

APPLICATION GUIDE



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CASSETTE FAN COIL UNIT

ARMONIA II

1556 - 10865 W

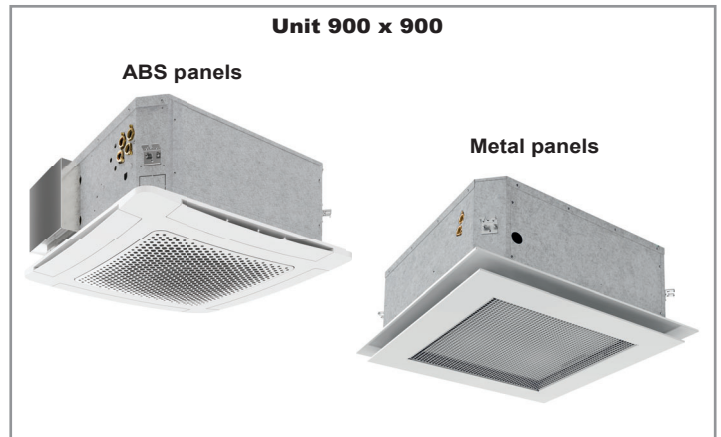
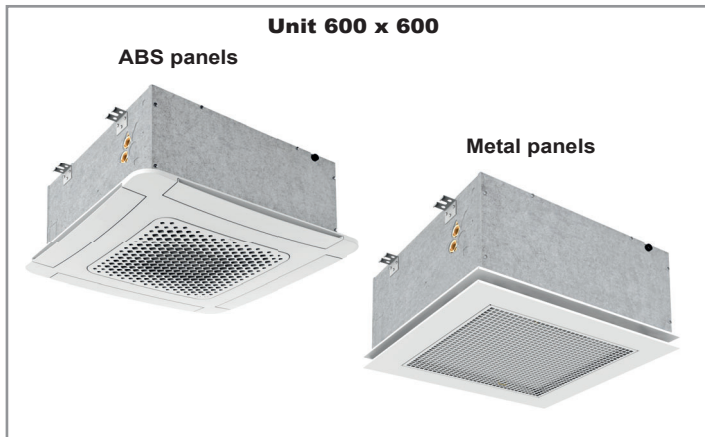
225 - 1536 m³/h

ARMONIA2-AGU-1804-E



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Unit description

Available in 8 sizes and 2 versions for 2 pipe system, in 10 sizes for 4 pipe system and 5 sizes for 2-pipe system with electric heater (*). The square section makes these units ideal for installation in false ceilings and, by the specially designed accessories, is possible enable system solutions articulated such as the air distribution in adjacent rooms or from air primary ducts.

(*) The 2P + EH version (2 pipe + electric heater) is equipped with a 24V transformer for powering the control thermostat and valves. It is necessary to respect this condition to avoid electromagnetic interferences. It is also necessary to provide post-ventilation after switching off the electric heater.

Unit type

Water cassette

Structure

Galvanized sheet, internally insulated with closed cell cross-linked polyethylene with anti-condensation barrier externally. Shaped in order to increase its rigidity, it is equipped with four support hooks for anchoring to the ceiling. On the sides are made predispositions for the fresh air intake or outlet in adjacent room.

EasyWaySystem

It allows to intervene easily on the unit from the side with considerable advantages for the maintenance operations.

Fan group

Installed on elastic shock absorbers, it is constituted by an asynchronous or EC motor and a centrifugal fan with reverse blades in plastic reinforced with glass fiber material.

Air filter

Filter fabric of polypropylene honeycomb enclosed by a galvanized steel frame fixed on the inside of the front panel, easily removable and reusable, available with efficiency class G1 or G4

Air filter

Made from copper pipes and aluminum fins, corrugated or turbo-lencend, mechanically crimped in order to maximize the thermal contact, and then shaped to allow its accommodation within the unit. On all batteries is the air vent valve, which directs the discharge directly into the internal condensate drain pan.

Valves

2 or 3 way supplied loose or assembled inside the unit (optional)

Casing

White RAL 9010, is built in ABS to combine strength and lightness or in metal sheet. The fastening to the bearing structure is simple and fast.

The particular positioning of the air outlet openings accentuate the Coanda effect in the process of summer air conditioning.

Condensate drain pan

Thermoformed plastic with insulation in expanded polystyrene foam density 50 kg/m3. The condensate water is carried out with the aid of a centrifugal pump with its float switch.

