

Induction unit for supply air, cooling and heating

FacadeAir

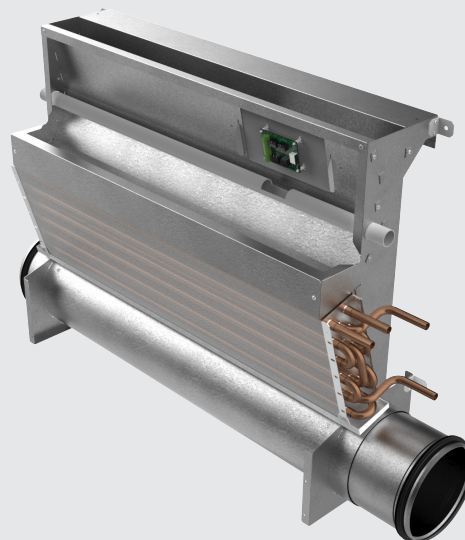


Figure 1. FacadeAir, size 600, the product is shown with accessories.

Description

FacadeAir is an induction unit for supply air, cooling and heating, intended for installation along a perimeter wall. With the primary air stream as the driving force, the room air is induced through the heat exchanger, that in consequence cools or heats the air. The primary and induced airflow is supplied to room through the window bench grille, towards the ceiling. The circular plenum box for the supply airflow is equipped with fixed nozzles and predetermined airflows. The unit can be shipped with three optional air spigot dimensions: 125, 160 or 200. FacadeAir is delivered with a wall mounted rack and a pipe console for the water pipes.

Materials

The connection and plenum air box are made of galvanized steel. The visible front grille is aluminium, powder coated in standard white RAL 9003 colour or nature aluminum. The heat exchanger is made of copper and aluminum. Rubber sealing on the air connection.

Standard sizes*

600-160
600-200
800-160
800-200
1000-160
1000-200
1200-160
1200-200
1500-160
1500-200

* Product length and air duct connection size

Main features

- Induction unit
- Designed for integrated facade installations
- Cooling and heating functions
- ControlAir individual local controller as an option
- Complete automation solution as an option

T1: Quick selection

Size (mm)	Airflow (l/s) [m³/h]	Cooling capacity ^{*)} (W) at 125 Pa		
		Air	Water	Total
600	8-16 [29-58]	96-192	299-335	395-527
800	10-20 [36-72]	120-240	402-477	522-717
1000	10-25 [36-90]	120-300	485-604	605-904
1200	16-30 [58-108]	192-360	628-734	820-1094
1500	20-40 [72-144]	240-480	793-940	1033-1420

^{*)} at $\Delta T = 10$ K

Accessories

Airvent provides a range of accessories needed for connection and operation of the product:

- Connection hinges (set 4 pcs)
- Control valves for water connections
- Valve actuators
- Supply air grille for window sill/cladding in two versions: (see Figures 2 and 3)
 - Aluminum grille with horizontal blades (AGR)
 - Rectangular transfer air grille (E5)
- Mounting frame RAM, for mounting of the rectangular grille
- Complete control equipment (ControlAir)



Figure 2. Supply air grille AGR, for mounting in the facade

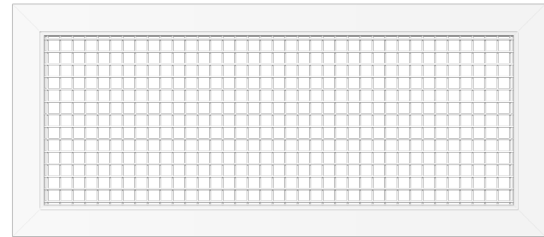


Figure 3. Supply air grille E5, for mounting in the facade

Control options

FacadeAir is available with our new generation integrated ControlAir local controller, factory mounted and programmed for each order. The control system consists of a setpoint switch with presence and temperature sensors for the regulation of the cooling and heating actuator valves, condensation guard. FacadeAir integrated with ControlAir can easily connect to SUM through the QuickNet communications network. SUM is an automation and optimization web application specifically developed for DCV applications. The ControlAir controller is accessible for inspection through the removable front grille.

Commissioning

The product has fixed nozzles and is supplied with the chosen airflow and pressure, specified in the order. The supply airflow can be measured, by measuring the pressure in the nozzles.

Cleaning

- The unit needs regular cleaning, inspection and servicing - this should be taken into consideration while designing the facade cover.
- The diffuser grille can be cleaned, if necessary, with a damp cloth, possibly with a mild detergent without ammonia.
- The battery can be vacuumed carefully, if necessary.

Mounting

- FacadeAir is usually mounted under windows in the facade
- The duct connections are in nipple dimension for connection to the air duct.
- The water connection of the device is selectable and can be specified at order (left or right). Orientation refers to unit viewed from the room in the final wall-mounted position.
- When ordering the unit together with grilles E5 or AGR, according to the selected grille, one of the following points is also considered assembly options before ordering:
 1. Mounting with mounting frame RAM - the grille is equipped with clips where the grille is clicked into the frame. This mounting type is recommended in case of secured grilles.
 2. Mounting without mounting frame and clips - the grille is placed directly in the hole without being secured. This mounting is recommended when easy access of the unit is prioritized, for example for cleaning/maintenance.

■ T.2. Cooling capacity, 75 Pa + cooling capacity air with noise levels

Size (mm)	Supply airflow		Cooling capacity*) water (W) at 75 Pa pressure**) and at given ΔT_{RWm} (K)					Cooling capacity air (W) at given ΔT_{RS} (K)					Sound level dB (A)
	l/s	[m³/h]	6	7	8	9	10	6	7	8	9	10	
600	6	[22]	150	175	200	225	250	43	50	58	65	72	<20
	8	[29]	161	188	215	242	269	58	67	77	86	96	<20
	10	[36]	169	197	226	254	282	72	84	96	108	120	<20
	12	[43]	175	204	234	263	292	86	101	115	130	144	<20
800	6	[22]	161	188	215	242	269	58	67	77	86	96	<20
	8	[29]	206	240	274	309	343	58	67	77	86	96	<20
	10	[36]	217	253	289	325	361	72	84	96	108	120	<20
	12	[43]	226	264	302	339	377	86	101	115	130	144	<20
	14	[50]	235	274	314	353	392	101	118	134	151	168	<20
	16	[58]	244	284	325	365	406	115	134	154	173	192	<20
1000	10	[36]	262	305	349	392	436	72	84	96	108	120	<20
	12	[43]	272	318	363	409	454	86	101	115	130	144	<20
	14	[50]	283	330	377	424	471	101	118	134	151	168	<20
	16	[58]	292	341	390	438	487	115	134	154	173	192	<20
	18	[65]	301	351	401	451	501	130	151	173	194	216	<20
	20	[72]	309	361	412	464	515	144	168	192	216	240	20
1200	12	[43]	317	370	423	476	529	86	101	115	130	144	<20
	14	[50]	328	383	438	492	547	101	118	134	151	168	<20
	16	[58]	338	395	451	508	564	115	134	154	173	192	<20
	18	[65]	349	407	465	523	581	130	151	173	194	216	<20
	20	[72]	358	417	477	536	596	144	168	192	216	240	<20
	25	[90]	379	442	505	568	631	180	210	240	270	300	22
1500	16	[58]	406	474	542	609	677	115	134	154	173	192	<20
	18	[65]	417	487	556	626	695	130	151	173	194	216	<20
	20	[72]	428	499	570	642	713	144	168	192	216	240	<20
	25	[90]	452	527	602	678	753	180	210	240	270	300	<20
	30	[108]	473	552	630	709	788	216	252	288	324	360	21

