Active Chilled Beam

PremiAir

Function

The PremiAir active chilled beam is a four-way induction type air-conditioning unit that is designed for integrated installation, mounted directly in suspended ceilings. Excellently suitable for ventilation, cooling and heating. The primary air from the air handling unit is injected into the plenum box and through the specially shaped nozzles, discharged into the room along the ceiling. Causing induction of the room air to flow through the cooling and/or heating coil, which then mixed with the primary air flows back into the room.

Description

The standard primary air box has four separate adjustable nozzle blades per direction. These nozzles have three different sizes (A, B, C) providing the highest flexibility to the customer. The air flow on each side can be adjusted separately in three different positions, using a 5mm allen key delivered with the beam. This built-in function makes it possible to control and check the air flow very easily. PremiAir is designed to fit in most type of suspended ceiling framework on the market with a standard width of 2 ft. The coil is equipped with cooling function or cooling/heating function together. The visible re-designed aluminium front and frames are powder coated (RAL 9003 as standard). Air duct connection: From 4" to 8", depending on the air volume.

Main features

- Air flow of 170 cfm
- Ventilation, cooling and/or heating
- High cooling capacity
- AirFlex© adjustable air deflectors (optional)
- Adjustable nozzles
- ControlAir regulation system (optional)
- Easy accessable front
- For suspended ceilings

Selection

Size, inches	24	48	72
Nozzle pressure, PSI	0.40 / 0.20	0.40 / 0.20	0.40 / 0.20
Air flow, CFM	42 / 42	63 / 63	84 / 84
Cooling capacity, water Δt=18°F	1779 / 1547	3265 / 2810	4327 / 3764
Cooling capacity, air Δt=18°F	820 / 820	1230 / 1230	1640 / 1640
Total cooling capacity, BTUH	2599 / 2367	4495 / 4040	5967 / 5404

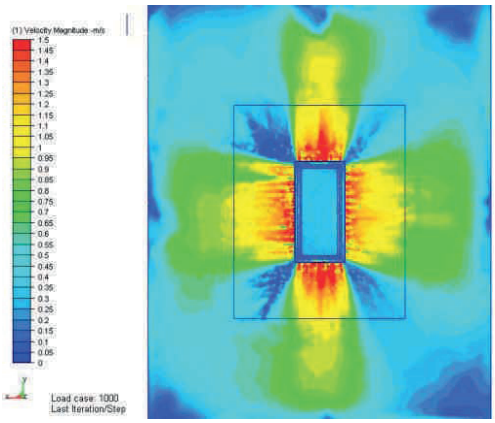
Materials

The duct and plenum air box are made of galvanized steel. The visible front plate and side panels are powder coated aluminum and sheet steel painted in standard white RAL 9003 color (or in any other RAL color requested by the customer). The coil fins are made of aluminum and the pipes are made of copper (alternatively, the coils can be blackend). The AirFlex© air deflectors are made of polyamide plastic.

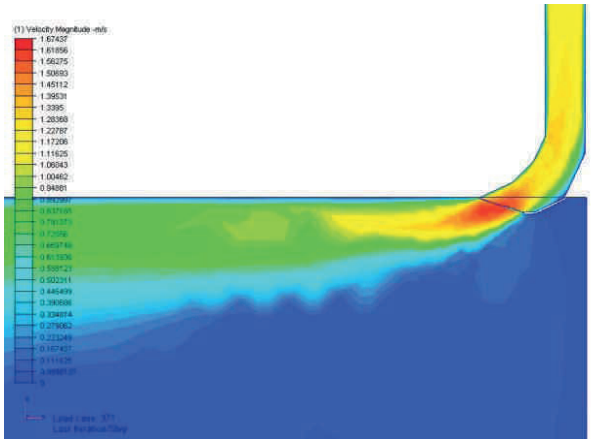
Fields of application

- Offices
- Classrooms
- Hospitals
- Department stores
- Airports
- Hotels
- Conference rooms
- Restaurants etc.

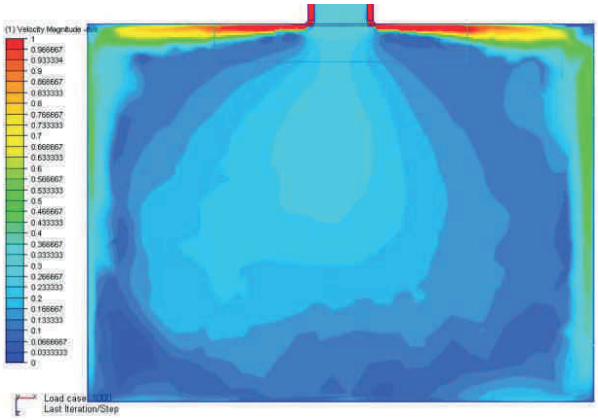
OptimAir CFD modelling



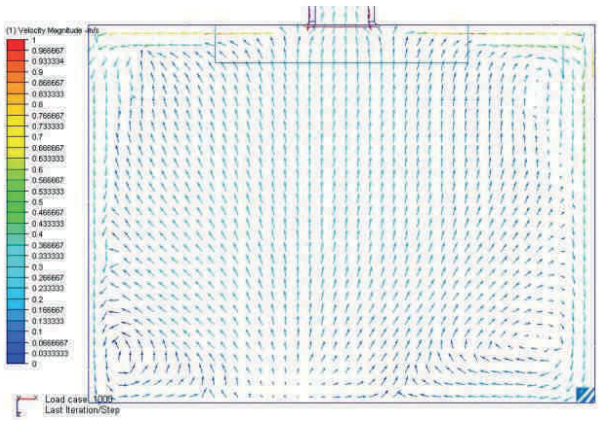
Top View



Air Distribution Pattern – Detail



Section View



Vector Model

AirFlex© adjustable air deflectors (optional)

PremiAir can also be selected with AirFlex© which are manually and individually adjustable air deflectors. These flexible fins, allows the customer to easily adjust the direction and the throw length of the supplied air. With just one adjustment of the deflectors, it is possible to provide a pleasant and draught-free indoor climate. (see Figures 3.1 and 3.2).