Certification

Eurovent

MODEL NUMBER DESCRIPTION

ARMONIA2 LX 621 NC EC			
6	6 =	600 x 600	NC
	9 =	900 x 900	
2	2 =	2 pipes	EC
	3 =	2 pipes + electrical heater	
	4 =	4 pipes	
1	Size		

Modbus card (suitable for infrared remote control)
 NC = Not included
 RC = Included
 EC = EC fan motor

Performances
ARMONIA2 600 x 600
2 pipes system

			621	622	623	624	625
COOLING MODE Water inlet temperature.: 7°C Water outlet temperature.: 12°C Air inlet temperature.: 27°C DB. - 19°C WB.	Total cooling capacity	(E) W	2223	2667	4247	4975	5381
		(E) W	1835	2433	3047	3648	4655
		(E) W	1556	1944	2144	2697	3967
	Sensible cooling capacity	(E) W	1843	2027	3107	3695	3991
		(E) W	1485	1813	2177	2628	3355
		(E) W	1236	1424	1494	1907	2797
	Water flow rate	l/h	390	465	739	867	939
		l/h	321	424	530	635	812
		l/h	271	338	372	468	691
	Water pressure drop	(E) kPa	20,0	16,0	24,0	24,0	30,0
		(E) kPa	14,0	14,0	18,0	18,0	24,0
		(E) kPa	11,0	10,0	11,0	16,0	18,0
HEATING MODE Air temperature.: 20°C Water inlet temperature.: 45/40°C	Heating capacity	(E) W	2340	2620	4080	4910	5420
		(E) W	1920	2370	2930	3440	4930
		(E) W	1590	1910	2090	2580	4090
	Water flow rate	l/h	408	456	711	855	943
		l/h	335	413	510	600	860
		l/h	276	333	364	449	712
	Water pressure drop	(E) kPa	20,9	15,5	18,5	22,8	29,6
		(E) kPa	14,2	12,5	16,2	18,0	25,7
		(E) kPa	10,5	8,9	9,7	15,3	19,2
HEATING MODE Air temperature.: 20°C Water inlet temperature.: 50°C	Heating capacity	W	2800	3150	4910	5900	6500
		W	2300	2850	3522	4150	5900
		W	1900	2300	2510	3100	4900
	Water flow rate	l/h	390	465	739	867	939
		l/h	321	424	530	635	812
		l/h	271	338	372	468	691
	Water pressure drop	kPa	19,0	16,0	19,0	23,1	29,0
		kPa	13,0	13,0	17,0	19,8	23,0
		kPa	10,0	9,0	10,0	16,5	18,0
Sound power level	(E) dB(A)	46	44	52	60	62	
	(E) dB(A)	39	41	44	49	59	
	(E) dB(A)	33	34	34	39	53	
Sound pressure level	dB(A)	37	35	43	51	53	
	dB(A)	30	32	35	40	50	
	dB(A)	24	25	25	30	44	
Air flow rate	m³/h	367	398	550	660	760	
	m³/h	295	355	398	468	660	
	m³/h	225	269	269	328	550	

(E) = Eurovent

Standard unit with free outlet: external static pressure = 0 Pa

The sound power level test has to be performed according to EN 16583:2015 standard

Sound pressure level: 8,6 dB(A) lower that the sound power level for a room of 90 m³ with a reverberation time of 0,5 sec.

Supported power supply: ~230V / 1ph / 50-60Hz

Performances

ARMONIA2 600 x 600

4 pipes system			641	642	643	644	645	646
COOLING MODE Water inlet temperature.: 7°C Water outlet temperature.: 12°C Air inlet temperature.: 27°C DB. - 19°C WB.	Total cooling capacity	(E) W	2303	2707	3337	3827	3825	4395
		(E) W	1905	2373	2507	2957	3048	3408
		(E) W	1606	1864	1884	1974	2367	2627
	Sensible cooling capacity	(E) W	1873	1977	2547	2857	2975	3345
		(E) W	1505	1713	1867	2157	2308	2518
		(E) W	1226	1344	1364	1404	1747	1897
	Water flow rate	l/h	403	472	584	668	669	767
		l/h	333	414	438	515	532	594
		l/h	280	324	328	343	412	456
Water pressure drop	(E) kPa	18,0	14,0	17,0	22,0	21,0	28,0	
	(E) kPa	15,0	12,0	14,0	19,0	17,0	22,0	
	(E) kPa	10,0	10,0	10,0	15,0	12,0	17,0	
HEATING MODE Air temperature.: 20°C Water inlet temperature.: 45/40°C	Heating capacity	(E) W	2690	3070	3900	2890	4380	3250
		(E) W	2300	2680	3070	2340	3510	2610
		(E) W	1780	2150	2150	1680	2760	2100
	Water flow rate	l/h	236	269	342	254	384	285
		l/h	201	235	269	206	307	229
		l/h	156	187	189	147	242	184
	Water pressure drop	(E) kPa	12,2	20,4	14,4	18,1	17,5	21,2
		(E) kPa	11,3	16,5	11,9	14,9	15,1	18,8
		(E) kPa	8,8	12,2	7,1	11,0	9,6	13,3
HEATING MODE Air temperature.: 20°C Water inlet temperature.: 50°C	Heating capacity	W	3050	3500	4450	3300	5000	3710
		W	2600	3050	3500	2670	4000	2980
		W	2010	2450	2450	1910	3150	2390
	Water flow rate	l/h	268	307	391	290	439	326
		l/h	228	268	307	235	351	262
		l/h	177	215	215	168	277	210
	Water pressure drop	kPa	15,0	15,0	18,0	23,0	22,0	27,0
		kPa	14,0	12,0	15,0	19,0	19,0	24,0
		kPa	11,0	9,0	9,0	14,0	12,0	17,0
Sound power level	(E) dB(A)	46	47	52	52	58	58	
	(E) dB(A)	39	41	44	44	49	51	
	(E) dB(A)	33	37	34	37	39	44	
Sound pressure level	dB(A)	37	38	43	43	49	49	
	dB(A)	30	32	35	35	40	42	
	dB(A)	24	28	25	28	30	35	
Air flow rate	m³/h	367	398	550	550	660	660	
	m³/h	295	355	398	398	468	468	
	m³/h	224	269	269	269	328	328	

