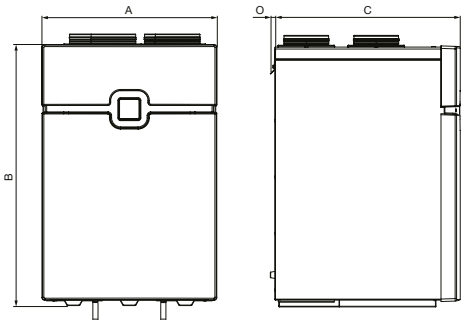
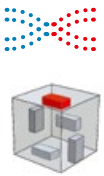
SABIK 210, 350, 500, 600 (E, RF)



entalpic exchanger



construction

Technical parameters

Cabinet
is made of galvanized steel sheet and is powder coated in grey-white combination. The internal construction is made of high quality EPP. On the top of the unit there are 4 throats with diameters according to the type of the unit. The SABIK unit also has a fresh air outlet on the underside of the cabinet. The right or left version is obtained by switching the switch on the control electronics of the unit (after removing the front cover).

Fans
On the discharge and intake there are radial fans with backward curved blades.

Engines
Single phase EC enginey 230 V / 50 Hz.

Recuperator
The SABIK unit is equipped with a counter-flow exchanger with a heat recovery efficiency of up to 94%. The SABIK E unit is equipped with a counter-flow enthalpy exchanger with a heat recovery efficiency of up to 86% and a moisture recovery efficiency of up to 82%. The exchanger is accessible after opening the front panel. The unit is equipped with a bypass for summer operation.

Filters
For fresh air intake a G4 plate filter (ISO coarse 65 %) is standard. F7 (ISO ePM1 50 %) can be supplied as accessories. For exhaust air intake a G4 plate filter is standard.

Replacement filters:
- AFR-SABIK 210 G4/G4, set 2 ks
- AFR-SABIK 210 F7/G4, set 2 ks
- AFR-SABIK 350 G4/G4, set 2 ks
- AFR-SABIK 350 F7/G4, set 2 ks
- AFR-SABIK 500/600 G4/G4, set 2 ks
- AFR-SABIK 500/600 F7/G4, set 2 ks

Regulation
The unit is equipped with a fully automatic control system, which, in combination with four temperature and relative humidity sensors, ensures continuous speed regulation according to the current requirement, without the need for any further intervention in the control of the unit. In the performance characteristics, curves for individual speeds are indicated (see operating instructions for details). The designer wired controller allows manual switching of fan speed, by-pass control, turning on the intensive ventilation function (boost), activation of automatic operation, night cooling and filter clogging indication. Other unit settings are made via DIP switches and potentiometers on the unit's control electronics (after removing the front cover). The unit has four pre-set weekly programs, one of which allows automatic operation from a humidity sensor, built-in VOC sensor (optional accessory), or a 0–10V analogue master signal. The unit provides operation down to an outdoor temperature of -15 °C with built-in preheat. SABIK units can be supplemented with a built-in module providing constant air flow rate control SABIK-NEMBUS-SF. Access to the ConnectAir platform (S&P cloud) is enabled using the external SPCM module.

Electrical connection
The unit is designed to be connected directly to a mains socket with a mains plug. The power supply is single-phase 230 V / 50 Hz.

Construction
The unit is designed for vertical mounting in indoor areas with a minimum temperature of 12 °C, wall mounting (wall mounting brackets included). An optional SABIK-WMC mounting bracket is available to provide greater clearance from the wall. The unit must be mounted in such a way as to provide sufficient space for opening the unit lid, changing filters, connecting the condensate drain (DN20) to the waste with a siphon odour stopper and for carrying out periodic wiring inspections.

Noise
The tables show the sound pressure measured in the free acoustic field at a distance of 1.5 m.

Accessories VZT
- **ED Flex® System** circular pipelines
- **AIRSENS** room sensors
- **SABIK-WMC** mounting brackets
- **SABIK-PH** built-in preheating
- **SABIK-VOC** built-in sensor VOC
- **SABIK-NEMBUS-SF** module for constant air flow rate
- **SPCM** communication module
- **SONOULTRA** flexibilní muffler
- **SF-P 138** siphon with cap

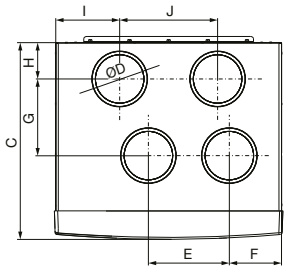
Instructions
The unit can be equipped with a built-in SABIK-PH preheater. If required, MBE and MBW duct heaters with corresponding control elements can be used to reheat the supply air.