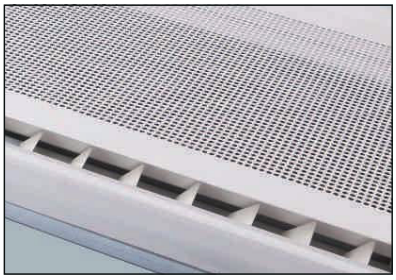


Figure 3.1

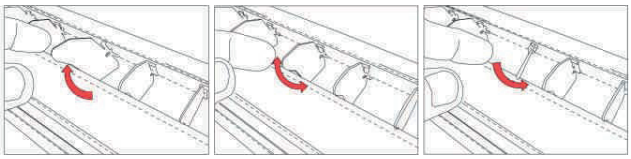


Figure 3.2

Adjustable Nozzles

The PremiAir is supplied with adjustable nozzles. This function allows the customer to easily adjust and set the required air flow or to fullfil any future demands or adjustments of the room climate. The nozzles are positioned on all four sides of the beam and can be set independent from one another. With the use of a long key wrench (size 3/16'') the air flow can be adjusted in three steps, by covering and uncovering the nozzle blades. The requested air flow is pre-set at the factory (see fig. 3.3). When selected together with the optional AirFlex© air defectors it is possible to achieve a very pleasant indoor climate with high flexibility.

The nozzle setting on each side can be adjusted as in fig. 3.4 below. The settings are always measured from the air-duct (side 'A'). The air flows are defined from 1 (=lowest flow) to 3 (= highest flow).

Example: nozzle setting 2323 means: A=2, B=3, C=2, D=2

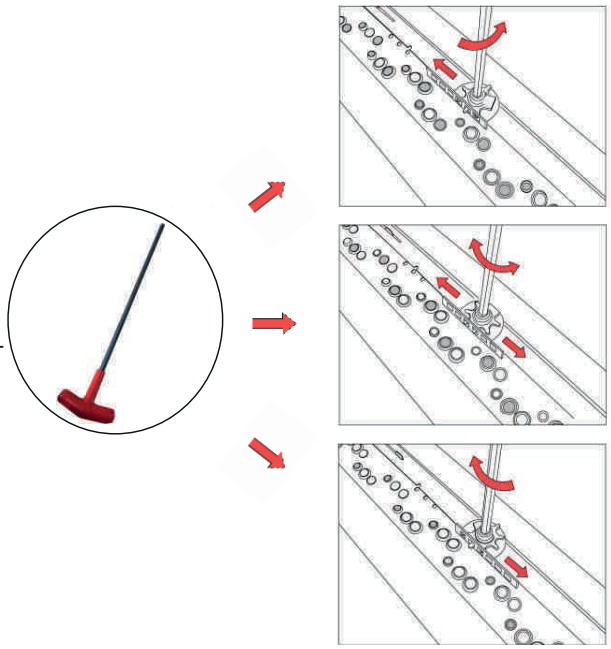
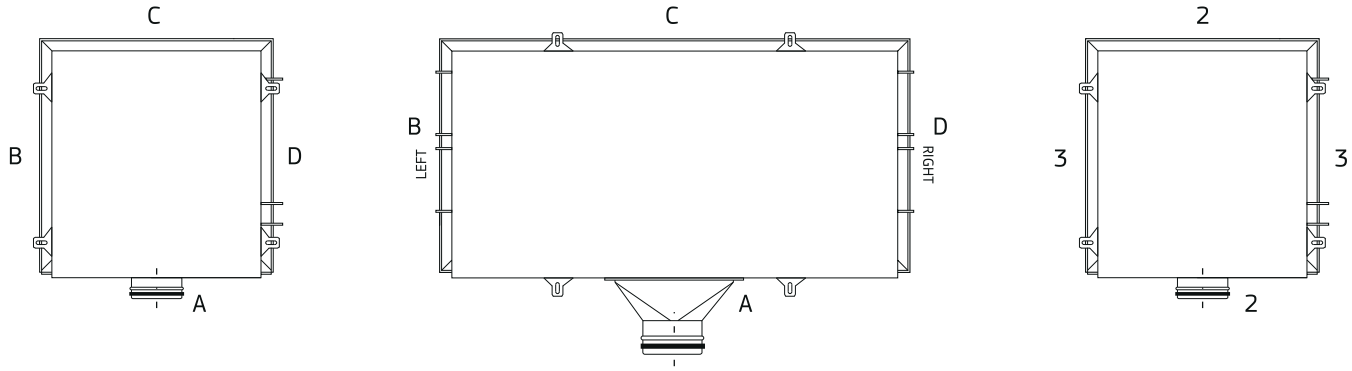


Figure 3.3

Figure 3.4



Suspension

The length and width of PremiAir is designed to fit in most T-grid ceiling framework. The units are delivered with four factory mounted suspension elements (one in every corner), which can be adjusted separately in four directions. Step 1. The mounting elements needs to be fastened with a standard bolt. Step 2. Then fix the required height by adjusting the threaded bolt vertically. (see figures 4.1 and 4.2)