*) Cooling capacity: Applies to water flow 0,066 l/s

**) Pressure refers to static pressure (P_s) in the product's pressure chamber.

■ T.3. Cooling capacity, 100 Pa + cooling capacity air with noise levels

Size (mm)	Supply airflow l/s [m³/h]		Cooling capacity *) water (W) at 75 Pa pressure**) and at given ΔT_{RWm} (K)					Cooling capacity air (W) at given ΔT_{RS} (K)					Sound level dB (A)
			6	7	8	9	10	6	7	8	9	10	
600	6	[22]	161	188	214	241	268	43	50	58	65	72	<20
	8	[29]	172	200	229	257	286	58	67	77	86	96	<20
	10	[36]	182	212	242	273	303	72	84	96	108	120	20
	12	[43]	190	222	254	285	317	86	101	115	130	144	23
	14	[50]	197	230	263	296	329	101	118	134	151	168	25
800	10	[36]	232	270	309	347	386	72	84	96	108	120	<20
	12	[43]	242	283	323	364	404	86	101	115	130	144	<20
	14	[50]	252	294	336	378	420	101	118	134	151	168	<20
	16	[58]	260	304	347	391	434	115	134	154	173	192	<20
	18	[65]	268	313	358	402	447	130	151	173	194	216	20
	20	[72]	275	321	367	413	459	144	168	192	216	240	23
1000	12	[43]	291	340	388	437	485	86	101	115	130	144	<20
	14	[50]	302	353	403	454	504	101	118	134	151	168	<20
	16	[58]	313	365	417	469	521	115	134	154	173	192	<20
	18	[65]	322	375	429	482	536	130	151	173	194	216	20
	20	[72]	330	385	440	495	550	144	168	192	216	240	22
	25	[90]	349	407	465	523	581	180	210	240	270	300	25
1200	14	[50]	351	410	468	527	585	101	118	134	151	168	<20
	16	[58]	362	423	483	544	604	115	134	154	173	192	<20
	18	[65]	373	435	497	559	621	130	151	173	194	216	<20
	20	[72]	383	447	510	574	638	144	168	192	216	240	20
	25	[90]	405	473	540	608	675	180	210	240	270	300	23
	30	[108]	424	494	565	635	706	216	252	288	324	360	27
1500	18	[65]	446	521	595	670	744	130	151	173	194	216	<20
	20	[72]	457	533	610	686	762	144	168	192	216	240	<20
	25	[90]	483	564	644	725	805	180	210	240	270	300	<20
	30	[108]	506	590	674	759	843	216	252	288	324	360	22
	35	[126]	526	613	701	788	876	252	294	336	378	420	25

*) Cooling capacity: Applies to water flow 0,066 l/s

**) Pressure refers to static pressure (P_s) in the product's pressure chamber.

■ T.4. Cooling capacity, 125 Pa + cooling capacity air with noise levels

Size (mm)	Supply airflow l/s [m³/h]		Cooling capacity *) water (W) at 75 Pa pressure**) and at given ΔT_{RWM} (K)					Cooling capacity air (W) at given ΔT_{RS} (K)					Sound level dB (A)
			6	7	8	9	10	6	7	8	9	10	
600	8	[29]	179	209	239	269	299	58	67	77	86	96	<20
	10	[36]	188	220	251	283	314	72	84	96	108	120	21
	12	[43]	195	228	260	293	325	86	101	115	130	144	23
	14	[50]	198	231	264	297	330	101	118	134	151	168	25
	16	[58]	201	235	268	302	335	115	134	154	173	192	27
800	10	[36]	241	281	322	362	402	72	84	96	108	120	<20
	12	[43]	252	294	336	378	420	86	101	115	130	144	<20
	14	[50]	262	305	349	392	436	101	118	134	151	168	<20
	16	[58]	271	316	361	406	451	115	134	154	173	192	20
	18	[65]	279	326	372	419	465	130	151	173	194	216	22
	20	[72]	286	334	382	429	477	144	168	192	216	240	25
1000	10	[36]	291	340	388	437	485	72	84	96	108	120	<20
	12	[43]	303	354	404	455	505	86	101	115	130	144	<20
	14	[50]	314	367	419	472	524	101	118	134	151	168	<20
	16	[58]	325	379	433	487	541	115	134	154	173	192	20
	18	[65]	335	391	446	502	558	130	151	173	194	216	22
	20	[72]	344	401	458	516	573	144	168	192	216	240	23
	25	[90]	362	423	483	544	604	180	210	240	270	300	25
1200	16	[58]	377	440	502	565	628	115	134	154	173	192	<20
	18	[65]	388	452	517	581	646	130	151	173	194	216	20
	20	[72]	398	464	530	597	663	144	168	192	216	240	22
	25	[90]	421	491	562	632	702	180	210	240	270	300	25
	30	[108]	440	514	587	661	734	216	252	288	324	360	27
1500	20	[72]	476	555	634	714	793	144	168	192	216	240	20
	25	[90]	502	586	670	753	837	180	210	240	270	300	22
	30	[108]	526	613	701	788	876	216	252	288	324	360	23
	35	[126]	547	638	729	820	911	252	294	336	378	420	26
	40	[144]	564	658	752	846	940	288	336	384	432	480	29