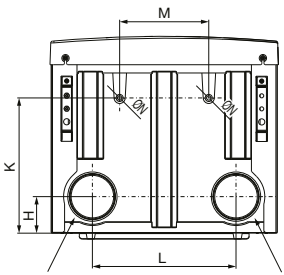
Information
A small unit designed for residential construction or single-family homes. It is characterized by simple installation, minimal control and maintenance requirements and very economical operation. Easy to switch between left and right hand versions. All units are „Passive House" certified.

Type	flow rate (100 Pa) [m³/h]	tension [V]	max. input unit [W]	max. current unit [A]	max. input preheating SABIK-PH [W]	sound power level* [dB(A)]	max. efficiency heat transfer [%]**	max. efficiency moisture transfer [%]**	mass [kg]
SABIK 210 / 210 E	225	230	87	0,67	750	49	92 / 80	– / 74	34
SABIK 350 / 350 E	375	230	145	0,98	1125	50	89 / 83	– / 80	45
SABIK 500 / 500 E	550	230	265	2,10	1500	53	90 / 86	– / 82	56
SABIK 600 / 600 E	640	230	356	2,30	1500	53	90 / 86	– / 82	56 (70)

* acoustic power level at reference flow (70 % max. flow) and external static pressure 50 Pa; ** EN 13141-7

SABIK 210, 350, 500, 600 (E, RF)



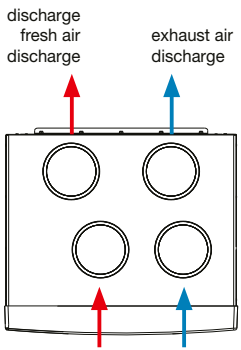


throat for discharge fresh air outlet (Option A)

throat for discharge fresh air outlet (Option B)

Type	A	B	C	ØD	E	F	G	H	I	J	K	L	M	ØN	O
SABIK 210 / 210 E	600	995	460	125	215	125	180	94	161	215	313	392	267	21	19
SABIK 350 / 350 E	700	1046	603	150	248	160	235	111	196	300	414	440	273	21	19
SABIK 500 / 500 E	700	1046	753	180	257	153	280	126	196	300	493	440	273	21	19
SABIK 600 / 600 E	700	1046	753	200	257	153	280	126	196	300	493	440	273	21	19

Supplementary image



Option A (standard delivery)

94% maximum efficiency recuperation

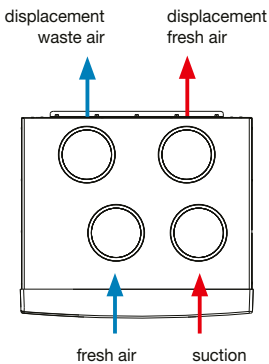
Plug & play

EC engine

Certified Passive House

wireless controller (RF variant)

unit driver 90 × 90 × 20 mm, can be led outside the unit (up to 30 m)



Option B (switching via DIP switches)

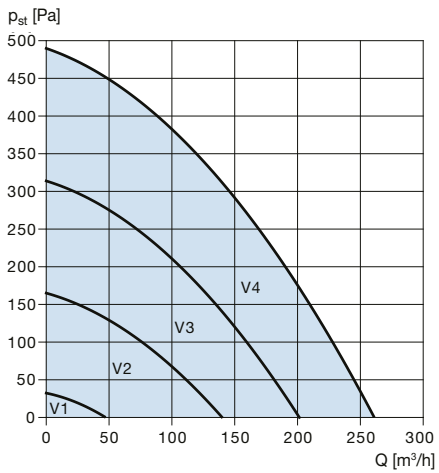
button	press	indications	
Zzz	1 s	V3 V2 V1	
A	1 s	V1 V2 V3	
	1 s		maximum speed
	1 s		manual bypass opening (for 8 h)
Zzz	5 s	Zzz	switching off the unit for 1 h
A	5 s	A	in automatic mode the unit operates depending on the activated sensor or weekly program
	5 s		reset filters
	5 s		extraction function, only exhaust fan in operation
			defrosting

