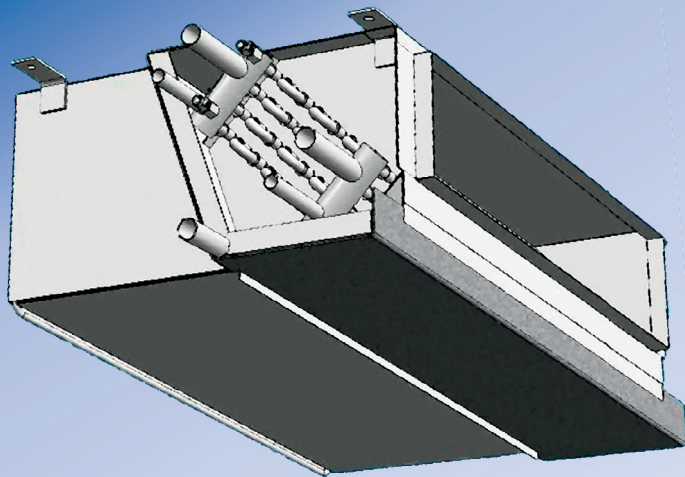
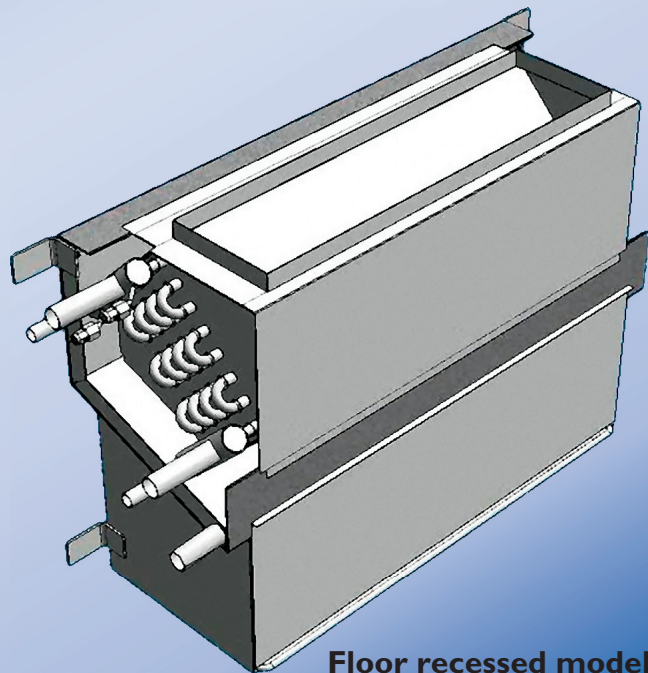


Fan Coil Units

For hotel and office projects



Ceiling recessed model



Floor recessed model

Project unit, model SL

biddle



Fan coil units from Biddle were applied in Hotel Sofitel in The Hague.

Project unit

Fan coil units are known for the good results they produce in conditioning the climate per room. For buildings where a larger number of identical units is used and individual climate control is essential, Biddle has developed the project unit, model SL. Instances of such buildings include hotels and offices. This fan coil unit can be applied in both refurbishment/renovation and new build projects.

Inaudible and invisible

The fan coil unit is carried out with very quiet fans and therefore produces very low sound levels. As the unit is hidden in a false ceiling or incorporated into a wall casing system, the unit does not intrude on the interior.

Your own input

Biddle assesses the needs and requirements of the customer on a project by project basis, after which a custom product is realised in mutual consultation. Possible changes include primary spigots, discharge plenums and other control options. The method of mounting the units is also adapted to each individual project.

Hotel Sofitel

At hotel Sofitel in The Hague, the fan coil units were mounted in the false ceiling above the entrance to the hotel rooms. Air is drawn in through an air grille in the partially suspended ceiling at the door, is conditioned in the fan coil unit, and is then blown out again through a dedicated air grille. The unit has a strong focus on proper air distribution at a low air discharge speed.

References

- Hotel Keizerskroon in Apeldoorn
- Holiday Inn in Amsterdam and Antwerp
- Sofitel in The Hague
- Mercure Hotel in Rosmalen
- Novotel in Eindhoven

Hotel room Sofitel, fan coil unit, recessed ceiling model.



Benefits of project unit

- Heating and/or cooling
- Custom-made design
- Recessed floor or ceiling model
- Individual climate control
- High-quality components
- Compact unit
- Fast installation
- Mounting ease

Biddle fan coil unit, model SL, ceiling model with discharge plenum and external drain tray.