*) Cooling capacity: Applies to water flow 0,066 l/s

**) Pressure refers to static pressure (P_s) in the product's pressure chamber.

■ T.5. Cooling capacity, 150 Pa + cooling capacity air with noise levels

Size (mm)	Supply airflow		Cooling capacity *) water (W) at 75 Pa pressure**) and at given ΔT_{RWM} (K)					Cooling capacity air (W) at given ΔT_{RS} (K)					Sound level dB (A)
	l/s	[m³/h]	6	7	8	9	10	6	7	8	9	10	
600	8	[29]	186	217	248	279	310	58	67	77	86	96	<20
	10	[36]	196	228	261	293	326	72	84	96	108	120	20
	12	[43]	202	236	270	303	337	86	101	115	130	144	25
	14	[50]	206	240	274	309	343	101	118	134	151	168	26
	16	[58]	212	247	282	318	353	115	134	154	173	192	27
800	10	[36]	250	292	334	375	417	72	84	96	108	120	<20
	12	[43]	262	305	349	392	436	86	101	115	130	144	<20
	14	[50]	272	317	362	408	453	101	118	134	151	168	20
	16	[58]	281	328	375	422	469	115	134	154	173	192	22
	18	[65]	290	338	386	435	483	130	151	173	194	216	23
	20	[72]	297	347	396	446	495	144	168	192	216	240	26
	25	[90]	311	363	415	467	519	180	210	240	270	300	30
1000	12	[43]	314	367	419	472	524	86	101	115	130	144	20
	14	[50]	326	381	435	490	544	101	118	134	151	168	21
	16	[58]	337	393	450	506	562	115	134	154	173	192	22
	18	[65]	347	405	463	521	579	130	151	173	194	216	23
	20	[72]	357	417	476	536	595	144	168	192	216	240	24
	25	[90]	377	440	502	565	628	180	210	240	270	300	27
	30	[126]	391	456	522	587	652	216	252	288	324	360	31
1200	16	[58]	391	456	522	587	652	115	134	154	173	192	20
	18	[65]	403	470	537	604	671	130	151	173	194	216	22
	20	[72]	413	482	551	620	689	144	168	192	216	240	23
	25	[90]	437	510	583	656	729	180	210	240	270	300	27
	30	[108]	457	533	610	686	762	216	252	288	324	360	29
	35	[126]	473	552	631	710	789	252	294	336	378	420	32
1500	18	[64]	482	562	642	723	803	130	151	173	194	216	21
	20	[72]	494	576	658	741	823	144	168	192	216	240	22
	25	[90]	521	608	695	782	869	180	210	240	270	300	24
	30	[108]	546	637	728	819	910	216	252	288	324	360	25
	35	[126]	568	662	757	851	946	252	294	336	378	420	27
	40	[144]	586	683	781	878	976	288	336	384	432	480	30

*) Cooling capacity: Applies to water flow 0,066 l/s

**) Pressure refers to static pressure (P_s) in the product's pressure chamber.

■ T.6. Cooling capacity, 175 Pa + cooling capacity air with noise levels

Size (mm)	Supply airflow l/s [m³/h]		Cooling capacity*) water (W) at 75 Pa pressure**) and at given ΔT_{RWM} (K)					Cooling capacity air (W) at given ΔT_{RS} (K)					Sound level dB (A)
			6	7	8	9	10	6	7	8	9	10	
600	8	[29]	193	225	258	290	322	58	67	77	86	96	<20
	10	[36]	203	237	270	304	338	72	84	96	108	120	20
	12	[43]	209	244	279	314	349	86	101	115	130	144	25
	14	[50]	213	249	284	320	355	101	118	134	151	168	26
	16	[58]	219	256	292	329	365	115	134	154	173	192	27
800	10	[36]	259	302	346	389	432	72	84	96	108	120	<20
	12	[43]	271	316	362	407	452	86	101	115	130	144	<20
	14	[50]	282	329	376	423	470	101	118	134	151	168	20
	16	[58]	292	340	389	437	486	115	134	154	173	192	22
	18	[65]	301	351	401	451	501	130	151	173	194	216	23
	20	[72]	308	360	411	463	514	144	168	192	216	240	26
	25	[90]	323	377	430	484	538	180	210	240	270	300	30
1000	12	[43]	326	381	435	490	544	86	101	115	130	144	20
	14	[50]	338	395	451	508	564	101	118	134	151	168	21
	16	[58]	350	408	466	525	583	115	134	154	173	192	22
	18	[65]	361	421	481	541	601	130	151	173	194	216	23
	20	[72]	370	432	494	555	617	144	168	192	216	240	24
	25	[90]	391	456	521	586	651	180	210	240	270	300	27
	30	[126]	406	473	541	608	676	216	252	288	324	360	31
1200	16	[58]	418	487	557	626	696	115	134	154	173	192	20
	18	[65]	418	487	557	626	696	130	151	173	194	216	22
	20	[72]	428	500	571	643	714	144	168	192	216	240	23
	25	[90]	454	529	605	680	756	180	210	240	270	300	27
	30	[108]	475	554	633	712	791	216	252	288	324	360	29
	35	[126]	491	573	654	736	818	252	294	336	378	420	32
1500	18	[64]	500	583	666	750	833	130	151	173	194	216	21
	20	[72]	512	598	683	769	854	144	168	192	216	240	22
	25	[90]	541	631	721	811	901	180	210	240	270	300	24
	30	[108]	566	661	755	850	944	216	252	288	324	360	25
	35	[126]	589	687	785	883	981	252	294	336	378	420	27
	40	[144]	608	709	810	912	1013	288	336	384	432	480	30

*) Cooling capacity: Applies to water flow 0,066 l/s

**) Pressure refers to static pressure (P_s) in the product's pressure chamber.

■ T.7. Cooling capacity, 200 Pa + cooling air with noise levels

Size (mm)	Supply airflow l/s [m³/h]		Cooling capacity *) water (W) at 75 Pa pressure**) and at given ΔT_{RWM} (K)					Cooling capacity air (W) at given ΔT_{RS} (K)					Sound level dB (A)
			6	7	8	9	10	6	7	8	9	10	
600	10	[36]	210	245	280	315	350	72	84	96	108	120	23
	12	[43]	217	253	290	326	362	86	101	115	130	144	26
	14	[50]	221	258	294	331	368	101	118	134	151	168	27
	16	[58]	226	263	301	338	376	115	134	154	173	192	29
	18	[65]	229	267	306	344	382	130	151	173	194	216	32
	20	[72]	234	273	312	351	390	144	168	192	216	240	34
800	12	[43]	281	328	374	421	468	86	101	115	130	144	21
	14	[50]	292	341	390	438	487	101	118	134	151	168	23
	16	[58]	302	353	403	454	504	115	134	154	173	192	25
	18	[65]	311	363	415	467	519	130	151	173	194	216	26
	20	[72]	319	372	426	479	532	144	168	192	216	240	27
	25	[90]	335	391	446	502	558	180	210	240	270	300	32
1000	14	[50]	350	409	467	526	584	101	118	134	151	168	22
	16	[58]	362	423	483	544	604	115	134	154	173	192	23
	18	[65]	373	435	498	560	622	130	151	173	194	216	25
	20	[72]	383	447	511	575	639	144	168	192	216	240	26
	25	[90]	404	472	539	607	674	180	210	240	270	300	28
	30	[108]	420	490	560	630	700	216	252	288	324	360	32
	35	[126]	430	502	574	645	717	252	294	336	378	420	35
1200	18	[65]	433	505	577	649	721	130	151	173	194	216	22
	20	[72]	444	518	592	666	740	144	168	192	216	240	25
	25	[90]	470	548	626	705	783	180	210	240	270	300	27
	30	[108]	491	573	655	737	819	216	252	288	324	360	31
	35	[126]	509	594	678	763	848	252	294	336	378	420	33
	40	[144]	521	608	695	782	869	288	336	384	432	480	37
1500	25	[90]	560	654	747	841	934	180	210	240	270	300	26
	30	[108]	587	685	782	880	978	216	252	288	324	360	27
	35	[126]	610	711	813	914	1016	252	294	336	378	420	29
	40	[144]	629	734	839	944	1049	288	336	384	432	480	32