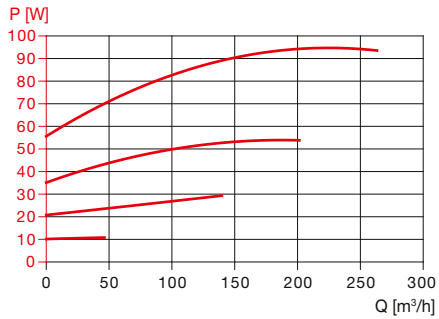
main functions of the driver

SABIK 210, 350, 500, 600 (E, RF)

Charakteristiky

SABIK 210





Performance characteristics

p_{st} static pressure in Pa
Q flow rate v m³/h
P power in W

Recovery efficiency

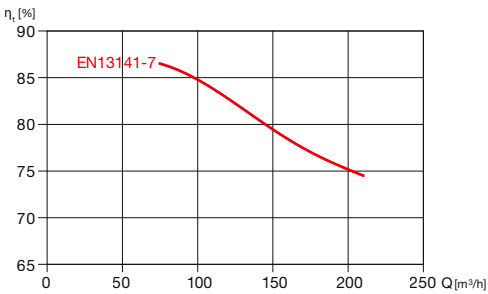
Q flow rate v m³/h
η_t efficiency recuperation in %

V1 area of the power curves corresponding to the minimum operating speed of the unit
V2 area of the power curves corresponding to the medium operating speed of the unit
V3 area of the power curves corresponding to the high operating speed of the unit*
V4 area of the power curves corresponding to the highest operating speed of the unit**

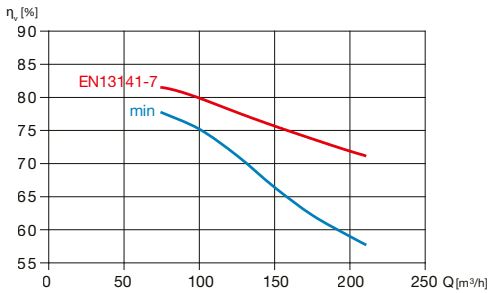
* value of the set power when the unit is put into operation V3, the other values are derived from it (V1 – 30 %, V2 – 70 %, V4 – 130 %)

** Power level V4 can be called up by switching on an external switch (button) or by setting intensive ventilation directly on the controller. In automatic mode, when the ventilation intensity is controlled according to integrated RH sensors or external air quality sensors, the unit speed is regulated only between curves V1 to V3 and power level V4 can only be called up by switching on an external button.

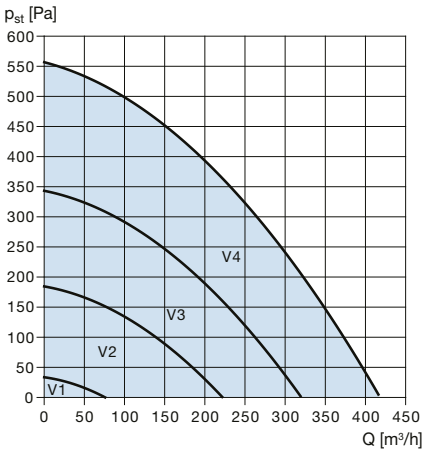
SABIK 210 – heat recovery efficiency

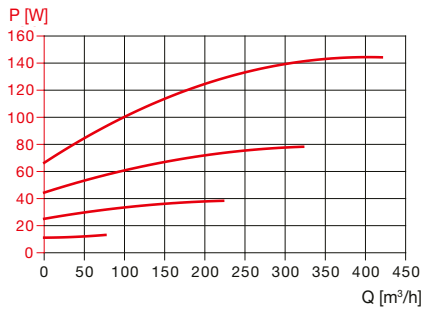


SABIK 210 E – heat and moisture recovery efficiency



SABIK 350





Performance characteristics

p_{st} static pressure in Pa
Q flow rate v m³/h
P power in W

Recovery efficiency

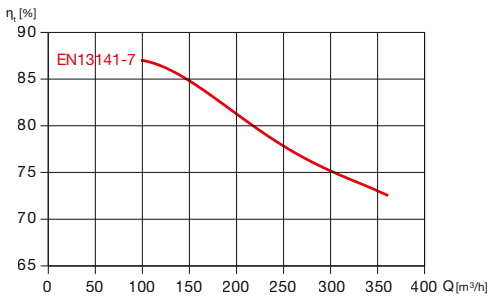
Q flow rate v m³/h
η_t efficiency recuperation in %