Individual controllability

Biddle fan coil units do not only promote the well-being of guests, visitors and staff but also that of all others involved. Thus, they also reckon take the technical and economic needs of owners, advisers and installers into account. The key benefit of applying fan coil units is their individual controllability. The air temperature and air displacement can be set for each individual room, depending on the needs of the people in that room. Other benefits of the unit are the fast and easy installation and the low maintenance. The unit is also characterised by a very low noise level. This is possible by using high-quality, very silent centrifugal fans.

Basic models



The project unit is available in 5 types: SL 50, SL 75, SL 100, SL 125, and SL 150. The air flow rates of these types range from 100 to 1,600 m³/h, at very low noise levels. The unit can be integrated into both ceilings and walls. It can be controlled using a 3-speed switch, offering the modes Off-Low-Medium-High. In addition, you can regulate the desired room temperature using a wall-mounted thermostat.

Model types

Both models are available as top discharge units. A front discharge section is also available.

Type codes

SL 75-HIC3-R-FR4

Unit dimensions

50, 75, 100, 125, 150

Battery type

H1, H2, H4 = water heating

C2, C3, C4 = water cooling

HIC3 = water heating and cooling

(1, 2, 3, 4 = No. of rows)

Water-side connection

(when looking against air direction)

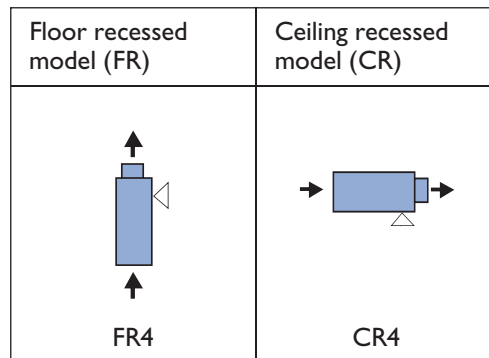
R = right

L = left

Model types

FR = Floor recessed model

CR = Ceiling recessed model



△ = inspection side

➔ = air direction

Installation data		SL 50	SL 75
supply voltage	V; ph; Hz	230; 1; 50	230; 1; 50
max. running current	A	0,35	0,70
max. consumed power	W	80	160

General selection data SL 50

fan speed				1		2		3	4		5		6
tapping voltage	V	60	70	80	90	100	110	115	130	150	170	190	230
power consumption, fans	A	0.07	0.08	0.09	0.11	0.12	0.15	0.15	0.18	0.21	0.25	0.27	0.35
air displacement	m³/h	75	105	135	165	205	245	260	325	400	475	520	545
sound pressure level	dB(A)	10	16	21	25	30	34	35	40	45	48	51	52
Heating		H1 LPHW 80/60°C						H2 LPHW 80/60°C					
fan speed		1	2	3	4	5	6	1	2	3	4	5	6
air displacement	m³/h	135	205	260	325	475	545	135	205	260	325	475	545
air inlet temperature	°C	20						20					
heating capacity	kW	1.44	1.98	2.36	2.78	3.57	3.91	1.97	2.8	3.42	4.09	5.49	6.09
air outlet temperature	°C	52	49	47	45	42	41	63	61	59	57	54	53
water volume	l/h	63	87	104	122	156	171	86	123	150	179	241	267
water pressure loss	kPa	1.1	1.8	2.5	3.3	5.1	6.0	0.5	1.0	1.4	1.9	3.3	3.9
Cooling		C3 LPCW 6/12°C						C4 LPCW 6/12°C					
fan speed		1	2	3	4	5	6	1	2	3	4	5	6
air displacement	m³/h	135	205	260	325	475	545	135	205	260	325	475	545
air inlet condition	°C/%R.H.	24/50						24/50					
cooling capacity, total	kW	0.7	1	1.2	1.4	1.8	1.9	0.7	1	1.3	1.5	2	2.2
cooling capacity, sensible	kW	0.6	0.8	1	1.2	1.7	1.8	0.6	0.9	1.1	1.3	1.8	2
air outlet temperature	°C	11	12	12	13	14	14	11	11	12	12	13	13
water volume	l/h	97	137	164	193	252	276	105	149	182	217	288	318
water pressure loss	kPa	0.4	0.8	1.1	1.5	2.3	2.7	0.3	0.6	0.8	1.1	1.8	2.1