*) Cooling effect: Applies to water flow 0,066 l/s

**) Pressure refers to static pressure (P_s) in the product's pressure chamber.

■ T.8. Heating capacity of water, 75 Pa + cooling capacity air with noise levels

Size (mm)	Supply airflow		Heating capacity*) water (W) at 75 Pa pressure**) and at given ΔT_{RWm} (K)					Cooling capacity air (W) at given ΔT_{RS} (K)					Sound level dB (A)
	l/s	[m³/h]	10	15	20	25	30	2	3	4	5	6	
600	6	[22]	160	240	320	400	480	14	22	29	36	43	<20
	8	[29]	172	258	344	430	516	19	29	38	48	58	<20
	10	[36]	180	271	361	451	541	24	36	48	60	72	<20
	12	[43]	187	280	374	467	561	29	43	58	72	86	<20
800	8	[29]	220	329	439	549	659	19	29	38	48	58	<20
	10	[36]	231	347	462	578	693	24	36	48	60	72	<20
	12	[43]	241	362	483	603	724	29	43	58	72	86	<20
	14	[50]	251	376	502	627	753	34	50	67	84	101	<20
	16	[58]	260	390	520	650	780	38	58	77	96	115	<20
1000	10	[36]	279	419	558	698	837	24	36	48	60	72	<20
	12	[43]	291	436	581	726	872	29	43	58	72	86	<20
	14	[50]	301	452	603	754	904	34	50	67	84	101	<20
	16	[58]	312	468	623	779	935	38	58	77	96	115	<20
	18	[65]	321	481	641	802	962	43	65	86	108	130	<20
	20	[72]	330	494	659	824	989	48	72	96	120	144	20
1200	12	[43]	339	508	677	846	1016	29	43	58	72	86	<20
	14	[50]	350	525	700	875	1050	34	50	67	84	101	<20
	16	[58]	361	541	722	902	1083	38	58	77	96	115	<20
	18	[65]	372	558	744	930	1116	43	65	86	108	130	<20
	20	[72]	381	572	763	954	1144	48	72	96	120	144	<20
	25	[90]	404	606	808	1010	1212	60	90	120	150	180	22
1500	16	[58]	433	650	867	1083	1300	38	58	77	96	115	<20
	18	[65]	445	667	890	1112	1334	43	65	86	108	130	<20
	20	[72]	456	684	913	1141	1369	48	72	96	120	144	<20
	25	[90]	482	723	964	1205	1446	60	90	120	150	180	<20
	30	[108]	504	756	1009	1261	1513	72	108	144	180	216	21

*) Heating capacity: Applies to water flow 0,03 l/s

**) Pressure refers to static pressure (P_s) in the product's pressure chamber.

■ T.9. Heat output water, 100 Pa + cooling capacity air with noise levels

Size (mm)	Supply airflow		Heating capacity*) water (W) at 75 Pa pressure**) and at given ΔT_{RWm} (K)					Cooling capacity air (W) at given ΔT_{RS} (K)					Sound level dB (A)
	l/s	[m³/h]	10	15	20	25	30	2	3	4	5	6	
600	6	[22]	172	257	343	429	515	14	22	29	36	43	< 20
	8	[29]	183	275	366	458	549	19	29	38	48	58	< 20
	10	[36]	194	291	388	485	582	24	36	48	60	72	20
	12	[43]	203	304	406	507	609	29	43	58	72	86	23
	14	[50]	211	316	421	526	632	34	50	67	84	101	25
800	10	[36]	247	371	494	618	741	24	36	48	60	72	<20
	12	[43]	259	388	517	646	776	29	43	58	72	86	<20
	14	[50]	269	403	538	672	806	34	50	67	84	101	<20
	16	[58]	278	417	556	694	833	38	58	77	96	115	<20
	18	[65]	286	429	572	715	858	43	65	86	108	130	20
	20	[72]	294	441	588	734	881	48	72	96	120	144	23
1000	12	[43]	310	466	621	776	931	29	43	58	72	86	< 20
	14	[50]	323	484	645	806	968	34	50	67	84	101	< 20
	16	[58]	333	500	667	834	1000	38	58	77	96	115	< 20
	18	[65]	343	515	686	858	1029	43	65	86	108	130	20
	20	[72]	352	528	704	880	1056	48	72	96	120	144	22
	25	[90]	372	558	744	930	1116	60	90	120	150	180	25
1200	14	[50]	374	562	749	936	1123	34	50	67	84	101	< 20
	16	[58]	387	580	773	966	1160	38	58	77	96	115	< 20
	18	[65]	397	596	795	994	1192	43	65	86	108	130	< 20
	20	[72]	408	612	817	1021	1225	48	72	96	120	144	20
	25	[90]	432	648	864	1080	1296	60	90	120	150	180	23
	30	[108]	452	678	904	1130	1356	72	108	144	180	216	27
1500	18	[65]	476	714	952	1190	1428	43	65	86	108	130	< 20
	20	[72]	488	732	975	1219	1463	48	72	96	120	144	< 20
	25	[90]	515	773	1030	1288	1546	60	90	120	150	180	< 20
	30	[108]	540	809	1079	1349	1619	72	108	144	180	216	22
	35	[126]	561	841	1121	1402	1682	84	126	168	210	252	25