(E) = Eurovent

Standard unit with free outlet: external static pressure = 0 Pa

The sound power level test has to be performed according to EN 16583:2015 standard

Sound pressure level: 8,6 dB(A) lower that the sound power level for a room of 90 m³ with a reverberation time of 0,5 sec.

Supported power supply: ~230V / 1ph / 50-60Hz

Performances
ARMONIA2 900 x 900
2 pipes system

			921	922	923
COOLING MODE	Total cooling capacity	(E) W	6128	9460	10865
		(E) W	4950	6609	8790
		(E) W	4152	5337	5336
	Sensible cooling capacity	(E) W	4558	6400	7965
		(E) W	3580	4339	6210
		(E) W	2982	3457	3716
	Water flow rate	l/h	1064	1641	1888
		l/h	858	1144	1523
		l/h	719	923	923
	Water pressure drop	(E) kPa	31,5	33,5	53,0
(E) kPa		21,5	13,5	36,0	
(E) kPa		16,5	8,5	12,5	
HEATING MODE	Heating capacity	(E) W	6400	8610	11280
		(E) W	5000	5970	8660
		(E) W	4210	4590	5030
	Water flow rate	l/h	1115	1500	1964
		l/h	871	1039	1508
		l/h	734	800	876
	Water pressure drop	(E) kPa	24,2	25,0	49,9
		(E) kPa	16,7	10,8	30,7
		(E) kPa	11,6	7,9	10,1
HEATING MODE	Heating capacity	W	7650	10400	13500
		W	6000	7200	10400
		W	5050	5550	6050
	Water flow rate	l/h	1064	1641	1888
		l/h	858	1144	1523
		l/h	719	923	923
	Water pressure drop	kPa	22,0	29,0	46,0
		kPa	16,0	12,5	31,0
		kPa	11,0	10,0	11,0
Sound power level	(E) dB(A)	47	53	59	
	(E) dB(A)	39	40	49	
	(E) dB(A)	32	34	35	
Sound pressure level	dB(A)	38	44	50	
	dB(A)	30	31	40	
	dB(A)	23	25	26	
Air flow rate	m ³ /h	1023	1270	1536	
	m ³ /h	763	858	1175	
	m ³ /h	623	662	669	

(E) = Eurovent

Standard unit with free outlet: external static pressure = 0 Pa

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Supported power supply: ~230V / 1ph / 50-60Hz

