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Offer
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Project
Position **CTA 1 -**
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Office / Agent **UG**
Utente

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Data sheet

CFR+ 40 N

High efficiency heat recovery units

Description

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These heat recovery units are distinguished by a special aluminium air-to-air crossflow heat recovery exchanger.

This negates the need for additional heating/cooling systems for fresh air, a simplified air & water plant and very low consumption.

Series units, designed for false-ceiling installation or similar, match most air plant configurations and use EC technology fans.

The units are provided with standard compact filter, ISO 16890 ePM_1 55% (F7 EN 779) efficiency for the fresh air flow, ISO 16890 ePM_{10} 55% (M5 EN 779) efficiency for the exhaust air flow (ePM_1 55% filter available for exhaust air as optional).

These units can be easily integrated into traditional room heating/cooling systems, placed in sequence or in parallel.

Series comprises eight sizes, horizontal version only, to cover ventilation requirements from 400 to 4700 m^3/h.

For each model two configurations are available.

The models of this series can be supplied with an air ionization system called BIOXIGEN®.

Technical data sheets

Supply air		Exhaust air	
Air volume [m³/h]	**400**	Air volume [m³/h]	**400**
External static pressure (required): [Pa]	**100**	External static pressure (required): [Pa]	**100**
External static pressure (available): [Pa]	**176**	External static pressure (available): [Pa]	**177**
Winter condition: Temperature: [°C]	**-5.00**	Winter condition: Temperature: [°C]	**20.00**
Humidity: [%]	**80.0**	Humidity: [%]	**50.0**
Summer condition: Temperature: [°C]	**32.00**	Summer condition: Temperature: [°C]	**26.00**
Humidity: [%]	**50.0**	Humidity: [%]	**50.0**

Panel filter

Type	**F7**	Clean dP [Pa]	**34**

Plate exchanger

Heating condition				Cooling condition			
Exhaust [m³/h]	**400**			Exhaust [m³/h]	**400**		
Entering [°C]	**20.00**	Humidity [%]	**50.0**	Entering [°C]	**26.00**	Humidity [%]	**50.0**
Leaving [°C]	**7.10**	Humidity [%]	**100.0**	Leaving [°C]	**30.50**	Humidity [%]	**39.0**
Supply [m³/h]	**400**			Supply [m³/h]	**400**		
Entering [°C]	**-5.00**	Humidity [%]	**80.0**	Entering [°C]	**32.00**	Humidity [%]	**50.0**
Leaving [°C]	**15.90**	Humidity [%]	**18.0**	Leaving [°C]	**27.50**	Humidity [%]	**65.0**
Temperature efficiency [%]	**76.1**			Temperature efficiency [%]	**75.5**		
Recovery capacity [kW]	**2.75**			Recovery capacity [kW]	**0.61**		
Condensation (Kg/h)	**1.16**			Condensation (Kg/h)			

Direct driven fan

Supply		sound power [db(A)]								
Max. power input [kW]	**0.147**	Fan octave band sound power level Lokt [dB] / Glob [db(A)]								
Max. current input [A]	**0.75**	Frq. [Hz]	63	125	250	500	1000	2000	4000	8000	**Glob**
Power supply [ph/V/hz]	**1x230 / 50**	Inlet	**75.4**	**73.4**	**73.4**	**70.4**	**65.4**	**59.4**	**57.4**	**56.4**	**71.7**
Power/Current Input [kW]	**0.080 kW / 0.30 A**	Outlet									

Panel filter

Type	**M5**	Clean dP [Pa]	**36**

Direct driven fan

Exhaust		sound power [db(A)]								
Max. power input [kW]	**0.147**	Fan octave band sound power level Lokt [dB] / Glob [db(A)]								
Max. current input [A]	**0.75**	Frq. [Hz]	63	125	250	500	1000	2000	4000	8000	**Glob**
Power supply [ph/V/hz]	**1x230 / 50**	Inlet	**75.4**	**73.4**	**73.4**	**70.4**	**65.4**	**59.4**	**57.4**	**56.4**	**71.7**
Power/Current Input [kW]	**0.080 kW / 0.30 A**	Outlet									

Sound Power Level external casing Lw [dB(A)]