General selection data SL 75

fan speed			1		2	3		4	5		6		
tapping voltage	V	60	70	80	90	100	110	115	130	150	170	190	230
power consumption, fans	A	0.13	0.15	0.18	0.21	0.24	0.28	0.3	0.36	0.42	0.48	0.54	0.69
air displacement	m³/h	145	200	250	300	365	430	475	605	715	830	900	955
sound pressure level	dB(A)	14	20	24	29	33	37	38	43	47	50	52	53
Heating		H1 LPHW 80/60°C						H2 LPHW 80/60°C					
fan speed		1	2	3	4	5	6	1	2	3	4	5	6
air displacement	m³/h	200	300	365	475	605	830	200	300	365	475	605	830
air inlet temperature	°C	20						20					
heating capacity	kW	2.2	3	3.5	4.25	5	6.15	2.95	4.21	4.95	6.15	7.5	9.55
air outlet temperature	°C	53	50	48	47	45	42	64	62	60	59	57	54
water volume	l/h	97	132	153	186	220	269	130	185	218	271	328	418
water pressure loss	kPa	2.9	5.0	6.6	9.2	12.5	17.8	1.5	2.7	3.6	5.3	7.4	11.4
Cooling		C3 LPCW 6/12°C						C4 LPCW 6/12°C					
fan speed		1	2	3	4	5	6	1	2	3	4	5	6
air displacement	m³/h	200	300	365	475	605	830	200	300	365	475	605	830
air inlet condition	°C/%R.H.	24/50						24/50					
cooling capacity, total	kW	1.1	1.5	1.8	2.2	2.7	3.3	1.2	1.7	2	2.4	3	3.8
cooling capacity, sensible	kW	0.9	1.3	1.5	1.9	2.3	3	0.9	1.3	1.6	2	2.5	3.3
air outlet temperature	°C	11	11	12	12	12	13	10	11	11	11	12	12
water volume	l/h	156	219	257	316	379	473	165	236	280	349	424	540
water pressure loss	kPa	1.3	2.4	3.2	4.6	6.4	9.4	0.9	1.7	2.3	3.3	4.7	7.2

Installation data		SL 100	SL 125
supply voltage	V; ph; Hz	230; 1; 50	230; 1; 50
max. running current	A	0,70	1,05
max. consumed power	W	160	245

General selection data SL 100

			1	2	3	4	5	6	7	8	9	10	11	12	
fan speed															
tapping voltage	V	60	70	80	90	100	110	115	130	150	170	190	230		
power consumption, fans	A	0.13	0.15	0.18	0.21	0.24	0.29	0.3	0.36	0.42	0.49	0.54	0.69		
air displacement	m ³ /h	150	210	270	330	410	490	525	650	800	955	1040	1100		
sound pressure level	dBA	10	16	21	25	30	34	35	40	45	48	51	52		
Heating		HI	LPHW 80/60°C						H2	LPHW 80/60°C					
fan speed		1	2	3	4	5	6	1	2	3	4	5	6		
air displacement	m ³ /h	210	410	525	650	800	1040	210	410	525	650	800	1040		
air inlet temperature	°C	20						20							
heating capacity	kW	2.35	3.96	4.76	5.57	6.44	7.57	3.14	5.61	6.89	8.18	9.64	11.8		
air outlet temperature	°C	53	49	47	45	44	41	64	61	59	57	55	53		
water volume	l/h	104	174	209	244	282	332	137	246	302	359	422	515		
water pressure loss	kPa	0.6	1.5	2.0	2.7	3.5	4.6	0.3	0.8	1.2	1.6	2.0	2.9		
Cooling		C3	LPCW 6/12°C						C4	LPCW 6/12°C					
fan speed		1	2	3	4	5	6	1	2	3	4	5	6		
air displacement	m ³ /h	210	410	525	650	800	1040	210	410	525	650	800	1040		
air inlet condition	°C/%R.H.	24/50						24/50							
cooling capacity, total	kW	1.1	1.9	2.3	2.7	3.1	3.7	1.2	2.1	2.6	3	3.6	4.3		
cooling capacity, sensible	kW	0.9	1.7	2	2.5	2.9	3.6	0.9	1.7	2.2	2.6	3.1	4		
air outlet temperature	°C	11	12	12	13	13	14	11	11	12	12	12	13		
water volume	l/h	158	273	331	387	448	534	168	299	366	434	509	615		
water pressure loss	kPa	0.2	0.6	0.9	1.2	1.5	2.1	0.2	0.5	0.7	0.9	1.2	1.6		