Performances

ARMONIA2 900 x 900

4 pipes system			941	942	943	944
COOLING MODE Water inlet temperature.: 7°C Water outlet temperature.: 12°C Air inlet temperature.: 27°C DB. - 19°C WB.	Total cooling capacity	(E) W	6125	7100	8665	9965
		(E) W	4847	5139	6560	7510
		(E) W	4011	4257	4456	5056
	Sensible cooling capacity	(E) W	4505	5340	6635	7515
		(E) W	3497	3749	4880	5520
		(E) W	2851	3047	3186	3596
	Water flow rate	I/h	1064	1236	1511	1734
		I/h	841	893	1142	1304
		I/h	695	738	772	876
Water pressure drop	(E) kPa	20,5	29,6	38,0	34,0	
	(E) kPa	13,5	18,0	24,5	21,0	
	(E) kPa	9,5	11,5	14,0	14,0	
HEATING MODE Air temperature.: 20°C Water inlet temperature.: 45/40°C	Heating capacity	(E) W	7940	9270	11030	8420
		(E) W	6180	7060	8380	6500
		(E) W	5130	5570	6010	4400
	Water flow rate	I/h	697	812	967	739
		I/h	542	619	735	570
		I/h	449	488	527	386
	Water pressure drop	(E) kPa	19,5	27,2	35,2	17,8
		(E) kPa	13,2	16,9	23,9	12,1
		(E) kPa	9,1	11,6	13,2	6,4
HEATING MODE Air temperature.: 20°C Water inlet temperature.: 50°C	Heating capacity	W	9000	10500	12500	9600
		W	7000	8000	9500	7400
		W	5800	6300	6800	5000
	Water flow rate	I/h	791	922	1098	843
		I/h	615	703	835	650
		I/h	510	554	598	439
	Water pressure drop	kPa	23,5	33,0	42,5	22,0
		kPa	16,0	20,5	29,0	15,0
		kPa	11,0	14,0	16,0	8,0
Sound power level	(E) dB(A)	47	53	59	59	
	(E) dB(A)	39	40	49	49	
	(E) dB(A)	32	34	35	35	
Sound pressure level	dB(A)	38	44	50	50	
	dB(A)	30	31	40	40	
