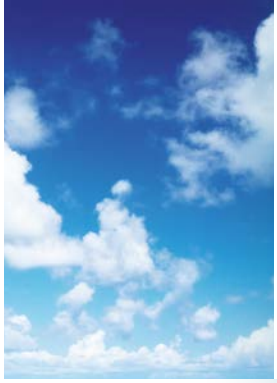
EN

UCS/HM 600 VDI 6022
CERTIFIED HYGIENIC CASSETTE

EUROPO
INTEGRATED
COMFORT
SYSTEMS

UCS/HM 600
VDI 6022



THE HYGIENIC CERTIFIED CASSETTE THAT GUARANTEES TOP PERFORMANCE BY IMPROVING THE AIR QUALITY

The Eurapo UCS/HM 600 VDI 6022 cassette is a hydronic terminal unit certified according to the VDI 6022 * guidelines, which requires air conditioning and heating systems and related components to comply with the highest and most restrictive hygiene standards. Compliance with the aforementioned standard guarantees better quality of the treated air: the technical solutions adopted and the extreme scruple (accuracy) in the selection of materials prevent the proliferation of pathogens (such as fungi and bacteria) inside the unit and make healthier also the environment in which it is installed.

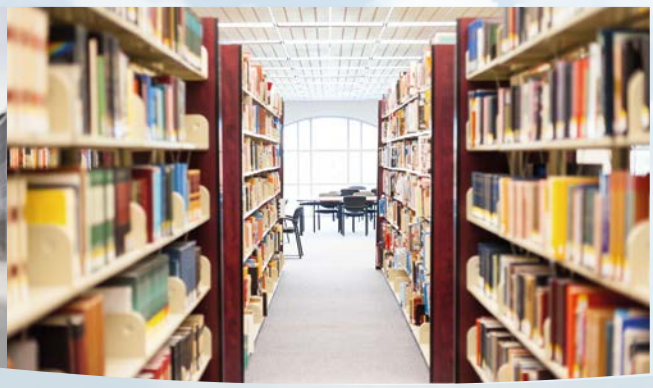
The guidelines of the VDI 6022 standard define the criteria for ensuring maximum hygiene in HVAC systems. By raising the quality standard of the treated air, negative effects are prevented in the rooms served, protecting the health of users. In creating UCS/HM 600 VDI 6022, Eurapo has managed to meet the requirements of the described standard both by adopting advanced mechanical design criteria and by using top performance materials.

The UCS/HM 600 VDI 6022 cassette is particularly suitable both for environments where high air quality is required (for example waiting rooms, waiting rooms for clinics, hotel rooms and laboratories) and for particularly crowded spaces, where germs are likely to proliferate (e.g. schools and shopping centers).

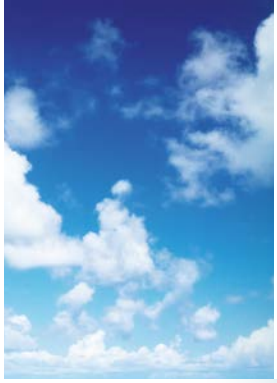
The UCS/HM 600 VDI 6022 cassette, designed and built to prevent pathogenic microorganisms or other infectious agents from spreading inside, is the ideal solution for air-conditioning environments while keeping them healthy and therefore safe.

The reliability, the advantageous energy efficiency and the elegant simplicity of the design make this fan coil the right answer to the most diverse and evolved needs for comfort, especially in public environments, offices and shops.

*note: VDI is a German association of engineers (Verein Deutscher Ingenieure). VDI Societies consists of "12,000 experts from science, industry and public administration are engaged in more than 600 VDI committees.