General selection data SL 125

			1	2	3	4	5	6	7	8	9	10	11	12	
fan speed															
tapping voltage	V	60	70	80	90	100	110	115	130	150	170	190	230		
power consumption, fans	A	0.16	0.2	0.24	0.29	0.34	0.4	0.43	0.52	0.63	0.73	0.82	1.03		
air displacement	m ³ /h	220	295	370	450	550	650	720	920	1100	1275	1375	1485		
sound pressure level	dBA	13	19	24	28	32	36	37	42	47	50	52	54		
Heating		HI	LPHW 80/60°C						H2	LPHW 80/60°C					
fan speed		1	2	3	4	5	6	1	2	3	4	5	6		
air displacement	m ³ /h	295	450	650	720	920	1275	295	450	650	720	920	1275		
air inlet temperature	°C	20						20							
heating capacity	kW	3.3	4.57	6.02	6.5	7.76	9.55	4.4	6.4	8.67	9.43	11.5	14.8		
air outlet temperature	°C	53	50	47	47	45	42	64	62	60	59	57	54		
water volume	l/h	145	200	264	285	340	418	193	280	380	413	503	647		
water pressure loss	kPa	1.3	2.3	3.7	4.2	5.8	8.3	0.6	1.2	2.1	2.4	3.4	5.3		
Cooling		C3	LPCW 6/12°C						C4	LPCW 6/12°C					
fan speed		1	2	3	4	5	6	1	2	3	4	5	6		
air displacement	m ³ /h	295	450	650	720	920	1275	295	450	650	720	920	1275		
air inlet condition	°C/%R.H.	24/50						24/50							
cooling capacity, total	kW	1.6	2.3	3	3.3	3.9	5	1.7	2.4	3.3	3.6	4.4	5.7		
cooling capacity, sensible	kW	1.3	1.9	2.6	2.9	3.5	4.6	1.3	2	2.8	3	3.8	5		
air outlet temperature	°C	11	12	12	12	13	13	11	11	11	11	12	12		
water volume	l/h	227	324	435	471	565	710	241	350	478	520	632	811		
water pressure loss	kPa	0.6	1.0	1.7	2.0	2.8	4.1	0.4	0.7	1.2	1.4	2.0	3.2		

Installation data		SL 150
supply voltage	V; ph; Hz	230; 1; 50
max. running current	A	1.05
max. consumed power	W	245

General selection data SL 150

fan speed			1		2		3		4	5	6		
tapping voltage	V	60	70	80	90	100	110	115	130	150	170	190	230
power consumption, fans	A	0.16	0.23	0.27	0.32	0.36	0.44	0.45	0.54	0.63	0.74	0.81	1.04
air displacement	m ³ /h	220	315	405	500	610	725	790	975	1205	1430	1560	1640
sound pressure level	dBA	10	16	21	25	30	34	35	40	45	48	51	52
Heating		H1		LPHW 80/60°C				H2		LPHW 80/60°C			
fan speed		1	2	3	4	5	6	1	2	3	4	5	6
air displacement	m ³ /h	315	500	725	975	1205	1430	315	500	725	975	1205	1430
air inlet temperature	°C	20						20					
heating capacity	kW	3.65	5.23	6.93	8.63	10	11.1	4.78	7.24	9.89	12.6	14.9	17
air outlet temperature	°C	54	51	48	46	45	43	65	63	60	58	57	55
water volume	l/h	160	229	304	378	439	487	210	318	433	553	654	747
water pressure loss	kPa	1.8	3.4	5.5	8.1	10.6	12.7	0.9	1.8	3.1	4.7	6.3	8.0
Cooling		C3				LPCW 6/12°C			C4		LPCW 6/12°C		
fan speed		1	2	3	4	5	6	1	2	3	4	5	6
air displacement	m ³ /h	315	500	725	975	1205	1430	315	500	725	975	1205	1430
air inlet condition	°C/%R.H.	24/50						24/50					
cooling capacity, total	kW	1.8	2.6	3.6	4.5	5.3	6	1.9	2.8	3.9	5	5.9	6.7
cooling capacity, sensible	kW	1.4	2.2	3	3.9	4.6	5.3	1.5	2.2	3.2	4.1	5	5.8
air outlet temperature	°C	11	11	12	12	13	13	10	11	11	11	12	12
water volume	l/h	253	377	511	645	756	854	265	403	557	713	845	965
water pressure loss	kPa	0.8	1.6	2.7	4.1	5.4	6.7	0.5	1.1	1.9	2.9	4.0	5.0



Biddle fan coil unit, model SL, ceiling model with discharge plenum and air inlet nozzles for primary air inlet.