	dB(A)	23	25	26	26	
Air flow rate	m³/h	1023	1270	1536	1536	
	m³/h	763	858	1175	1175	
	m³/h	623	662	669	669	

(E) = Eurovent

Standard unit with free outlet: external static pressure = 0 Pa

The sound power level test has to be performed according to EN 16583:2015 standard

Sound pressure level: 8,6 dB(A) lower that the sound power level for a room of 90 m³ with a reverberation time of 0,5 sec.

Supported power supply: ~230V / 1ph / 50-60Hz

Performances
ARMONIA2 600 x 600

Standard motor		621	622	623	624	625	641	642	643	644	645	646
Power input	W	48	43	63	75	89	48	43	63	63	75	75
Absorbed current	A	0,22	0,19	0,28	0,33	0,39	0,22	0,19	0,28	0,28	0,33	0,33
Power supply		~230V / 1ph / 50Hz										

ARMONIA2 600 x 600

EC motor		621	622	623	624	625	641	642	643	644	645	646
Power input	W	12	11	26	45	65	12	11,2	25,5	25,5	40	40
Absorbed current	A	0,11	0,11	0,22	0,33	0,47	0,11	0,11	0,22	0,22	0,33	0,33
Power supply		~230V / 1ph / 50Hz										

ARMONIA2 900 x 900

Standard motor												
Power input	W	102	108	156	98	106	163	163				
Absorbed current	A	0,52	0,6	0,75	0,52	0,6	0,75	0,75				
supply		~230V / 1ph / 50Hz										

ARMONIA2 900 x 900

EC motor		921	922	923	941	942	943	944
Power input	W	81	89	155	45	74	121	121
Power supply		~230V / 1ph / 50Hz						

ARMONIA2 NC-E

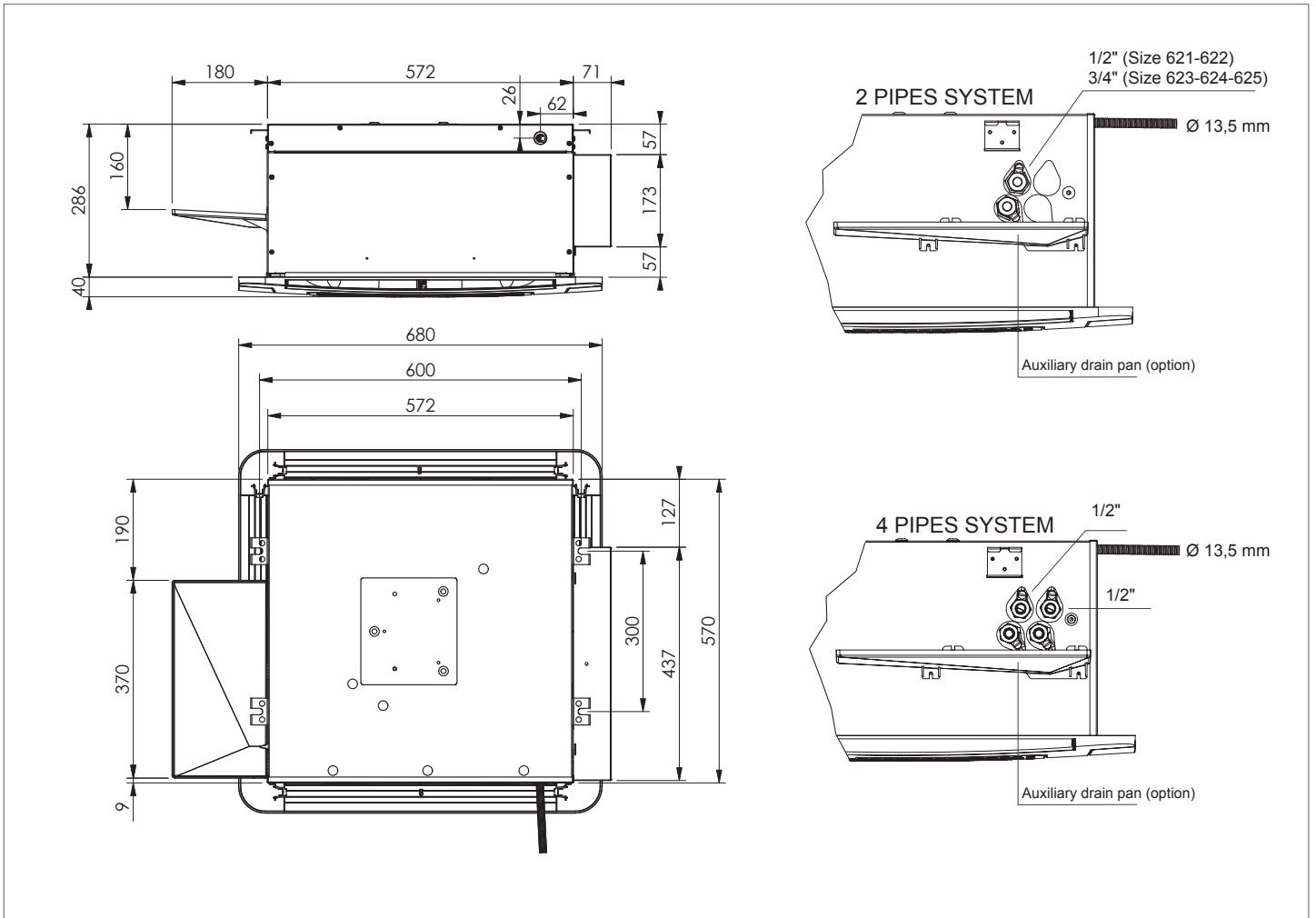
Electric heater		631	632	633	634	635
Heating power output	W	1500	1500	3000	3000	3000
Power supply	V	230	230	230	230	230

