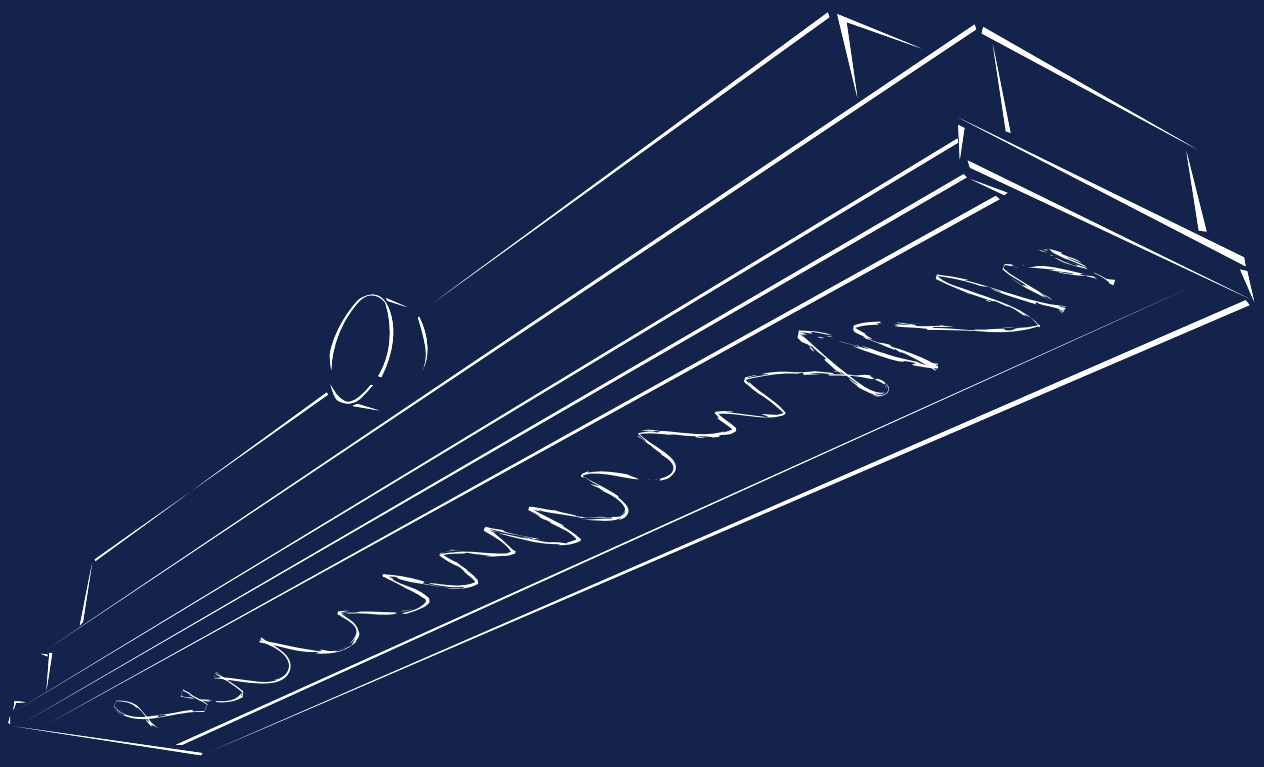


AIR-FIT

Active Chilled Beam

BARCOL-AIR

Index

General Description

Introduction

Barcol-Air Chilled Beam systems create a comfortable indoor climate with low energy consumption and a low ceiling void height.

System Concept

The principle of the chilled beam system is to use terminal chilled water heat exchangers in the ceiling to handle the sensible cooling loads. The ventilation and humidity requirements are taken care of using primary conditioned air supplied by a central air handling unit.

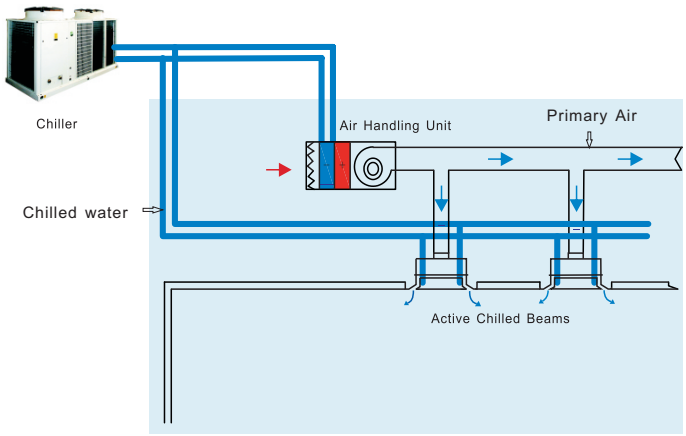


Figure 1: Active Chilled Beam System

Due to the use of relatively high chilled water temperatures, about 15 degrees C, the heat exchangers operate dry avoiding many of the maintenance and health concerns that are associated with other systems using terminal heat exchangers such as fan coil units.

The system provides large energy savings because the amount of air required to be circulated around the building can reduced to close to that required for ventilation and humidity control resulting in large reductions in air handling unit fan power and energy consumption. Further energy savings result from the use of high chilled water temperatures serving the heat exchangers. This can allow the water chiller to operate at higher water temperatures improving chiller operating efficiency and energy consumption.

System Technology

Barcol-Air active chilled beams integrate the primary air distribution function with the secondary air heat exchange using a proprietary air nozzle technology to induce secondary room air into the unit and through the heat exchanger before mixing with the primary air. The resulting mixture of primary air and induced secondary room air is then supplied to the room through the contoured diffusers which are designed to keep the air close to the ceiling using the Coanda effect. The units incorporate multiple primary air nozzles on each side of the unit to allow for the airflow and air discharge pattern to be adjusted.

Barcol-Air's active chilled beams units are designed with nominal widths of 300mm and 600mm to integrate with the ceiling grids of the more popular ceiling configurations. Standard unit lengths are nominally 1,200mm to 3,000mm in 300mm increments but special lengths are also available to match with specific ceiling requirements.

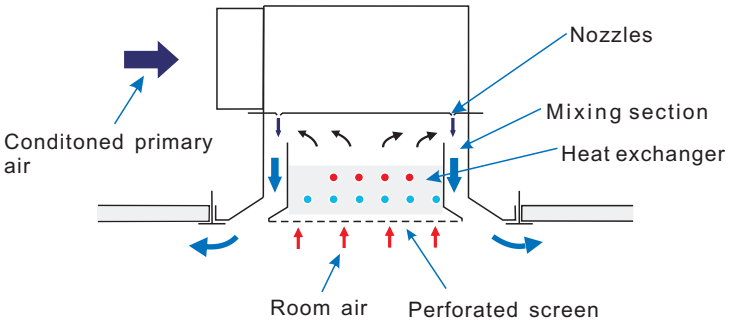


Figure 2: Operating Principle of the Active Chilled Beam.

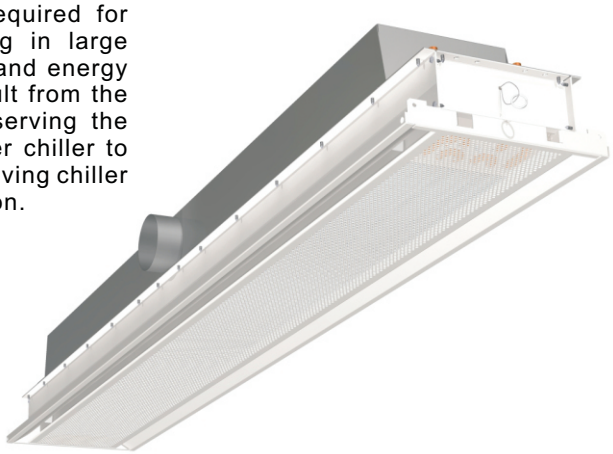


Figure 3: 300mm wide Airfit

General description

Air distribution in the room

The specific shape of the active chilled beam supply slot diffusers create two air streams under the suspended ceiling.

These air streams provide a good distribution of the supply air into the room. The velocity of the supply air along the suspended ceiling creates the Coanda-effect whereby the air stream attaches to the ceiling, extending the throw of the supply air. It is important that the ceiling is flat and free of any obstacles, especially light fixtures situated close to the slots which can influence the Coanda-effect.

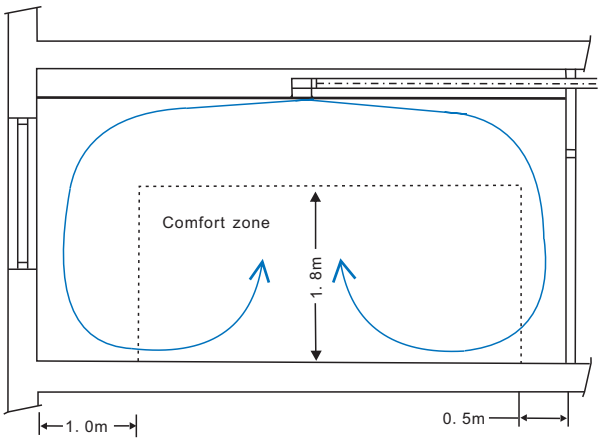


Figure 4: Air distribution

Facade-orientation

Orientation of the active chilled beam with regard to the facade has no influence on the operation and the active chilled beams can be installed either perpendicular or parallel to the facade.

The choice between these configurations should be determined by:

- Aesthetics (fitting into the pattern of the ceiling).
- Level of flexibility to create rooms within the floor plan
- Number of active chilled beams.
- Available distance for the throw; the air must have the opportunity to mix before it reaches the comfort zone.
- Disturbances from the ceiling which might influence air pattern, like lighting fixtures.
- Disturbances from the facade or floor, like radiators or floor convectors, that might influence the air pattern.

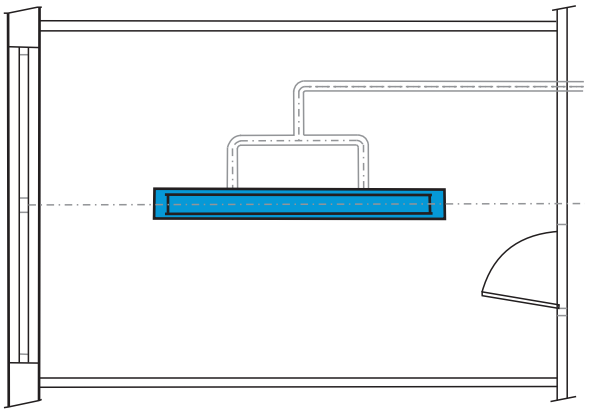


Figure 5: AIR-FIT application perpendicular to the facade

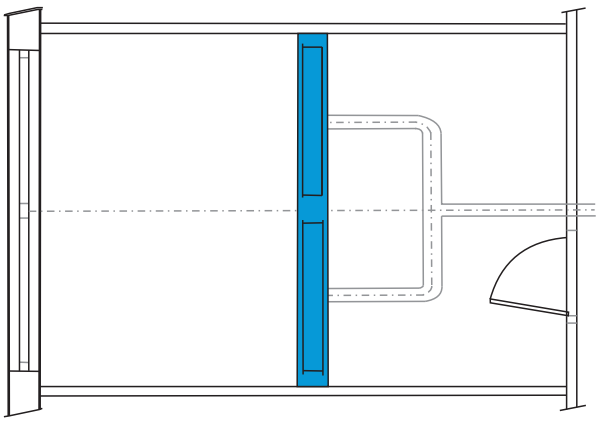


Figure 6: AIR-FIT application parallel to the facade

Features of the Barcol-Air active chilled beam

Configuration Choices:

Barcol-Air Active Chilled Beams are available with 2 pipe heat excharges for cooling only or heating only with change over systems or 4 pipe heat excharges for simultaneous cooling and heating.

Simplicity in mounting:

With a width of 295mm or 595 mm, the active chilled beam can be perfectly integrated into suspended ceilings with exposed T bar or other ceiling systems.

Different capacities:

The active chilled beam are available in different lengths varying from 1200 mm to 3000 mm providing a wide range of unit capacities.

Multi-nozzle technology:

The units are provided with three nozzle selections. The primary air volume of every unit can be easily adjusted, even after mounting into the ceiling. A complete shut-off on one side is an available option.

Controls:

The water flow to the heat exchanger should be controlled in accordance with the demands of the room thermostat installed in the occupied space. HC Barcol-Air can provide a specific control solution to match each project's specific control needs.

Diffuser Choices:

The units are available with perforated induction air diffuser or linear slot diffuser to meet the aesthetic requirements of the project.

Performance Choices:

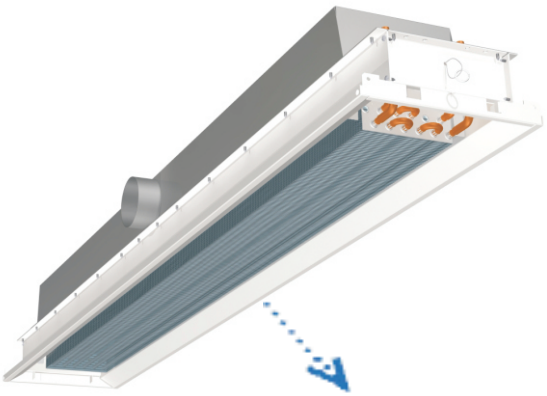
In addition to the standard coil configuration, special coil designs can be provided for specific applications and performances.

Figur 7: Linear Diffuser

Product presentation

Air distribution plenum:
- Galvanized steel, uninsulated
- Spigot(s) for duct connection (other air connections available on request)

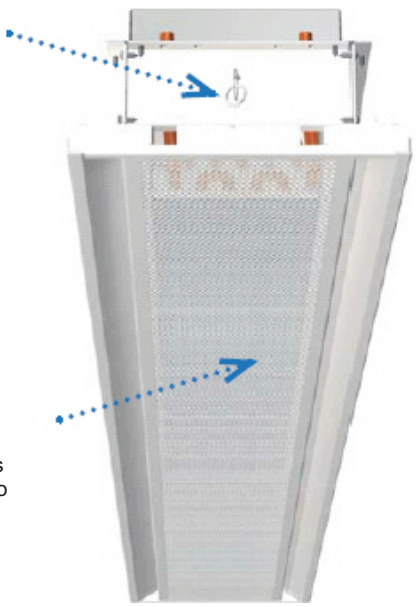
Frontview:
Polyestor coating, RAL9010
(Other colour finish on request)



Heat exchanger:
- Tubes: copper
- Fins: aluminium
- Pressure tested: 20bar

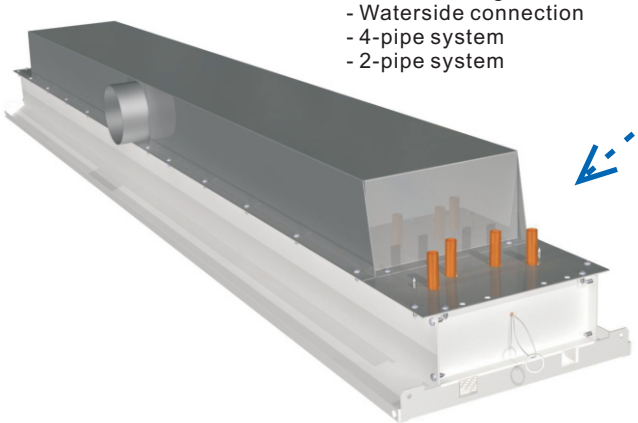
Multi-Nozzle adjustment
- positon 1, 2 or 3
- complete shut-off on request

Safety wire:
- Wire connection between perforated screen and unit



Maintenance:
- Removable induction air diffuser to access heat exchanger and to adjust primary air nozzles.

Heat exchanger:
- Waterside connection
- 4-pipe system
- 2-pipe system



Available Models:

- AIR-FIT 300
- AIR-FIT 600

System Benefits

○ Energy savings

- Primary air requirements can be reduced to only that needed for ventilation and humidity control and the induction process, typically 1.5 to 2.5 l/s per m^2 of floor area. This results in large savings in fan energy consumption.
- The system operates with high entering chilled water temperatures - about 15 degrees C and if dedicated chillers are used for the chilled beam water circuits large energy savings can be achieved.
- The system operates with low temperature heating water, as low as 35 degrees C, and therefore chiller heat reclaim or heat pumps can be used as the hot water source eliminating the additional energy costs for supplementary heating with boilers.

○ Improved Air Quality

- Reduced air flows may allow for 100% outdoor air or less recycled air to be used for the primary air improving air quality and reducing the possibility for pollutants or germs to be recycled

.

○ Reduced Plant Room Space

The need for less airflow results in floor space savings for:
- Duct risers.
- Air handling plant can generally be reduced by 30% or more.

○ Less Maintenance

The active chilled beam has no filter, no fan or any other moving parts, therefore maintenance is limited to cleaning the heat exchanger every 1-2 years depending on the dust concentration in the room using a simple vacuum cleaner. The heat exchanger can be accessed simply by removing the induction air diffuser which is equipped with safety support wires.

○ Hygiene

With the elimination of filters and drain pans in the occupied space the risk of bacteria growth is eliminated.

○ Flexibility

The active chilled beams can be easily relocated to suit reconfigured partitions and space utilization.

○ Capital Costs

The first cost of a chilled beam system is often similar to an all air system but there are opportunities for considerable savings in the total capital cost of the building due to:

Space savings

- The risers for air ducts can be much smaller.
- Plant room saving due to much smaller air handling units.
- Chiller plant room savings because chillers can be smaller when operating with higher chilled water temperatures.

Saving in Floor to Slab Heights.

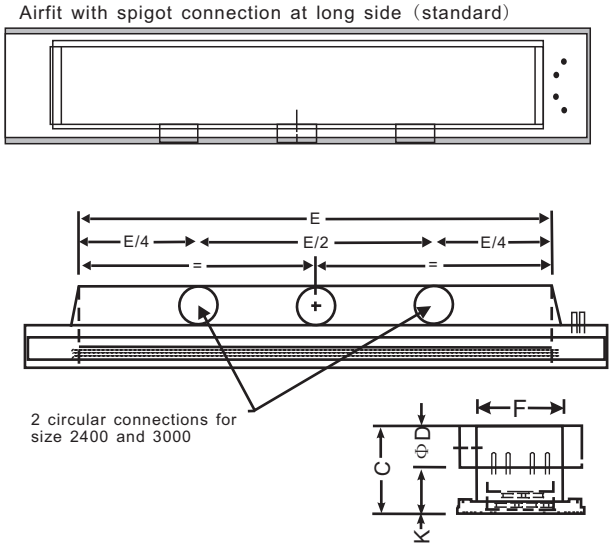
Due to the low height of the chilled beam terminals the system can be used with a low height ceiling void with as little as 250 mm between the ceiling and the slab above.

○ Life Cycle Costs

Overall life cycle costs offer significant benefit due to:
- Reduced energy costs
- Practically no maintenance
- System flexibility which allows for the layout to be easily reconfigured to suit space usage changes.