*) Heating capacity: Applies to water flow 0,03 l/s

**) Pressure refers to static pressure (P_s) in the product's pressure chamber.

■ T.10. Heat output water, 125 Pa + cooling capacity air with noise levels

Size (mm)	Supply airflow		Heating capacity *) water (W) at 75 Pa pressure**) and at given ΔT_{RWm} (K)					Cooling capacity air (W) at given ΔT_{RS} (K)					Sound level dB (A)
	l/s	[m³/h]	10	15	20	25	30	2	3	4	5	6	
600	8	[29]	191	287	383	478	574	19	29	38	48	58	< 20
	10	[36]	201	301	402	502	603	24	36	48	60	72	21
	12	[43]	208	312	416	520	624	29	43	58	72	86	23
	14	[50]	211	317	422	528	634	34	50	67	84	101	25
	16	[58]	214	322	429	536	643	38	58	77	96	115	27
800	10	[36]	257	386	515	643	772	24	36	48	60	72	<20
	12	[43]	269	403	538	672	806	29	43	58	72	86	<20
	14	[50]	279	419	558	698	837	34	50	67	84	101	<20
	16	[58]	289	433	577	722	866	38	58	77	96	115	20
	18	[65]	298	446	595	744	893	43	65	86	108	130	22
	20	[72]	305	458	611	763	916	48	72	96	120	144	25
1000	10	[36]	310	466	621	776	931	24	36	48	60	72	< 20
	12	[43]	323	485	646	808	970	29	43	58	72	86	< 20
	14	[50]	335	503	671	838	1006	34	50	67	84	101	< 20
	16	[58]	346	519	692	866	1039	38	58	77	96	115	20
	18	[65]	357	536	714	893	1071	43	65	86	108	130	22
	20	[72]	367	550	733	917	1100	48	72	96	120	144	23
	25	[90]	387	580	773	966	1160	60	90	120	150	180	25
1200	16	[58]	402	603	804	1005	1206	38	58	77	96	115	< 20
	18	[65]	413	620	827	1034	1240	43	65	86	108	130	20
	20	[72]	424	636	849	1061	1273	48	72	96	120	144	22
	25	[90]	449	674	899	1123	1348	60	90	120	150	180	25
	30	[108]	470	705	940	1174	1409	72	108	144	180	216	27
1500	20	[72]	508	761	1015	1269	1523	48	72	96	120	144	20
	25	[90]	536	804	1071	1339	1607	60	90	120	150	180	22
	30	[108]	561	841	1121	1402	1682	72	108	144	180	216	23
	35	[126]	583	875	1166	1458	1749	84	126	168	210	252	26
	40	[144]	602	902	1203	1504	1805	96	144	192	240	288	29

*) Heating capacity: Applies to water flow 0,03 l/s

**) Pressure refers to static pressure (P_s) in the product's pressure chamber.

■ T.11. Heat output water, 150 Pa + cooling capacity air with noise levels

Size (mm)	Supply airflow		Heating capacity*) water (W) at 75 Pa pressure**) and at given ΔT_{RWm} (K)					Cooling capacity air (W) at given ΔT_{RS} (K)					Sound level dB (A)
	l/s	[m³/h]	10	15	20	25	30	2	3	4	5	6	
600	8	[29]	198	298	397	496	595	19	29	38	48	58	< 20
	10	[36]	209	313	417	522	626	24	36	48	60	72	20
	12	[43]	216	324	431	539	647	29	43	58	72	86	25
	14	[50]	220	329	439	549	659	34	50	67	84	101	26
	16	[58]	226	339	452	565	678	38	58	77	96	115	27
800	10	[36]	267	400	534	667	801	24	36	48	60	72	<20
	12	[43]	279	419	558	698	837	29	43	58	72	86	<20
	14	[50]	290	435	580	725	870	34	50	67	84	101	20
	16	[58]	300	450	600	750	900	38	58	77	96	115	22
	18	[65]	309	464	618	773	927	43	65	86	108	130	23
	20	[72]	317	475	634	792	950	48	72	96	120	144	26
	25	[90]	332	498	664	830	996	60	90	120	150	180	30
1000	12	[43]	335	503	671	838	1006	29	43	58	72	86	20
	14	[50]	348	522	696	870	1044	34	50	67	84	101	21
	16	[58]	360	540	719	899	1079	38	58	77	96	115	22
	18	[65]	371	556	741	926	1112	43	65	86	108	130	23
	20	[72]	381	571	762	952	1142	48	72	96	120	144	24
	25	[90]	402	603	804	1005	1206	60	90	120	150	180	27
	30	[126]	417	626	835	1043	1252	72	108	144	180	216	31
1200	16	[58]	417	626	835	1043	1252	38	58	77	96	115	20
	18	[65]	429	644	859	1074	1288	43	65	86	108	130	22
	20	[72]	441	661	882	1102	1323	48	72	96	120	144	23
	25	[90]	467	700	933	1166	1400	60	90	120	150	180	27
	30	[108]	488	732	975	1219	1463	72	108	144	180	216	29
	35	[126]	505	757	1010	1262	1515	84	126	168	210	252	32
1500	18	[64]	514	771	1028	1285	1542	43	65	86	108	130	21
	20	[72]	527	790	1053	1317	1580	48	72	96	120	144	22
	25	[90]	556	834	1112	1390	1668	60	90	120	150	180	24
	30	[108]	582	874	1165	1456	1747	72	108	144	180	216	25
	35	[126]	605	908	1211	1514	1816	84	126	168	210	252	27
	40	[144]	625	937	1249	1562	1874	96	144	192	240	288	30

*) Heating capacity: Applies to water flow 0,03 l/s

**) Pressure refers to static pressure (P_s) in the product's pressure chamber.

■ T.12. Heat output water, 175 Pa + cooling capacity air with noise levels

Size (mm)	Supply airflow		Heating capacity*) water (W) at 75 Pa pressure**) and at given ΔT_{RWm} (K)					Cooling capacity air (W) at given ΔT_{RS} (K)					Sound level dB (A)
	l/s	[m³/h]	10	15	20	25	30	2	3	4	5	6	
600	8	[29]	206	309	412	515	618	19	29	38	48	58	< 20
	10	[36]	216	324	433	541	649	24	36	48	60	72	20
	12	[43]	223	335	447	558	670	29	43	58	72	86	25
	14	[50]	227	341	454	568	682	34	50	67	84	101	26
	16	[58]	234	350	467	584	701	38	58	77	96	115	27
800	10	[36]	276	415	553	691	829	24	36	48	60	72	<20
	12	[43]	289	434	579	723	868	29	43	58	72	86	<20
	14	[50]	301	451	602	752	902	34	50	67	84	101	20
	16	[58]	311	467	622	778	933	38	58	77	96	115	22
	18	[65]	321	481	641	802	962	43	65	86	108	130	23
	20	[72]	329	493	658	822	987	48	72	96	120	144	26
	25	[90]	344	516	689	861	1033	60	90	120	150	180	30
1000	12	[43]	348	522	696	870	1044	29	43	58	72	86	20
	14	[50]	361	541	722	902	1083	34	50	67	84	101	21
	16	[58]	373	560	746	933	1119	38	58	77	96	115	22
	18	[65]	385	577	769	962	1154	43	65	86	108	130	23
	20	[72]	395	592	790	987	1185	48	72	96	120	144	24
	25	[90]	417	625	833	1042	1250	60	90	120	150	180	27
	30	[126]	433	649	865	1082	1298	72	108	144	180	216	31
1200	16	[58]	445	668	891	1114	1336	38	58	77	96	115	20
	18	[65]	445	668	891	1114	1336	43	65	86	108	130	22
	20	[72]	457	685	914	1142	1371	48	72	96	120	144	23
	25	[90]	484	726	968	1210	1452	60	90	120	150	180	27
	30	[108]	506	759	1012	1266	1519	72	108	144	180	216	29
	35	[126]	524	785	1047	1309	1571	84	126	168	210	252	32
1500	18	[64]	533	800	1066	1333	1599	43	65	86	108	130	21
	20	[72]	547	820	1093	1366	1640	48	72	96	120	144	22
	25	[90]	577	865	1153	1442	1730	60	90	120	150	180	24
	30	[108]	604	906	1208	1510	1812	72	108	144	180	216	25
	35	[126]	628	942	1256	1570	1884	84	126	168	210	252	27
	40	[144]	648	972	1297	1621	1945	96	144	192	240	288	30