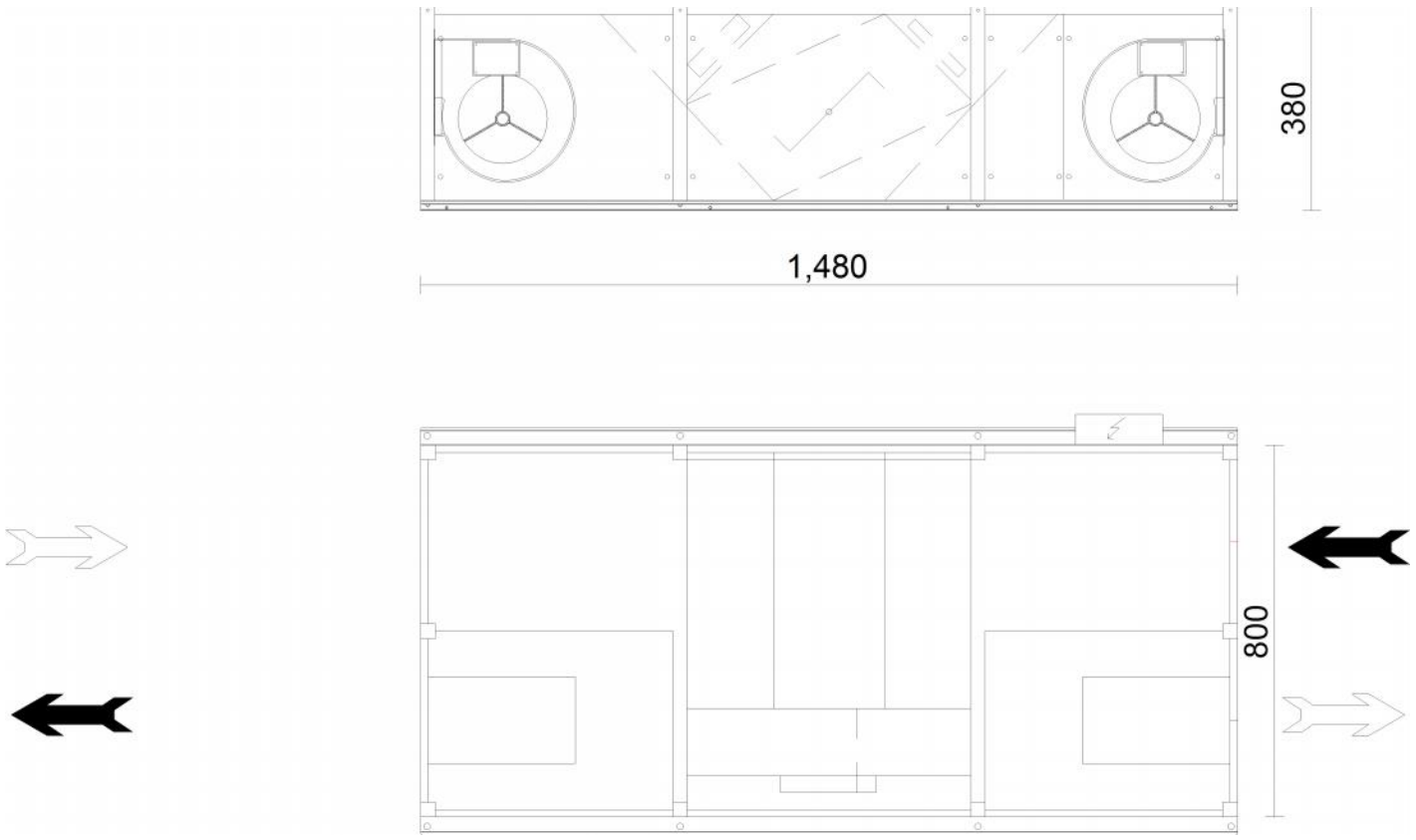
Frq [Hz]	63	125	250	500	1000	2000	4000	8000	Glob.
Lw [db(A)]	**44**	**46**	**53**	**52**	**50**	**45**	**27**	**18**	**57**

Configuration and Design Options

- [X] Configuration type 01
- [ ] Configuration type 02
- [ ] Electrical post heating section - BER
- [ ] Post-heating internal water coil - BCR
- [ ] External water coil section - SBFR
- [ ] DX coil section - SBED
- [ ] High efficiency filters on exhaust air - F7CF
- [ ] 3 dampers defrosting section - RMS
- [ ] Damper on fresh air intake - SR
- [ ] Damper on exhaust air intake - SR
- [ ] N. 4 connections for circular ducts kit - SPC
- [ ] Kit for external installation - EXT
- [ ] Kit weather hood for external installation - CPA
- [ ] Duct Silencer supply air - SSC
- [ ] Duct Silencer exhaust air - SSC
- [ ] Purifying system BIOXIGEN
- [ ] Additional pressure switch - PF
- [ ] Installation valve and electronic supplied by customer - IKV