ARMONIA2 RC-E

		631	632	633	634	635
Heating power output	W	1250	1250	2500	2500	2500
Power supply	V	230	230	230	230	230

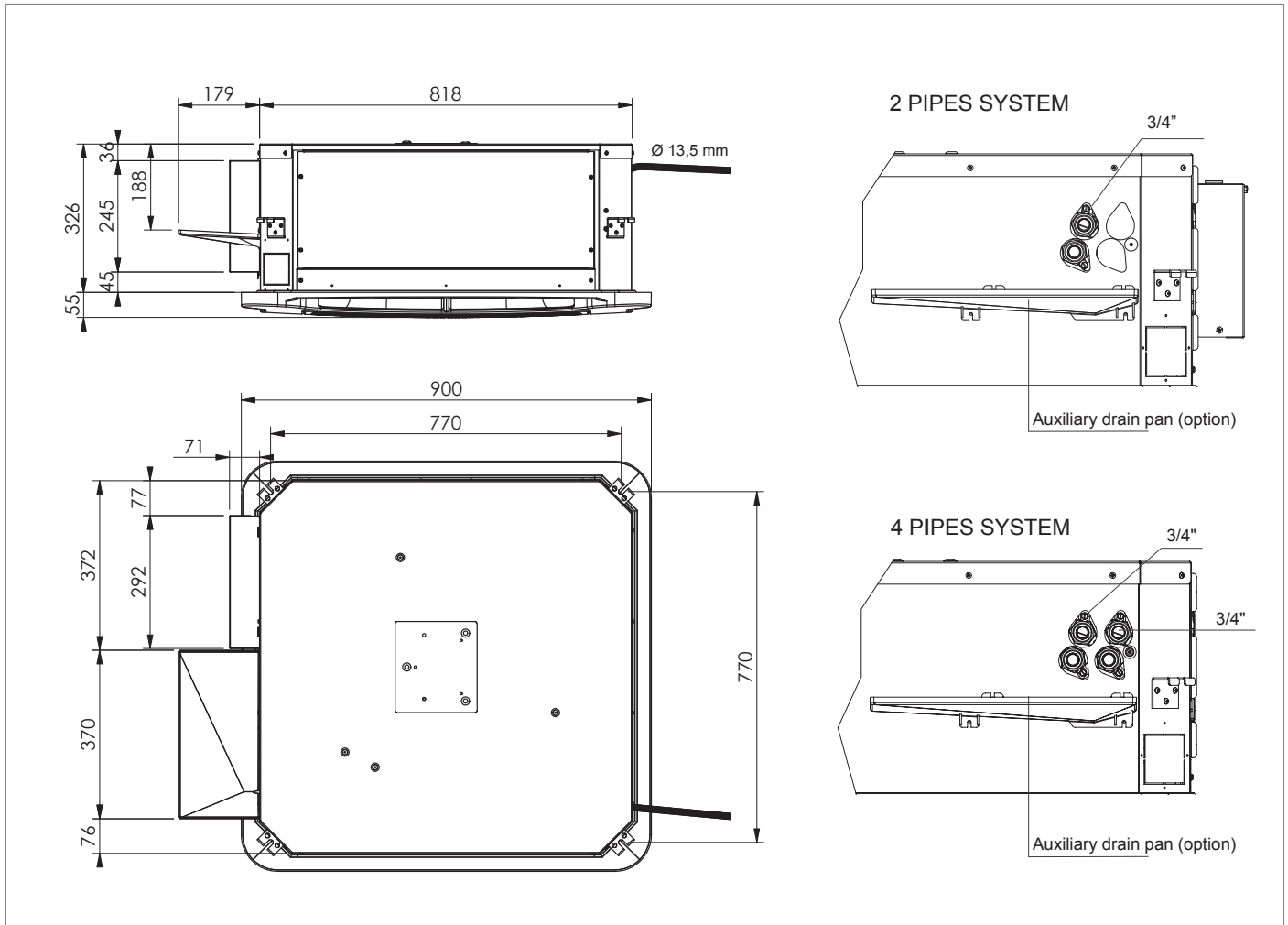
ARMONIA2 600 x 600

			621	622	623	624	625	641	642	643	644	645	646
Unit	Lenght	L1	575	575	575	575	575	575	575	575	575	575	575
	Height	H1	285	285	285	285	285	285	285	285	285	285	285
	Depth	P1	575	575	575	575	575	575	575	575	575	575	575
Panel	Lenght	L	680	680	680	680	680	680	680	680	680	680	680
	Height	H	40	40	40	40	40	40	40	40	40	40	40
	Depth	P	680	680	680	680	680	680	680	680	680	680	680

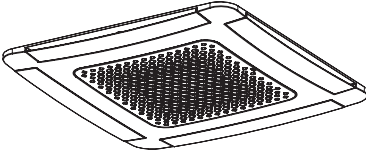







ARMONIA2 900 x 900

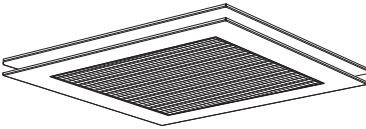

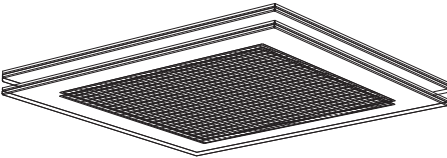

			921	922	923	941	942	943	944
Unit	Lenght	L1	818	818	818	818	818	818	818
	Height	H1	326	326	326	326	326	326	326
	Depth	P1	818	818	818	818	818	818	818
Panel	Lenght	L	900	900	900	900	900	900	900
	Height	H	55	55	55	55	55	55	55
	Depth	P	900	900	900	900	900	900	900




ABS FRONT PANEL


		MODEL
ARMONIA2 600x600 & 900x900		
	Front panel ABS white RAL 9010 with manual louvers 	ARMONIA2 NC
	Front panel ABS white RAL 9010 with manual louvers + infrared receiver IR-C  	ARMONIA2 RC-M
	Front panel ABS white RAL 9010 with motorized louvers + infrared receiver IR-C  	ARMONIA2 RC-A


METAL FRONT PANEL


		MODEL
ARMONIA2 600x600		
	White RAL9010 painted metal front panel	ARMONIA2 NC
	White RAL9010 painted metal front panel + infrared receiver IR-C 	ARMONIA2 RC
ARMONIA2 900x900		
	White RAL9010 painted metal front panel	ARMONIA2 NC
	White RAL9010 painted metal front panel + infrared receiver IR-C 	ARMONIA2 RC

REMOTE CONTROL

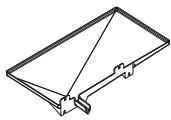
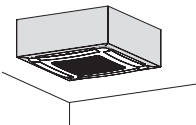
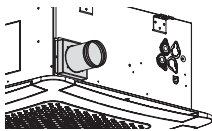
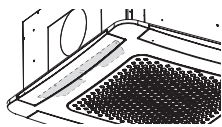
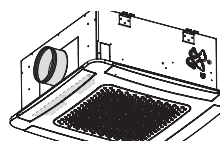
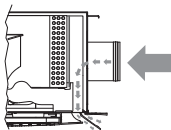
		MODEL
	Infrared remote control IR-C	ARMONIA2 RC