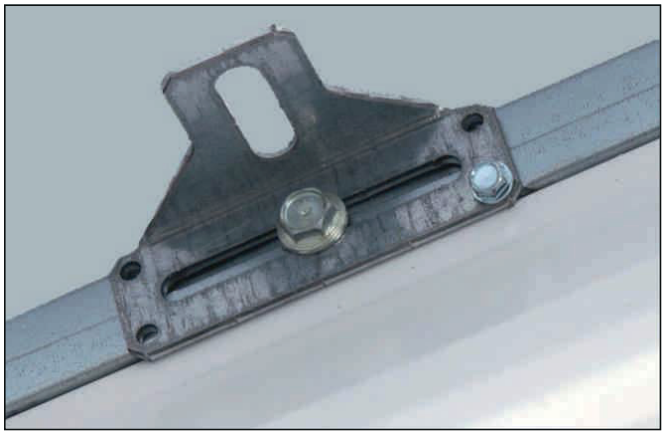


Figure 4.1

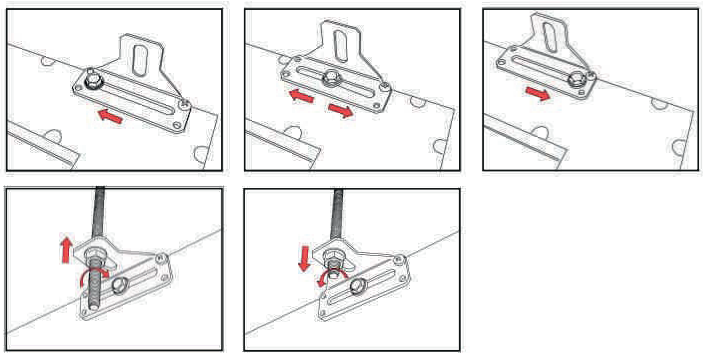


Figure 4.2

Maintenance

The perforated front panel of the active chilled beam can be folded down allowing easy access for maintenance (see figures 4.3 and 4.4). The air chambers and the heat exchanger have to be cleaned by carefully using a vacuum cleaner with a soft brush so that the fins and the copper tubes do not get damaged.
The front panels and parts that are out of reach for the vacuum cleaner have to be wiped off with a soft cloth. If required, mild preferably neutral cleaning detergent should be used.
The electrical parts have to be maintained in accordance with the relevant prescriptions. The points of connection/shock protection and the functional ability of the components must be checked. *The maintenance operation has to be carried out at least twice a year.*

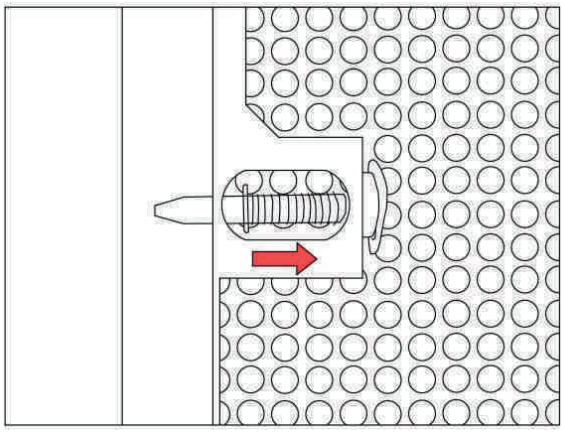
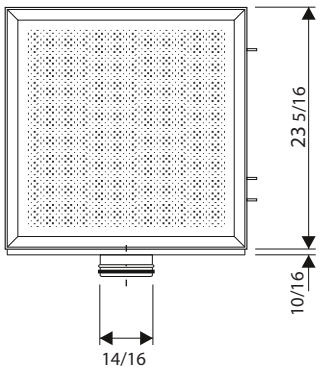
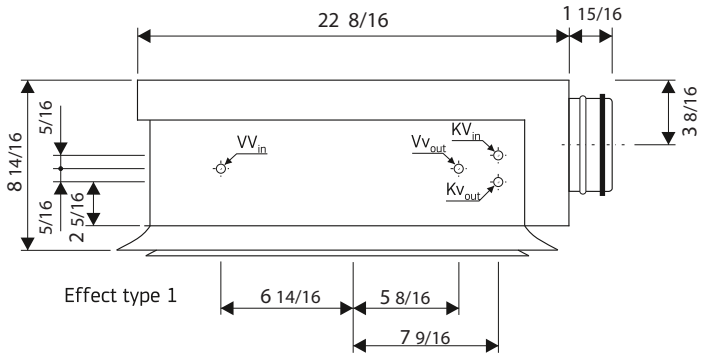


Figure 4.4

Figure 4.3

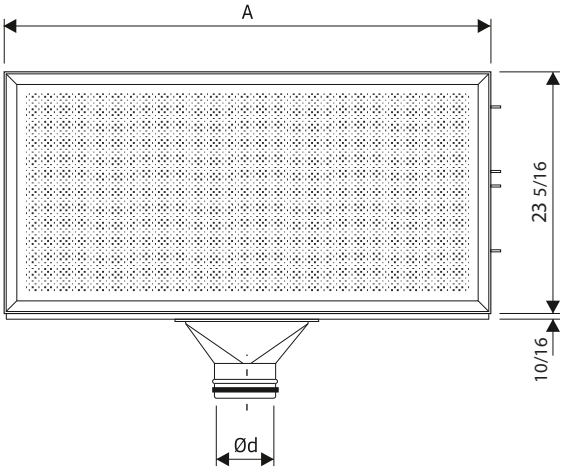
PremiAir 24

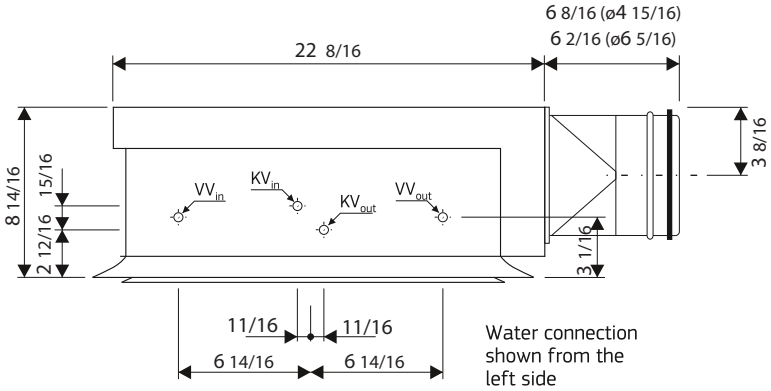




VV$_{in}$ = Heating water in, VV$_{out}$ = Heating water out
KV$_{in}$ = Cooling water in, KV$_{out}$ = Cooling water out

PremiAir 48 & 72





Size PremiAir

Length	A	Ød
48	47	ø5 / ø6
72	70.5	ø5 / ø6

Table 1
Pipe sizes

Number of water circuits	06	12	18
1	Ø12	Ø12	Ø12
2	-	Ø15	Ø15
Heating	Ø12	Ø12	Ø12

Table 2
Weight, water flow

Length	24	48		72	
Effect Type	2	1	2	1	2
Weight, lbs	30.86	59.52	59.52	101.41	101.41
Water Flow, gal	0.26	0.33	0.53	0.66	1.06