V1 area of the power curves corresponding to the minimum operating speed of the unit
V2 area of the power curves corresponding to the medium operating speed of the unit
V3 area of the power curves corresponding to the high operating speed of the unit*
V4 area of the power curves corresponding to the highest operating speed of the unit**

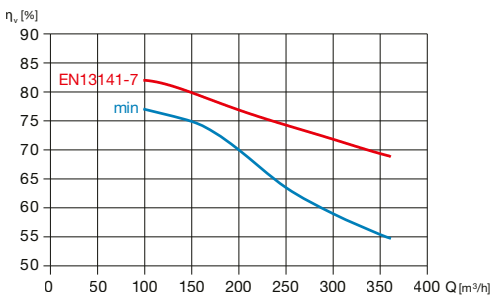
* value of the set power when the unit is put into operation V3, the other values are derived from it (V1 – 30 %, V2 – 70 %, V4 – 130 %)

** Power level V4 can be called up by switching on an external switch (button) or by setting intensive ventilation directly on the controller. In automatic mode, when the ventilation intensity is controlled according to integrated RH sensors or external air quality sensors, the unit speed is regulated only between curves V1 to V3 and power level V4 can only be called up by switching on an external button.

SABIK 350 – heat recovery efficiency



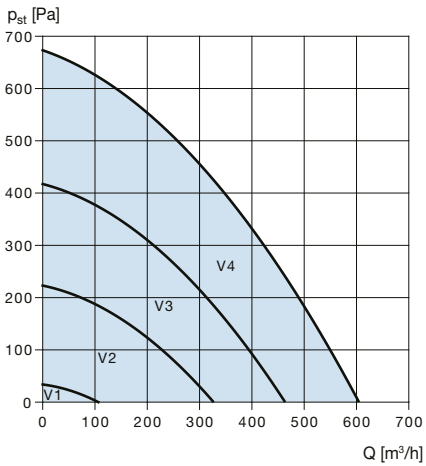
SABIK 350 E – heat and moisture recovery efficiency

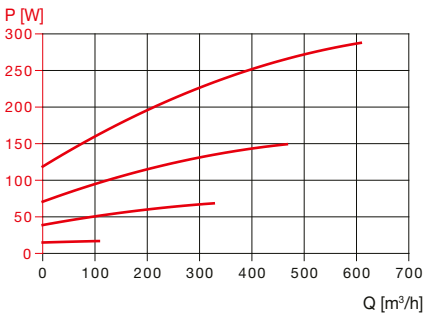


SABIK 210, 350, 500, 600 (E, RF)

Characteristics

SABIK 500





Performance characteristics

p_{st} static pressure in Pa
Q flow rate v m³/h
P power in W

Recovery efficiency

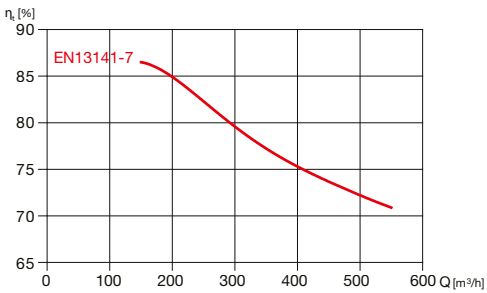
Q flow rate v m³/h
η_t efficiency recuperation in %

V1 area of the power curves corresponding to the minimum operating speed of the unit
V2 area of the power curves corresponding to the medium operating speed of the unit
V3 area of the power curves corresponding to the high operating speed of the unit*
V4 area of the power curves corresponding to the highest operating speed of the unit**

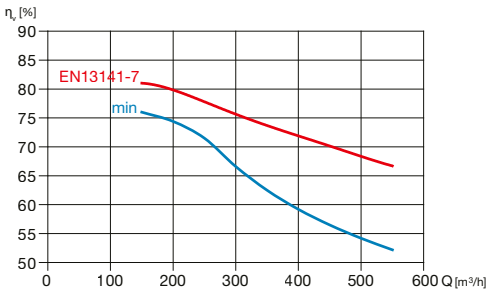
* value of the set power when the unit is put into operation V3, the other values are derived from it (V1 – 30 %, V2 – 70 %, V4 – 130 %)

** Power level V4 can be called up by switching on an external switch (button) or by setting intensive ventilation directly on the controller. In automatic mode, when the ventilation intensity is controlled according to integrated RH sensors or external air quality sensors, the unit speed is regulated only between curves V1 to V3 and power level V4 can only be called up by switching on an external button.