 Manual louvers

 Automatic louvers

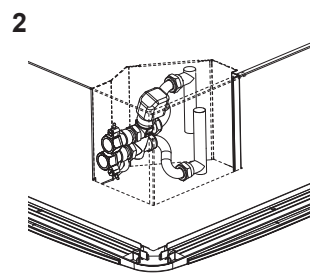
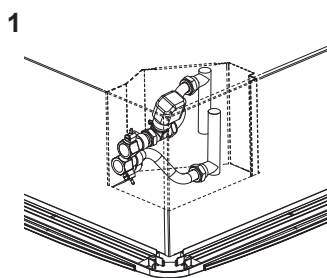
 Infrared receiver

NOT INSTALLED ACCESSORIES

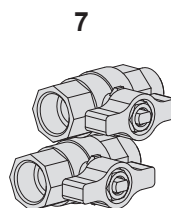
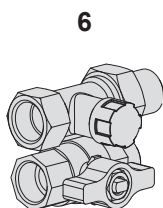
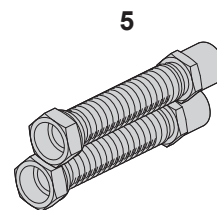
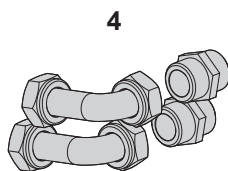
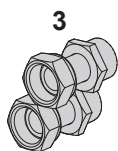
		Size	Dimensions
	Auxiliary drain pan	600 x 600	370 x 217 x (H) 50 mm
		900 x 900	370 x 217 x (H) 50 mm
	Painted steel cover RAL9010	600 x 600	785 x 785 x (H) 290 mm
		900 x 900	1065 x 1065 x (H) 335 mm
	Ø 80 mm circular spigot for fresh air intake (only spigot)	600 x 600	Ø 80 x 90
		900 x 900	Ø 80 x 90
	Vent plate	600 x 600	-
		900 x 900	-
	Circular spigot Ø 150 mm for air supply to adjacent room (with flap lower)	600 x 600	Ø 150 x 70
		900 x 900	Ø 150 x 70
	Fresh air baffle plate with Ø 150 mm spigot	600 x 600	Ø 150 x 70
		900 x 900	Ø 150 x 70
-	Painting steel cover (color of choice)	600 x 600	-
		900 x 900	-
-	Painting front panel in ABS (color of choice)	600 x 600	-
		900 x 900	-
-	Painting metal front panel (color of choice)	600 x 600	-
		900 x 900	-

VALVES INSTALLED

2-PIPE SYSTEM		ON/OFF - 230 Vac			
		ARMONIA2 621-622	ARMONIA2 623-622	ARMONIA2 LX 921	ARMONIA2 LX 922-923
		Code	Code	Code	Code
1	2-way valve	9812ST0212	9812ST0234	9812ST0251	9812ST0252
2	3-way valve	9812ST0312	9812ST0334	9812ST0351	9812ST0352

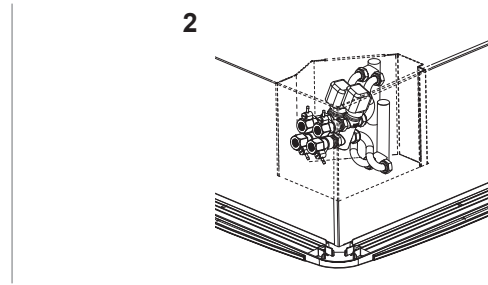
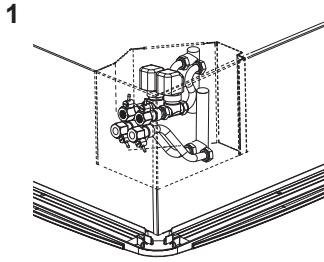


2 PIPE SYSTEM		ARMONIA 2 621-622	ARMONIA 2 623-625	ARMONIA 2 LX 921	ARMONIA 2 LX 922-923
		Code	Code	Code	Code
3	No. 2 straight male/female copper tube	9812ST0912	9812ST0934	9812ST0937	9812ST0938
4	No. 2 90° male/female copper tubes	9812ST09129	9812ST09349	9812ST09379	9812ST09389
5	No. 2 stainless steel flexible pipes	9812ST0043	9812ST0044	9812ST0046	9812ST0047
6	No. 1 shut off/no. 1 balancing valve	9812ST0512	9812ST0534	9812ST0537	9812ST0538
7	No. 2 shut off valves	9812ST0612	9812ST0634	9812ST0637	9812ST0638

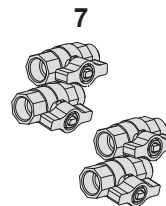
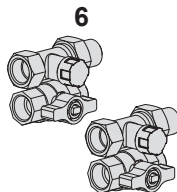
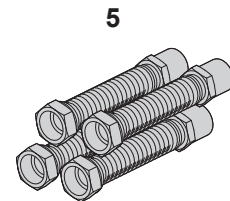
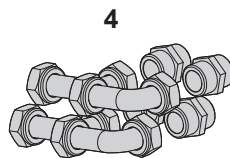
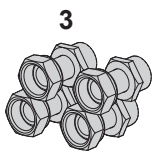