Primary air, CFM	Nozzle Setting	Length	Cooling capacity of water* 0.4 inches of water, Δt					Cooling capacity of air Δt				
			Δt 10 °F	Δt 12 °F	Δt 14 °F	Δt 16 °F	Δt 18 °F	Δt 10°F	Δt 12°F	Δt 14°F	Δt 16°F	Δt 18 °F
25	1111	24	777	933	1,088	1,244	1,399	272	327	382	437	492
32	1112	24	863	1,036	1,209	1,381	1,554	341	410	478	546	614
42	1222	24	989	1,187	1,384	1,581	1,778	455	546	637	728	819
	1111	48	1,494	1,794	2,094	2,393	2,693	455	546	637	728	819
53	2223	24	1,096	1,316	1,536	1,756	1,976	569	683	796	910	1024
	1121	48	1,663	1,995	2,328	2,661	2,993	569	683	796	910	1024
64	3332	24	1,198	1,437	1,676	1,915	2,154	683	819	956	1092	1229
	1313	48	1,814	2,176	2,538	2,900	3,262	683	819	956	1092	1229
	1111	72	2,231	2,676	3,122	3,567	4,013	683	819	956	1092	1229
74	2213	48	1,950	2,339	2,729	3,118	3,508	796	956	1115	1274	1433
	1211	72	2,320	2,785	3,249	3,714	4,178	796	956	1115	1274	1433
85	2223	48	2,077	2,492	2,907	3,323	3,738	910	1092	1274	1456	1638
	1312	72	2,402	2,883	3,363	3,844	4,324	910	1092	1274	1456	1638
95	3322	48	2,197	2,635	3,074	3,513	3,952	1024	1229	1433	1638	1843
	1121	72	2,478	2,974	3,469	3,965	4,461	1024	1229	1433	1638	1843
117	2312	72	2,611	3,133	3,655	4,177	4,700	1251	1502	1752	2002	2253
138	2122	72	2,727	3,273	3,819	4,365	4,911	1479	1775	2071	2366	2662
159	3322	72	2,831	3,397	3,963	4,529	5,096	1707	2048	2389	2730	3072
180	3333	72	2,926	3,511	4,096	4,681	5,266	1934	2321	2708	3094	3481

Cooling capacity: at a water flow of 1.05 GPM

* Standard coil meaning the 2nd effect type PA 06, and 1st effect type of PA 12 and PA 18.

Primary air, CFM	Nozzle Setting	Length	Cooling capacity of water* 0.3 inches of water, Δt					Cooling capacity of air Δt				
			Δt 10 °F	Δt 12 °F	Δt 14 °F	Δt 16 °F	Δt 18 °F	Δt 10°F	Δt 12°F	Δt 14°F	Δt 16°F	Δt 18 °F
21	1111	24	667	800	934	1,068	1,202	228	273	319	364	410
32	2121	24	807	968	1,129	1,290	1,451	341	410	478	546	614
42	2222	24	923	1,108	1,293	1,477	1,662	455	546	637	728	819
	1211	48	1,399	1,678	1,958	2,238	2,518	455	546	637	728	819
53	2333	24	1,027	1,232	1,437	1,642	1,846	569	683	796	910	1,024
	2112	48	1,555	1,866	2,177	2,488	2,799	569	683	796	910	1,024
64	2122	48	1,694	2,033	2,372	2,711	3,050	683	819	956	1,092	1,229
	1112	72	2,086	2,503	2,920	3,337	3,754	683	819	956	1,092	1,229
74	2223	48	1,824	2,188	2,552	2,916	3,280	796	956	1,115	1,274	1,433
	1312	72	2,171	2,605	3,038	3,472	3,905	796	956	1,115	1,274	1,433
85	3323	48	1,941	2,329	2,718	3,107	3,496	910	1,092	1,274	1,456	1,638
	2111	72	2,246	2,696	3,145	3,594	4,044	910	1,092	1,274	1,456	1,638
95	3333	48	2,054	2,464	2,875	3,286	3,696	1,024	1,229	1,433	1,638	1,843
	2212	72	2,316	2,780	3,244	3,708	4,171	1,024	1,229	1,433	1,638	1,843
117	2122	72	2,443	2,931	3,419	3,907	4,395	1,251	1,502	1,752	2,002	2,253
138	2233	72	2,551	3,061	3,571	4,081	4,591	1,479	1,775	2,071	2,366	2,662
153	3333	72	2,620	3,144	3,668	4,193	4,717	1,637	1,965	2,293	2,621	2,949

Cooling capacity: at a water flow of 1.05 GPM

* Standard coil meaning the 2nd effect type PA 06, and 1st effect type of PA 12 and PA 18.

Primary air, CFM	Nozzle Setting	Length	Cooling capacity of water * 0.2 inches of water, Δt					Cooling capacity of air Δt				
			Δt 10 °F	Δt 12 °F	Δt 14 °F	Δt 16 °F	Δt 18 °F	Δt 10°F	Δt 12°F	Δt 14°F	Δt 16°F	Δt 18 °F
17	1111	24	557	668	780	892	1,004	183	219	255	291	327
32	2222	48	752	901	1,051	1,201	1,351	341	410	478	546	614
42	2333	72	860	1,031	1,203	1,375	1,547	455	546	637	728	819
	1122	24	1,303	1,563	1,822	2,082	2,342	455	546	637	728	819
53	2222	48	1,447	1,736	2,025	2,315	2,604	569	683	796	910	1,024
64	3322	72	1,576	1,892	2,208	2,524	2,840	683	819	956	1,092	1,229
	1121	96	1,940	2,328	2,716	3,104	3,491	683	819	956	1,092	1,229
74	3333	24	2,090	2,508	2,926	3,344	3,762	796	956	1,115	1,274	1,433
	1222	48	2,156	2,587	3,018	3,449	3,881	796	956	1,115	1,274	1,433
85	2121	72	2,261	2,718	3,176	3,634	4,091	910	1,092	1,274	1,456	1,638
95	2222	96	1,697	2,035	2,374	2,713	3,051	1,024	1,229	1,433	1,638	1,843
117	3333	120	2,019	2,423	2,826	3,230	3,634	1,251	1,502	1,752	2,002	2,253

Cooling capacity: at a water flow of 1.05 GPM

* Standard coil meaning the 2nd effect type PA 06, and 1st effect type of PA 12 and PA 18.