UCS/HM 600
VDI 6022



THE UCS/HM 600 VDI 6022 CASSETTE TOLD THROUGH ITS STRONG POINTS:

- The surfaces within the terminal unit which are in direct contact with the handled air are all tested in according with ISO 846** in this way no proliferation of microbial flora or fungi is ensured inside the unit;

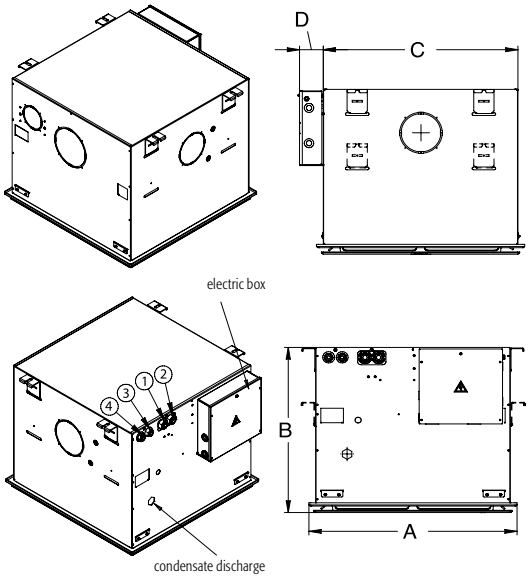
**note: ISO 846 rule specifies methods for determining the deterioration of plastics due to the action of fungi and bacteria and soil microorganisms.

- Sealings are made of closed-cell materials and do not absorb moisture or provide a nutrient source for microorganisms (sealing in direct contact with the air are tested according to ISO 846);
- In order to allow cleaning and disinfection, interior wall surfaces are smooth and free of exposed absorption areas and insulating materials are provided with a **suitable aluminized cover**. Grooves and joints in the bottom panel of the unit are avoided;
- All components and built-in parts are arranged for an easy maintenance;
- **A classified ePM1 55% filter** (able to capture the 55% of particles of size between 0,1 µm to 0,3 µm according to ISO 16890) is provided with the unit. It is an improvement on the minimum VDI requirements that foresee an ePM10 50% filter for fan coils and cassettes;
- The filter is replaceable through the air intake side (the filter is located upstream of the coil);
- The use of a **hydrophilic coat** for the fin avoid the entrainment of droplets during the cooling;
- The condensate tray is made in plastic with a single sloped and it has a single sloped condensation tray with and rounded edges in order to avoid that any stagnant water remains in the unit, which is an ideal environment for the spread of bacteria, fungi and others potential pathogenic agent;
- The condensate pump is not foreseen in this unit.

Filter operation can be monitoring continuously: any drop in its efficiency, as a result of the filter medium becoming clogged, results in a decrease in air flow, which is reported immediately by a **differential pressure switch** (accessory upon request) to the eventual OMNIBUS supervisor on the actual unit. This **prompt alarm** means that technical service personnel can remedy the situation quickly with accurate maintenance.

High-efficiency filtering. Monitoring. Savings.
The UCS/HM 600 VDI 6022 cassette offers nothing short of top-quality air.

UCS/HM 600 VDI 6022

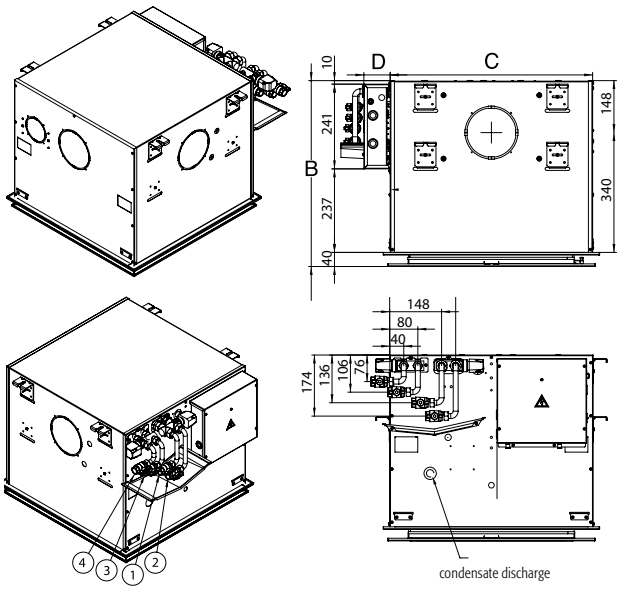


2 pipes installation		
1	Water inlet	3/4" F
2	Water outlet	3/4" F

4 pipes installation		
1	Cooling water inlet	3/4" F
2	Cooling water outlet	3/4" F
3	Heating water inlet	1/2" F
4	Heating water outlet	1/2" F