*) Heating capacity: Applies to water flow 0,03 l/s

**) Pressure refers to static pressure (P_s) in the product's pressure chamber.

■ T.13. Heating power of water, 200 Pa + cooling capacity air with noise levels

Size (mm)	Supply airflow l/s [m³/h]		Heating capacity*) water (W) at 75 Pa pressure**) and at given ΔT_{RWm} (K)					Cooling capacity air (W) at given ΔT_{RS} (K)					Sound level dB (A)
			10	15	20	25	30	2	3	4	5	6	
600	10	[36]	224	336	448	560	672	24	36	48	60	72	23
	12	[43]	232	348	463	579	695	29	43	58	72	86	26
	14	[50]	236	353	471	589	707	34	50	67	84	101	27
	16	[58]	241	361	481	602	722	38	58	77	96	115	29
	18	[65]	244	367	489	611	733	43	65	86	108	130	32
	20	[72]	250	374	499	624	749	48	72	96	120	144	34
800	12	[43]	300	449	599	749	899	29	43	58	72	86	21
	14	[50]	312	468	623	779	935	34	50	67	84	101	23
	16	[58]	323	484	645	806	968	38	58	77	96	115	25
	18	[65]	332	498	664	830	996	43	65	86	108	130	26
	20	[72]	340	511	681	851	1021	48	72	96	120	144	27
	25	[90]	357	536	714	893	1071	60	90	120	150	180	32
1000	14	[50]	374	561	748	934	1121	34	50	67	84	101	22
	16	[58]	387	580	773	966	1160	38	58	77	96	115	23
	18	[65]	398	597	796	995	1194	43	65	86	108	130	25
	20	[72]	409	613	818	1022	1227	48	72	96	120	144	26
	25	[90]	431	647	863	1078	1294	60	90	120	150	180	28
	30	[108]	448	672	896	1120	1344	72	108	144	180	216	32
	35	[126]	459	688	918	1147	1377	84	126	168	210	252	35
1200	18	[65]	461	692	923	1154	1384	43	65	86	108	130	22
	20	[72]	474	710	947	1184	1421	48	72	96	120	144	25
	25	[90]	501	752	1002	1253	1503	60	90	120	150	180	27
	30	[108]	524	786	1048	1310	1572	72	108	144	180	216	31
	35	[126]	543	814	1085	1357	1628	84	126	168	210	252	33
	40	[144]	556	834	1112	1390	1668	96	144	192	240	288	37
1500	25	[90]	598	897	1196	1494	1793	60	90	120	150	180	26
	30	[108]	626	939	1252	1565	1878	72	108	144	180	216	27
	35	[126]	650	975	1300	1626	1951	84	126	168	210	252	29
	40	[144]	671	1007	1343	1678	2014	96	144	192	240	288	32

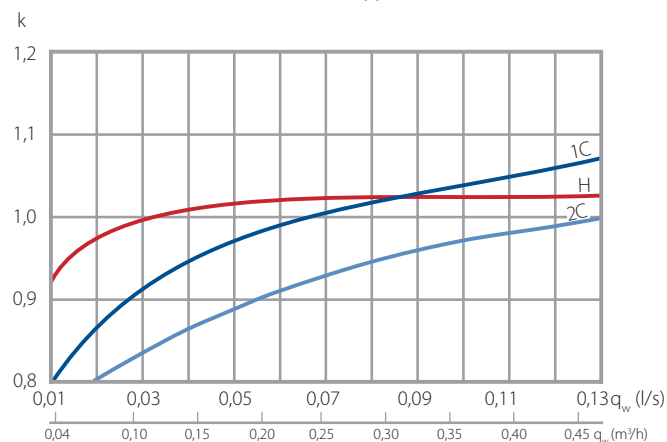
*) Heating capacity: Applies to water flow 0,03 l/s

**) Pressure refers to static pressure (P_s) in the product's pressure chamber.

Correction

- Diagram D1: Correction for different types of coils: Blue graphs refer to 1-circuit cooling (1C) and 2-circuit cooling (2C). Red graph refers to heating.

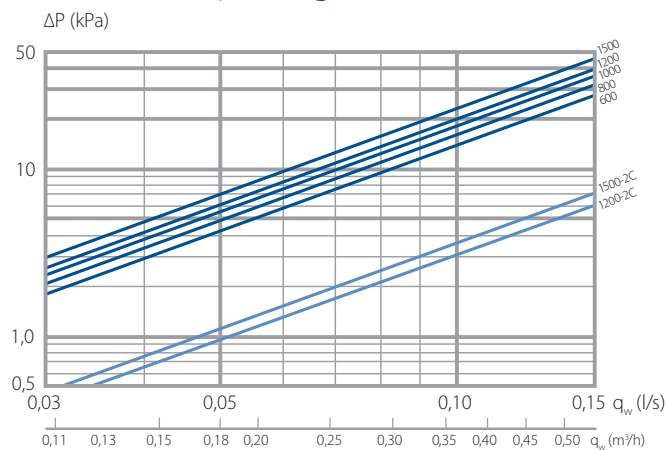
D.1. Correction for different types of coils



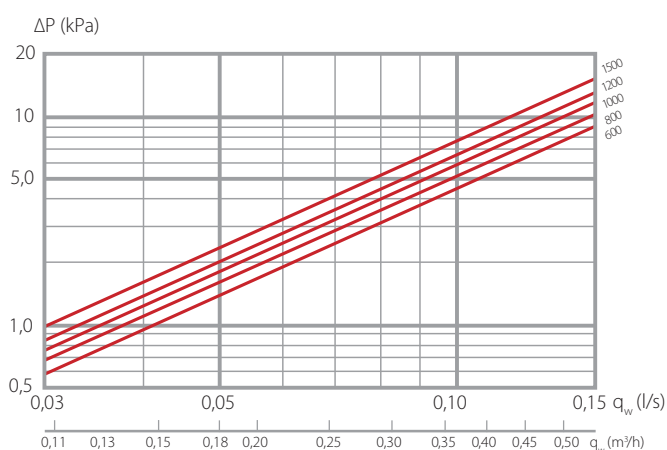
Pressure drop

- Diagrams D2 and D3 depict the pressure drop of FCA for each size, taking into consideration the number of water circuits (1C, 2C, H). Note: The 2-circuit option is only available for sizes 1200 and 1500, and only for cooling function.
- Diagram D4: In case of using flexible hoses to connect the FCA to the water system, the pressure drop of the hoses have to be added to the pressure drop of the coil (D2 and D3).