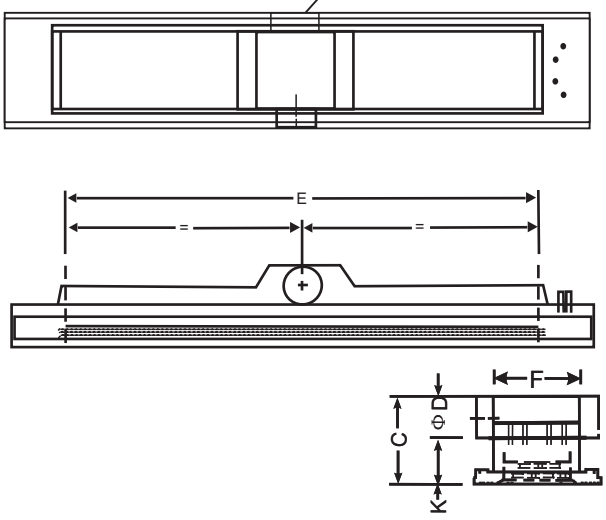
Dimension AIR-FIT 300

AIRFIT
Airfit with spigot connection at long side (standard)

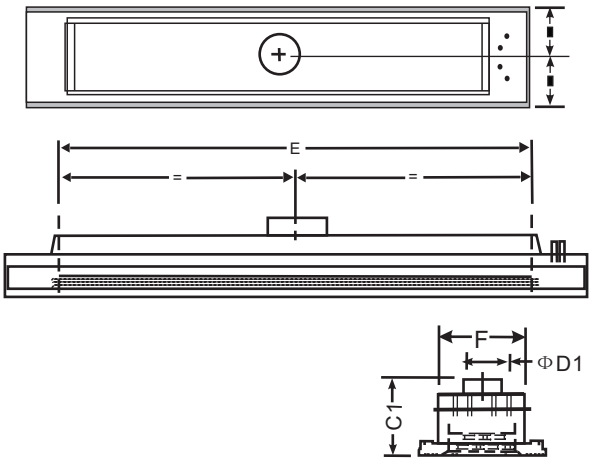


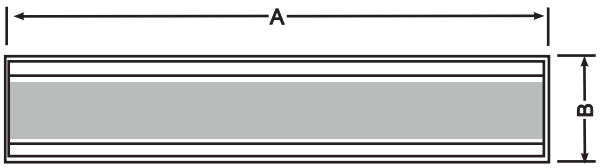
AIRFITV
Airfit with reduced height

Optional: extra circular connection for sizes 2400 and 3000



AIRFITB
Airfit with top connection





Product Codes:
4-pipe system: AIRFIT (standard)
AIRFITB (top connection)
AIRFITV (reduced height)
2-pipe system: AIRFITK (standard)
AIRFITKB (top connection)
AIRFITKV (reduced height)

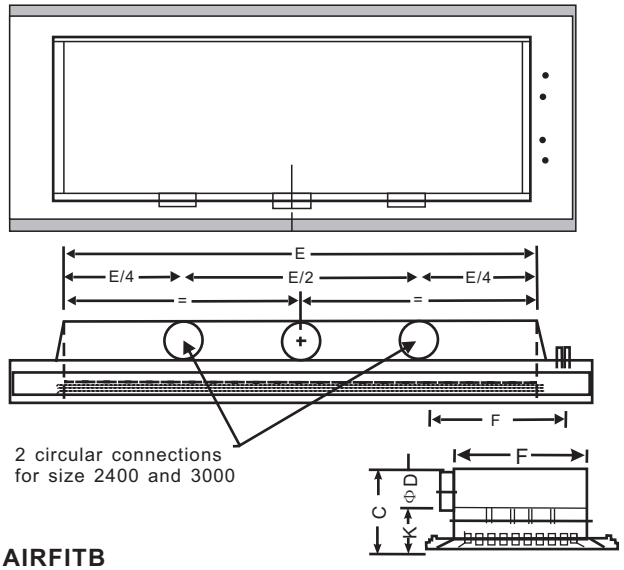
Table1: Dimensional data AIR-FIT 300

Size	1200	1500	1800	**2400**	3000
A	1194	1494	1794	**2394**	2994
B	293	293	293	**293**	293
C	210	210	210	**210**	210
C1	191	191	191	**191**	191
D	1 x ø98	1 x ø98	1 x ø98	**2 x ø98**	2 x ø98
D1	1 x ø98	1 x ø98	1 x ø98	**1 x ø123**	1 x ø158
E	915	1215	915	**2115**	2715
F	109	109	109	**109**	109
K	110	110	110	**110**	110
Weight (kg)[4]	15	18	21	**29**	36

1. Dimensions in mm.
2. On request, Barcol-Air can provide air connectors on the short side of the plenum.
3. Intermediate lengths are available on request.
4. Weight in kg including water content.

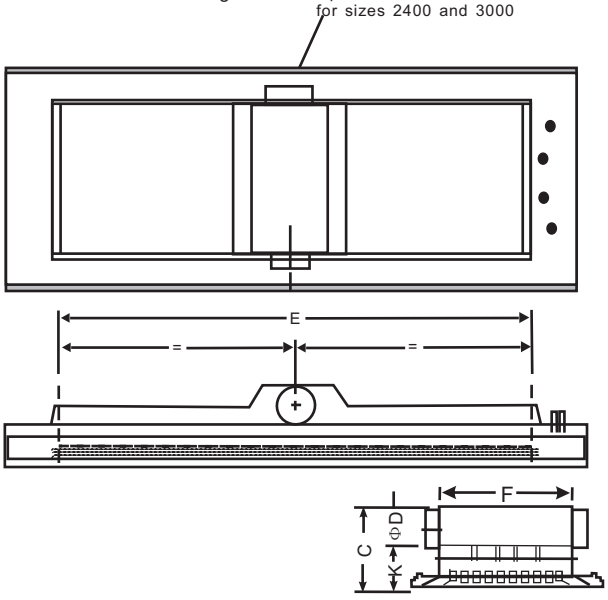
Dimension AIR-FIT 600

AIRFIT
Airfit with spigot connection at long side (standard)

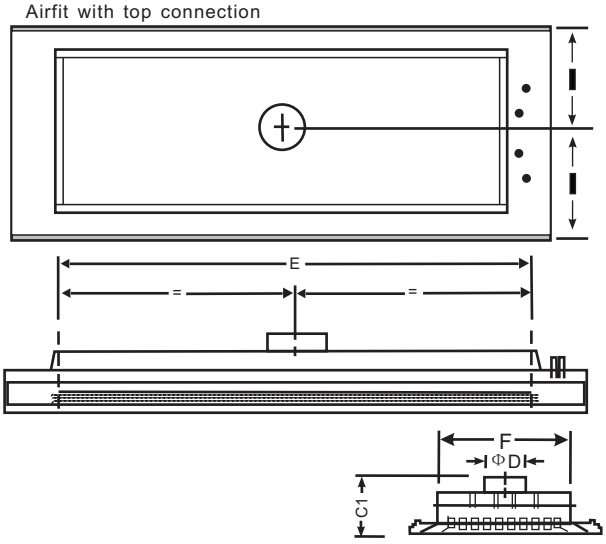


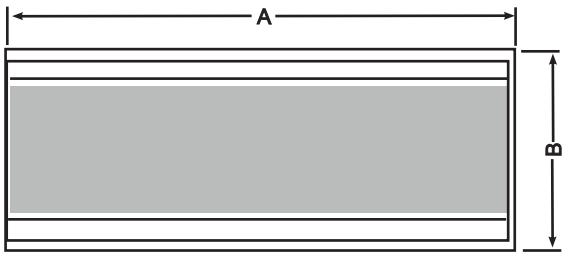
AIRFITV
Airfit with reduced height

Optional: extra circular connection for sizes 2400 and 3000



AIRFITB
Airfit with top connection





Product Codes:
4-pipe system: AIRFIT (standard)
AIRFITB (top connection)
AIRFITV (reduced height)
2-pipe system: AIRFITK (standard)
AIRFITKB (top connection)
AIRFITKV (reduced height)

Table2: Dimensional data AIR-FIT 600

Size	1200	1500	1800	2400	3000
A	1194	1494	1794	**2394**	2994
B	593	593	593	**593**	593
C	242	242	242	**242**	242
C1	198	198	198	**198**	198
D	1 x ø123	1 x ø123	1 x ø123	**2 x ø123**	2 x ø123
D1	1 x ø123	1 x ø123	1 x ø123	**1 x ø158**	1 x ø198
E	915	1215	1515	**2115**	2715
F	416	416	416	**416**	416
K	116	116	116	**116**	116
Weight (kg)[4]	25	30	34	**44**	54

1. Dimensions in mm.
2. On request, Barcol-Air can provide air connectors on the short side of the plenum.
3. Intermediate lengths are available on request.
4. Weight in kg including water content.

Selection example

Specified data:

Office (LxWxH)	5.4 x 3.6 x 2.7 m
Occupants:	2
Minimum Ventilation	2 x 30 m^3/h
Preferred size of chilled beams	1800 x 300 mm (2 units)
Summer room design condition	24 deg C with 50% Relative Humidity (Dew point 14 deg C)
Chilled Water temperature	15 deg C (Room Dew Point 13 deg C + 2 deg C)
Summer supply air temperature	12 deg C
Summer sensible cooling requirement	1400W
Winter room design condition	20 deg C with 50% Relative Humidity (Dew point 9 deg C)
Heating water temperature	45 deg C
Winter supply air temperature	20 deg C
Winter heating requirement	1450 W

Calculation:

The temperature differences required to make the cooling selection are:
ΔTAC = Troom T1 = 25 - 13 = 12K
ΔTWC = Troom Tw,in = 25 -16 = 9K

The temperature differences required to make the heating selection are:
ΔTAH = T1 Troom = 20 - 20 = 0K
ΔTWH = TW,in Troom = 45 - 20 = 25K

Selection:

Model: Width:	300mm
Length:	1800mm
Catalogue page	10
Nozzle selection:	3
Primary airflow:	80 m^3/h (22 l/s)
Static air pressure in plenum:	67 Pa
Air cooling capacity:	1.213 x 22 x 12 = 320 W (PA = mc_p ΔTAC)
Chilled water flow:	190 l /h
Chilled water pressure drop:	12.5 Kpa
Chilled water cooling capacity:	515 W
Total cooling capacity:	320W + 515W = 835W x 2 units = 1670 W

This satisfies the total sensible cooling requirement of 1650 W

Catalogue page	10
Air heating capacity:	1.213 x 22 x 0 = 0 W (PA = mc_p ΔTAH)
Heating water flow:	100 l/h
Heating water pressure drop:	2.4 Kpa
Heating water heating capacity:	745 W
Total heating capacity:	0 W + 745 W = 745 W x 2 units = 1490 W

This satisfies the total heating requirement of 1450 W

For non standard applications and/or selections, please contact our technical staff.

Performance data AIR-FIT 300

Cooling

Multi Nozzle	q1	q1	p_{st}	Cooling capacity air PA (W) $\Delta T_{AC} = T_{room} - T_1$(K)				ΔP_w	q_w	Cooling capacity water Pw (W) $\Delta T_{WK} = T_{room} - T_{water,in}$(K), $T_{water,in}$>dew point air + 2K								T	L_{pA}	L_{pA}	L_{pA}
				7	8	9	10			7		8		9		10					
Position	(m^3/h)	(l/s)	(Pa)	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	(kPa)	(l/h)	$P_{A,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	(m)	(dB(A))	(NC)	(NR)

Chilled beam model 300-size 1200 mm

Nozzle-position	m^3/h	L/s	P_{st}	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	Kpa	L/h	$P_{W,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	T	L_{pA}	L_{pA}	L_{pA}
1	25	7	69	59	67	75	84	1.5 4.7 9.4	70 130 190	120 165 190	1.5 1.1 0.9	135 185 215	1.7 1.2 1.0	150 200 235	1.8 1.3 1.1	160 220 255	2.0 1.5 1.2	0.5	--	--	--
	30	8	99	70	80	90	101	1.5 4.7 9.4	70 130 190	130 180 205	1.6 1.2 0.9	145 195 230	1.8 1.3 1.0	160 215 250	2.0 1.4 1.1	175 235 275	2.1 1.6 1.2	0.6	25	20	22
	35	10	134	82	94	106	117	1.5 4.7 9.4	70 130 190	150 195 220	1.8 1.3 1.0	165 215 245	2.0 1.4 1.1	180 235 270	2.2 1.6 1.2	200 260 295	2.5 1.7 1.3	0.7	30	25	27
2	35	10	73	82	94	106	117	1.5 4.7 9.4	70 130 190	135 185 215	1.7 1.2 1.0	150 205 235	1.8 1.4 1.1	165 225 260	2.0 1.5 1.2	180 245 285	2.2 1.6 1.3	0.7	--	--	--
	40	11	96	94	107	121	134	1.5 4.7 9.4	70 130 190	145 195 225	1.8 1.3 1.0	165 220 250	2.0 1.5 1.1	180 240 280	2.2 1.6 1.3	195 260 305	2.4 1.7 1.4	0.9	29	24	26
	45	13	121	106	121	136	151	1.5 4.7 9.4	70 130 190	160 205 235	2.0 1.4 1.1	175 230 260	2.1 1.5 1.2	195 250 290	2.4 1.7 1.3	210 275 315	2.6 1.8 1.4	1.0	33	28	30
3	45	13	64	106	121	136	151	1.5 4.7 9.4	70 130 190	155 210 240	1.9 1.4 1.1	170 230 270	2.1 1.5 1.2	190 255 295	2.3 1.7 1.3	205 275 320	2.5 1.8 1.4	1.0	28	23	25
	55	15	95	129	147	166	184	1.5 4.7 9.4	70 130 190	170 225 260	2.1 1.5 1.2	190 250 290	2.3 1.7 1.3	210 275 315	2.6 1.8 1.4	230 300 345	2.8 2.0 1.6	1.3	34	29	31
	65	18	133	152	174	196	218	1.5 4.7 9.4	70 130 190	185 240 275	2.3 1.6 1.2	205 265 305	2.5 1.8 1.4	225 295 335	2.8 1.9 1.5	245 320 365	3.0 2.1 1.7	1.6	39	34	36

Chilled beam model 300-size 1500 mm

Nozzle-position	m^3/h	l/s	P_{st}	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	KPa	L/h	$P_{W,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	T	L_{pA}	L_{pA}	L_{pA}
1	35	10	74	82	94	106	117	1.7 5.4 10.9	70 130 190	170 225 260	2.1 1.5 1.2	185 250 290	2.3 1.7 1.3	205 275 320	2.5 1.8 1.4	225 300 350	2.8 2.0 1.6	0.7	--	--	--
	40	11	97	94	107	121	134	1.7 5.4 10.9	70 130 190	175 240 275	2.1 1.6 1.2	195 265 305	2.4 1.8 1.4	218 290 335	2.6 1.9 1.5	235 315 365	2.9 2.1 1.7	0.8	28	23	25
	45	13	122	106	121	136	151	1.7 5.4 10.9	70 130 190	195 255 295	2.4 1.7 1.3	215 285 325	2.6 1.9 1.5	240 315 360	2.9 2.1 1.6	260 340 390	3.2 2.2 1.8	0.9	32	27	29
2	40	11	53	94	107	121	134	1.7 5.4 10.9	70 130 190	165 230 270	2.0 1.5 1.2	185 255 300	2.3 1.7 1.4	205 280 330	2.5 1.9 1.5	225 310 360	2.8 2.0 1.6	0.8	--	--	--
	50	14	83	117	134	151	168	1.7 5.4 10.9	70 130 190	190 255 300	2.3 1.7 1.4	210 285 330	2.6 1.9 1.5	235 315 365	2.9 2.1 1.7	255 345 395	3.1 2.3 1.8	1.1	--	--	--
	60	17	119	141	161	181	201	1.7 5.4 10.9	70 130 190	210 275 315	2.6 1.8 1.4	235 310 350	2.9 2.0 1.6	260 340 385	3.2 2.2 1.7	285 370 425	3.5 2.4 1.9	1.3	30	25	27
3	70	19	85	164	188	211	235	1.7 5.4 10.9	70 130 190	225 295 340	2.8 1.9 1.5	250 330 380	3.1 2.2 1.7	275 365 415	3.4 2.4 1.9	300 395 455	3.7 2.6 2.1	1.6	29	24	26
	80	22	111	188	214	241	268	1.7 5.4 10.9	70 130 190	240 315 360	2.9 2.1 1.6	265 350 400	3.3 2.3 1.8	295 380 435	3.6 2.5 2.0	320 415 475	3.9 2.7 2.1	1.9	32	27	29
	90	25	140	211	241	271	302	1.7 5.4 10.9	70 130 190	255 325 375	3.1 2.1 1.7	280 365 415	3.4 2.4 1.9	310 400 455	3.8 2.6 2.1	340 435 495	4.2 2.9 2.2	2.2	36	31	33

Chilled beam model 300-size 1800 mm

Nozzle-position	m^3/h	l/s	P_{st}	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	Kpa	L/h	$P_{W,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	T	L_{pA}	L_{pA}	L_{pA}
1	40	11	58	94	107	121	134	2.0 6.2 12.5	70 130 190	200 275 325	2.5 1.8 1.5	225 310 360	2.8 2.0 1.6	245 340 395	3.0 2.2 1.8	270 370 430	3.3 2.4 1.9	0.7	26	21	23
	45	13	73	106	121	136	151	2.0 6.2 12.5	70 130 190	210 290 340	2.6 1.9 1.5	235 320 375	2.9 2.1 1.7	260 355 415	3.2 2.3 1.9	280 385 450	3.4 2.5 2.0	0.9	30	25	27
	50	14	91	117	134	151	168	2.0 6.2 12.5	70 130 190	235 310 360	2.9 2.0 1.6	260 345 400	3.2 2.3 1.8	285 380 440	3.5 2.5 2.0	310 415 480	3.8 2.7 2.2	1.0	33	28	30
2	50	14	50	117	134	151	168	2.0 6.2 12.5	70 130 190	210 295 345	2.6 1.9 1.6	235 325 380	2.9 2.1 1.7	260 360 420	3.2 2.4 1.9	280 390 460	3.4 2.6 2.1	1.0	25	20	22
	60	17	71	141	161	181	201	2.0 6.2 12.5	70 130 190	235 320 375	2.9 2.1 1.7	260 360 415	3.2 2.4 1.9	290 395 460	3.6 2.6 2.1	315 430 500	3.9 2.8 2.3	1.3	31	26	28
	70	19	97	164	188	211	235	2.0 6.2 12.5	70 130 190	260 345 395	3.2 2.3 1.8	290 380 440	3.6 2.5 2.0	320 420 485	3.9 2.8 2.2	345 460 252	4.2 3.0 2.4	1.5	35	30	32
3	80	22	67	188	214	241	268	2.0 6.2 12.5	70 130 190	270 365 420	3.3 2.4 1.9	300 405 470	3.7 2.7 2.1	330 445 515	4.1 2.9 2.3	360 485 565	4.4 3.2 2.6	1.8	33	28	30
	90	25	84	211	241	271	302	2.0 6.2 12.5	70 130 190	290 385 440	3.6 2.5 2.0	320 425 490	3.9 2.8 2.2	350 470 540	4.3 3.1 2.4	385 510 585	4.7 3.4 2.6	2.1	36	31	33
	100	28	104	235	268	302	355	2.0 6.2 12.5	70 130 190	305 400 460	3.7 2.6 2.1	340 445 510	4.2 2.9 2.3	370 490 560	4.5 3.2 2.5	405 530 610	2.0 3.5 2.8	2.4	39	34	36