Primary air, CFM	Nozzle Setting	Length	Cooling capacity of water ** 0.4 inches of water, Δt					Cooling capacity of air Δt				
			Δt 10 °F	Δt 12 °F	Δt 14 °F	Δt 16 °F	Δt 18 °F	Δt 10°F	Δt 12°F	Δt 14°F	Δt 16°F	Δt 18°F
42	1111	48	1,542	1,850	2,158	2,466	2,775	455	546	637	728	819
53	1121	48	1,757	2,107	2,458	2,809	3,160	569	683	796	910	1,024
64	1313	48	1,953	2,344	2,734	3,125	3,515	683	819	956	1,092	1,229
	1111	72	2,272	2,726	3,180	3,634	4,088	683	819	956	1,092	1,229
74	2213	48	2,137	2,564	2,992	3,419	3,846	796	956	1,115	1,274	1,433
	1211	72	2,310	2,773	3,235	3,698	4,161	796	956	1,115	1,274	1,433
85	2223	48	2,402	2,883	3,363	3,844	4,324	910	1,092	1,274	1,456	1,638
	1312	72	2,522	3,026	3,531	4,035	4,539	910	1,092	1,274	1,456	1,638
95	3322	48	2,475	2,970	3,465	3,960	4,455	1,024	1,229	1,433	1,638	1,843
	1121	72	2,630	3,156	3,682	4,208	4,734	1,024	1,229	1,433	1,638	1,843
117	2312	72	2,828	3,394	3,961	4,527	5,093	1,251	1,502	1,752	2,002	2,253
138	2122	72	3,003	3,604	4,205	4,806	5,407	1,479	1,775	2,071	2,366	2,662
159	3322	72	3,164	3,796	4,428	5,060	5,692	1,707	2,048	2,389	2,730	3,072
180	3333	72	3,309	3,971	4,633	5,295	5,956	1,934	2,321	2,708	3,094	3,481

Cooling capacity: at a water flow of 1.05 GPM

* * High Capacity coil refers to 2nd effect type.

Primary air, CFM	Nozzle Setting	Length	Cooling capacity of water ** 0.3 inches of water, Δt					Cooling capacity of air Δt				
			Δt 10 °F	Δt 12 °F	Δt 14 °F	Δt 16 °F	Δt 18 °F	Δt 10°F	Δt 12°F	Δt 14°F	Δt 16°F	Δt 18 °F
42	1211	48	1,441	1,729	2,017	2,306	2,594	455	546	637	728	819
53	2112	48	1,640	1,969	2,298	2,627	2,956	569	683	796	910	1,024
64	2122	48	1,826	2,191	2,556	2,922	3,287	683	819	956	1,092	1,229
	1112	72	2,124	2,548	2,973	3,398	3,822	683	819	956	1,092	1,229
74	2223	48	1,998	2,398	2,797	3,197	3,597	796	956	1,115	1,274	1,433
	1312	72	2,246	2,696	3,145	3,594	4,044	796	956	1,115	1,274	1,433
85	3323	48	2,158	2,591	3,023	3,455	3,887	910	1,092	1,274	1,456	1,638
	2111	72	2,357	2,829	3,301	3,773	4,245	910	1,092	1,274	1,456	1,638
95	3333	48	2,313	2,776	3,239	3,701	4,164	1,024	1,229	1,433	1,638	1,843
	2212	72	2,459	2,950	3,442	3,934	4,426	1,024	1,229	1,433	1,638	1,843
117	2122	72	2,646	3,175	3,704	4,233	4,762	1,251	1,502	1,752	2,002	2,253
138	2233	72	2,810	3,371	3,932	4,493	5,055	1,479	1,775	2,071	2,366	2,662
153	3333	72	2,914	3,497	4,080	4,663	5,246	1,707	2,048	2,389	2,730	3,072

Cooling capacity: at a water flow of 1.05 GPM
* * High Capacity coil refers to 2nd effect type.

Primary air, CFM	Nozzle Setting	Length	Cooling capacity of water ** 0.2 inches of water, Δt					Cooling capacity of air Δt				
			Δt 10 °F	Δt 12 °F	Δt 14 °F	Δt 16 °F	Δt 18 °F	Δt 10°F	Δt 12°F	Δt 14°F	Δt 16°F	Δt 18 °F
42	1122	48	1,340	1,609	1,877	2,146	2,414	455	546	637	728	819
53	2222	48	1,526	1,832	2,138	2,444	2,750	569	683	796	910	1,024
64	3322	48	1,700	2,039	2,379	2,718	3,057	683	819	956	1,092	1,229
	1121	72	1,976	2,372	2,767	3,162	3,557	683	819	956	1,092	1,229
74	3333	48	1,858	2,230	2,601	2,973	3,345	796	956	1,115	1,274	1,433
	1222	72	2,090	2,508	2,926	3,344	3,762	796	956	1,115	1,274	1,433
85	2121	72	2,194	2,253	3,003	3,754	4,505	910	1,092	1,274	1,456	1,638
95	2222	72	2,288	2,746	3,203	3,661	4,119	1,024	1,229	1,433	1,638	1,843
117	3333	72	2,462	2,954	3,446	3,938	4,429	1,251	1,502	1,752	2,002	2,253

Cooling capacity: at a water flow of 1.05 GPM
* * High Capacity coil refers to 2nd effect type.

Example for designing

Search the cooling capacity of water at the current air flow, pressure and Δt, room temperature - average temp. of cooling water . Check the pressure drop in the water circuit (Diagram 2, pg. 10). Then adjust it by the turbulence intensity, *k of cooling coil in Diagram 1, page 10 and add the cooling capacity of the air.
The water flow can be calculated, given the Δt of the current cooling water, with the following formula:
Cooling capacity (BTUH) = Δt (return water - supply water temperature) x 499.8 x GPM

Example:
The unit PremiAir 48 gives a cooling capacity of 2,243.5 BTUH at 42 CFM, 0.4'' H2O and Δt (room temp. – average temp. of cooling water) 15°F, (2094+2392)/2=2243.5 BTUH.
Chilled water flow at 57°F - 62°F: 2243.5/(5*499.8)=0.897gpm.
Diagram 1, page 10 gives a correction factor of about 0.98, and thereby, the cooling capacity of the water is 2243.5x0.98=2,198 BTUH. The cooling capacity of the air at Δt 15°F is 682.5 BTUH. This gives the following total capacity: 682.5+2,198=2,881 BTUH.