Unit dimensions		Sound pressure level*	Sound power level**								
		in dBA	Per octave band in the medium frequency, in dB (ref 1 x 10 ⁻¹² W)								
Type	Fan speed	Lp	63 Hz	125 Hz	250 Hz	500 Hz	1000 HZ	2000 Hz	4000 Hz	8000 Hz	Lw
SL 50	1	21.1	44.5	31.4	34.7	32.7	25.3	16.3	0.0	0.0	32.5
	2	29.7	45.8	39.0	43.3	41.1	34.7	26.7	13.6	0.0	41.2
	3	35.2	46.5	43.8	48.2	46.0	41.2	34.5	23.1	6.7	46.6
	4	39.6	47.2	47.3	51.8	49.7	46.3	40.9	31.4	16.2	51.1
	5	48.4	48.3	54.8	60.0	57.7	55.4	50.8	45.6	33.2	59.9
	6	51.8	48.7	57.5	63.6	61.2	58.4	54.2	50.0	39.1	63.3

Type	Fan speed	Lp	63 Hz	125 Hz	250 Hz	500 Hz	1000 HZ	2000 Hz	4000 Hz	8000 Hz	Lw
SL 75	1	19.8	43.6	32.8	33.5	34.3	24.4	11.8	0.0	0.0	33.0
	2	28.9	44.6	40.7	42.2	43.2	34.9	24.1	12.0	0.0	42.1
	3	32.6	45.1	42.7	45.7	46.6	39.4	29.6	18.7	0.2	45.7
	4	38.1	45.7	46.8	50.8	51.7	45.6	37.1	27.6	11.1	51.2
	5	43.1	46.3	49.5	54.8	55.7	52.1	44.5	35.2	20.4	56.3
	6	50.2	47.0	55.7	61.8	62.7	58.8	52.9	47.3	35.1	63.4

Type	Fan speed	Lp	63 Hz	125 Hz	250 Hz	500 Hz	1000 HZ	2000 Hz	4000 Hz	8000 Hz	Lw
SL 100	1	16.0	46.7	29.6	32.5	30.5	22.2	12.3	0.0	0.0	30.5
	2	29.7	48.8	42.0	46.3	44.2	37.8	29.8	16.6	0.0	44.2
	3	35.2	49.5	46.8	51.2	49.1	44.2	37.6	26.1	9.7	49.7
	4	39.6	50.2	50.3	54.8	52.7	49.3	43.9	34.4	19.2	54.1
	5	44.6	50.8	54.6	59.8	57.5	54.2	49.1	41.9	28.5	59.1
	6	50.6	51.6	59.5	65.0	62.7	60.4	56.2	51.5	39.9	65.0

Type	Fan speed	Lp	63 Hz	125 Hz	250 Hz	500 Hz	1000 HZ	2000 Hz	4000 Hz	8000 Hz	Lw
SL 125	1	19.1	43.5	33.3	34.9	35.7	26.2	14.3	0.0	0.0	34.4
	2	27.7	45.9	41.0	43.7	44.1	35.5	25.3	12.2	0.0	43.0
	3	35.9	48.1	46.4	50.9	51.4	45.7	38.1	25.2	5.7	51.1
	4	37.4	48.7	48.4	52.9	52.9	47.1	39.5	28.5	10.4	52.7
	5	41.9	50.1	51.3	56.8	56.3	52.7	46.2	36.6	21.8	57.1
	6	50.4	52.0	58.5	64.7	64.2	61.1	56.3	50.4	38.1	65.7

Type	Fan speed	Lp	63 Hz	125 Hz	250 Hz	500 Hz	1000 HZ	2000 Hz	4000 Hz	8000 Hz	Lw
SL 150	1	16.0	48.5	31.4	34.2	32.3	23.9	14.1	0.0	0.0	32.2
	2	25.3	49.9	39.9	43.6	41.5	34.9	26.7	10.5	0.0	41.5
	3	33.7	51.0	47.4	51.5	49.4	44.3	37.8	24.5	7.8	49.9
	4	39.6	51.9	52.1	56.5	54.5	51.1	45.7	36.1	20.9	55.8
	5	44.6	52.6	56.4	61.6	59.3	56.0	50.9	43.6	30.2	60.8
	6	48.4	53.1	59.6	64.8	62.5	60.2	55.5	50.3	37.9	64.7

* The sound pressure levels are based on the reverberation field in a reference room (see page 8).

** The value <0 indicates that the relevant value is below the hearing threshold.

Explanation of Technical Data

Sound

The tables on pages 4 to 6 provide the sound pressure levels in the reverberation field for all six fan speed settings. These sound pressure level values are based on the use of one fan coil unit in a reference room.

Reference Room

For each type of fan coil unit, a room has been used as a reference for expressing the sound pressure level. The reference room (V_0) depends on the dimensions of the unit, such that the air circulation ratio in the room will be about 2 at fan speed 4. The reference room is given in the following table. As many offices have sound-absorbing ceilings, an average reverberation time of 0.5 second has been assumed.