Performance data AIR-FIT 300 Cooling

Multi Nozzle	q1	q1	p_{st}	Cooling capacity air PA (W) $\Delta T_{AC} = T_{room} - T_1$(K)				ΔP_w	q_w	Cooling capacity water Pw (W) $\Delta T_{WK} = T_{room} - T_{water,in}$(K), $T_{water,in}$>dew point air + 2K								T	L_{pA}	L_{pA}	L_{pA}
				7	8	9	10			7		8		9		10					
Position	(m^3/h)	(l/s)	(Pa)	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	(kPa)	(l/h)	$P_{A,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	(m)	(dB(A))	(NC)	(NR)

Chilled beam model 300-size 2400 mm

喷嘴档位	m^3/h	l/s	Pst	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	KPa	L/h	$P_{W,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	T	L_{pA}	L_{pA}	L_{pA}
1	55	15	56	129	147	166	184	1.4 2.7 4.3	130 190 250	385 450 495	2.5 2.0 1.7	430 500 550	2.8 2.3 1.9	470 550 605	3.1 2.5 2.1	515 600 660	3.4 2.7 2.3	1.0	--	--	--
	65	18	78	152	174	196	218	1.4 2.7 4.3	130 190 250	410 480 530	2.7 2.2 1.8	455 530 585	3.0 2.4 2.0	500 585 645	3.3 2.6 2.2	550 640 705	3.6 2.9 2.4	1.3	--	--	--
	75	21	104	176	201	226	251	1.4 2.7 4.3	130 190 250	450 515 565	3.0 2.3 1.9	500 575 625	3.3 2.6 2.1	550 630 690	3.6 2.8 2.4	595 685 750	3.9 3.1 2.6	1.5	28	23	25
2	75	21	57	176	201	226	251	1.4 2.7 4.3	130 190 250	425 495 545	2.8 2.2 1.9	470 550 605	3.1 2.5 2.1	520 605 665	3.4 2.7 2.3	565 660 725	3.7 3.0 2.5	1.5	--	--	--
	85	24	73	199	228	256	285	1.4 2.7 4.3	130 190 250	455 525 580	3.0 2.4 2.0	505 585 645	3.3 2.6 2.2	555 645 710	3.7 2.9 2.4	605 700 775	4.0 3.2 2.7	1.8	28	23	25
	95	26	91	223	255	286	318	1.4 2.7 4.3	130 190 250	475 550 600	3.1 2.5 2.1	530 610 665	3.5 2.8 2.3	580 670 735	3.8 3.0 2.5	635 730 800	4.2 3.3 2.7	2.0	32	27	29
3	110	31	64	258	295	332	369	1.4 2.7 4.3	130 190 250	505 590 645	3.3 2.7 2.2	565 655 715	3.7 3.0 2.5	620 720 790	4.1 3.3 2.7	675 785 860	4.5 3.5 3.0	2.5	32	27	29
	120	33	76	281	322	362	402	1.4 2.7 4.3	130 190 250	525 605 665	3.5 2.7 2.3	585 675 740	3.9 3.1 2.5	640 740 815	4.2 3.3 2.8	700 810 885	4.6 3.7 3.0	2.8	36	31	33
	130	36	90	305	348	392	436	1.4 2.7 4.3	130 190 250	545 625 685	3.6 2.8 2.4	605 695 760	4.0 3.1 2.6	665 765 835	4.4 3.5 2.9	725 830 910	4.8 3.8 3.1	3.1	39	34	36

Chilled beam model 300-size 3000 mm

喷嘴档位	m^3/h	l/s	Pst	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	KPa	L/h	$P_{W,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	T	L_{pA}	L_{pA}	L_{pA}
1	90	25	88	211	241	271	302	1.6 3.2 5.2	130 190 250	555 635 700	3.7 2.9 2.4	615 710 775	4.1 3.2 2.7	675 780 855	4.5 3.5 2.9	735 850 930	4.9 3.8 3.2	1.8	--	--	--
	100	28	109	235	268	302	335	1.6 3.2 5.2	130 190 250	575 665 725	3.8 3.0 2.5	640 735 805	4.2 3.3 2.8	700 810 885	4.6 3.7 3.0	765 880 965	5.1 4.0 3.3	2.0	29	24	26
	110	31	132	258	295	332	369	1.6 3.2 5.2	130 190 250	610 700 765	4.0 3.2 2.6	680 775 845	4.5 3.5 2.9	745 855 930	4.9 3.9 3.2	815 930 1015	5.4 4.2 3.5	2.3	31	26	28
2	130	36	101	305	348	392	436	1.6 3.2 5.2	130 190 250	620 715 780	4.1 3.2 2.7	690 795 865	4.6 3.6 3.0	760 870 955	5.0 3.9 3.3	830 950 1040	5.5 4.3 3.6	2.9	34	29	31
	140	39	117	328	375	422	469	1.6 3.2 5.2	130 190 250	650 745 815	4.3 3.4 2.8	720 830 905	4.8 3.8 3.1	795 910 995	5.3 4.1 3.4	865 995 1085	5.7 4.5 3.7	3.1	36	31	33
	150	42	134	352	402	452	503	1.6 3.2 5.2	130 190 250	670 760 830	4.4 3.4 2.9	740 845 920	4.9 3.8 3.2	815 930 1015	5.4 4.2 3.5	890 1015 1105	5.9 4.6 3.8	3.4	39	34	36
3	170	47	90	399	456	513	570	1.6 3.2 5.2	130 190 250	710 815 890	4.7 3.7 3.1	785 905 990	5.2 4.1 3.4	865 995 1085	5.7 4.5 3.7	945 1085 1185	6.2 4.9 4.1	4.0	36	31	33
	180	50	101	422	482	543	603	1.6 3.2 5.2	130 190 250	725 830 905	4.8 3.8 3.1	805 920 1005	5.3 4.2 3.5	885 1015 1110	5.8 4.6 3.8	965 1105 1210	6.4 5.0 4.2	4.3	38	33	35
	190	53	113	446	509	573	637	1.6 3.2 5.2	130 190 250	740 845 925	4.9 3.8 3.2	820 940 1025	5.4 4.3 3.5	905 1035 1130	6.0 4.7 3.9	985 1130 1230	6.5 5.1 4.2	4.6	39	34	36

Comments:

1. All data is based on 2-way discharge air pattern.
2. Throw data T refers to chilled beams mounted in a ceiling, 2.7-3.0m above the floor, and with horizontal discharge. It is also based on primary air temperature 8 °C below room temperature and supply water temperature 8 °C below room temperature.
3. Throw will be extended if one end of the chilled beam is mounted close to a sidewall or a similar construction.
4. Sound pressure levels are based on a room absorption of 10 dB, levels less than NC 20 are indicated by "--".
5. For non standard applications and/or selections, please contact our technical staff.
6. For explanation of the symbols see page 30.

Performance data AIR-FIT 300

Heating

Multi Nozzle	q1	q1	p_{st}	Heating capacity air PA (W)			ΔP_w	q_w	Heating capacity water Pw (W)								T	L_{pA}	L_{pA}	L_{pA}
				ΔTAC = Troom - T1(K)					ΔTWK = Troom - Twater,in(K)											
				10	15	20			20		25		30		35					
Position	(m^3/h)	(l/s)	(P_a)	$P_{A,10K}$	$P_{A,15K}$	$P_{A,20K}$	(kP_a)	(l/h)	$P_{A,20K}$	$\Delta T_{w,20k}$	$P_{A,25K}$	$\Delta T_{w,25k}$	$P_{A,30K}$	$\Delta T_{w,30k}$	$P_{A,35K}$	$\Delta T_{w,35k}$	(m)	(dB(A))	(NC)	(NR)

Chilled beam model 300-size 1200 mm

Nozzle-position	m^3/h	L/s	Pst	$P_{A,10K}$	$P_{A,15K}$	$P_{A,20K}$	Kpa	L/h	$P_{W,20K}$	$\Delta T_{w,20k}$	$P_{A,25K}$	$\Delta T_{w,25k}$	$P_{A,30K}$	$\Delta T_{w,30k}$	$P_{A,35K}$	$\Delta T_{w,35k}$	T	L_{pA}	L_{pA}	L_{pA}
1	25	7	69	83	125	167	0.5	50	230	4.0	290	5.0	345	5.9	405	7.0	0.5	--	--	--
							1.0	75	290	3.3	360	4.1	430	4.9	505	5.8				
							1.6	100	330	2.8	410	3.5	490	4.2	575	4.9				
	30	8	99	100	150	200	0.5	50	255	4.4	320	5.5	380	6.5	445	7.6	0.6	--	--	--
							1.0	75	315	3.6	390	4.5	470	5.4	550	6.3				
							1.6	100	355	3.1	445	3.8	535	4.6	625	5.4				
	35	10	134	117	175	233	0.5	50	280	4.8	350	6.0	425	7.3	495	8.5	0.7	30	25	27
							1.0	75	345	4.0	430	4.9	515	5.9	605	6.9				
							1.6	100	390	3.4	485	4.2	585	5.0	680	5.8				
2	35	10	73	117	175	233	0.5	50	365	4.6	335	5.8	400	6.9	465	8.0	0.7	--	--	--
							1.0	75	330	3.8	410	4.7	495	5.7	575	6.6				
							1.6	100	375	3.2	470	4.0	560	4.8	655	5.6				
	40	11	96	133	200	266	0.5	50	280	4.8	350	6.0	425	7.3	495	8.5	0.9	29	24	26
							1.0	75	345	4.0	435	5.0	520	6.0	605	6.9				
							1.6	100	390	3.4	490	4.2	590	5.1	685	5.9				
	45	13	121	150	225	300	0.5	50	300	5.2	375	6.4	450	7.7	525	9.0	1.0	33	28	30
							1.0	75	370	4.2	460	5.3	555	6.4	645	7.4				
							1.6	100	415	3.6	520	4.5	625	5.4	730	6.3				
3	45	13	64	150	225	300	0.5	50	270	4.6	335	5.8	405	7.0	470	8.1	1.0	28	23	25
							1.0	75	335	3.8	415	4.8	500	5.7	585	6.7				
							1.6	100	380	3.3	470	4.0	565	4.9	660	5.7				
	55	15	95	183	275	366	0.5	50	315	5.4	390	6.7	470	8.1	545	9.4	1.3	34	29	31
							1.0	75	380	4.4	475	5.4	570	6.5	665	7.6				
							1.6	100	430	3.7	535	4.6	640	5.5	750	6.4				
	65	18	133	216	325	433	0.5	50	365	6.3	455	7.8	545	9.4	635	10.9	1.6	39	34	36
							1.0	75	440	5.0	545	6.2	655	7.5	765	8.8				
							1.6	100	490	4.2	615	5.3	735	6.3	860	7.4				

Chilled beam model 300-size 1500 mm

Nozzle-position	m^3/h	l/s	Pst	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	Kpa	L/h	$P_{W,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	T	L_{pA}	L_{pA}	L_{pA}
1	35	10	74	117	176	235	0.7	50	320	5.5	400	6.9	480	8.2	560	9.6	0.7	--	--	--
							1.3	75	395	4.5	495	5.7	595	6.8	690	7.9				
							2.0	100	450	3.9	560	4.8	675	5.8	785	6.7				
	40	11	97	134	201	268	0.7	50	340	5.8	425	7.3	510	8.8	595	10.2	0.8	28	23	25
							1.3	75	420	4.8	525	6.0	630	7.2	735	8.4				
							2.0	100	480	4.1	595	5.1	715	6.1	835	7.2				
	45	13	122	151	226	302	0.7	50	370	6.4	460	7.9	555	9.5	645	11.1	0.9	32	27	29
							1.3	75	455	5.2	570	6.5	680	7.8	795	9.1				
							2.0	100	515	4.4	645	5.5	775	6.7	900	7.7				
2	40	11	53	134	201	268	0.7	50	325	5.6	405	7.0	485	8.3	570	9.8	0.8	--	--	--
							1.3	75	410	4.7	510	5.8	615	7.0	715	8.2				
							2.0	100	470	4.0	585	5.0	705	6.1	820	7.0				
	50	14	83	168	251	335	0.7	50	365	6.3	455	7.8	545	9.4	635	10.9	1.1	24	19	21
							1.3	75	450	5.2	565	6.5	675	7.7	790	9.1				
							2.0	100	515	4.4	640	5.5	770	6.6	895	7.7				
	60	17	119	201	302	402	0.7	50	405	7.0	505	8.7	605	10.4	705	12.1	1.3	30	25	27
							1.3	75	495	5.7	620	7.1	740	8.5	865	9.9				
							2.0	100	560	4.8	700	6.0	840	7.2	975	8.4				
3	70	19	85	235	352	469	0.7	50	395	6.8	490	8.4	590	10.1	690	11.9	1.6	29	24	26
							1.3	75	480	5.5	600	6.9	720	8.2	840	9.6				
							2.0	100	540	4.6	675	5.8	810	7.0	945	8.1				
	80	22	111	268	402	536	0.7	50	440	7.6	550	9.5	660	11.3	770	13.2	1.9	32	27	29
							1.3	75	530	6.1	660	7.6	795	9.1	925	10.6				
							2.0	100	595	5.1	740	6.4	890	7.6	1040	8.9				
	90	25	140	302	452	603	0.7	50	495	8.5	620	10.7	745	12.8	870	14.9	2.2	36	31	33
							1.3	75	595	6.8	745	8.5	895	10.3	1045	12.0				
							2.0	100	665	5.7	835	7.2	1000	8.6	1170	10.1				

Chilled beam model 300-size 1800 mm

Nozzle-position	m^3/h	L/s	Pst	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	Kpa	L/h	$P_{W,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	T	L_{pA}	L_{pA}	L_{pA}
1	40	11	58	134	201	268	0.8	50	380	6.5	480	8.2	575	9.9	670	11.5	1.7	26	21	23
							1.5	75	480	5.5	600	6.9	720	8.2	840	9.6				
							2.4	100	550	4.7	690	5.9	825	7.1	965	8.3				
	45	13	73	151	226	302	0.8	50	405	7.0	505	8.7	610	10.5	710	12.2	0.9	30	25	27
							1.5	75	510	5.8	635	7.3	765	8.8	890	10.2				
							2.4	100	580	5.0	725	6.2	870	7.5	1015	8.7				
	50	14	91	168	251	335	0.8	50	435	7.5	545	9.4	655	11.3	765	13.1	1.0	33	28	30
							1.5	75	545	6.2	685	7.8	820	9.4	955	10.9				
							2.4	100	625	5.4	780	6.7	935	8.0	1095	9.4				
2	50	14	50	168	251	335	0.8	50	410	7.0	515	8.8	615	10.6	720	12.4	1.0	25	20	22
							1.5	75	520	6.0	650	7.4	780	8.9	910	10.4				
							2.4	100	595	5.1	745	6.4	895	7.7	1045	9.0				
	60	17	71	201	302	402	0.8	50	450	7.7	560	9.6	675	11.6	785	13.5	1.3	31	26	28
							1.5	75	560	6.4	700	8.0	845	9.7	985	11.3				
							2.4	100	640	5.4	800	6.9	960	8.2	1125	9.7				
	70	19	97	235	352	469	0.8	50	490	8.4	615	10.6	740	12.7	860	14.8	1.5	35	30	32
							1.5	75	610	7.0	760	8.7	915	10.5	1065	12.2				
							2.4	100	690	5.9	865	7.4	1035	8.9	1210	10.4				
3	80	22	67	268	402	536	0.8	50	475	8.2	595	10.2	715	12.3	830	14.3	1.8	33	28	30
							1.5	75	585	6.7	730	8.4	880	10.1	1025	11.7				
							2.4	100	665	5.7	830	7.1	995	8.5	1160	10.0				
	90	25	84	302	452	603	0.8	50	525	9.0	660	11.3	790	13.6	920	15.8	2.1	36	31	33
							1.5	75	645	7.4	805	9.2	965	11.1	1125	12.9				
							2.4	100	725	6.2	910	7.8	1090	9.4	170	10.9				
	100	28	104	335	503	670	0.8	50	595	10.2	740	12.7	890	15.3	1040	17.9	2.4	39	34	36
							1.5	75	720	8.2	905	10.4	1085	12.4	1265	14.5				
							2.4	100	815	7.0	1015	8.7	1220	10.5	1425	12.2				

BARCOL-AIR

Performance data AIR-FIT 300 — Heating

Multi Nozzle	q1	q1	pst	Heating capacity air PA (W)			ΔPw	qw	Heating capacity water Pw (W)								T	LpA	LpA	LpA
				ΔTAC = Troom - T1(K)					ΔTWK = Troom - Twater,in(K)											
				10	15	20			20		25		30		35					
Position	(m³/h)	(l/s)	(Pa)	PA, 10K	PA, 15K	PA, 20K	(kPa)	(l/h)	PA, 20K	ΔTw,20k	PA, 25K	ΔTw,25k	PA, 30K	ΔTw,30k	PA, 35K	ΔTw,35k	(m)	(dB(A))	(NC)	(NR)

Chilled beam model 300-size 2400 mm

Nozzle-position	m³/h	l/s	Pst	PA, 10K	PA, 15K	PA, 20K	Kpa	L/h	PW, 20K	ΔTw,20k	PA, 25K	ΔTw,25k	PA, 30K	ΔTw,30k	PA, 35K	ΔTw,35k	T	LpA	LpA	LpA
1	55	15	56	183	275	366	1.8	75	530	6.1	660	7.6	795	9.1	925	10.6	1.0	--	--	--
							3.2	100	665	5.7	835	7.2	1000	8.6	1165	10.0				
							4.8	125	765	5.3	955	6.6	1145	7.9	1340	9.2				
	65	18	78	216	325	433	1.8	75	580	6.6	725	8.3	870	10.0	1015	11.6	1.3	24	19	21
							3.2	100	725	6.2	905	7.8	1085	9.3	1265	10.9				
							4.8	125	825	5.7	1030	7.1	1240	8.5	1445	9.9				
	75	21	104	250	375	500	1.8	75	640	7.3	795	9.1	955	10.9	1115	12.8	1.5	28	23	25
							3.2	100	790	6.8	990	8.5	1185	10.2	1385	11.9				
							4.8	125	900	6.2	1125	7.7	1350	9.3	1575	10.8				
2	75	21	57	250	375	500	1.8	75	600	6.9	750	8.6	900	10.3	1050	12.0	1.5	23	18	20
							3.2	100	755	6.5	940	8.1	1130	9.7	1320	11.3				
							4.8	125	865	5.9	1080	7.4	1295	8.9	1510	10.4				
	85	24	73	283	425	566	1.8	75	635	7.3	790	9.1	950	10.9	1110	12.7	1.8	28	23	25
							3.2	100	790	6.8	990	8.5	1185	10.2	1385	11.9				
							4.8	125	905	6.2	1130	7.8	1355	9.3	1580	10.9				
	95	26	91	316	475	633	1.8	75	675	7.7	845	9.7	1015	11.6	1185	13.6	2.0	32	27	29
							3.2	100	840	7.2	1050	9.0	1260	10.8	1470	12.6				
							4.8	125	955	6.6	1195	8.2	1435	9.9	1670	11.5				
3	110	31	64	366	549	733	1.8	75	660	7.6	825	9.5	990	11.3	1150	13.2	2.5	32	27	29
							3.2	100	815	7.0	1015	8.7	1220	10.5	1420	12.2				
							4.8	125	920	6.3	1150	7.9	1385	9.5	1615	11.1				
	120	33	76	400	599	799	1.8	75	715	8.2	895	10.3	1075	12.3	1255	14.4	2.8	36	31	33
							3.2	100	880	7.6	1100	9.5	1320	11.3	1540	13.2				
							4.8	125	1000	6.9	1245	8.6	1495	10.3	1745	12.0				
	130	36	90	433	649	866	1.8	75	800	9.2	1000	11.5	1200	13.7	1395	16.0	3.1	39	34	36
							3.2	100	980	8.4	1225	10.5	1470	12.6	1710	14.7				
							4.8	125	1105	7.6	1380	9.5	1660	11.4	1935	13.3				