Primary air, CFM	Nozzle Setting	Length	Heating Capacity of Water 0.4 inches of water, Δt					Cooling capacity of air Δt				
			Δt 18 °F	Δt 27 °F	Δt 36 °F	Δt 45 °F	Δt 54 °F	Δt 4 °F	Δt 6 °F	Δt 8 °F	Δt 9 °F	Δt 10 °F
25	1111	24	700	1,050	1,400	1,750	2,100	109	163	218	245	272
32	1112	48	778	1,167	1,556	1,945	2,334	137	205	273	307	341
42	1222	72	891	1,337	1,782	2,228	2,673	182	137	182	205	228
	1111	24	1,349	2,023	2,697	3,371	4,045	182	137	182	205	228
53	2223	48	990	1,485	1,980	2,474	2,969	228	341	455	512	569
	1121	72	1,499	2,248	2,997	3,746	4,496	228	341	455	512	569
64	3332	96	1,079	1,618	2,157	2,696	3,236	273	410	546	614	683
	1313	24	1,631	2,447	3,263	4,079	4,894	273	410	546	614	683
	1111	48	2,007	3,010	4,014	5,017	6,020	273	410	546	614	683
74	2213	72	1,754	2,631	3,509	4,386	5,263	319	478	637	717	796
	1211	96	2,089	3,133	4,177	5,222	6,266	319	478	637	717	796
85	2223	120	1,870	2,806	3,741	4,676	5,611	364	546	728	819	910
	1312	48	2,164	3,246	4,328	5,409	6,491	364	546	728	819	910
95	3322	72	1,976	2,964	3,952	4,940	5,928	410	614	819	922	1,024
	1121	96	2,232	3,348	4,464	5,580	6,697	410	614	819	922	1,024
117	2312	120	2,352	3,528	4,704	5,879	7,055	501	751	1,001	1,126	1,251
138	2122	48	2,457	3,686	4,915	6,143	7,372	592	887	1,183	1,331	1,479
159	3322	72	2,550	3,825	5,100	6,374	7,649	683	1,024	1,365	1,536	1,707
180	3333	96	2,635	3,952	5,270	6,587	7,905	774	1,160	1,547	1,741	1,934

Heating capacity: at a water flow of 1.05 GPM

Primary air, CFM	Nozzle Setting	Length	Heating Capacity of Water 0.3 inches of water, Δt					Cooling capacity of air Δt				
			Δt 18 °F	Δt 27 °F	Δt 36 °F	Δt 45 °F	Δt 54 °F	Δt 4 °F	Δt 6 °F	Δt 8 °F	Δt 9 °F	Δt 10 °F
21	1111	24	601	901	1,201	1,502	1,802	91	137	182	205	228
32	2121	24	728	1,091	1,455	1,818	2,182	137	205	273	307	341
42	2222	24	833	1,249	1,666	2,082	2,498	182	273	364	410	455
	1211	47	1,260	1,890	2,519	3,149	3,779	182	273	364	410	455
53	2333	24	926	1,388	1,851	2,313	2,775	228	341	455	512	569
	2112	47	1,393	2,090	2,787	3,483	4,180	228	341	455	512	569
64	2122	47	1,526	2,289	3,052	3,815	4,578	273	410	546	614	683
	1112	71	1,877	2,816	3,754	4,693	5,632	273	410	546	614	683
74	2223	47	1,642	2,463	3,284	4,105	3,635	319	478	637	717	796
	1312	71	1,952	2,928	3,905	4,881	5,857	319	478	637	717	796
85	3323	47	1,747	2,621	3,495	4,369	5,242	364	273	364	410	455
	2111	71	2,025	3,037	4,049	5,060	6,072	364	273	364	410	455
95	3333	47	1,850	2,775	3,700	4,625	5,550	410	614	819	922	1,024
	2212	71	2,086	3,129	4,171	5,214	6,257	410	614	819	922	1,024
117	2122	71	2,198	3,297	4,396	5,495	6,594	501	751	1,001	1,126	1,251
138	2233	71	2,298	3,446	4,595	5,743	6,892	592	887	1,183	1,331	1,479
159	3333	71	2,359	3,538	4,717	5,897	7,076	655	982	1,310	1,473	1,637

Heating capacity: at a water flow of 1.05 GPM

Primary air, CFM	Nozzle Setting	Length	Heating Capacity of Water 0.3 inches of water, Δt					Cooling capacity of air Δt				
			Δt 18 °F	Δt 27 °F	Δt 36 °F	Δt 45 °F	Δt 54 °F	Δt 4 °F	Δt 6 °F	Δt 8 °F	Δt 9 °F	Δt 10 °F
17	1111	24	502	753	1,004	1,255	1,506	73	110	146	165	183
32	2222	24	676	1,014	1,352	1,689	2,027	137	205	273	307	341
42	2333	24	775	1,163	1,550	1,938	2,325	182	273	364	410	455
	1122	47	1,171	1,757	2,342	2,927	3,513	182	273	364	410	455
53	2222	47	1,304	1,956	2,608	3,259	3,911	228	341	455	512	569
64	3322	47	1,420	2,130	2,840	3,550	4,259	273	410	546	614	683
	1121	71	1,526	2,289	3,052	3,815	4,578	273	410	546	614	683
74	3333	47	1,747	2,621	3,495	4,369	5,242	319	478	637	717	796
	1222	71	1,820	2,729	3,639	4,548	5,458	319	478	637	717	796
85	2121	71	1,881	2,822	3,762	4,702	5,643	364	546	728	819	910
95	2222	71	1,943	2,914	3,885	4,856	5,827	410	614	819	922	1,024
117	3333	71	2,045	3,067	4,090	5,112	6,134	501	751	1,001	1,126	1,251

Heating capacity: at a water flow of 1.05 GPM

Diagram 1

k * water flow correction** (at other water flow rate)