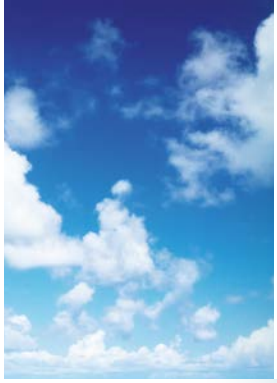
Dimensions (mm) and weights for	
A	615
B	528
C	575
D	75
Kg	36,6÷38,2

UCS/HM 600 VDI 6022 WITH VALVES



2 pipes installation		
1	Water inlet	1/2" F
2	Water outlet	1/2" F

4 pipes installation		
1	Cooling water inlet	1/2" F
2	Cooling water outlet	1/2" F
3	Heating water inlet	1/2" F
4	Heating water outlet	1/2" F



TECHNICAL DATA UCS/HM 600 VDI 6022

TECHNICAL DATA (EST)

ENERGY SAVING TECHNOLOGY

			2 pipes		4 pipes	
			621	622	641	642
Cooling Air temperature 27 °C d.b., 19 °C w.b. Water temperature 7/12 °C	Total cooling capacity [kW]	10V	2,78	4,36	1,95	4,10
		6V	2,07	3,15	1,60	2,92
		3V	1,24	1,94	1,06	1,84
	Sensible cooling capacity [kW]	10V	2,27	3,26	1,52	3,17
		6V	1,65	2,26	1,24	2,20
		3V	0,98	1,36	0,83	1,29
	Water flow [l/h]	10V	478	748	334	704
		6V	355	541	275	502
		3V	212	333	182	316
	Pressure drop [kPa]	10V	9,3	12,5	8,2	13,9
		6V	5,7	7,1	5,9	9,3
		3V	2,4	3,2	2,9	4,2
Heating 2 pipes Air temperature 20 °C Water temperature 45/40 °C	Heating capacity [kW]	10V	2,99	4,86	-	-
		6V	2,11	3,20	-	-
		3V	1,36	1,90	-	-
	Water flow [l/h]	10V	519	845	-	-
		6V	367	555	-	-
		3V	237	331	-	-
	Pressure drop [kPa]	10V	8,1	12,3	-	-
		6V	4,5	5,9	-	-
		3V	2,1	2,4	-	-
Heating Air temperature 20 °C Water temperature 65/55 °C	Heating capacity [kW]	10V	-	-	1,95	4,10
		6V	-	-	1,60	2,92
		3V	-	-	1,06	1,84
	Water flow [l/h]	10V	-	-	334	704
		6V	-	-	275	502
		3V	-	-	182	316
	Pressure drop [kPa]	10V	-	-	8,2	13,9
		6V	-	-	5,9	9,3
		3V	-	-	2,9	4,2
Further data	Air flow [m³/h]	10V	554	702	554	702
		6V	357	438	357	438
		3V	210	249	210	249
	Sound power level [dB(A)]	10V	53	58	53	58
		6V	45	49	45	49
		3V	33	36	33	36
	Sound pressure level [dB(A)] (1)	10V	44	49	44	49
		6V	35	40	35	40
		3V	24	27	24	27
	Power input [W] (2)	10V	25	42	25	42
	Absorbed current [A] (2)	10V	0,23	0,38	0,23	0,38
	Water content [l]		1,34	2,12	1,34	2,12
					(0,3)(3)	(0,3)(3)

(1) Sound pressure level in a 100 m³ room, 1.5 m distance and reverberating time of 0.3 s.
(2) Electrical supply: 230-1-50/60 [V-ph-Hz].
(3) Additional row.