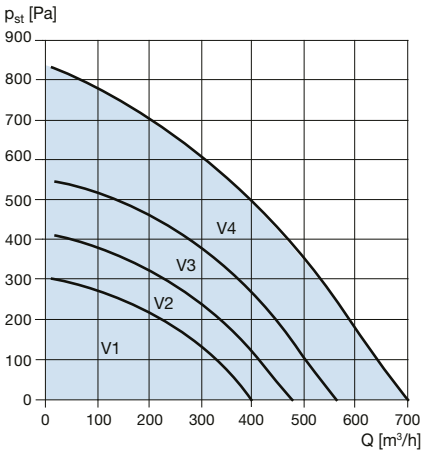
SABIK 500 – heat recovery efficiency

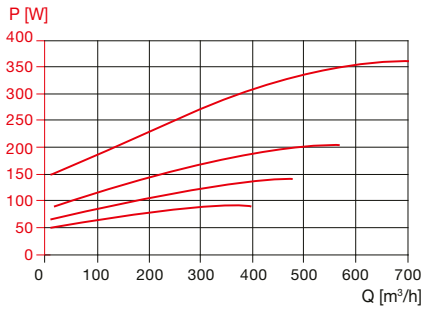


SABIK 500 E – heat and moisture recovery efficiency



SABIK 600





Výkonové charakteristiky

p_{st}	statický tlak v Pa
Q	průtok v m³/h
P	příkon v W

Účinnost

Q	průtok v m³/h
η_t	účinnost v %

V1 oblast výkonových křivek odpovídající minimálním provozním otáčkám jednotky

V2 oblast výkonových křivek odpovídající středním provozním otáčkám jednotky

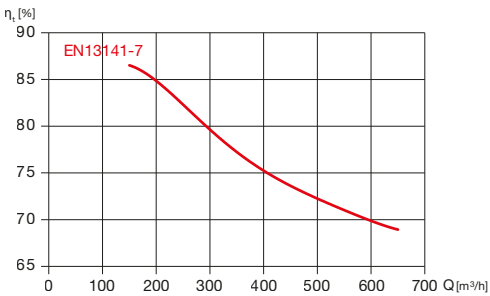
V3 oblast výkonových křivek odpovídající vysokým provozním otáčkám jednotky*

V4 oblast výkonových křivek odpovídající nejvyšším provozním otáčkám jednotky**

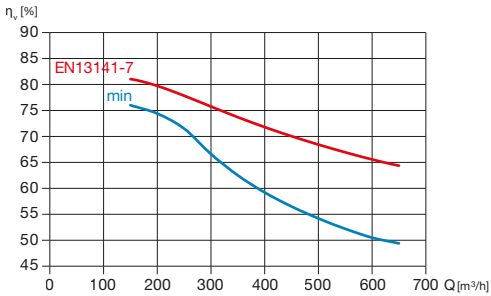
* hodnota nastavovaného výkonu při zprovoznění jednotky V3, ostatní hodnoty jsou ní odvozené (V1 – 30 %, V2 – 70 %, V4 – 130 %)

** Stupeň výkonu V4 lze vyvolat sepnutím externího vypínače (tlačítka) nebo nastavením intenzivního větrání přímo na ovladači. V automatickém režimu, kdy se intenzita větrání řídí dle integrovaných čidel RH či externích čidel kvality vzduchu, se regulují otáčky jednotky pouze mezi křivkami V1 až V3 a stupeň výkonu V4 je možné vyvolat pouze sepnutím externího tlačítka.