Unit dimensions	Reference room
SL 50	175 m ³
SL 75	258 m ³
SL 100	350 m ³
SL 125	420 m ³
SL 150	525 m ³

Deviating room and multiple units

If a unit is used in a deviating room, or if multiple units are used in a single room, the sound pressure level must be recalculated. This can be done using the below formula, whereby the relevant table value can be found in the tables on pages 4 to 6 (General selection data).

$$\text{table value} + \left(10 \cdot \log \frac{T}{T_0} - 10 \cdot \log \frac{V}{V_0} + 10 \cdot \log n \right)$$

T = Reverberation value, deviating room [s]

T_0 = Reverberation value is 0.5 s

V = Volume, deviating room [m³]

V_0 = Volume, reference room [m³] (see table)

n = No. of units

Sample calculation

Needed: the sound pressure level in the reverberation field if three SL 75 fan coil units are used at fan speed 3 in a room with a reverberation time of 0.6 second and a volume of 600 m³.

$$33 + \left(10 \cdot \log \frac{0,6}{0,5} - 10 \cdot \log \frac{600}{258} + 10 \cdot \log 3 \right)$$

$$= 33 + (0,8-3,7+ 4,8) \approx 35 \text{ dBA}$$

Explanation of Technical Data

Correction coefficients – heating capacity

Explanation

The correction coefficients apply for the capacities in the tables on pages 4 to 6. They give an indication of the capacity if water temperatures and air conditions are different. For exact data, please refer to and seek advice from Biddle staff.

The heating capacities for the battery types H1 and H2 listed in the tables on pages 4 to 6 are based on a water temperature range of 80/60 °C. If water temperatures differ, the heating capacity is to be multiplied by the factors in the below table. These factors are applicable to the heating capacity in the tables on pages 4 to 6 at an air inlet temperature of 20°C.

The below table provides the correction coefficients for the battery types H1 and H2.

H1 and H2

LPHW	air inlet temperature			
	-10 °C	0 °C	10°C	20 °C
90/70°C	2,0	1,8	1,5	1,2
80/60°C	1,8	1,5	1,2	1
70/50°C	1,5	1,3	1,0	0,8
60/40°C	1,3	1,0	0,8	0,5
50/30°C	1,0	0,8	0,5	0,3

Correction coefficients for heating capacities of the battery types H1 and H2.

Correction coefficients – cooling capacity

The cooling capacities for the battery types C3 and C4 listed in the tables on pages 4 to 6 are based on a water temperature range of 6-12°C and on an air inlet temperature of 24°C at 50% R.H. If water temperatures and inlet air conditions differ, the cooling capacity is to be multiplied by the coefficients in the below table.

C3 and C4

LPCW		air inlet temperature / relative humidity					
		40% R.H.		50% R.H.		60% R.H.	
		Q_t	Q_v	Q_t	Q_v	Q_t	Q_v
6/12 °C	22 °C	0.8	0.9	0.8	0.9	0.9	0.8
	24 °C	1.0	1.0	1	1	1.3	1.0
	26° C	1.2	1.2	1.3	1.1	1.7	1.1
	28 °C	1.3	1.3	1.7	1.3	2.1	1.2
8/14°C	22 °C	0.7	0.7	0.7	0.7	0.7	0.7
	24 °C	0.9	0.9	0.9	0.9	0.9	0.8
	26° C	1.0	1.0	1.0	1.0	1.3	1.0
	28 °C	1.2	1.2	1.3	1.1	1.8	1.1
10/16°C	22 °C	0.5	0.5	0.5	0.5	0.5	0.5
	24 °C	0.7	0.7	0.7	0.7	0.7	0.7
	26° C	0.9	0.9	0.9	0.9	0.9	0.8
	28 °C	1.0	1.0	1.0	1.0	1.4	1.0

Correction coefficients for cooling capacities of the battery types C3 and C4.

Q_t = Total cooling capacity

Q_v = Sensible cooling capacity

Explanation of Technical Data

Water volume

If water volumes differ from those listed in the tables on pages 4 to 6, the water volume can be roughly calculated using the below formula. To do so, the capacity must first be recalculated (see page 9).

$$m_w = \frac{Q}{\rho_w c_{pw} \Delta T_w} \cdot 3600 \text{ [l/h]}$$

m_w = water volume [l/h]

Q = capacity [kW] (see page. 9)

ρ_w = density of water [kg/l]

c_{pw} = specific heat of water (= 4,18) [kJ/kg°C]

ΔT_w = water temperature differential

Water pressure loss

If water temperatures differ from those listed in the tables on pages 4 to 6, the water pressure loss can be roughly calculated using the below formula. To do so, the water volume must first be calculated (see above).