With calculating conditions differing form the standard ones please use the selection software or contact EURAPO staff.

The printed data could be modified without any notice.

TECHNICAL DATA (asynchronous)

			2 pipes			4 pipes		
			621	622	623	641	642	643
Cooling Air temperature 27 °C d.b., 19 °C w.b. Water temperature 7/12 °C	Total cooling capacity [kW]	MAX	2,54	3,42	4,74	1,86	3,22	3,91
		MED	1,44	2,38	3,57	1,05	2,20	3,00
		MIN	1,00	1,75	2,01	0,74	1,65	1,82
	Sensible cooling capacity [kW]	MAX	1,98	2,43	3,44	1,46	2,31	3,05
		MED	1,09	1,68	2,54	0,82	1,60	2,29
		MIN	0,73	1,22	1,42	0,58	1,18	1,32
	Water flow [l/h]	MAX	436	586	814	319	552	671
		MED	247	409	612	180	377	514
		MIN	172	301	345	128	283	312
	Pressure drop [kPa]	MAX	9,0	8,2	14,4	13,4	9,1	12,6
		MED	3,5	4,5	8,9	5,1	4,8	8,1
		MIN	1,9	2,7	3,4	2,9	3,0	3,5
Heating 2 pipes Air temperature 20 °C Water temperature 45/40 °C	Heating capacity [kW]	MAX	2,69	3,28	4,69	-	-	-
		MED	1,48	2,30	3,44	-	-	-
		MIN	0,99	1,70	1,97	-	-	-
	Water flow [l/h]	MAX	468	570	815	-	-	-
		MED	258	400	597	-	-	-
		MIN	171	296	342	-	-	-
	Pressure drop [kPa]	MAX	6,8	6,6	12,3	-	-	-
		MED	2,4	3,6	7,2	-	-	-
		MIN	1,2	2,2	2,8	-	-	-
Heating Air temperature 20 °C Water temperature 65/55 °C	Heating capacity [kW]	MAX	-	-	-	2,17	2,82	4,03
		MED	-	-	-	1,37	2,09	2,95
		MIN	-	-	-	0,90	1,51	1,76
	Water flow [l/h]	MAX	-	-	-	190	247	353
		MED	-	-	-	120	183	258
		MIN	-	-	-	78	132	154
	Pressure drop [kPa]	MAX	-	-	-	5,4	10,6	17,7
		MED	-	-	-	2,4	6,3	10,3
		MIN	-	-	-	1,2	3,6	4,7
Further data	Air flow [m^3/h]	MAX	451	451	674	451	451	674
		MED	221	306	475	221	306	475
		MIN	139	221	258	139	221	258
	Sound power level [dB(A)]	MAX	49	49	57	49	49	57
		MED	36	43	50	36	43	50
		MIN	30	36	38	30	36	38
	Sound pressure level [dB(A)] (1)	MAX	40	40	47	40	40	47
		MED	26	34	41	26	34	41
		MIN	21	26	29	21	26	29
	Power input [W] (2)	MAX	0,052	0,052	0,086	0,052	0,052	0,086
	Absorbed current [A] (2)	MAX	0,25	0,25	0,38	0,25	0,25	0,38
	Water content [l]		1,34	2,12	2,12	1,34	2,12	2,12
						(0,3)(3)	(0,3)(3)	(0,3)(3)

(1) Sound pressure level in a 100 m^3 room, 1.5 m distance and reverberating time of 0.3 s.
(2) Electrical supply: 230-1-50/60 [V-ph-Hz].
(3) Additional row.