Accessories

- [ ] Low energy consumption fans EC
- [ ] Speed controller C3V (CFR+ 40 - 320 N)
- [X] Unit control panel - PCU
- [ ] Unit control panel - PCUE
- [ ] Unit control panel with modbus - PCUEM
- [ ] Unit control panel out 0-10V - MCUE
- [ ] Unit control panel out 0-10V with modbus - MCUEM
- [ ] Air quality (CO2) sensor (room) - QSA
- [ ] Air quality (CO2) sensor (duct) - QSC
- [ ] Integrated Management System built-in - SIGB
- [ ] Integrated Management System wall - SIGQ
- [ ] BMS Modbus RTU Board - SCMB
- [ ] Antifreeze thermostat - ATG
- [ ] Signal lamps kit - KLS
- [ ] Kit 2-way valve with on-off actuator - V2O
- [ ] Kit 3-way valve with modulating actuator - V3M
- [ ] Damper actuator - SM230
- [ ] Damper actuator - SMR230
- [ ] Kit bypass management - KBP
- [ ] Constant air flow fans control - VSD
- [ ] Duct Humidity sensor - USD
- [ ] Wall Humidity sensor - USW
- [ ] Wall mount remote control panel - TUP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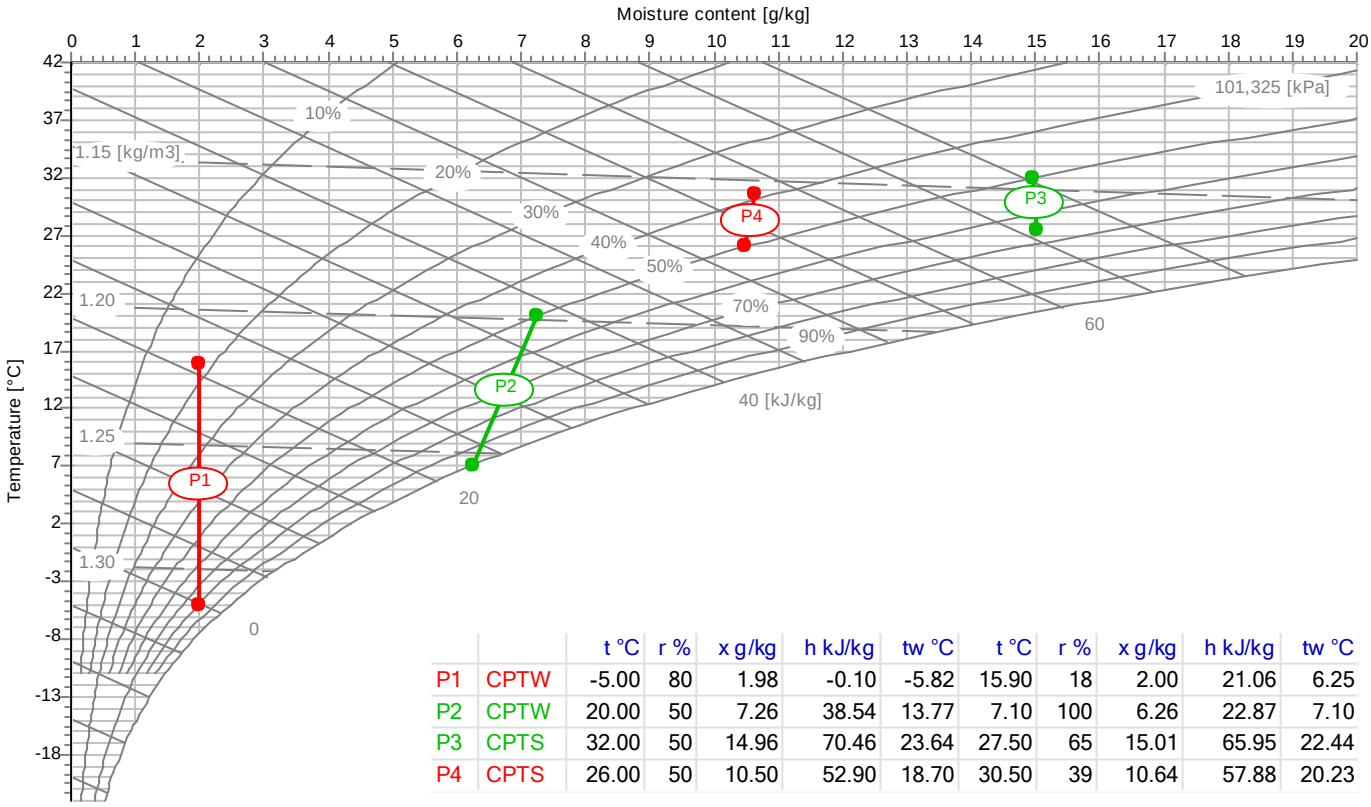

		t °C	r %	x g/kg	h kJ/kg	tw °C	t °C	r %	x g/kg	h kJ/kg	tw °C
P1	CPTW	-5.00	80	1.98	-0.10	-5.82	15.90	18	2.00	21.06	6.25
P2	CPTW	20.00	50	7.26	38.54	13.77	7.10	100	6.26	22.87	7.10
P3	CPTS	32.00	50	14.96	70.46	23.64	27.50	65	15.01	65.95	22.44
P4	CPTS	26.00	50	10.50	52.90	18.70	30.50	39	10.64	57.88	20.23

ECODESIGN

- Thermal efficiency of heat recovery	%	75.7
- Nominal flow rate NRVU	m³/s	0.11
- Effective electric power input	kW	0.26
- Internal specific fan power of ventilation components (SFPint)	W/(m³/s)	694
- internal specific fan power of ventilation components (SFPint_limit)	W/(m³/s)	1172
- Face velocity at design flow rate	m/s	2.22
- Nominal external pressure (ps, ext)	Pa	176
- Internal pressure drop of ventilation components (ps,int) - Supply/Exhaust	Pa	104/106
- Static efficiency of fans	%	
- Declared maximum external leakage rates of the casing of ventilation units	%	< 3,5
- Declared maximum internal leakage rates for bidirectional ventilation units or carry over	%	< 4
- Energy classification of the filters		-
- Sound power level (LWA)	dB(A)	57

All parameters meet ECODESIGN requirements