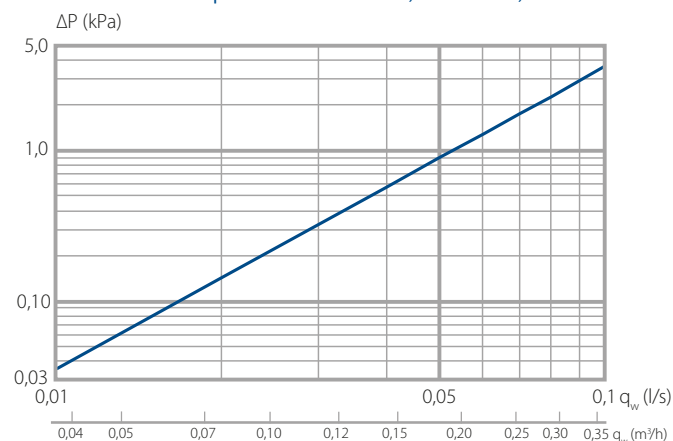
D.2. Pressure drop cooling



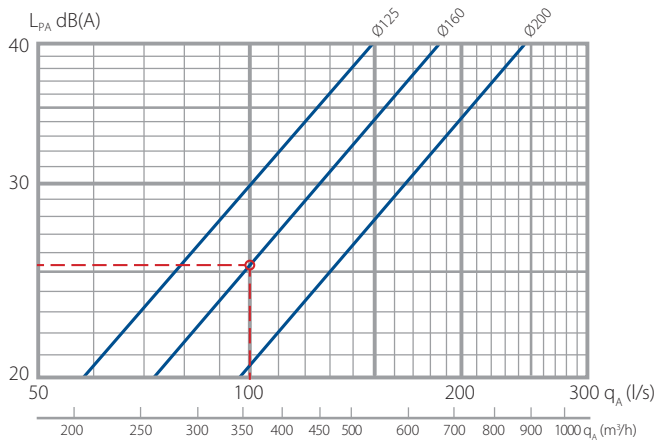
D.3. Pressure drop heating



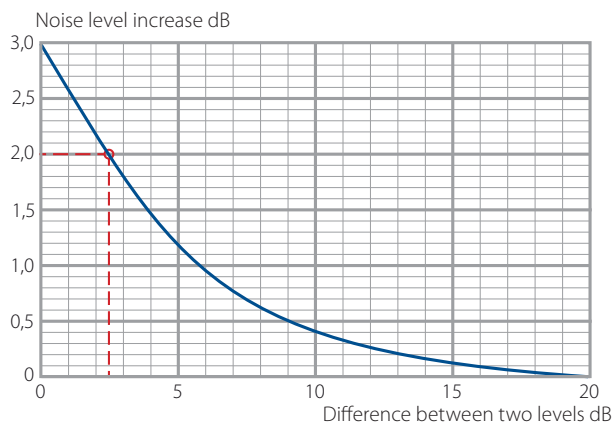
D.4. Pressure drop in flexible tube, inv. Ø13, 2x500 mm



D.5. Sound attenuation



D.6. Logarithmic connection of two different noise sources



Technical data

Sound power level: L_W [dB]

A-weighted sound pressure level L_{PA} [dB(A)]

Correction factor: K_{OK} [dB]

$$L_p = L_{PA} + K_{OK}$$

The sound pressure level L_{PA} dB(A) applies to an equivalent surface of 10 m², which corresponds to an attenuation of 4 dB in a 25 m³ room with normal attenuation.

Table 16: A few examples for sound corrections in different type of rooms.

T.14. Sound attenuation

Size	Medium frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
600	18	11	15	12	6	16	15	19
800	15	14	13	8	8	14	15	19
1000	12	8	10	10	6	14	13	16
1200	13	13	10	6	10	12	12	17
1500	12	11	8	6	6	13	12	17

Tolerans ± 3 dB

T.15. Correction K_{OK} dB

Size	Medium frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
600	+ 19	+ 5	+ 1	+ 1	+ 1	- 9	- 17	- 27
800	+ 15	+ 1	+ 2	+ 2	0	- 7	- 16	- 25
1000	+ 18	+ 7	+ 2	+ 1	0	- 8	- 16	- 25
1200	+ 14	- 1	+ 2	+ 2	0	- 7	- 16	- 25
1500	+ 14	- 2	+ 2	+ 2	0	- 6	- 14	- 23

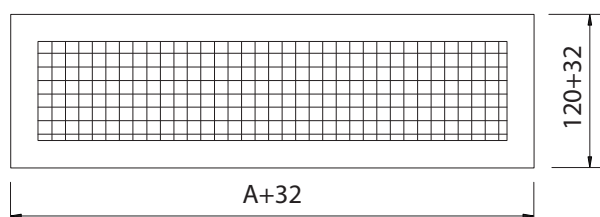
Tolerans ± 3 dB

T.16. Correction by room types

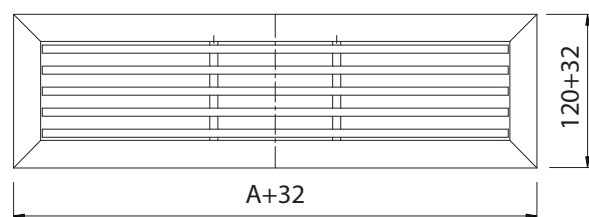
Room volume capacity	Room type	Correction
25 m ³	hard	+2 dB
25 m ³	attenuated	-2 dB
150 m ³	hard	-3 dB
150 m ³	normal	-5 dB
150 m ³	attenuated	-7 dB

Dimensions

FCA-E5



FCA-AGR



T.17.

Size	Duct size ¹⁾	Dimensions (mm)			Weight (kg)
		ØD	A	B	
600	Ø125	123		570	11,0
	Ø160	157	600	600	11,4
	Ø200	198		640	11,9
800	Ø125	123		570	13,7
	Ø160	157	725	600	14,2
	Ø200	198		640	14,8
1000	Ø125	123		570	16,4
	Ø160	157	925	600	17,0
	Ø200	198		640	17,6
1200	Ø125	123		570	19,8
	Ø160	157	1125	600	20,4
	Ø200	198		640	21,0
1500	Ø125	123		570	24,9
	Ø160	157	1425	600	25,6
	Ø200	198		640	26,3

¹⁾ Duct size (125, 160 or 200) and connection side (V or H) are selectable and specified in order code as instructed.

T.18. Dimensions – E5 and AGR grille

Size	Nom. dimensions (mm)
600	640 x 120
800	765 x 120
1000	965 x 120
1200	1165 x 120
1500	1465 x 120

Grille height = 5 mm.