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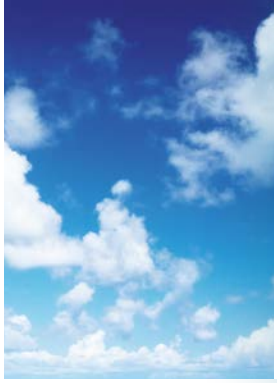


GENERAL FEATURES

EST version: Cooling capacity from 0,83 kw to 4,36 kw
Heating capacity: from 0,83 kw to 4,86 kw
4 size (2 and 4 pipes)

Asynchronous version: Cooling capacity from 1,00 kw to 4,74 kw
Heating capacity from 0,99 kw to 4,69 kw
6 size (2 and 4 pipes)

The main structure is made of **galvanised steel**, completely insulated inside with **aluminated** thermal insulation material.

On three of the four sides, there are prearranged holes for the connection to an air supply duct. The relevant collars for an easy connection to the air duct are always supplied as standard.

2 and 3 row **coils** are available. The finned 3 row heat exchangers are made of copper pipes and surface treated **aluminium fins** that permits to have a high dehumidification effect.

Water connections have diameter ¾" G female on the cooling coil and diameter ½" G female on the heating coil (4 pipe system).

The **fan deck**, installed in central position, is composed by a centrifugal fan and plastic impeller.
The electric motor is single phase and is provided with six speeds, three of them are factory wired as standard. In the EST version, the motor is equipped with an integrated inverter and it is managed by a modulating signal 0-10Vdc.

The **electric panel** (QEC00) consists of a galvanized metal box, which contains the terminal board for the electrical connections, the earth protection terminal, the autotransformer and the capacitor (in the asynchronous version). The electric panel is located on the side of the unit, at the same side of the water connections.

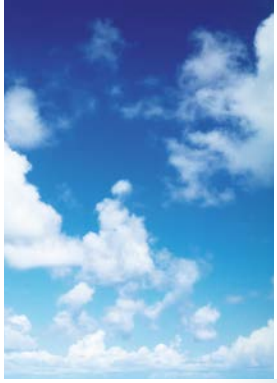
The **standard filter** is classified ePMI 55%, consists of a white ABS frame and a glass fiber filtering septum. The filter is immediately accessible by removing the external air intake grill.

The micro-drilled air intake grill and its air diffusion frame are entirely realized in painted metal sheet, perfectly adaptable to modular false ceilings (600x600).

The **air intake grill** has been designed to facilitate maintenance and filter cleaning operations: by simply turning outwards the closing lever, the intake grill opens and it remains hooked to one side of the unit, making any type of operation extremely easy.

AVAILABLE ACCESSORY

- DIFFERENTIAL PRESSURE SWITCH
- WIDE RANGE OF VALVES WITH SHUT-OFF VALVES
- MICROPROCESSOR REMOTE CONTROL
- MODBUS DIGITAL CONTROL WITH SUPERVISION
- SPECIAL PAINTING COLOUR OF THE GRILL



ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD Industrie Service

Herewith it is confirmed to the company

EURAPO S.r.l.
in
I-33170 Pordenone

based on the positive results of the inspection of one
fan coil unit of the ranges
„UCS/HM 6xx- xxx – VDI 6022 xxx"
„ESTUCS/HM 6xx- xxx – VDI 6022 xxx"

according to the standard
VDI 6022 part 1: 2018-01

that the requirements of the Certification Program of the
TÜV SÜD Industrie Service GmbH are fulfilled.

The manufacturer is allowed to use the following
TÜV SÜD Certification Mark.

Type tested · Production monitored · TÜV SÜD · Hygiene

Compliance with hygienic requirements (used materials/ accessibility/cleanability) acc. to:

- VDI 6022-1

www.tuev-sued.de/climate

This certificate is valid until 2021-03-31

Certificate Registration Number: 19/21/75

TÜV SÜD Industrie Service GmbH

Certification Body for Products
Refrigeration and Air-Conditioning
Munich, 2019-03-11

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6DC0218 - EN2000