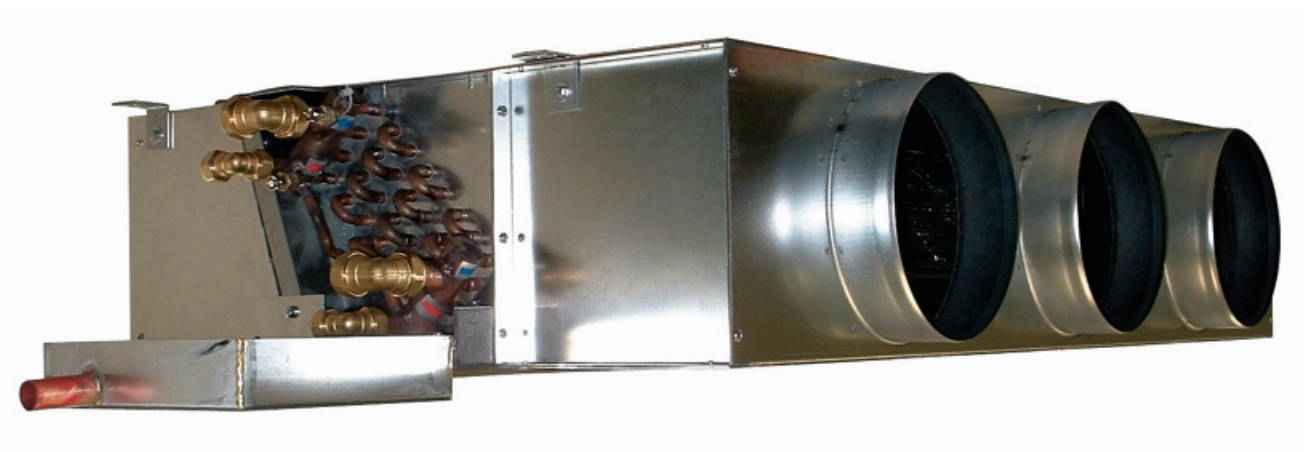
$$\Delta p_{w2} = \Delta p_{w1} \left(\frac{m_{w2}}{m_{w1}} \right)^2$$

Δp_{w2} = water pressure loss

Δp_{w1} = water pressure loss acc. to table values

m_{w1} = water volume acc. to table values

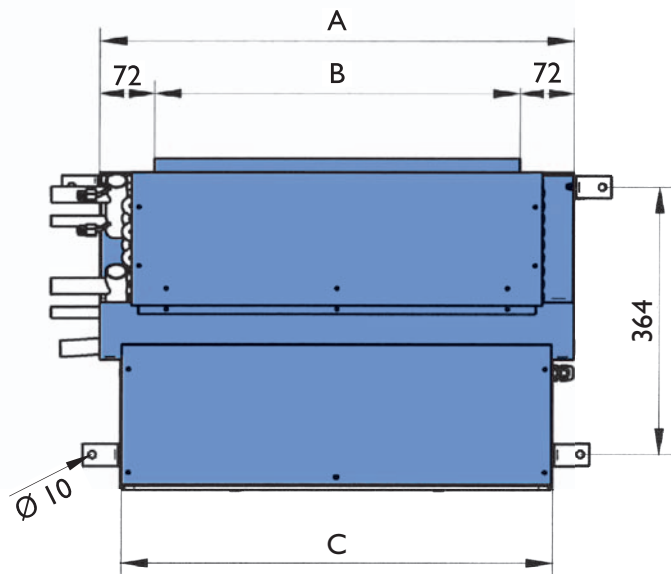
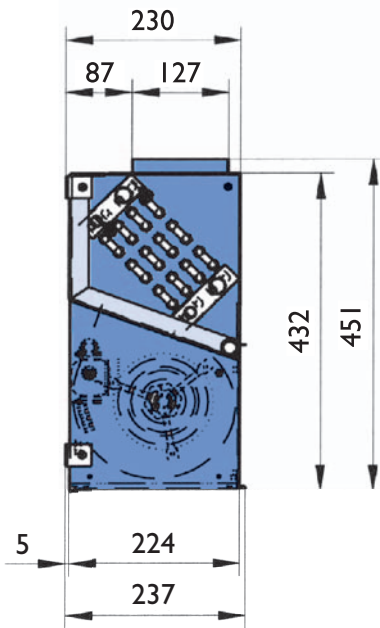
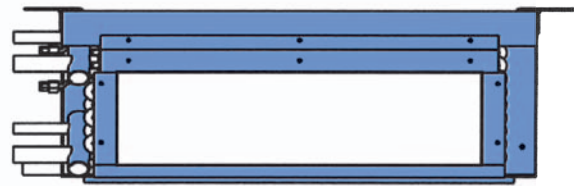
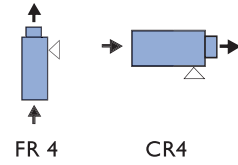
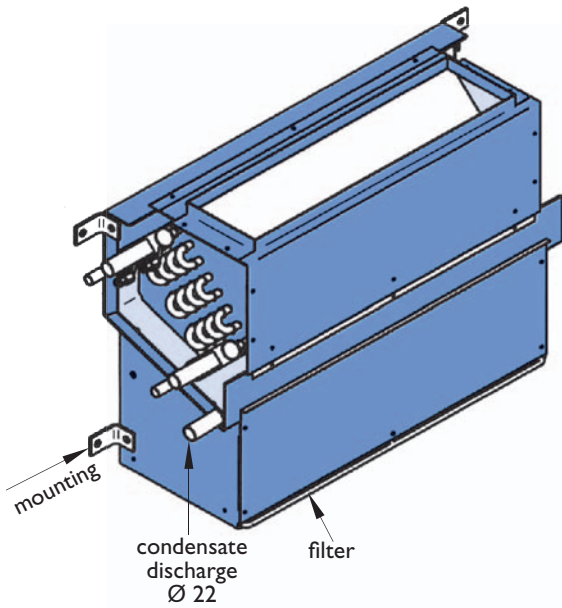
m_{w2} = water volume calculated using formula