Chilled beam model 300-size 3000 mm

Nozzle-position	m³/h	l/s	Pst	PA, 7K	PA, 8K	PA, 9K	Kpa	L/h	PW, 7K	ΔTw,7k	PA, 8K	ΔTw,8k	PA, 9K	ΔTw,9k	PA, 10K	ΔTw,10k	T	LpA	LpA	LpA
1	90	25	88	302	452	603	2.3	75	790	9.1	990	11.3	1185	13.6	1385	15.9	1.8	--	--	--
							3.9	100	970	8.3	1210	10.4	1455	12.5	1695	14.6				
							5.7	125	1095	7.5	1370	9.4	1645	11.3	1920	13.2				
	100	28	109	335	503	670	2.3	75	830	9.5	1040	11.9	1245	14.3	1455	16.7	2.0	29	24	26
							3.9	100	1020	8.8	1275	11.0	1530	13.1	1785	15.3				
							5.7	125	1150	7.9	1440	9.9	1730	11.9	2015	13.9				
	110	31	132	369	553	737	2.3	75	890	10.2	1110	12.7	1335	15.3	1555	17.8	2.3	31	26	28
							3.9	100	1090	9.4	1360	11.7	1635	14.0	1905	16.4				
							5.7	125	1230	8.5	1540	10.6	1850	12.7	2155	14.8				
2	130	36	101	436	653	871	2.3	75	925	10.6	1155	13.2	1385	15.9	1615	18.5	2.9	34	29	31
							3.9	100	1125	9.7	1405	12.1	1685	14.5	1965	16.9				
							5.7	125	1265	8.7	1580	10.9	1895	13.0	2215	15.2				
	140	39	117	469	704	938	2.3	75	945	10.8	1180	13.5	1415	16.2	1655	19.0	3.1	36	31	33
							3.9	100	1150	9.9	1435	12.3	1725	14.8	2010	17.3				
							5.7	125	1295	8.9	1620	11.1	1940	13.3	2265	15.6				
	150	42	134	503	754	1005	2.3	75	980	11.2	1225	14.0	1475	16.9	1720	19.7	3.4	39	34	36
							3.9	100	1195	10.3	1495	12.8	1795	15.4	2090	18.0				
							5.7	125	1345	9.2	1685	11.6	2020	13.9	2355	16.2				
3	170	47	90	570	854	1139	2.3	75	945	10.8	1180	13.5	1415	16.2	1650	18.9	4.0	36	31	33
							3.9	100	1145	9.8	1430	12.3	1715	14.7	2000	17.2				
							5.7	125	1285	8.8	1605	11.0	1930	13.3	2250	15.5				
	180	50	101	603	905	1206	2.3	75	1010	11.6	1260	14.4	1515	17.4	1765	20.2	4.3	38	33	35
							3.9	100	1225	10.5	1530	13.1	1835	15.8	2140	18.4				
							5.7	125	1375	9.5	1720	11.8	2060	14.2	2405	16.5				
	190	53	113	637	955	1273	2.3	75	1105	12.7	1385	15.9	1660	19.0	1935	22.2	4.6	39	34	36
							3.9	100	1340	11.5	1675	14.4	2010	17.3	2350	20.2				
							5.7	125	1510	10.4	1885	13.0	2260	15.5	2640	18.1				

Comments:

1. All data is based on 2-way discharge air pattern.
2. Throw data T refers to chilled beams mounted in a ceiling, 2.7-3.0m above the floor, and with horizontal discharge. It is also based on primary air temperature 8 °C below room temperature and supply water temperature 8 °C below room temperature.
3. Throw will be extended if one end of the chilled beam is mounted close to a sidewall or a similar construction.
4. Sound pressure levels are based on a room absorption of 10 dB, levels less than NC 20 are indicated by "--".
5. For non standard applications and/or selections, please contact our technical staff.
6. For explanation of the symbols see page 30.

Performance data AIR-FIT 600

Cooling

Multi Nozzle	q1	q1	p_{st}	Cooling capacity air PA (W)				ΔP_w	q_w	Cooling capacity water Pw (W)								T	L_{pA}	L_{pA}	L_{pA}
				$\Delta T_{AC} = T_{room} - T_1$(K)						$\Delta T_{WK} = T_{room} - T_{water,in}$(K), $T_{water,in}$>dew point air + 2K											
				7	8	9	10			7		8		9		10					
Position	(m^3/h)	(l/s)	(Pa)	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	(kPa)	(l/h)	$P_{A,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	(m)	(dB(A))	(NC)	(NR)

Chilled beam model 600-size 1200 mm

Nozzle-position	m^3/h	L/s	P_{st}	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	Kpa	l/h	$P_{W,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	T	L_{pA}	L_{pA}	L_{pA}
1	25	7	50	59	67	75	84	1.0	130	160	1.1	180	1.2	200	1.3	215	1.4	0.5	--	--	--
								1.9	190	175	0.8	195	0.9	215	1.0	235	1.1				
								3.1	250	185	0.6	205	0.7	225	0.8	250	0.9				
	30	8	72	70	80	90	101	1.0	130	185	1.2	205	1.4	225	1.5	245	1.6	1.6	--	--	--
								1.9	190	205	0.9	225	1.0	245	1.1	270	1.2				
								3.1	250	215	0.7	240	0.8	265	0.9	290	1.0				
	35	10	98	82	94	106	117	1.0	130	200	1.3	225	1.5	245	1.6	270	1.8	1.7	24	--	21
								1.9	190	225	1.0	250	1.1	275	1.2	300	1.4				
								3.1	250	245	0.8	270	0.9	300	1.0	325	1.1				
	40	11	128	94	107	121	134	1.0	130	215	1.4	240	1.6	365	1.7	290	1.9	0.9	27	22	24
								1.9	190	245	1.1	275	1.2	300	1.4	330	1.5				
								3.1	250	265	0.9	295	1.0	325	1.1	355	1.2				
	45	13	162	106	121	136	151	1.0	130	230	1.5	255	1.7	280	1.8	305	2.0	1.0	30	25	27
								1.9	190	265	1.2	295	1.3	320	1.4	350	1.6				
								3.1	250	285	1.0	320	1.1	350	1.2	380	1.3				
	50	14	200	117	134	151	168	1.0	130	245	1.6	270	1.8	295	1.9	325	2.1	1.1	33	28	30
								1.9	190	280	1.3	310	1.4	340	1.5	375	1.7				
								3.1	250	305	1.0	340	1.2	370	1.3	405	1.4				
2	40	11	60	94	107	121	134	1.0	130	180	1.2	200	1.3	220	1.5	235	1.5	0.9	--	--	--
								1.9	190	200	0.9	225	1.0	245	1.1	270	1.2				
								3.1	250	210	0.7	235	0.8	260	0.9	280	1.0				
	45	13	76	106	121	136	151	1.0	130	200	1.3	220	1.5	240	1.6	265	1.7	1.0	22	--	--
								1.9	190	220	1.0	245	1.1	270	1.2	295	1.3				
								3.1	250	235	0.8	260	0.9	285	1.0	315	1.1				
	50	14	94	117	134	151	168	1.0	130	215	1.4	240	1.6	260	1.7	285	1.9	1.1	25	20	22
								1.9	190	240	1.1	265	1.2	290	1.3	320	1.4				
								3.1	250	255	0.9	285	1.0	310	1.1	340	1.2				
	55	15	113	129	147	166	184	1.0	130	230	1.5	255	1.7	280	1.8	305	2.0	1.3	28	23	25
								1.9	190	255	1.2	285	1.3	310	1.4	340	1.5				
								3.1	250	275	0.9	305	1.0	335	1.1	365	1.3				
	60	17	135	141	161	181	201	1.0	130	245	1.6	270	1.8	300	2.0	325	2.1	1.4	31	26	28
								1.9	190	270	1.2	300	1.4	330	1.5	360	1.6				
								3.1	250	290	1.0	325	1.1	355	1.2	390	1.3				
	65	18	159	152	174	196	218	1.0	130	260	1.7	285	1.9	315	2.1	345	2.3	1.6	33	28	30
								1.9	190	285	1.3	315	1.4	345	1.6	380	1.7				
								3.1	250	305	1.0	340	1.2	375	1.3	410	1.4				
3	65	18	71	152	174	196	218	1.0	130	245	1.6	270	1.8	300	2.0	325	2.1	1.6	27	22	24
								1.9	190	270	1.2	300	1.4	330	1.5	360	1.6				
								3.1	250	290	1.0	325	1.1	355	1.2	390	1.3				
	70	19	82	164	188	211	235	1.0	130	255	1.7	280	1.8	310	2.0	340	2.2	1.7	29	24	26
								1.9	190	285	1.3	315	1.4	345	1.6	375	1.7				
								3.1	250	305	1.0	340	1.2	370	1.3	405	1.4				
	75	21	94	176	201	226	251	1.0	130	265	1.7	290	1.9	320	2.1	350	2.3	1.9	31	26	28
								1.9	190	295	1.3	325	1.5	360	1.6	390	1.8				
								3.1	250	315	1.1	350	1.2	385	1.3	420	1.4				
	80	22	107	188	214	241	268	1.0	130	270	1.8	300	2.0	330	2.2	360	2.4	2.1	33	28	30
								1.9	190	305	1.4	335	1.5	370	1.7	405	1.8				
								3.1	250	325	1.1	365	1.3	400	1.4	435	1.5				
	85	24	121	199	228	256	285	1.0	130	280	1.8	310	2.0	340	2.2	370	2.4	2.2	35	30	32
								1.9	190	310	1.4	345	1.6	380	1.7	415	1.9				
								3.1	250	335	1.1	375	1.3	410	1.4	450	1.5				
	90	25	136	211	241	271	302	1.0	130	285	1.9	315	2.1	350	2.3	380	2.5	2.4	37	32	34
								1.9	190	320	1.4	355	1.6	390	1.8	425	1.9				
								3.1	250	345	1.2	385	1.3	425	1.5	460	1.6				

Performance data AIR-FIT 600

Cooling

Multi Nozzle	q1	q1	p_{st}	Cooling capacity air PA (W)				ΔP_w	q_w	Cooling capacity water Pw (W)								T	L_{pA}	L_{pA}	L_{pA}
				$\Delta T_{AC} = T_{room} - T_1$(K)						$\Delta T_{WK} = T_{room} - T_{water,in}$(K), $T_{water,in}$>dew point air + 2K											
				7	8	9	10			7		8		9		10					
Position	(m^3/h)	(l/s)	(Pa)	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	(kPa)	(l/h)	$P_{A,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	(m)	(dB(A))	(NC)	(NR)

Chilled beam model 600-size 1500 mm

Nozzle-position	m^3/h	L/s	P_{st}	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	Kpa	L/h	$P_{W,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	T	L_{pA}	L_{pA}	L_{pA}
1	40	11	67	94	107	121	134	1.2	130	250	1.6	275	1.8	305	2.0	330	2.2	0.8	--	--	--
								2.3	190	275	1.2	305	1.4	335	1.5	365	1.6				
								3.7	250	290	1.0	325	1.1	355	1.2	390	1.3				
	45	13	84	106	121	136	151	1.2	130	265	1.7	295	1.9	325	2.1	355	2.3	0.9	22	--	--
								2.3	190	300	1.4	330	1.5	365	1.6	395	1.8				
								3.7	250	320	1.1	355	1.2	390	1.3	425	1.5				
	50	14	104	117	134	151	168	1.2	130	285	1.9	315	2.1	345	2.3	380	2.5	1.1	25	20	22
								2.3	190	320	1.4	355	1.6	390	1.8	425	1.9				
								3.7	250	345	1.2	385	1.3	420	1.4	460	1.6				
	55	15	126	129	147	166	184	1.2	130	300	2.0	335	2.2	365	2.4	400	2.6	1.2	28	23	25
								2.3	190	340	1.5	375	1.7	415	1.9	450	2.0				
								3.7	250	370	1.3	410	1.4	450	1.5	490	1.7				
	60	17	150	141	161	181	201	1.2	130	315	2.1	350	2.3	385	2.5	420	2.8	1.3	30	25	27
								2.3	190	360	1.6	400	1.8	435	2.0	475	2.1				
								3.7	250	390	1.3	430	1.5	475	1.6	520	1.8				
	65	18	176	152	174	196	218	1.2	130	325	2.1	365	2.4	400	2.6	435	2.9	1.5	32	27	29
								2.3	190	375	1.7	415	1.9	460	2.1	500	2.3				
								3.7	250	410	1.4	455	1.6	500	1.7	545	1.9				
2	65	18	82	152	174	196	218	1.2	130	285	1.9	315	2.1	345	2.3	375	2.5	1.5	25	20	22
								2.3	190	315	1.4	350	1.6	385	1.7	420	1.9				
								3.7	250	335	1.1	375	1.3	410	1.4	450	1.5				
	70	19	95	164	188	211	235	1.2	130	300	2.0	335	2.2	365	2.4	400	2.6	1.6	27	22	24
								2.3	190	335	1.5	370	1.7	410	1.8	445	2.0				
								3.7	250	355	1.2	395	1.4	435	1.5	475	1.6				
	75	21	109	176	201	226	251	1.2	130	315	2.1	350	2.3	385	2.5	420	2.8	1.8	29	24	26
								2.3	190	350	1.6	390	1.8	430	1.9	465	2.1				
								3.7	250	375	1.3	420	1.4	460	1.6	500	1.7				
	80	22	124	188	214	241	268	1.2	130	330	2.2	365	2.4	405	2.7	440	2.9	1.9	31	26	28
								2.3	190	365	1.6	405	1.8	445	2.0	485	2.2				
								3.7	250	395	1.4	435	1.5	480	1.6	525	1.8				
	90	25	158	211	241	271	302	1.2	130	360	2.4	395	2.6	435	2.9	475	3.1	2.2	35	30	32
								2.3	190	395	1.8	435	2.0	480	2.2	525	2.4				
								3.7	250	425	1.5	475	1.6	520	1.8	565	1.9				
	95	26	176	223	255	286	318	1.2	130	370	2.4	410	2.7	450	3.0	495	3.3	2.4	36	31	33
								2.3	190	405	1.8	450	2.0	495	2.2	540	2.4				
								3.7	250	440	1.5	490	1.7	540	1.9	585	2.0				
3	100	28	87	235	268	302	335	1.2	130	360	2.4	395	2.6	435	2.9	475	3.1	2.5	32	27	29
								2.3	190	400	1.8	445	2.0	485	2.2	530	2.4				
								3.7	250	430	1.5	475	1.6	525	1.8	570	2.0				
	105	29	96	246	281	317	352	1.2	130	365	2.4	405	2.7	445	2.9	490	3.2	2.7	34	29	31
								2.3	190	410	1.8	455	2.1	500	2.3	545	2.5				
								3.7	250	440	1.5	490	1.7	540	1.9	585	2.0				
	110	31	105	258	295	332	369	1.2	130	375	2.5	415	2.7	455	3.0	500	3.3	2.9	35	30	32
								2.3	190	420	1.9	465	2.1	510	2.3	555	2.5				
								3.7	250	450	1.5	500	1.7	550	1.9	600	2.1				
	115	32	115	270	308	347	385	1.2	130	380	2.5	425	2.8	465	3.1	510	3.4	3.0	37	32	34
								2.3	190	425	1.9	475	2.1	520	2.3	570	2.6				
								3.7	250	460	1.6	515	1.8	564	1.9	615	2.1				
	120	33	125	281	322	362	402	1.2	130	390	2.6	430	2.8	475	3.1	520	3.4	3.2	38	33	35
								2.3	190	435	2.0	485	2.2	530	2.4	580	2.6				
								3.7	250	470	1.6	525	1.8	575	2.0	630	2.2				
	125	35	136	293	335	377	419	1.2	130	395	2.6	440	2.9	485	3.2	525	3.5	3.4	39	34	36
								2.3	190	445	2.0	495	2.2	540	2.4	590	2.7				
								3.7	250	480	1.6	535	1.8	585	2.0	640	2.2				

Performance data AIR-FIT 600

Cooling

Multi Nozzle	q1	q1	p_{st}	Cooling capacity air PA (W)				ΔP_w	q_w	Cooling capacity water Pw (W)								T	L_{pA}	L_{pA}	L_{pA}
				$\Delta T_{AC} = T_{room} - T_1$(K)						$\Delta T_{WK} = T_{room} - T_{water,in}$(K), $T_{water,in}$>dew point air + 2K											
				7	8	9	10			7		8		9		10					
Position	(m^3/h)	(l/s)	(Pa)	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	(kPa)	(l/h)	$P_{A,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	(m)	(dB(A))	(NC)	(NR)