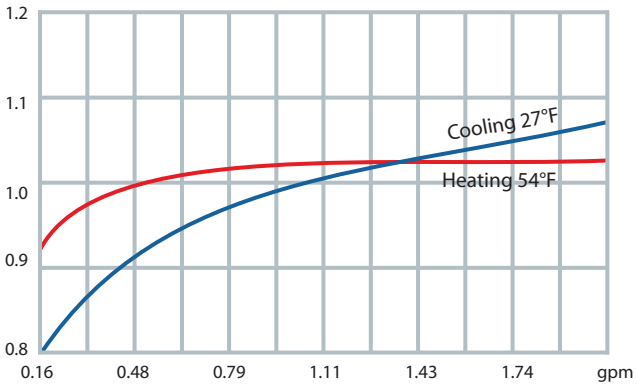
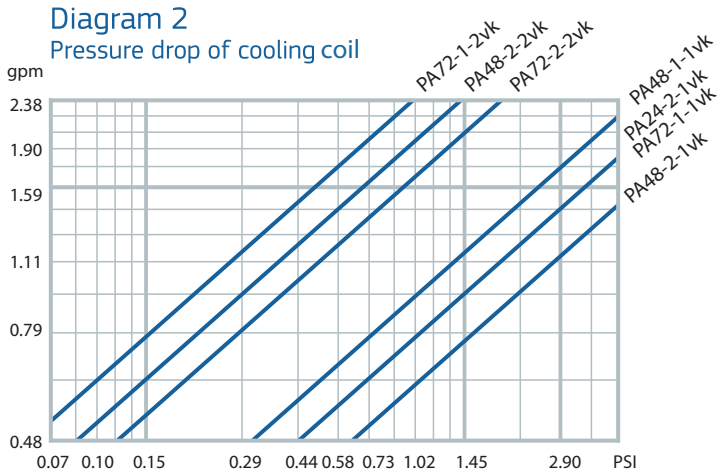


Diagram 2

Pressure drop of cooling coil



k * = correction factor
** Applies to one water circuit; in case of two water circuits, the water amount is halved.

1 = one water circuit, 2 = two water circuit
1 vk = 1water circuit, 2 vk = 2 water circuit

Diagram 3
Hűtőkör nyomásesése

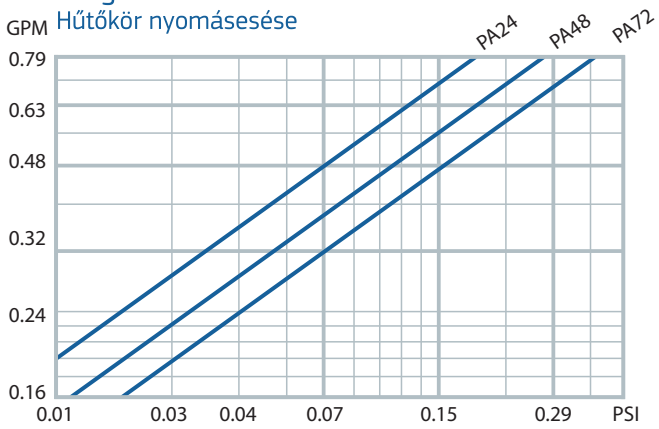


Diagram 4
PremiAir 24

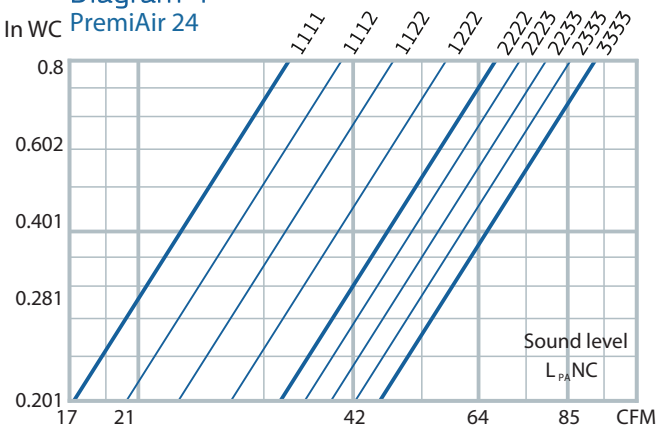


Diagram 5
Short side PA 42 & 72

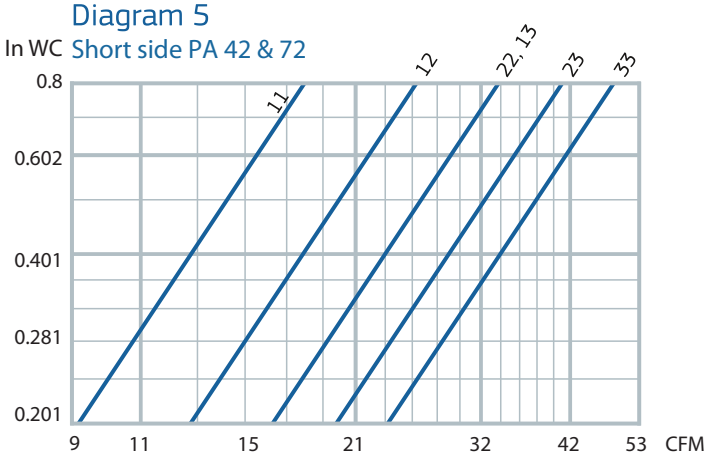


Diagram for measuring the air flow and pressure in the plenum box. The air flow in the diagram refers to PA 24 .

Air flow PremiAir 48 = 3 and 4 diagram
Air flow PremiAir 72 = 3 and 5 diagram

Diagram 6
Long side PA 48

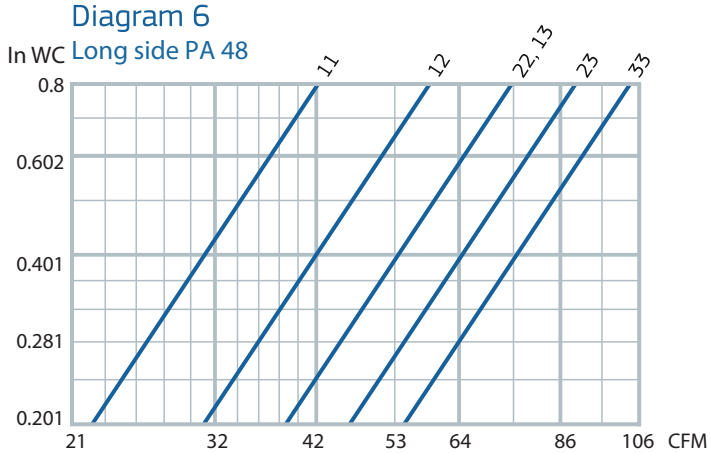
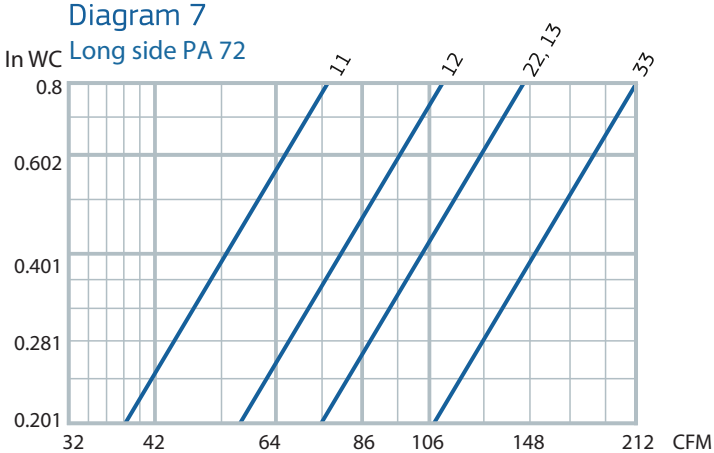