VALVES INSTALLED

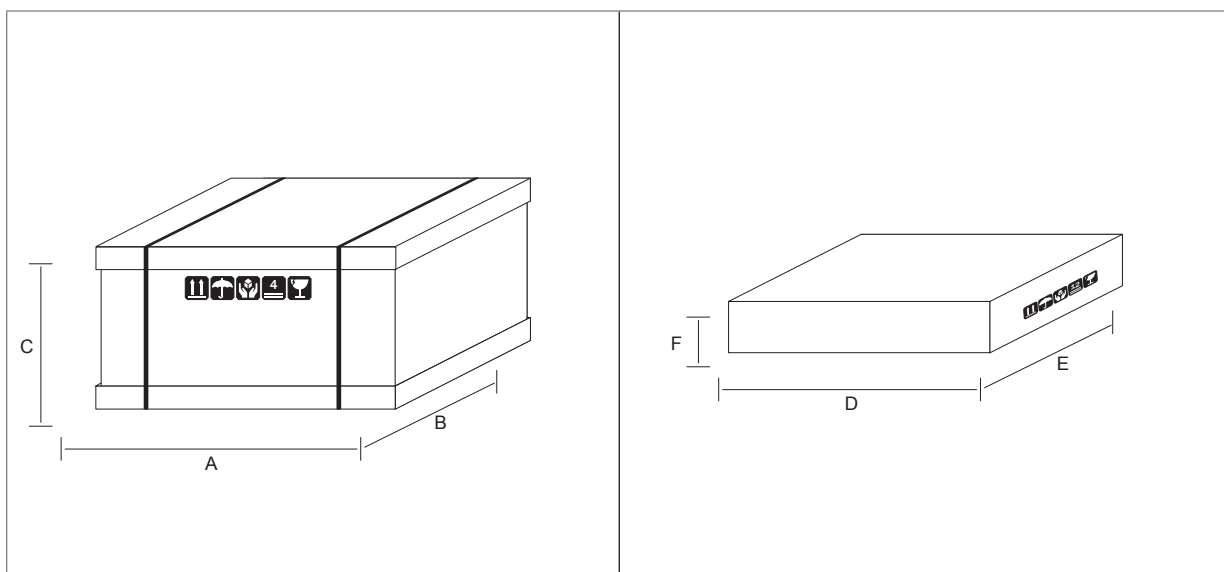
4 PIPE SYSTEM		ARMONIA 2 LX 641-646	ARMONIA 2 LX 941-943	ARMONIA 2 LX 944
		Code	Code	Code
1	2-way valve	9812ST02CA	9812ST02CL	9812ST02CR
2	3-way valve	9812ST03CA	9812ST03CL	9812ST03CR



4 PIPE SYSTEM		ARMONIA 2 LX 641-646	ARMONIA 2 LX 941-943
		Code	Code
3	No. 4 straight male/female copper tube	9812ST09CA	9812ST09CG
4	No. 4 90° male/female copper tubes	9812ST09CA9	9812ST09CG9
5	No. 4 stainless steel flexible pipes	9812ST0045	9812ST0048
6	No. 2 shut off/no. 2 balancing valves	9812ST05CA	9812ST05CG
7	No. 4 shut off valves	9812ST06CA	9812ST06CG



	UNITÀ - UNIT			PANNELLO - PANEL		
	Dimensions [mm] (AxBxC)	Net weight [kg]	Gross weight [kg]	Dimensions [mm] (DxExF)	Net weight [kg]	Gross weight [kg]
ARMONIA2 621		20	22			
ARMONIA2 622		21	23			
ARMONIA2 623		23	25			
ARMONIA2 624		23	26			
ARMONIA2 625		24	26			
ARMONIA2 641	790 x 760 x 335	23	25	730 x 730 x 115	3	4
ARMONIA2 642		24	26			
ARMONIA2 643		24	26			
ARMONIA2 644		24	26			
ARMONIA2 645		24	26			
ARMONIA2 646		24	26			
ARMONIA2 921		40	43			
ARMONIA2 922		45	48			
ARMONIA2 923		45	48			
ARMONIA2 941	1050 x 1005 x 380	41	44	965 x 970 x 115	5	6
ARMONIA2 942		46	49			
ARMONIA2 943		46	49			
ARMONIA2 944		46	49			



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Due to LENNOX EMEA ongoing commitment to quality, the specifications, ratings and dimensions are subject to change without notice and without incurring liability.
Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury.
Installation and service must be performed by a qualified installer and servicing agency.



ARMONIA2-AGU-1804-E