Chilled beam model 600-size 1800 mm

Nozzle-position	m^3/h	L/s	P_{st}	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	KPa	L/h	$P_{W,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	T	L_{pA}	L_{pA}	L_{pA}
1	50	14	63	117	134	151	168	1.4	130	315	2.1	345	2.3	380	2.5	415	2.7	1.0	--	--	--
								2.7	190	345	1.6	380	1.7	420	1.9	455	2.1				
								4.4	250	365	1.3	405	1.4	450	1.5	490	1.7				
	55	15	77	129	147	166	184	1.4	130	330	2.2	370	2.4	405	2.7	445	2.9	1.1	--	--	--
								2.7	190	370	1.7	410	1.8	450	2.0	490	2.2				
								4.4	250	395	1.4	440	1.5	485	1.7	525	1.8				
	60	17	91	141	161	181	201	1.4	130	350	2.3	390	2.6	430	2.8	465	3.1	1.3	22	--	--
								2.7	190	390	1.8	435	2.0	480	2.2	520	2.3				
								4.4	250	420	1.4	470	1.6	515	1.8	560	1.9				
	65	18	107	152	174	196	218	1.4	130	365	2.4	405	2.7	450	3.0	490	3.2	1.4	25	20	22
								2.7	190	415	1.9	460	2.1	505	2.3	550	2.5				
								4.4	250	445	1.5	495	1.7	545	1.9	595	2.0				
	70	19	124	164	188	211	235	1.4	130	380	2.5	425	2.8	465	3.1	510	3.4	1.5	27	22	24
								2.7	190	435	2.0	480	2.2	530	2.4	575	2.6				
								4.4	250	470	1.6	520	1.8	575	2.0	625	2.1				
	75	21	143	176	201	226	251	1.4	130	395	2.6	440	2.9	485	3.2	530	3.5	1.7	29	24	26
								2.7	190	450	2.0	500	2.3	550	2.5	600	2.7				
								4.4	250	490	1.7	545	1.9	600	2.1	655	2.2				
2	80	22	76	188	214	241	268	1.4	130	350	2.3	390	2.6	430	2.8	470	3.1	1.8	25	20	22
								2.7	190	395	1.8	435	2.0	480	2.2	525	2.4				
								4.4	250	420	1.4	465	1.6	510	1.7	555	1.9				
	85	24	86	199	228	256	285	1.4	130	370	2.4	410	2.7	450	3.0	490	3.2	2.0	27	22	24
								2.7	190	410	1.8	455	2.1	505	2.3	550	2.5				
								4.4	250	440	1.5	490	1.7	535	1.8	585	2.0				
	90	25	96	211	241	271	302	1.4	130	385	2.5	430	2.8	470	3.1	515	3.4	2.1	28	23	25
								2.7	190	430	1.9	475	2.1	525	2.4	570	2.6				
								4.4	250	460	1.6	510	1.7	560	1.9	610	2.1				
	95	26	107	223	255	286	318	1.4	130	400	2.6	445	2.9	490	3.2	535	3.5	2.2	30	25	27
								2.7	190	445	2.0	495	2.2	545	2.5	595	2.7				
								4.4	250	480	1.6	530	1.8	585	2.0	635	2.2				
	100	28	119	235	268	302	335	1.4	130	415	2.7	460	3.0	510	3.4	555	3.7	2.4	32	27	29
								2.7	190	460	2.1	510	2.3	565	2.5	615	2.8				
								4.4	250	495	1.7	550	1.9	605	2.1	660	2.3				
	105	29	131	246	281	317	352	1.4	130	430	2.8	480	3.2	525	3.5	575	3.8	2.6	33	28	30
								2.7	190	475	2.1	530	2.4	580	2.6	635	2.9				
								4.4	250	510	1.7	570	2.0	625	2.1	680	2.3				
3	110	31	64	258	295	332	369	1.4	130	425	2.8	470	3.1	520	3.4	565	3.7	2.7	28	23	25
								2.7	190	470	2.1	525	2.4	575	2.6	625	2.8				
								4.4	250	505	1.7	560	1.9	615	2.1	670	2.3				
	120	33	76	281	322	362	402	1.4	130	445	2.9	495	3.3	540	3.6	590	3.9	3.0	30	25	27
								2.7	190	495	2.2	550	2.5	605	2.7	660	3.0				
								4.4	250	530	1.8	590	2.0	650	2.2	705	2.4				
	130	36	90	305	348	392	436	1.4	130	460	3.0	510	3.4	565	3.7	615	4.1	3.4	33	28	30
								2.7	190	515	2.3	570	2.6	630	2.8	685	3.1				
								4.4	250	555	1.9	615	2.1	675	2.3	740	2.5				
	140	39	104	328	375	422	469	1.4	130	480	3.2	530	3.5	585	3.9	635	4.2	3.7	35	30	32
								2.7	190	535	2.4	595	2.7	650	2.9	710	3.2				
								4.4	250	575	2.0	640	2.2	705	2.4	765	2.6				
	150	42	119	352	402	452	503	1.4	130	495	3.3	545	3.6	600	4.0	655	4.3	4.0	37	32	34
								2.7	190	550	2.5	615	2.8	675	3.0	735	3.3				
								4.4	250	595	2.0	660	2.3	730	2.5	795	2.7				
	160	44	136	375	429	482	536	1.4	130	505	3.3	565	3.7	620	4.1	675	4.4	4.4	39	34	36
								2.7	190	570	2.6	630	2.8	695	3.1	755	3.4				
								4.4	250	615	2.1	685	2.3	750	2.6	820	2.8				

Performance data AIR-FIT 600

Cooling

Multi Nozzle	q1	q1	p_{st}	Cooling capacity air PA (W)				ΔP_w	q_w	Cooling capacity water Pw (W)								T	L_{pA}	L_{pA}	L_{pA}
				$\Delta T_{AC} = T_{room} - T_1$(K)						$\Delta T_{WK} = T_{room} - T_{water,in}$(K), $T_{water,in}$>dew point air + 2K											
				7	8	9	10			7		8		9		10					
Position	(m^3/h)	(l/s)	(Pa)	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	(kPa)	(l/h)	$P_{A,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	(m)	(dB(A))	(NC)	(NR)

Chilled beam model 600-size 2400 mm

Nozzle-position	m^3/h	l/s	P_{st}	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	KPa	L/h	$P_{W,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	T	L_{pA}	L_{pA}	L_{pA}
1	70	19	63	164	188	211	235	3.4	190	465	2.1	520	2.3	570	2.6	620	2.8	1.4	21	- -	- -
								5.4	250	510	1.7	565	1.9	620	2.1	680	2.3				
								7.8	310	535	1.5	595	1.6	655	1.8	715	2.0				
	75	21	72	176	201	226	251	3.4	190	490	2.2	545	2.5	600	2.7	655	3.0	1.5	24	- -	- -
								5.4	250	535	1.8	595	2.0	655	2.2	715	2.5				
								7.8	310	565	1.6	625	1.7	690	1.9	750	2.1				
	80	22	82	188	214	241	268	3.4	190	510	2.3	570	2.6	625	2.8	680	3.1	1.6	26	21	23
								5.4	250	560	1.9	625	2.1	685	2.3	745	2.6				
								7.8	310	590	1.6	655	1.8	720	2.0	785	2.2				
	85	24	93	199	228	256	285	3.4	190	535	2.4	590	2.7	650	2.9	710	3.2	1.8	28	23	25
								5.4	250	585	2.0	650	2.2	715	2.5	780	2.7				
								7.8	310	615	1.7	680	1.9	750	2.1	815	2.3				
	90	25	104	211	241	271	302	3.4	190	555	2.5	615	2.8	675	3.0	735	3.3	1.9	30	25	27
								5.4	250	605	2.1	675	2.3	740	2.5	805	2.8				
								7.8	310	635	1.8	705	1.9	775	2.1	845	2.3				
	95	26	116	223	255	286	318	3.4	190	570	2.6	635	2.9	700	3.2	760	3.4	2.0	32	27	29
								5.4	250	625	2.1	695	2.4	765	2.6	835	2.9				
								7.8	310	660	1.8	730	2.0	805	2.2	875	2.4				
2	100	28	60	235	268	302	335	3.4	190	485	2.2	535	2.4	590	2.7	645	2.9	2.2	24	- -	21
								5.4	250	530	1.8	590	2.0	650	2.2	710	2.4				
								7.8	310	560	1.5	620	1.7	680	1.9	745	2.1				
	110	31	73	258	295	332	369	3.4	190	520	2.3	580	2.6	640	2.9	695	3.1	2.5	27	22	24
								5.4	250	570	2.0	635	2.2	700	2.4	760	2.6				
								7.8	310	605	1.7	670	1.9	735	2.0	805	2.2				
	120	33	86	281	322	362	402	3.4	190	560	2.5	620	2.8	680	3.1	745	3.4	2.8	29	24	26
								5.4	250	610	2.1	675	2.3	745	2.6	810	2.8				
								7.8	310	645	1.8	715	2.0	785	2.2	860	2.4				
	130	36	101	305	348	392	436	3.4	190	590	2.7	655	3.0	720	3.2	785	3.5	3.1	32	27	29
								5.4	250	645	2.2	715	2.5	785	2.7	855	2.9				
								7.8	310	685	1.9	760	2.1	835	2.3	910	2.5				
	140	39	118	328	375	422	469	3.4	190	620	2.8	690	3.1	760	3.4	825	3.7	3.4	34	29	31
								5.4	250	675	2.3	750	2.6	825	2.8	895	3.1				
								7.8	310	720	2.0	800	2.2	875	2.4	955	2.6				
	150	42	135	352	402	452	503	3.4	190	650	2.9	720	3.2	795	3.6	865	3.9	3.7	36	31	33
								5.4	250	705	2.4	780	2.7	860	2.9	935	3.2				
								7.8	310	750	2.1	835	2.3	915	2.5	1000	2.8				
3	150	42	60	352	402	452	503	3.4	190	620	2.8	690	3.1	760	3.4	825	3.7	3.7	30	25	27
								5.4	250	675	2.3	750	2.6	825	2.8	900	3.1				
								7.8	310	715	2.0	795	2.2	870	2.4	950	2.6				
	160	44	69	375	429	482	536	3.4	190	640	2.9	715	3.2	785	3.5	855	3.9	4.0	32	27	29
								5.4	250	695	2.4	775	2.7	850	2.9	930	3.2				
								7.8	310	735	2.0	820	2.3	900	2.5	980	2.7				
	170	47	78	399	456	513	570	3.4	190	660	3.0	735	3.3	805	3.6	880	4.0	4.3	34	29	31
								5.4	250	720	2.5	795	2.7	875	3.0	955	3.3				
								7.8	310	760	2.1	845	2.3	925	2.6	1010	2.8				
	180	50	87	422	482	543	603	3.4	190	680	3.1	755	3.4	830	3.7	905	4.1	4.6	36	31	33
								5.4	250	735	2.5	820	2.8	900	3.1	980	3.4				
								7.8	310	780	2.2	865	2.4	955	2.6	1040	2.9				
	190	53	97	446	509	573	637	3.4	190	695	3.1	775	3.5	850	3.8	925	4.2	5.0	38	33	35
								5.4	250	755	2.6	840	2.9	925	3.2	1005	3.4				
								7.8	310	800	2.2	890	2.5	975	2.7	1065	2.9				
	200	56	107	469	536	603	670	3.4	190	710	3.2	790	3.6	870	3.9	950	4.3	5.3	39	34	36
								5.4	250	775	2.7	860	2.9	945	3.2	1030	3.5				
								7.8	310	820	2.3	910	2.5	1000	2.8	1090	3.0				

Performance data AIR-FIT 600

Cooling

Multi Nozzle	q1	q1	p_{st}	Cooling capacity air PA (W) $\Delta T_{AC} = T_{room} - T_1$(K)				ΔP_w	q_w	Cooling capacity water Pw (W) $\Delta T_{WK} = T_{room} - T_{water,in}$(K), $T_{water,in}$>dew point air + 2K								T	L_{pA}	L_{pA}	L_{pA}
				7	8	9	10			7		8		9		10					
Position	(m^3/h)	(l/s)	(Pa)	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	(kPa)	(l/h)	$P_{A,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	(m)	(dB(A))	(NC)	(NR)

Chilled beam model 600-size 3000 mm

Nozzle-position	m^3/h	l/s	P_{st}	$P_{A,7K}$	$P_{A,8K}$	$P_{A,9K}$	$P_{A,10K}$	kPa	l/h	$P_{W,7K}$	$\Delta T_{w,7k}$	$P_{A,8K}$	$\Delta T_{w,8k}$	$P_{A,9K}$	$\Delta T_{w,9k}$	$P_{A,10K}$	$\Delta T_{w,10k}$	T	L_{pA}	L_{pA}	L_{pA}
1	75	21	43	176	201	226	251	4.3	190	520	2.3	575	2.6	630	2.8	690	3.1	1.4	20	--	--
								6.8	250	565	1.9	630	2.2	690	2.4	755	2.6				
								9.7	310	595	1.6	660	1.8	725	2.0	795	2.2				
	85	24	56	199	228	256	285	4.3	190	575	2.6	635	2.9	700	3.2	765	3.5	1.7	23	--	--
								6.8	250	630	2.2	695	2.4	765	2.6	835	2.9				
								9.7	310	660	1.8	735	2.0	805	2.2	880	2.4				
	95	26	70	223	255	286	318	4.3	190	625	2.8	695	3.1	760	3.4	830	3.7	1.9	26	21	23
								6.8	250	680	2.3	760	2.6	835	2.9	910	3.1				
								9.7	310	715	2.0	795	2.2	875	2.4	955	2.6				
	105	29	85	246	281	317	352	4.3	190	670	3.0	745	3.4	815	3.7	890	4.0	2.2	28	23	25
								6.8	250	730	2.5	815	2.8	895	3.1	975	3.3				
								9.7	310	770	2.1	855	2.4	940	2.6	1025	2.8				
	115	32	102	270	308	347	385	4.3	190	710	3.2	790	3.6	865	3.9	945	4.3	2.4	31	26	28
								6.8	250	775	2.7	860	2.9	950	3.3	1035	3.5				
								9.7	310	815	2.3	905	2.5	995	2.8	1085	3.0				
	125	35	121	293	335	377	419	4.3	190	745	3.4	830	3.7	910	4.1	995	4.5	2.7	33	28	30
								6.8	250	820	2.8	910	3.1	1000	3.4	1090	3.7				
								9.7	310	860	2.4	955	2.6	1050	2.9	1145	3.2				
2	135	38	66	317	362	407	452	4.3	190	645	2.9	720	3.2	790	3.6	860	3.9	3.0	28	23	25
								6.8	250	710	2.4	790	2.7	870	3.0	945	3.2				
								9.7	310	745	2.1	830	2.3	915	2.5	995	2.8				
	145	40	76	340	389	437	486	4.3	190	685	3.1	760	3.4	835	3.8	910	4.1	3.3	30	25	27
								6.8	250	750	2.6	835	2.9	915	3.1	1000	3.4				
								9.7	310	790	2.2	880	2.4	965	2.7	1055	2.9				
	155	43	87	363	415	467	519	4.3	190	720	3.2	800	3.6	880	4.0	960	4.3	3.6	31	26	28
								6.8	250	785	2.7	875	3.0	960	3.3	1045	3.6				
								9.7	310	830	2.3	925	2.6	1015	2.8	1110	3.1				
	165	46	98	387	442	497	553	4.3	190	755	3.4	835	3.8	920	4.1	1005	4.5	3.9	32	27	29
								6.8	250	820	2.8	910	3.1	1000	3.4	1090	3.7				
								9.7	310	870	2.4	965	2.7	1065	2.9	1160	3.2				
	175	49	111	410	469	528	586	4.3	190	785	3.5	870	3.9	960	4.3	1045	4.7	4.2	34	29	31
								6.8	250	850	2.9	945	3.2	1040	3.6	1135	3.9				
								9.7	310	905	2.5	1005	2.8	1105	3.1	1210	3.3				
	185	51	124	434	496	558	620	4.3	190	815	3.7	905	4.1	995	4.5	1085	4.9	4.5	35	30	32
								6.8	250	880	3.0	980	3.4	1075	3.7	1175	4.0				
								9.7	310	940	2.6	1045	2.9	1150	3.2	1255	3.5				
3	190	53	58	446	509	573	637	4.3	190	795	3.6	880	4.0	970	4.4	1055	4.8	4.6	29	24	26
								6.8	250	860	2.9	955	3.3	1050	3.6	1150	3.9				
								9.7	310	910	2.5	1015	2.8	1115	3.1	1215	3.4				
	210	58	71	492	563	633	704	4.3	190	835	3.8	925	4.2	1020	4.6	1110	5.0	5.2	32	27	29
								6.8	250	905	3.1	1005	3.4	1105	3.8	1205	4.1				
								9.7	310	960	2.7	1065	2.9	1170	3.2	1275	3.5				
	230	64	85	539	616	693	771	4.3	190	870	3.9	970	4.4	1065	4.8	1160	5.2	5.9	34	29	31
								6.8	250	945	3.2	1050	3.6	1155	4.0	1260	4.3				
								9.7	310	1000	2.8	1110	3.1	1225	3.4	1335	3.7				
	250	69	101	586	670	754	838	4.3	190	905	4.1	1005	4.5	1105	5.0	1205	5.4	6.6	35	30	32
								6.8	250	985	3.4	1090	3.7	1200	4.1	1310	4.5				
								9.7	310	1040	2.9	1155	3.2	1270	3.5	1385	3.8				
	270	75	118	633	724	814	905	4.3	190	935	4.2	1040	4.7	1145	5.2	1250	5.6	7.2	37	32	34
								6.8	250	1020	3.5	1130	3.9	1245	4.3	1355	4.6				
								9.7	310	1075	3.0	1195	3.3	1315	3.6	1435	4.0				
	290	81	136	680	777	874	972	4.3	190	965	4.4	1075	4.8	1180	5.3	1285	5.8	7.9	39	34	36
								6.8	250	1050	3.6	1165	4.0	1280	4.4	1395	4.8				
								9.7	310	1110	3.1	1235	3.4	1355	3.7	1480	4.1				

Comments:

1. All data is based on 2-way discharge air pattern.
2. Throw data T refers to chilled beams mounted in a ceiling, 2.7-3.0m above the floor, and with horizontal discharge. It is also based on primary air temperature 8 °C below room temperature and supply water temperature 8 °C below room temperature.
3. Throw will be extended if one end of the chilled beam is mounted close to a sidewall or a similar construction.
4. Sound pressure levels are based on a room absorption of 10 dB, levels less than NC 20 are indicated by "--".
5. For non standard applications and/or selections, please contact our technical staff.
6. For explanation of the symbols see page 30.