Diagram 7
Long side PA 72



The sound level L_{PA} NC applies to an equivalent surface of 108 ft² as per the Diagrams No. 4-6, which corresponds to an attenuation of 4 dB in a room with normal attenuation. The NC value of sound attenuation as per Table No. 3 is to be understood inclusive of the end reflection of the active chilled beam, from the air duct toward the room.

Room volume capacity	Room type	Correction
883 ft³	hard	+2 NC
883 ft³	attenuated	-2 NC
5297 ft³	hard	-3 NC
5297 ft³	normal	-5 NC
5297 ft³	attenuated	-7 NC

Diagram 8
PremiAir 24

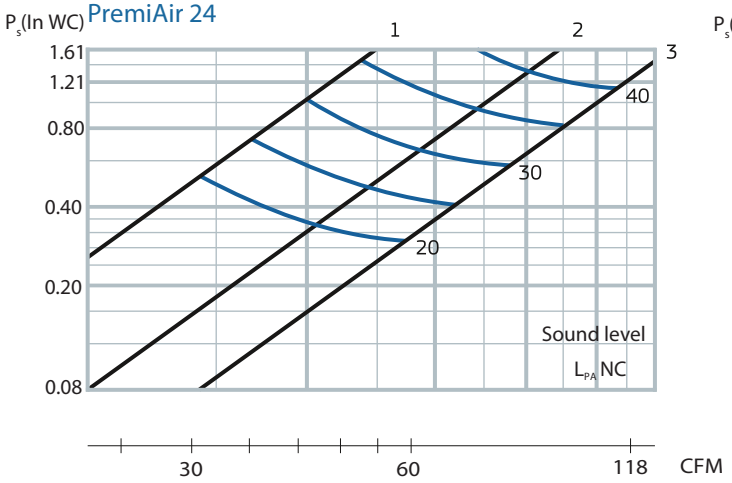


Diagram 9
PremiAir 48

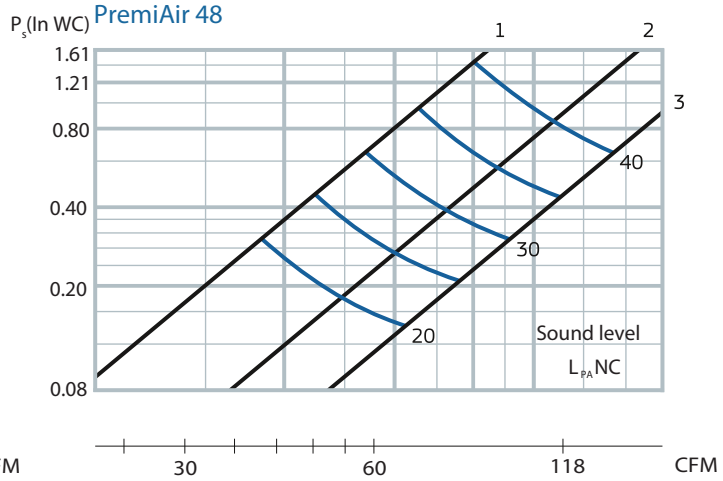


Diagram 10
PremiAir 72

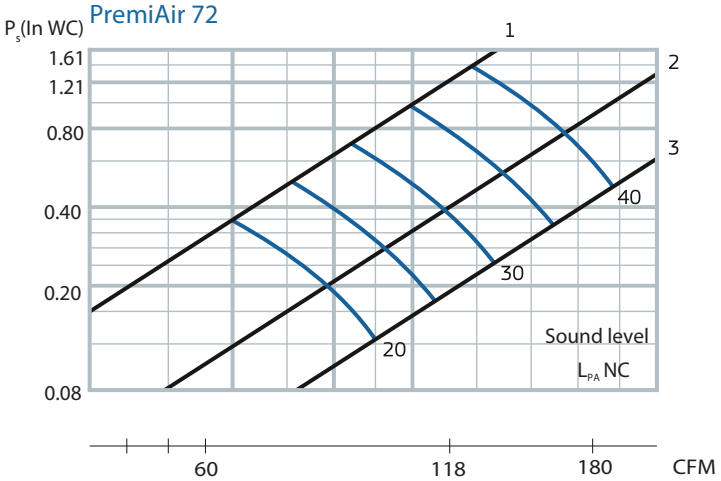


Table 3
Correction K_0NC for PremiAir

PremiAir	Mid-frequency (Octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
24	+1	-11	+2	+1	0	-5	-13	-23
48	0	-1	+1	0	0	-4	-13	-24
72	+2	-1	+3	+1	-1	-4	-11	-24

Tol. ±3 NC

Table 4
Sound attenuation for PremiAir

PremiAir	Mid-frequency (Octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
24	18	10	7	7	13	14	17	20
48	17	7	4	5	10	11	16	21
72	13	9	4	3	8	10	15	21

Tol. ±3 NC

Technical data

Sound power leve L_w NC

Sound level:
(see diagrams 8-10)

Correction factor: K_0NC from table 3

$L_W = L_{PA} + K_0$

Sound self-attenuation from table 4.

The lab measurements were conducted subject to the Standards ISO 9614.2 and ISO 11691:1995