Dimensional sketches

The in- and outlet plenums are specifically designed for each individual project. Detailed dimensional sketches available on request.

Illustrated SL 50-HIC3-L-FR4/CR4



Unit	Dimensions		
	A	B	C
SL 50	625	482	569
SL 75	875	732	819
SL 100	1125	982	1069
SL 125	1375	1232	1319
SL 150	1625	1482	1569

All dimensions in mm.

Water-side connections: C = Ø 22 mm, H = Ø 15 mm.

Specifications

Fan/Motor Assembly

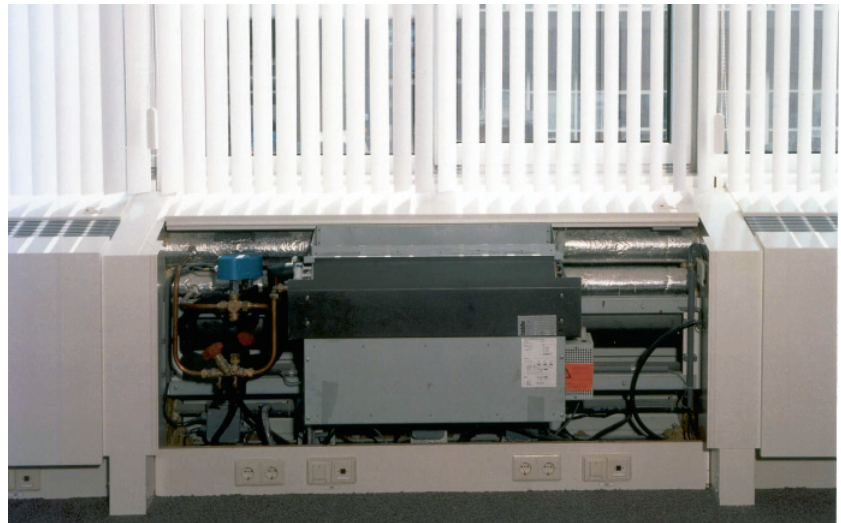
One or more (depending on type) dual-inlet, vibration-free suspended centrifugal fans, driven by a rotor motor on ball bearings. The fan casing and the impeller are made of zinc coated sheet steel. The motor is manufactured according to DIN 40050, Protection Class IP44, Insulation Class B. The motors have, as a standard, thermal contacts in the windings. These thermal contacts will break the circuit when the maximum permissible motor temperature is exceeded.

Heating (LPHW) / Cooling (LPCW) Batteries

The high-efficiency batteries are made up of 3/8" copper tubes and aluminum fins. The batteries are available with 2 or 4 rows of tubes. The maximum operating pressure is 6 Bars at 120 °C. To mount the water-side control, squeezing fittings are used, whereby a maximum operating pressure of 3 Bars at 120°C applies.

Cleanable Filter

Both the floor and the ceiling model come as a standard with a removable G2 filter. All units have an insert protection behind the filter. The filter prevents dust in the inlet air from settling on the battery or the fans. The filter is easy to clean with a vacuum cleaner. If the filter is to function optimally, it is recommended to clean it regularly and replace it when necessary.



Subject to change.

Technical information available on request.

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