Performance data AIR-FIT 600

Heating

Multi Nozzle	q1	q1	p_{st}	Heating capacity air PA (W)			ΔP_w	q_w	Heating capacity water Pw (W)								T	L_{pA}	L_{pA}	L_{pA}
				ΔTAC = Troom - T1(K)					ΔTWK = Troom - Twater,in(K)											
				10	15	20			20		25		30		35					
Position	(m^3/h)	(l/s)	(P_a)	$P_{A,10K}$	$P_{A,15K}$	$P_{A,20K}$	(kP_a)	(l/h)	$P_{A,20K}$	$\Delta T_{w,20k}$	$P_{A,25K}$	$\Delta T_{w,25k}$	$P_{A,30K}$	$\Delta T_{w,30k}$	$P_{A,35K}$	$\Delta T_{w,35k}$	(m)	(dB(A))	(NC)	(NR)

Chilled beam model 600-size 1200 mm

Nozzle-position	m^3/h	l/s	P_{st}	$P_{A,10K}$	$P_{A,15K}$	$P_{A,20K}$	Kpa	L/h	$P_{W,20K}$	$\Delta T_{w,20}$	$P_{A,25K}$	$\Delta T_{w,25k}$	$P_{A,30K}$	$\Delta T_{w,30k}$	$P_{A,35K}$	$\Delta T_{w,35k}$	T	L_{pA}	L_{pA}	L_{pA}
1	25	7	50	83	125	167	0.7	50	290	5.0	360	6.2	435	7.5	505	8.7	0.5	--	--	--
							1.4	75	330	3.8	415	4.8	500	5.7	580	6.6				
							2.5	100	405	3.5	505	4.3	605	5.2	705	6.1				
	30	8	72	100	150	200	0.7	50	315	5.4	390	6.7	470	8.1	550	9.5	0.6	--	--	--
							1.4	75	360	4.1	450	5.2	540	6.2	630	7.2				
							2.5	100	435	3.7	454	4.7	655	5.6	765	6.6				
	35	10	98	117	175	233	0.7	50	335	5.8	420	7.2	500	8.6	585	10.1	0.7	24	--	21
							1.4	75	385	4.4	480	5.5	575	6.6	670	7.7				
							2.5	100	465	4.0	580	5.0	700	6.0	815	7.0				
	40	11	128	133	200	266	0.7	50	350	6.0	440	7.6	530	9.1	615	10.6	0.9	27	22	24
							1.4	75	405	4.6	505	5.8	605	6.9	705	8.1				
							2.5	100	490	4.2	610	5.2	735	6.3	855	7.3				
	45	13	162	150	225	300	0.7	50	370	6.4	460	7.9	550	9.5	645	11.1	1.0	30	25	27
							1.4	75	420	4.8	530	6.1	635	7.3	740	8.5				
							2.5	100	510	4.4	640	5.5	765	6.6	895	7.7				
	50	14	200	167	250	333	0.7	50	380	6.5	475	8.2	575	9.9	670	11.5	1.1	33	28	30
							1.4	75	440	5.0	550	6.3	655	7.5	765	8.8				
							2.5	100	530	4.6	665	5.7	795	6.8	930	8.0				
2	40	11	60	133	200	266	0.7	50	315	5.4	395	6.8	470	8.1	550	9.5	0.9	--	--	--
							1.4	75	420	4.8	525	6.0	630	7.2	740	8.5				
							2.5	100	475	4.1	590	5.1	710	6.1	825	7.1				
	45	13	76	150	225	300	0.7	50	330	5.7	410	7.0	495	8.5	575	9.9	1.0	22	--	--
							1.4	75	440	5.0	550	6.3	660	7.6	770	8.8				
							2.5	100	495	4.3	615	5.3	740	6.4	865	7.4				
	50	14	94	167	250	333	0.7	50	340	5.8	425	7.3	510	8.8	595	10.2	1.1	25	20	22
							1.4	75	455	5.2	570	6.5	685	7.8	800	92				
							2.5	100	515	4.4	640	5.5	770	6.6	895	7.7				
	55	15	113	183	275	366	0.7	50	350	6.0	440	7.6	530	9.1	615	1.6	1.3	28	23	25
							1.4	75	470	5.4	590	6.8	710	8.1	825	9.5				
							2.5	100	530	4.6	660	5.7	795	6.8	925	7.9				
	60	17	135	200	300	400	0.7	50	365	6.3	455	7.8	545	9.4	635	10.9	1.4	31	26	28
							1.4	75	485	5.6	610	7.0	730	8.4	850	9.7				
							2.5	100	545	4.7	680	5.8	820	7.0	955	8.2				
	65	18	159	216	325	433	0.7	50	370	6.4	465	8.0	560	9.6	650	11.2	1.6	33	28	30
							1.4	75	500	5.7	625	7.2	750	8.6	875	10.0				
							2.5	100	560	4.8	700	6.0	840	7.2	980	8.4				
3	65	18	71	216	325	433	0.7	50	385	6.6	480	8.2	575	9.9	670	11.5	1.6	27	22	24
							1.4	75	460	5.3	575	6.6	690	7.9	805	9.2				
							2.5	100	545	4.7	680	5.8	815	7.0	950	8.2				
	70	19	82	233	350	466	0.7	50	395	6.8	490	8.4	590	10.1	685	11.8	1.7	29	24	26
							1.4	75	470	5.4	590	6.8	710	8.1	825	9.5				
							2.5	100	555	4.8	695	6.0	835	7.2	975	8.4				
	75	21	94	250	375	500	0.7	50	400	6.9	500	8.6	600	10.3	700	12.0	1.9	31	26	28
							1.4	75	480	5.5	605	6.9	725	8.3	845	9.7				
							2.5	100	570	4.9	710	6.1	855	7.3	995	8.5				
	80	22	107	266	400	533	0.7	50	410	7.0	510	8.8	615	10.6	715	12.3	2.1	33	28	30
							1.4	75	490	5.6	615	7.0	740	8.5	860	9.9				
							2.5	100	580	5.0	725	6.2	870	7.5	1051	8.7				
	85	24	121	283	425	566	0.7	50	415	7.1	520	8.9	625	10.7	730	12.5	2.2	35	30	32
							1.4	75	500	5.7	625	7.2	750	8.6	875	10.0				
							2.5	100	590	5.1	740	6.4	885	7.6	1035	8.9				
	90	25	136	300	450	599	0.7	50	425	7.3	530	9.1	635	10.9	740	12.7	2.4	37	32	34
							1.4	75	510	5.8	635	7.3	765	8.8	890	10.2				
							2.5	100	600	5.2	750	6.4	900	7.7	1050	9.0				

Performance data AIR-FIT 600

Heating

Multi Nozzle	q1	q1	p_{st}	Heating capacity air PA (W)			ΔP_w	q_w	Heating capacity water Pw (W)								T	L_{pA}	L_{pA}	L_{pA}
				ΔTAC = Troom - T1(K)					ΔTWK = Troom - Twater,in(K)											
				10	15	20			20		25		30		35					
Position	(m^3/h)	(l/s)	(P_a)	$P_{A,10K}$	$P_{A,15K}$	$P_{A,20K}$	(kP_a)	(l/h)	$P_{A,20K}$	$\Delta T_{w,20k}$	$P_{A,25K}$	$\Delta T_{w,25k}$	$P_{A,30K}$	$\Delta T_{w,30k}$	$P_{A,35K}$	$\Delta T_{w,35k}$	(m)	(dB(A))	(NC)	(NR)

Chilled beam model 600-size 1500 mm

Nozzle-position	m^3/h	l/s	P_{st}	$P_{A,10K}$	$P_{A,15K}$	$P_{A,20K}$	Kpa	l/h	$P_{W,20K}$	$\Delta T_{w,20}$	$P_{A,25K}$	$\Delta T_{w,25k}$	$P_{A,30K}$	$\Delta T_{w,30k}$	$P_{A,35K}$	$\Delta T_{w,35k}$	T	L_{pA}	L_{pA}	L_{pA}
1	40	11	87	134	201	268	0.9	50	430	7.4	535	9.2	640	11.0	750	12.9	0.8	--	--	--
							1.8	75	490	5.6	615	7.0	740	8.5	860	9.9				
							3.1	100	595	5.1	745	6.4	895	7.7	1045	9.0				
	45	13	84	151	226	302	0.9	50	450	7.7	560	9.6	675	11.6	785	13.5	0.9	22	--	--
							1.8	75	515	5.9	546	7.4	775	8.9	905	10.4				
							3.1	100	625	5.4	785	6.7	940	8.1	1095	9.4				
	50	14	104	168	251	335	0.9	50	470	8.1	585	10.1	705	12.1	820	14.1	1.1	25	20	22
							1.8	75	540	6.2	675	7.7	810	9.3	945	10.8				
							3.1	100	655	5.6	815	7.0	980	8.4	1145	9.8				
	55	15	126	184	276	369	0.9	50	485	8.3	610	10.5	730	12.5	855	14.7	1.2	28	23	25
							1.8	75	560	6.4	700	8.0	840	9.6	980	11.2				
							3.1	100	680	5.8	845	7.3	1015	8.7	1185	10.2				
	60	17	150	201	302	402	0.9	50	505	8.7	630	10.7	755	13.0	880	15.1	1.3	30	25	27
							1.8	75	580	6.6	720	8.2	865	9.9	1010	11.6				
							3.1	100	700	6.0	875	7.5	1050	9.0	1225	10.5				
	65	18	176	218	327	436	0.9	50	520	8.9	650	11.2	775	13.3	905	15.6	1.5	32	27	29
							1.8	75	595	6.8	745	8.5	890	10.2	1040	11.9				
							3.1	100	720	6.2	900	7.7	1080	9.3	1260	10.8				
2	65	18	82	218	327	436	0.9	50	465	8.0	580	10.0	695	11.9	810	13.9	1.5	25	20	22
							1.8	75	620	7.1	775	8.9	930	10.7	1085	12.4				
							3.1	100	695	6.0	870	7.5	1045	9.0	1215	10.4				
	70	19	95	235	352	469	0.9	50	475	8.2	595	10.2	710	12.2	830	14.3	1.6	27	22	24
							1.8	75	635	7.3	795	9.1	955	10.9	1115	12.8				
							3.1	100	715	6.14	890	7.6	1070	9.2	1250	10.7				
	75	21	109	251	377	503	0.9	50	485	8.3	610	10.5	730	12.5	850	14.6	1.8	29	24	26
							1.8	75	650	7.4	815	9.3	980	11.2	1140	13.1				
							3.1	100	730	6.3	915	7.9	1095	9.4	1280	11.0				
	80	22	124	268	402	536	0.9	50	495	8.5	620	10.7	745	12.8	870	14.9	1.9	31	26	28
							1.8	75	665	7.6	835	9.6	1000	11.5	1165	13.3				
							3.1	100	745	6.4	935	8.0	1120	9.6	1305	11.2				
	90	25	158	302	452	603	0.9	50	515	8.8	645	11.1	775	13.3	905	15.6	2.2	35	30	32
							1.8	75	690	7.9	865	9.9	1040	11.9	1210	13.9				
							3.1	100	775	6.7	970	8.3	1165	10.0	1360	11.7				
	95	26	176	318	477	637	0.9	50	525	9.0	655	11.3	790	13.6	920	15.8	2.4	36	31	33
							1.8	75	705	8.1	880	10.1	1055	12.1	1230	14.1				
							3.1	100	790	6.8	985	8.5	1185	10.2	1380	11.9				
3	100	28	87	335	503	670	0.9	50	550	9.5	685	11.8	825	14.2	960	16.5	2.5	32	27	29
							1.8	75	660	7.6	825	9.5	990	11.3	1160	13.3				
							3.1	100	780	6.7	975	8.4	1170	10.1	1365	11.7				
	105	29	96	352	528	704	0.9	50	560	9.6	700	12.0	835	14.3	975	16.8	2.7	34	29	31
							1.8	75	670	7.7	840	9.6	1005	11.5	1175	13.5				
							3.1	100	790	6.8	990	8.5	1185	10.2	1385	11.9				
	110	31	105	369	553	737	0.9	50	565	9.7	710	12.2	850	14.6	990	17.0	2.9	35	30	32
							1.8	75	680	7.8	850	9.7	1020	11.7	1190	13.6				
							3.1	100	805	6.9	1005	8.6	1205	10.4	1405	12.1				
	115	32	115	385	578	771	0.9	50	575	9.9	715	12.3	860	14.8	1005	17.3	3.0	37	32	34
							1.8	75	690	7.9	865	9.9	1035	11.9	1210	13.9				
							3.1	100	815	7.0	1015	8.7	1220	10.5	1425	12.2				
	120	33	125	402	603	804	0.9	50	580	10.0	725	12.5	870	14.9	1015	17.4	3.2	38	33	35
							1.8	75	700	8.0	875	10.0	1050	12.0	1225	14.0				
							3.1	100	825	7.1	1030	8.8	1235	10.6	1440	12.4				
	125	35	136	419	628	838	0.9	50	590	10.1	735	12.6	880	15.1	1030	17.7	3.4	39	34	36
							1.8	75	705	8.1	885	10.1	1060	12.1	1235	14.1				
							3.1	100	835	7.2	1040	8.9	1250	10.7	1460	12.5				

Performance data AIR-FIT 600

Heating

Multi Nozzle	q1	q1	pst	Heating capacity air PA (W)			ΔPw	qw	Heating capacity water Pw (W)								T	LpA	LpA	LpA
				ΔTAC = Troom - T1(K)					ΔTWK = Troom - Twater,in(K)											
				10	15	20			20		25		30		35					
Position	(m³/h)	(l/s)	(Pa)	PA, 10K	PA, 15K	PA, 20K	(kPa)	(l/h)	PA, 20K	ΔTw,20k	PA, 25K	ΔTw,25k	PA, 30K	ΔTw,30k	PA, 35K	ΔTw,35k	(m)	(dB(A))	(NC)	(NR)

Chilled beam model 600-size 1800 mm

Nozzle-position	m³/h	l/s	Pst	PA, 10K	PA, 15K	PA, 20K	kPa	l/h	PW, 20K	ΔTw,20	PA, 25K	ΔTw,25k	PA, 30K	ΔTw,30k	PA, 35K	ΔTw,35k	T	LpA	LpA	LpA
1	50	14	63	168	251	335	1.0	50	540	9.3	680	11.7	815	14.0	950	16.3	1.0	--	--	--
							2.1	75	625	7.2	780	8.9	935	10.7	1090	12.5				
							3.6	100	755	6.5	945	8.1	1135	9.8	1320	11.3				
	55	15	77	184	276	369	1.0	50	565	9.7	705	12.1	845	14.5	990	17.0	1.1	--	--	--
							2.1	75	650	7.4	810	9.3	975	11.2	1135	13.0				
							3.6	100	785	6.7	985	8.5	1180	10.1	1375	11.8				
	60	17	91	201	302	402	1.0	50	585	10.1	730	12.5	880	15.1	1025	17.6	1.3	22	--	--
							2.1	75	670	7.7	840	9.6	1010	11.6	1175	13.5				
							3.6	100	815	7.0	1020	8.8	1220	10.5	1425	12.2				
	65	18	107	218	327	436	1.0	50	605	10.4	755	13.0	905	15.6	1060	18.2	1.4	25	20	22
							2.1	75	695	8.0	870	10.0	1040	11.9	1215	13.9				
							3.6	100	840	7.2	1050	9.0	1260	10.8	1470	12.6				
	70	19	124	235	352	469	1.0	50	620	10.7	780	13.4	935	16.1	1090	18.7	1.5	27	22	24
							2.1	75	715	8.2	895	10.3	1070	12.3	1250	14.3				
							3.6	100	865	7.4	1080	9.3	1300	11.2	1515	13.0				
	75	21	143	251	377	503	1.0	50	640	11.0	800	13.7	960	16.5	1120	19.2	1.7	29	24	26
							2.1	75	735	8.4	915	10.5	1100	12.6	1285	14.7				
							3.6	100	890	7.6	1110	9.5	1330	11.4	1555	13.4				
2	80	22	76	268	402	536	1.0	50	585	10.1	730	12.5	875	15.0	1020	17.5	1.8	25	20	22
							2.1	75	785	9.0	980	11.2	1175	13.5	1370	15.7				
							3.6	100	880	7.6	1095	9.4	1315	11.3	1535	13.2				
	85	24	86	285	427	570	1.0	50	595	10.2	745	12.8	895	15.4	1045	18.0	2.0	27	22	24
							2.1	75	800	9.2	1000	11.5	1200	13.7	1400	16.0				
							3.6	100	895	7.7	1120	9.6	1345	11.6	1570	13.5				
	90	25	96	302	452	603	1.0	50	610	10.5	760	13.1	915	15.7	1065	18.3	2.1	28	23	25
							2.1	75	815	9.3	1020	11.7	1225	14.0	1430	16.4				
							3.6	100	915	7.9	1145	9.8	1375	11.8	1600	13.7				
	95	26	107	318	477	637	1.0	50	620	10.7	775	13.3	930	16.0	1085	18.6	2.2	30	25	27
							2.1	75	830	9.5	1040	11.9	1245	14.3	1455	16.7				
							3.6	100	930	8.0	1165	10.0	1400	12.0	1630	14.0				
	100	28	119	335	503	670	1.0	50	630	10.8	790	13.6	945	16.2	1105	19.0	2.4	32	27	29
							2.1	75	845	9.7	1055	12.1	1270	14.5	1480	17.0				
							3.6	100	950	8.2	1185	10.2	1425	12.2	1660	14.3				
	105	29	131	352	528	704	1.0	50	640	11.0	800	13.7	960	16.5	1125	19.3	2.6	33	28	30
							2.1	75	860	9.9	1075	12.3	1290	14.8	1505	17.2				
							3.6	100	965	8.3	1205	10.4	1445	12.4	1685	14.5				
3	110	31	64	369	553	737	1.0	50	670	11.5	840	14.4	1005	17.3	1175	20.2	2.7	28	23	25
							2.1	75	805	9.2	1010	11.6	1210	13.9	1410	16.2				
							3.6	100	950	8.2	1190	10.2	1425	12.2	1665	14.3				
	120	33	76	402	603	804	1.0	50	690	11.9	860	14.8	1035	17.8	1205	20.7	3.0	30	25	27
							2.1	75	830	9.5	1035	11.9	1245	14.3	1450	16.6				
							3.6	100	980	8.4	1225	10.5	1465	12.6	1710	14.7				
	130	36	90	436	653	871	1.0	50	705	12.1	885	15.2	1060	18.2	1240	21.3	3.4	33	28	30
							2.1	75	850	9.7	165	12.2	1275	14.6	1490	17.1				
							3.6	100	1005	8.6	1255	10.8	1505	12.9	1755	15.1				
	140	39	104	469	704	938	1.0	50	725	12.5	905	15.6	1085	18.6	1265	21.7	3.7	35	30	32
							2.1	75	870	10.0	1090	12.5	1305	14.9	1525	17.5				
							3.6	100	1025	8.8	1280	11.0	1540	13.2	1795	15.4				
	150	42	119	503	754	1005	1.0	50	740	12.7	925	15.9	1110	19.1	1290	22.2	4.0	37	32	34
							2.1	75	890	10.2	1110	12.7	1330	15.2	1555	17.8				
							3.6	100	1045	9.0	1310	11.3	1570	13.5	1830	15.7				
	160	44	136	536	804	1072	1.0	50	750	12.9	940	16.2	1130	19.4	1315	22.6	4.4	39	34	36
							2.1	75	905	10.4	1130	12.9	1360	15.6	1585	18.2				
							3.6	100	1065	9.2	1335	11.5	1600	13.7	1865	16.0				

Performance data AIR-FIT 600

Heating

Multi Nozzle	q1	q1	p_{st}	Heating capacity air PA (W)			ΔP_w	q_w	Heating capacity water Pw (W)								T	L_{pA}	L_{pA}	L_{pA}
				ΔTAC = Troom - T1(K)					ΔTWK = Troom - Twater,in(K)											
				10	15	20			20		25		30		35					
Position	(m^3/h)	(l/s)	(P_a)	$P_{A,10K}$	$P_{A,15K}$	$P_{A,20K}$	(kP_a)	(l/h)	$P_{A,20K}$	$\Delta T_{w,20k}$	$P_{A,25K}$	$\Delta T_{w,25k}$	$P_{A,30K}$	$\Delta T_{w,30k}$	$P_{A,35K}$	$\Delta T_{w,35k}$	(m)	(dB(A))	(NC)	(NR)