SABIK 600 – účinnost zpětného zisku tepla



SABIK 600 E – účinnost zpětného zisku tepla a vlhkosti



SABIK 210, 350, 500, 600 (E, RF)

Soler&Palau Ventilation Group

Sound pressure level values dB(A) measured at a distance of 1.5 m according to reference operating points

Type	Pa	Q [m³/h] (SUP – inlet)			Q [m³/h] (ETA – waste)			Q [m³/h] (to the surroundings)		
		225	150	100	225	150	100	225	150	100
SABIK 210	150	–	32	27	–	41	37	–	37	33
	100	38	31	25	45	39	34	43	35	30
	50	37	28	24	44	37	30	42	33	28

Type	Pa	Q [m³/h] (SUP – inlet)			Q [m³/h] (ETA – waste)			Q [m³/h] (to the surroundings)		
		350	225	150	350	225	150	350	225	150
SABIK 350	150	36	36	29	51	42	38	42	37	33
	100	35	31	25	49	39	34	41	34	31
	50	35	28	20	46	37	32	40	33	28

Type	Pa	Q [m³/h] (SUP – inlet)			Q [m³/h] (ETA – waste)			Q [m³/h] (to the surroundings)		
		500	350	200	500	350	200	500	350	200
SABIK 500	150	43	42	31	53	46	39	44	41	34
	100	43	39	28	52	44	37	43	39	31
	50	42	35	24	50	42	34	42	37	28

Type	Pa	Q [m³/h] (SUP – inlet)			Q [m³/h] (ETA – waste)			Q [m³/h] (to the surroundings)		
		600	450	300	600	450	300	600	450	300
SABIK 600	150	47	43	38	57	50	43	48	43	38
	100	47	73	35	56	49	41	47	42	35
	50	46	41	31	54	47	39	46	41	33

Sound power level in octave bands [db(A)]

SABIK 210 (for nominal speed V3 = 210 m³/h)

Hz		63	125	250	500	1000	2000	4000	8000	L_{wA}
L_{WA}	fresh	27	39	47	59	52	54	48	37	61
	inlet	27	34	40	53	45	38	30	24	54
	towing	27	36	46	56	56	53	50	39	60
	waste	23	32	38	52	45	39	31	24	53
	to the surroundings	29	39	45	56	51	48	41	28	58

SABIK 350 (for nominal speed V3 = 350 m³/h)

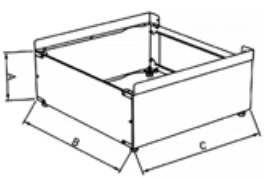
Hz		63	125	250	500	1000	2000	4000	8000	L_{wA}
L_{WA}	fresh	30	38	46	54	56	55	49	37	60
	inlet	28	32	44	46	45	41	32	25	50
	towing	28	39	55	67	58	53	49	39	68
	waste	25	34	43	47	44	41	31	24	51
	to the surroundings	34	38	48	54	51	44	34	27	57

SABIK 500 (for nominal speed V3 = 500 m³/h)

Hz		63	125	250	500	1000	2000	4000	8000	L_{wA}
L_{WA}	fresh	36	44	56	58	59	59	53	45	65
	inlet	34	38	57	50	45	43	33	26	58
	towing	35	45	64	63	58	59	52	45	68
	waste	37	39	63	55	46	42	33	25	64
	to the surroundings	34	44	58	53	49	43	32	23	60

Accessories

SABIK-FM – base frame for mounting on the floor



Type	A	B	C
SABIK-210 FM	250	600	376
SABIK-350 FM	250	700	512
SABIK-500 FM	250	700	662

Accessories

SABIK-PH – built-in preheating

SABIK-VOC – built-in sensor VOC

SPCM communication module for the possibility of controlling the unit via a mobile application or web interface

SABIK-NEMBUS-SF – module for constant air flow rate

SABIK-WMC – mounting brackets

SF-P 138 – vacuum siphon with cap

SABIK-350-D150/160 KIT
SABIK-500-D180/200 KIT
– reducing spare throats

SONOULTRA – flexible silencers

EDD-EASY – EPS pipes

AIRSENS – intelligent independent space sensors CO_2, VOC, RH

Air distribution system ED Flex® System LOCK

other accessories on pages 32–57

Connectair®

www.connectairapp.com

Connectair®

A platform for remote management of Soler & Palau devices. Allows management via a web interface or mobile application.

Features

- easy and intuitive operation
- clear visualisation
- monitoring of air quality in the home
- air flow rate control
- safe location in the Cloud (secure internet storage)
- filter health check
- operation history and more

Remote maintenance

Remote access to the unit can be used by service companies. After approval by the user of each device, it is possible to monitor multiple ventilation units at once.

Connectair® Platform