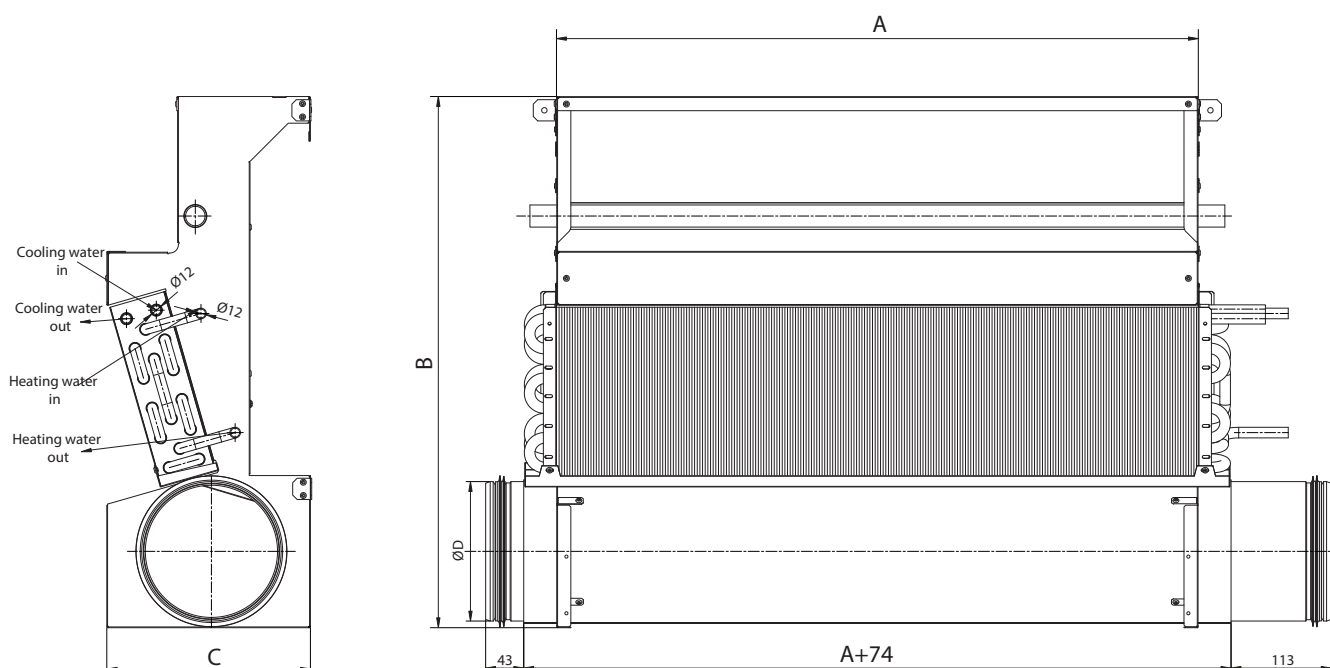


Figure 4. FacadeAir, dimensions (mm)

The illustration shows size 1000 with air duct dimension Ø160 in right-connected version.

T19: Water connections and water flow

Size	Number of water circuits	Water flow (l)	Water connections size (mm)	
			Cooling In/Out	Heating In/Out
600	1	0,7	Ø 12	Ø 12
800		0,9		
1000		1,2		
1200	1	1,4	Ø 12	
1500	2	1,5	Ø 15	
	1	1,7	Ø 12	
	2	1,8	Ø 15	

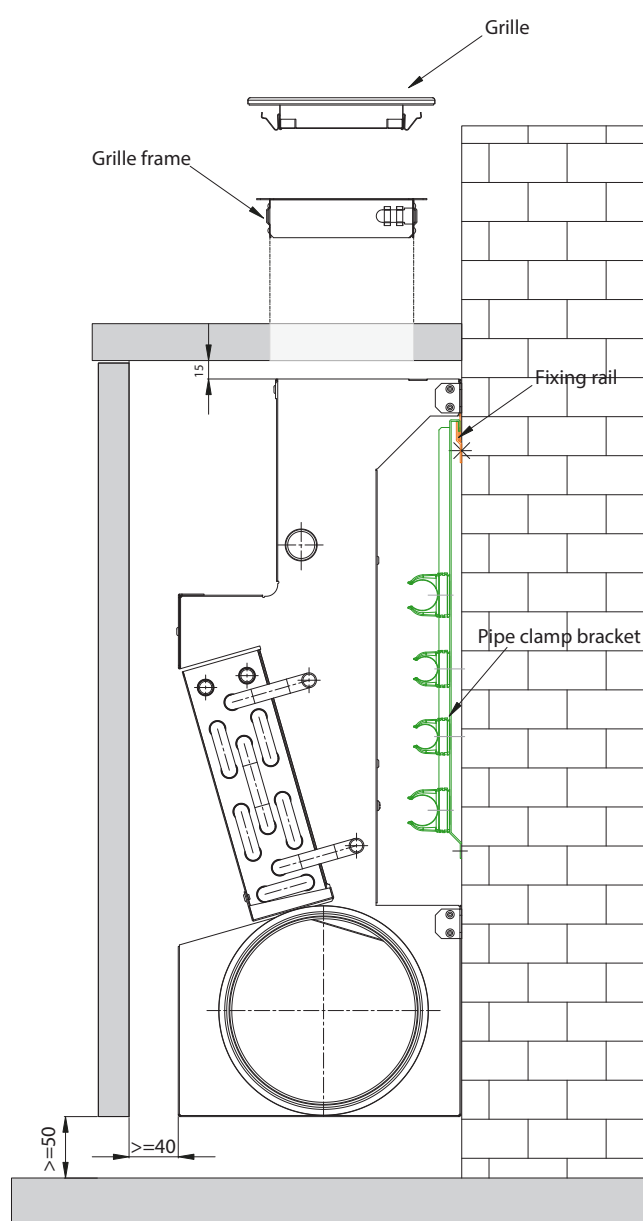


Figure 5. Installation requirements FacadeAir (mm)

Specification

Ordering code	FCA	-XX	-XXX	-X	-X
Product type	FCA				
Size (mm)	600	06			
	800	08			
	1000	10			
	1200	12			
	1500	15			
Duct connection (ØD, mm)			125		
			160		
			200		
Water connection			left	L	
			right	R	
Without pipe clamp bracket and fixing rail					0
Only with fixing rail					1
With pipe clamp bracket and fixing rail					2
Example: FCA-08-125-R-1					

Specification – grilles

Ordering code	FCA	-XXX	-XXXX
Rectangular transfer grille with clips and fixing frame (RAL9003-30% powder coated)		E5	
Rectangular linear bar grille (horizontal fins) with fixing frame (RAL9003-30% powder coated)		AGR-R	
Rectangular linear bar grille (horizontal fins) with fixing frame (nature aluminium)		AGR-N	
Size (mm)			600
			800
			1000
			1200
			1500
Example: FCA-E5-600			
FCA-AGR-R-1200			
FCA-AGR-N-1500			