Chilled beam model 600-size 2400 mm

Nozzle-position	m^3/h	l/s	P_{st}	$P_{A,10K}$	$P_{A,15K}$	$P_{A,20K}$	Kpa	l/h	$P_{W,20K}$	$\Delta T_{w,20k}$	$P_{A,25K}$	$\Delta T_{w,25k}$	$P_{A,30K}$	$\Delta T_{w,30k}$	$P_{A,35K}$	$\Delta T_{w,35k}$	T	L_{pA}	L_{pA}	L_{pA}
1	70	19	63	233	350	466	3.0	75	875	10.0	1095	12.5	1310	15.0	1530	17.5	1.4	21	--	--
							4.8	100	1060	9.1	1325	11.4	1590	13.7	1855	15.9				
							7.0	125	1120	7.7	1395	9.6	1675	11.5	1955	13.4				
	75	21	72	250	375	500	3.0	75	900	10.3	1125	12.9	1350	15.5	1575	18.0	1.5	24	--	--
							4.8	100	1090	9.4	1365	11.7	1635	14.0	1910	16.4				
							7.0	125	1150	7.9	1440	9.9	1725	11.9	2015	13.9				
	80	22	82	266	400	533	3.0	75	925	10.6	1155	13.2	1390	15.9	1620	18.6	1.6	26	21	23
							4.8	100	1120	9.6	1400	12.0	1680	14.4	1960	16.8				
							7.0	125	1185	8.1	1480	10.2	1775	12.2	2070	14.2				
	85	24	93	283	425	566	3.0	75	950	10.9	1185	13.6	1425	16.3	1660	19.0	1.8	28	23	25
							4.8	100	1150	9.9	1435	12.3	1725	14.8	2010	17.3				
							7.0	125	1210	8.3	1515	10.4	1820	12.5	2120	14.6				
	90	25	104	300	450	599	3.0	75	970	11.1	1215	13.9	1455	16.7	1700	19.5	1.9	30	25	27
							4.8	100	1175	10.1	1470	12.6	1765	15.2	2055	17.7				
							7.0	125	1240	8.5	1550	10.7	1860	12.8	2170	14.9				
	95	26	116	316	475	633	3.0	75	990	11.3	1240	14.2	1485	17.0	1735	19.9	2.0	32	27	29
							4.8	100	1200	10.3	1500	12.9	1800	15.5	2100	18.0				
							7.0	125	1265	8.7	1585	10.9	1900	13.1	2215	15.2				
2	100	28	60	333	500	666	3.0	75	1055	12.1	1320	15.1	1580	18.1	1845	21.1	2.2	24	--	21
							4.8	100	1180	10.1	1475	12.7	1770	15.2	2065	17.7				
							7.0	125	1235	8.5	1545	10.6	1855	12.8	2165	14.9				
	110	31	73	366	549	733	3.0	75	1090	12.5	1365	15.6	1640	18.8	1910	21.9	2.5	27	22	24
							4.8	100	1225	10.5	1530	13.1	1835	15.8	2140	18.4				
							7.0	125	1280	8.8	1600	11.0	1920	13.2	2240	15.4				
	120	33	86	400	599	799	3.0	75	1125	12.9	1410	16.2	1690	19.4	1970	22.6	2.8	29	24	26
							4.8	100	1265	10.9	1580	13.6	1895	16.3	2210	19.0				
							7.0	125	1320	9.1	1650	11.3	1980	13.6	2310	15.9				
	130	36	101	433	649	866	3.0	75	1160	13.3	1450	16.6	1740	19.9	2025	23.2	3.1	32	27	29
							4.8	100	1300	11.2	1625	14.0	1950	16.8	2275	19.5				
							7.0	125	1360	9.3	1700	11.7	2040	14.0	2380	16.4				
	140	39	118	466	699	932	3.0	75	1190	13.6	1485	17.0	1780	20.4	2080	23.8	3.4	34	29	31
							4.8	100	1330	11.4	1665	14.3	2000	17.2	2330	20.0				
							7.0	125	1395	9.6	1740	12.0	2090	14.4	2440	16.8				
	150	42	135	500	749	999	3.0	75	1215	13.9	1520	17.4	1825	20.9	2125	24.3	3.7	36	31	33
							4.8	100	1365	11.7	1705	14.6	2045	17.6	2385	20.5				
							7.0	125	1425	9.8	1780	12.2	2140	14.7	2495	17.1				
3	150	42	60	500	749	999	3.0	75	1125	12.9	1405	16.1	1685	19.3	1965	22.5	3.7	30	25	27
							4.8	100	1325	11.4	1655	14.2	1985	17.1	230	19.9				
							7.0	125	1380	9.5	1725	11.9	2070	14.2	2415	16.6				
	160	44	69	533	799	1066	3.0	75	1145	13.1	1435	16.4	1720	19.7	2010	23.0	4.0	32	27	29
							4.8	100	1355	11.6	1690	14.5	2030	17.4	2365	20.3				
							7.0	125	1410	9.7	1765	12.1	2115	14.5	2470	17.0				
	170	47	78	566	849	1132	3.0	75	1170	13.4	1460	16.7	1755	20.1	2045	23.4	4.3	34	29	31
							4.8	100	1380	11.9	1725	14.8	2070	17.8	2415	20.7				
							7.0	125	1440	9.9	1795	12.3	2155	14.8	2515	17.3				
	180	50	87	599	899	1199	3.0	75	1190	13.6	1490	17.1	1785	20.4	2085	23.9	4.6	36	31	33
							4.8	100	1405	12.1	1755	15.1	2105	18.1	2455	21.1				
							7.0	125	1465	10.1	1830	12.6	2195	15.1	2560	17.6				
	190	53	97	633	949	1265	3.0	75	1210	13.9	1515	17.4	1815	20.8	2120	24.3	5.0	38	33	35
							4.8	100	1425	12.2	1785	15.3	2140	18.4	2495	21.4				
							7.0	125	1490	10.2	1860	12.8	2230	15.3	2650	17.9				
	200	56	107	666	999	1332	3.0	75	1230	14.1	1535	17.6	1845	21.1	2150	24.6	5.3	39	34	36
							4.8	100	1450	12.5	1810	15.6	2175	18.7	2535	21.8				
							7.0	125	1510	10.4	1890	13.0	2265	15.6	2645	18.2				

Performance data AIR-FIT 600

Heating

Multi Nozzle	q1	q1	p_{st}	Heating capacity air PA (W)			ΔP_w	q_w	Heating capacity water Pw (W)								T	L_{pA}	L_{pA}	L_{pA}
				ΔTAC = Troom - T1(K)					ΔTWK = Troom - Twater,in(K)											
				10	15	20			20		25		30		35					
Position	(m^3/h)	(l/s)	(P_a)	$P_{A,10K}$	$P_{A,15K}$	$P_{A,20K}$	(kP_a)	(l/h)	$P_{A,20K}$	$\Delta T_{w,20k}$	$P_{A,25K}$	$\Delta T_{w,25k}$	$P_{A,30K}$	$\Delta T_{w,30k}$	$P_{A,35K}$	$\Delta T_{w,35k}$	(m)	(dB(A))	(NC)	(NR)
Chilled beam model 600-size 3000 mm																				
Nozzle-position	m^3/h	l/s	Pst	$P_{A,10K}$	$P_{A,15K}$	$P_{A,20K}$	kPa	L/h	$P_{W,20K}$	$\Delta T_{w,20}$	$P_{A,25K}$	$\Delta T_{w,25k}$	$P_{A,30K}$	$\Delta T_{w,30k}$	$P_{A,35K}$	$\Delta T_{w,35k}$	T	L_{pA}	L_{pA}	L_{pA}
1	75	21	43	250	375	500	3.6	75	1035	11.9	1295	14.8	1555	17.8	1815	20.8	1.4	20	--	--
							5.9	100	1255	10.8	1570	13.5	1885	16.2	2200	18.9				
							8.5	125	1325	9.1	1655	11.4	1985	13.6	2320	15.9				
	85	24	56	283	425	566	3.6	75	1100	12.6	1370	15.7	1645	18.8	1920	22.0	1.7	23	--	--
							5.9	100	1330	11.4	1665	14.3	1995	17.1	2330	20.0				
							8.5	125	1405	9.7	1755	12.1	2105	14.5	2455	16.9				
	95	26	70	316	475	633	3.6	75	1150	13.2	1440	16.5	1730	19.8	2015	23.1	1.9	26	21	23
							5.9	100	1395	12.0	1745	15.0	2095	18.0	2445	21.0				
							8.5	125	1475	10.1	1840	12.6	2210	15.2	2580	17.7				
	105	29	85	350	524	699	3.6	75	1200	13.7	1500	17.2	1800	20.6	2105	24.1	2.2	28	23	25
							5.9	100	1455	12.5	1820	15.6	2185	18.8	2550	21.9				
							8.5	125	1535	10.6	1920	13.2	2305	15.8	2690	18.5				
	115	32	102	383	574	766	3.6	75	1245	14.3	1560	17.9	1870	21.4	2180	25.0	2.4	31	26	28
							5.9	100	1510	13.0	1890	16.2	2265	19.5	2645	22.7				
							8.5	125	1595	11.0	1990	13.7	2390	16.4	2790	19.2				
	125	35	121	416	624	833	3.6	75	1285	14.7	1610	18.4	1930	22.1	2255	25.8	2.7	33	28	30
							5.9	100	1560	13.4	1950	16.8	2340	20.1	2730	23.5				
							8.5	125	1645	11.3	2055	14.1	2470	17.0	2880	19.8				
2	135	38	66	450	674	899	3.6	75	1380	15.8	1730	19.8	2075	23.8	2420	27.7	3.0	28	23	25
							5.9	100	1550	13.3	1935	16.6	2325	20.0	2710	23.3				
							8.5	125	1620	11.1	2025	13.9	2430	16.7	2835	19.5				
	145	40	76	483	724	966	3.6	75	1420	16.3	1775	20.3	2130	24.4	2485	28.5	3.3	30	25	27
							5.9	100	1590	13.7	1990	17.1	2385	20.5	2785	23.9				
							8.5	125	1665	11.4	2080	14.3	2495	17.1	2910	20.0				
	155	43	87	516	774	1032	3.6	75	1455	16.7	1815	20.8	2180	25.0	2545	29.2	3.6	31	26	28
							5.9	100	1630	14.0	2035	17.5	2445	21.0	2850	24.5				
							8.5	125	1705	11.7	2130	14.6	2555	17.6	2985	20.5				
	165	46	98	549	824	1099	3.6	75	1485	17.0	1855	21.3	2230	25.5	2600	29.8	3.9	32	27	29
							5.9	100	1665	14.3	2080	17.9	2500	21.5	2915	25.0				
							8.5	125	1740	12.0	2175	14.9	2615	18.0	3050	21.0				
	175	49	111	583	874	1166	3.6	75	1515	17.4	1895	21.7	2275	26.1	2650	30.4	4.2	34	29	31
							5.9	100	1700	14.6	2125	18.3	2550	21.9	2975	25.6				
							8.5	125	1775	12.2	2220	15.3	2665	18.3	3110	21.4				
	185	51	124	616	924	1232	3.6	75	1545	17.7	1930	22.1	2315	26.5	2700	30.9	4.5	35	30	32
							5.9	100	1730	14.9	2165	18.6	2595	22.3	3030	26.0				
							8.5	125	1810	12.4	2265	15.6	2715	18.7	3170	21.8				
3	190	53	58	633	949	1265	3.6	75	1440	16.5	1800	20.6	2160	24.7	2520	28.9	4.6	29	24	26
							5.9	100	1700	14.6	2120	18.2	2545	21.9	2970	25.5				
							8.5	125	1770	12.2	2210	15.2	2655	18.2	3095	21.3				
	210	58	71	699	1049	1399	3.6	75	1485	17.0	1860	21.3	2230	25.5	2605	29.8	5.2	32	27	29
							5.9	100	1755	15.1	2190	18.8	2630	22.6	3070	26.4				
							8.5	125	1830	12.6	2285	15.7	2740	18.8	3200	22.0				
	230	64	85	766	1149	1532	3.6	75	1530	17.5	1915	21.9	2295	26.3	2680	30.7	5.9	34	29	31
							5.9	100	1805	15.5	2255	19.4	2705	23.2	3155	27.1				
							8.5	125	1880	12.9	2350	16.2	2820	19.4	3290	22.6				
	250	69	101	833	1249	1665	3.6	75	1570	18.0	1965	22.5	2355	27.0	2750	31.5	6.6	35	30	32
							5.9	100	1850	15.9	2315	19.9	2775	23.8	3240	27.8				
							8.5	125	1930	13.3	2410	16.6	2895	19.9	3375	23.2				
	270	75	118	899	1349	1798	3.6	75	1605	18.4	2010	23.0	2410	27.6	2810	32.2	7.2	37	32	34
							5.9	100	1895	16.3	2365	20.3	2840	24.4	3315	28.5				
							8.5	125	1975	13.6	2470	17.0	2960	20.3	3455	23.7				
	290	81	136	966	1449	1931	3.6	75	1640	18.8	2050	2.5	2460	28.2	2870	32.9	7.9	39	34	36
							5.9	100	1935	16.6	2415	20.7	2900	24.9	3385	29.1				
								125	2015	13.9	2520	17.3	3025	20.8	3530	24.3				

Comments:

1. All data is based on 2-way discharge air pattern.
2. Throw data T refers to chilled beams mounted in a ceiling, 2.7-3.0m above the floor, and with horizontal discharge. It is also based on primary air temperature 8 °C below room temperature and supply water temperature 8 °C below room temperature.
3. Throw will be extended if one end of the chilled beam is mounted close to a sidewall or a similar construction.
4. Sound pressure levels are based on a room absorption of 10 dB, levels less than NC 20 are indicated by "--".
5. For non standard applications and/or selections, please contact our technical staff.
6. For explanation of the symbols see page 30.

Installation, Maintenance & Cleaning

Installation

There are two methods of installing the active chilled beam.

- Exposed Tee Systems
- Bolt-Slot Systems

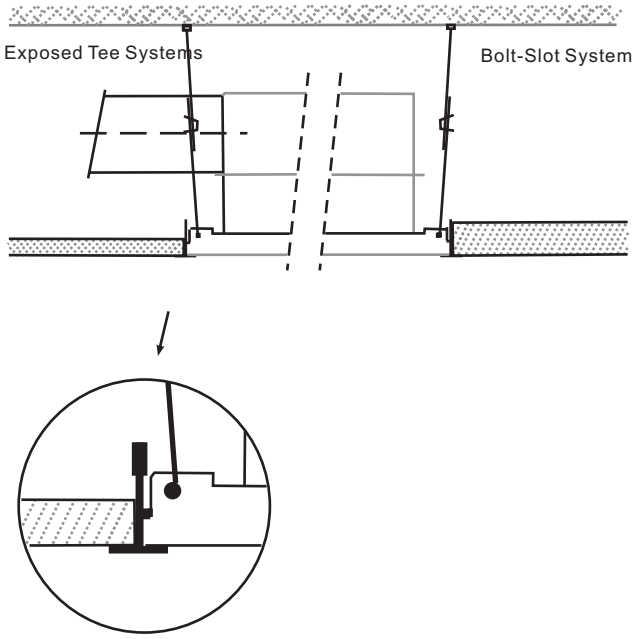


Figure 8: mounting solutions

With both methods the weight of the chilled beam must be supported by the hangers connected to the building construction, and not transferred to the ceiling.

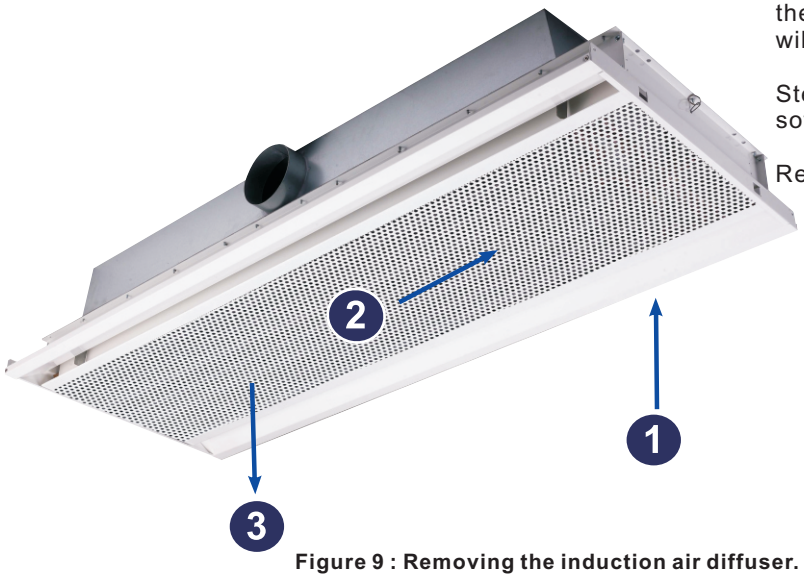


Figure 9 : Removing the induction air diffuser.

Duct connection

The active chilled beam is equipped with 1 or 2 circular spigots for duct connections. In the case of 2 spigots on one unit, we recommend a symmetric connection by using equal connecting duct lengths or a T-connection.

Coil connection

The heat exchanger is equipped with individual circuits for cooling or cooling and heating.. Connections are made of copper. The cooling and heating circuits are indicated by blue and red labels respectively.

Water connections can be made by pressed or solder connections or flexible hoses with quick-lock connectors.

Changing the airside connection

The standard configuration is with the water connections on the right side when looking into the air connector.
The construction of the chilled beam allows to change the position of the air connector by unscrewing the plenum box and rotating it by 180°.

Maintenance

The perforated screen or linear bar diffuser can be easily removed to clean the heat exchanger per the following instructions:

Step 1. Support the diffuser with 2 hands to prevent it dropping down when released.

Step 2. Push one end of the diffuser up and then horizontally towards the end of the unit. This will allow the other end of the diffuser to drop down. The diffuser will still be connected by safety wires.

Step 3. Use a conventional vacuum cleaner with a very soft brush to clean the coil.

Refitting the diffuser is done in reverse order.

Multi-nozzle technology

The Barcol-Air active chilled beams are equipped with multi-nozzle technology.
The multi-nozzle technology consists of three nozzle groups on both sides with different diameters.
Different sized nozzle can be selected to give different airflows.

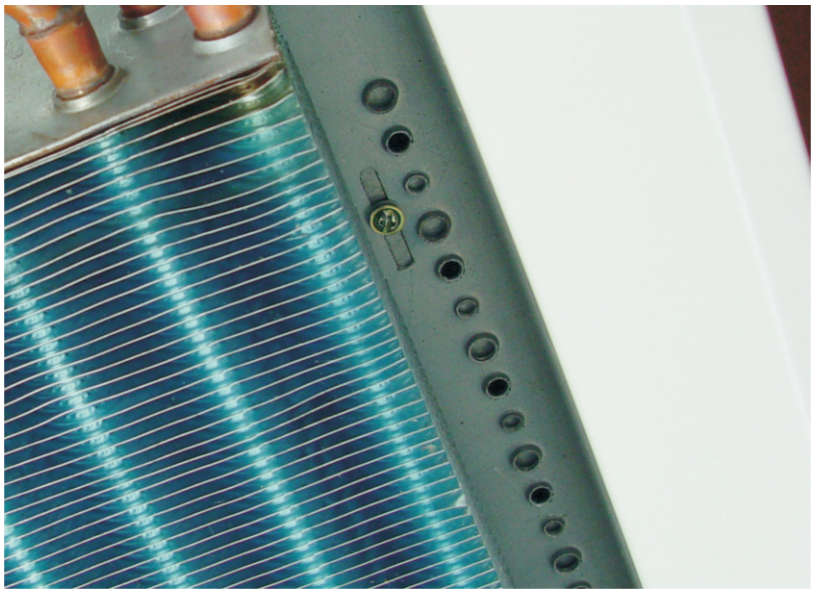


Figure 10: multi-nozzle technology

Adjusting multi-nozzle (figure 11)

The only tool needed to adjust the multi-nozzle is a screwdriver.
Step 1: Remove the induction air diffuser (see figure 10).
Step 2: Loosen all screws in the sliding plate. (One full turn).
Step 3: Move the sliding plate into the desired position*.
Step 4: Tighten all screws (hand tight).
Step 5: Replace the induction air diffuser.

*Factory setting: nozzle position 2.

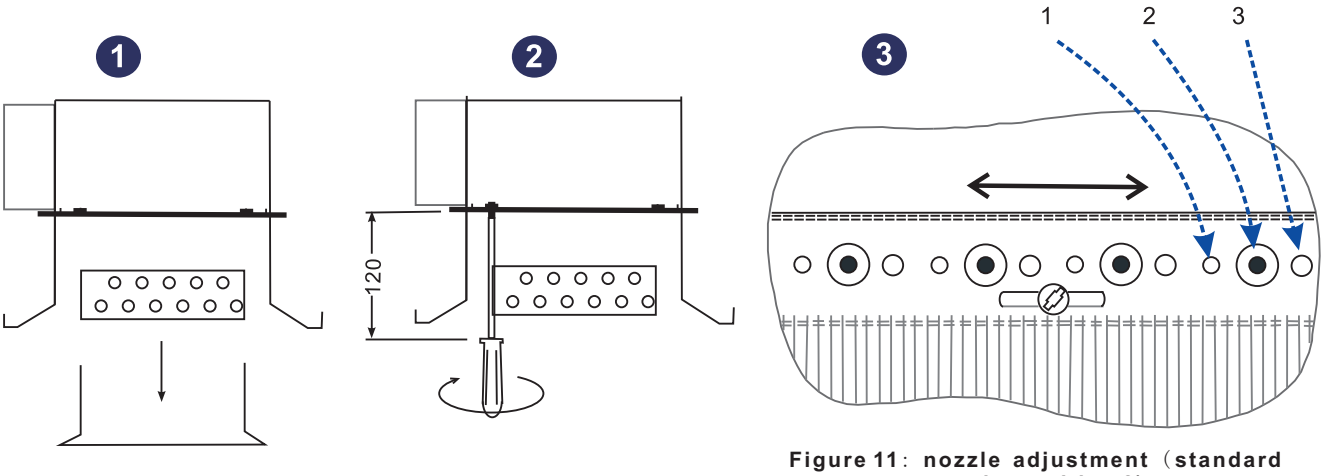
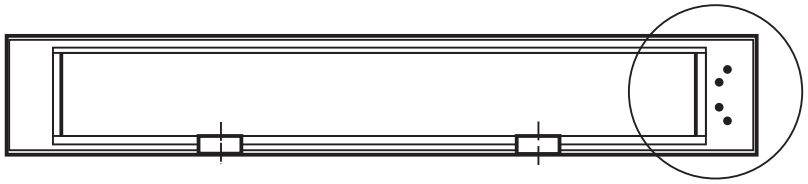


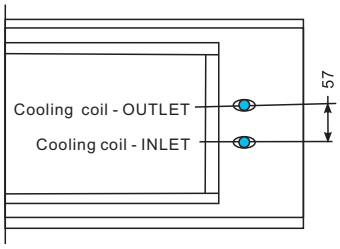
Figure 11: nozzle adjustment (standard nozzle position 2)

Water connections

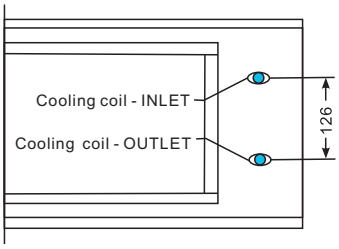


AIRFIT MODEL 300

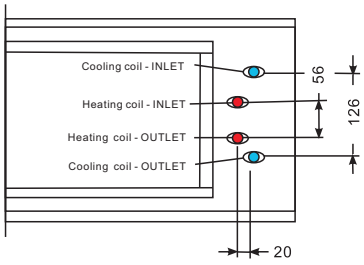
2 pipe Size 2400-3000



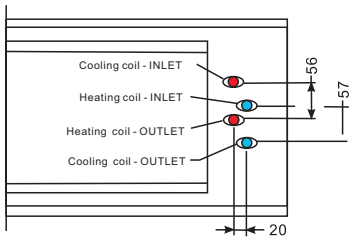
2 pipe Size 1200-1500-1800



4 pipe Size 1200-1500-1800

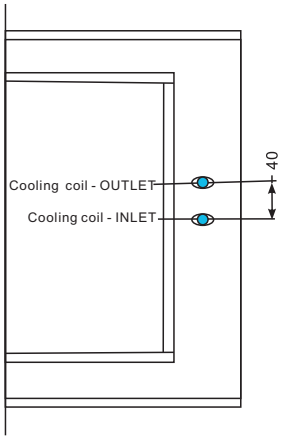


4 pipe Size 2400-3000



AIRFIT MODEL 600

2 pipe Size 1200-3000



4 pipe Size 1200-3000

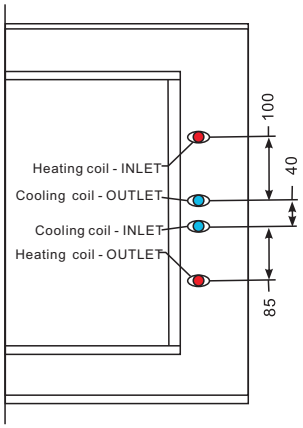


Table3: Dimensions connection

Width	300	600	
Size	1200-3000	1200-1800	2400-3000
$\varnothing d_{cold}$	12	12	15
$\varnothing d_{hot}$	12		

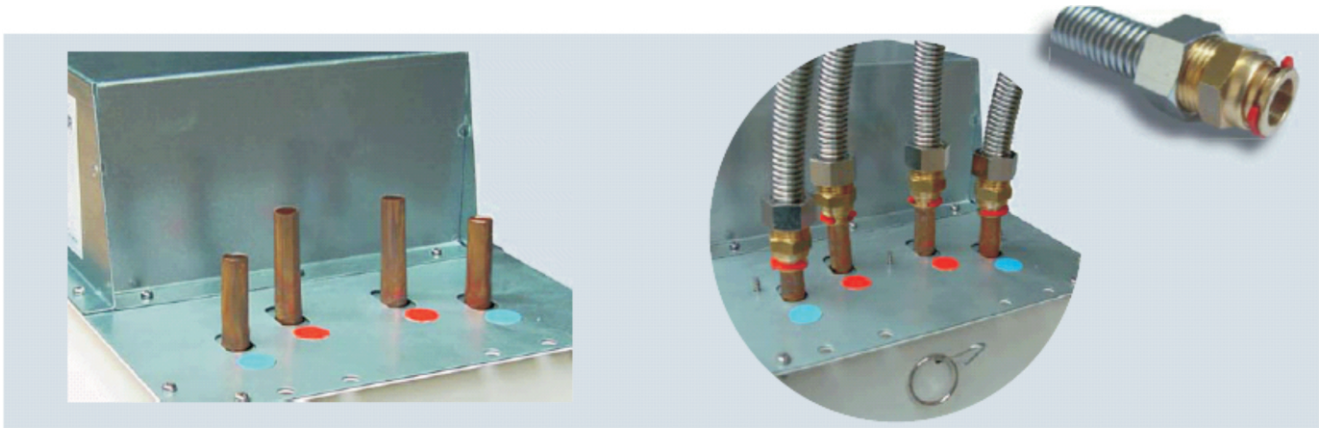


Figure 12: **Heat exchanger connections, flexible hoses with quick connect couplings**.

Remarks:

To ensure a leak proof connection, copper pipe must be undamaged, without sharp edges and perfectly circular. Be aware of deviations in length as a result of shrinking and expanding due to the temperature.

Note: Cold and warm water connections are marked with blue and red labels.

Specifications

Specification HC Barcol-Air Active Chilled Beam

Chilled Beams, manufactured by HC Barcol-Air, shall be used to compensate for the external and internal heat loads of the building and shall maintain the thermal comfort in the room within the specified comfort and noise criteria.

Control description

- Primary air will be supplied by a fresh air handling unit into the distribution plenum. The primary air then passes through the induction nozzles into the mixing section and from the mixing section the air will be distributed into the room by the two slot diffusers.

- The special construction of the jet nozzles (with the facility to select one of 3 difference airflows) will induce air from the room through a perforated or linear bar induction air diffuser. This air will pass through a cooling and / or heating coil and then mix with the primary air before being supplied back into the room.

Construction of the chilled beam:

- The distribution plenum box with one or two circular spigot inlets, depending on of the length of the chilled beam, connects the fresh air to the beam and distributes the primary air equally over the multiple jet nozzle plates. The plenum shall be made of galvanized sheet steel.

- A multi nozzle plate, adjustable in 3 different opening positions, injects the conditioned air into the mixing section of the beam. Different sized nozzles shall be selectable with a nozzle adjustment bar which can be easily repositioned using a screw driver.

- Room air is induced through the heat exchanger into the mixing section.

- Different heat exchangers shall be available to suit 2-pipe system or 4 systems. The heat exchangers shall be made of copper tubes with aluminum fins and shall have 12 or 15 mm diameter water connections depending on units size and connections. The heat exchangers shall be factory pressure tested at 20 bar. The diffuser for the induced room air shall be a perforated screen or provided with linear bar grilles. This diffuser must be removable and provided with a safe hanging provision.

The supply air diffuser shall be two linear slots, constructed from galvanized steel and designed in such a way that the “Coanda” effect is maintained together with comfortable air distribution in the room.

Dimensions

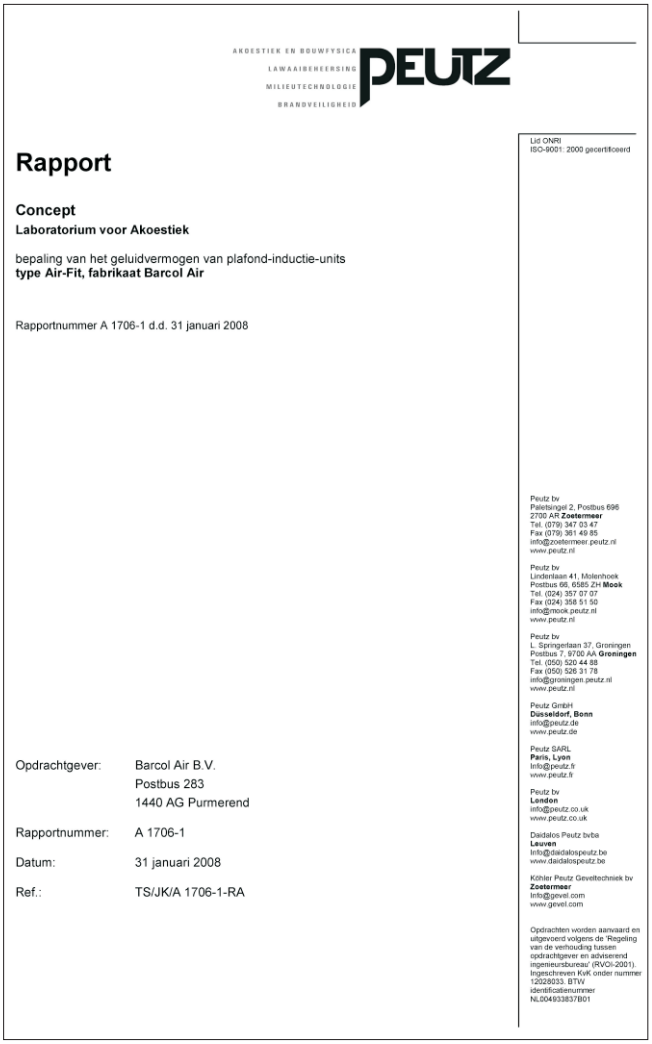
Width: The chilled beam shall be available in standard width 295mm (model 300) or 595 mm (model 600).
Length: The units shall be available in standard lengths of 1200, 1500, 1800, 2400 and 3000 mm together with any intermediate length by special order.

Height: The height of the chilled beam (including distribution plenum) shall not be more 212 mm (model 300) or 242mm (model 600).

Support: The chilled beam shall have 6 mm diameter mounting holes for easy installation.
The visible housing of chilled beam shall have RAL9010 polyester powder coated finish.
Other RAL colors available on request.

Performance Certificates

Independant Laboratory Sound Tests



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MILIEUTECHNOLOGIE
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ISO-9001: 2000 gecertificeerd

Rapport

Concept
Laboratorium voor Akoestiek

bepaling van het geluidvermogen van plafond-inductie-units
type Air-Fit, fabrikaat Barcol Air

Rapportnummer A 1706-1 d.d. 31 januari 2008

Opdrachtgever: Barcol Air B.V.
Postbus 283
1440 AG Purmerend

Rapportnummer: A 1706-1

Datum: 31 januari 2008

Ref.: TS/JK/A 1706-1-RA

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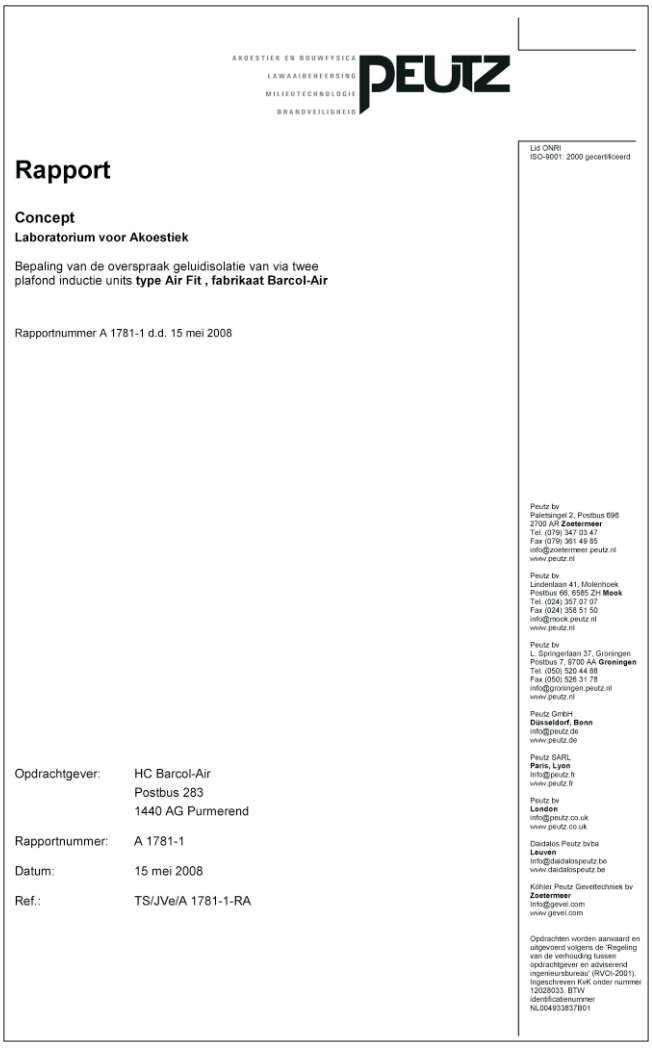
Opdrachten worden aanvaard en uitgevoerd volgens de 'Regeling van de verhouding tussen opdrachtgever en adviserend ingenieursbureau' (RVOI-2001). Ingeschreven KvK onder nummer 12028033. BTW identificatienummer NL004933837B01



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Rapport

Concept
Laboratorium voor Akoestiek

Bepaling van de overspraak geluidisolatie van via twee
plafond inductie units **type Air Fit , fabrikaat Barcol-Air**

Rapportnummer A 1781-1 d.d. 15 mei 2008

Opdrachtgever: HC Barcol-Air
Postbus 283
1440 AG Purmerend

Rapportnummer: A 1781-1

Datum: 15 mei 2008

Ref.: TS/JVe/A 1781-1-RA

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Symbol index

q_1= Primary airflow（m^3 / h)

T_1= Primary air temperature（℃）

T_{room}= Room temperature（℃）

P_A= Capacity Primary air（W）

P_W= Capacity Heat exchanger（W）

P_{tot}= Total supplied cooling or heating capacity of the heat exchanger + primary air（W）

P_{st}= Static pressure (Pa)

L_{pA}= Sound pressure level of the unit (dB(A) /NC /NR)

q_w= Water flow through the heat exchanger (l/h)

ΔP_w= Water pressure drop of the heat exchanger（kPa)

$T_{w,in}$= Water temperature entering the heat exchanger（°C）

ΔT_w = Difference between heat exchanger entering and leaving water temperature (K)

ΔT_{AC} = Difference between room temperature and the primary air temperature in cooling mode (K)

ΔT_{wc} = Difference between room temperature and the supply water temperature in cooling mode (K)

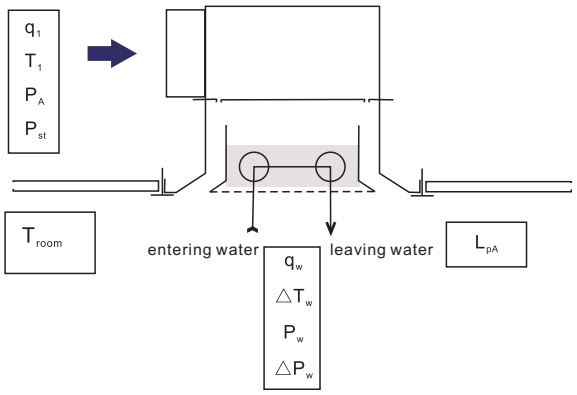
ΔT_{AH}= Difference between primary air temperature and room air temperature in heating mode (K)

ΔT_{WH} = Difference between entering water temperature and the room temperature in heating mode (K)

T = Throw: the distance between the wall and the unit or half of the distance between two units(m)

Note 1：All data provided in this catalogue is based on installations at sea level altitude.

Note 2：The primary air conditions（temperature and humidity）shall be controlled in such a way that condensation will not occur.




BARCOL-AIR