



# TECHNICAL PASSPORT OF THE DEVICE

RESIDENTIAL SERIES

● recuperators



Use the QR code or visit the website: [prana.help/b22](http://prana.help/b22) to view information about the device, user manual and other useful information.

- Equipment characteristics given in the documentation were obtained in the laboratory.
- Some content may differ from your device depending on the model, region or software version, and may change without prior notice.
- In order to use the device safely and properly, first read all the information concerning safety measures carefully.



## CONTENT

---

WARNINGS AND SAFETY MEASURES .....	4
DESCRIPTION OF SYSTEMS .....	5
SYSTEM ASSIGNMENT .....	5
SOFTWARE UPDATE .....	5
PRINCIPLE OF OPERATION .....	6
DELIVERY SET .....	7
QUALITY .....	7
RULES OF TRANSPORTATION AND STORAGE .....	7
SAFETY REQUIREMENTS .....	7
TECHNICAL CHARACTERISTICS .....	8
OVERALL DIMENSIONS .....	12
WARRANTY OBLIGATIONS .....	14
WARRANTY CARD .....	15

- This device may be used by children from the age of 8 years, as well as by physically or sensory disabled or mentally challenged persons or people with lack of experience and knowledge, provided that they are supervised or instructed about the safe operation of the device and understand the dangers involved. Do not allow children to play with the device. Cleaning and maintenance should not be performed by children.
- During the operation of the device, the fan rotates inside it. Avoid getting foreign objects inside the device during operation. This may result in injury.
- A user without proper qualifications must not install, move, disassemble, modify or repair the recuperator themselves.
- Do not block the supply and exhaust channels, as this will reduce the quality indicators of the recuperator and may lead to system failure.
- It is necessary to make sure that the conditions, mechanical and electric installation norms applied in the country where the installation is performed are observed.
- Do not place heating equipment in the way of the air intake by appliance. Products of incomplete combustion can lead to accident.
- When using the recuperator in the same room with other functioning ventilation systems, the characteristics of the appliance may differ from those stated in this technical documentation. This is due to the influence of these systems on performance, efficiency, geometry of air flows, etc.
- Excessive external wind brace may affect on system performance.
- Avoid hitting and damage to the system (recuperator).
- Warnings and safety measures during the operation of the PRANA ventilation system are described in the quick user's guide.
- Warnings and safety measures when installing the PRANA ventilation system are described in the installation manual.

Monoblocks of the decentralized supply and exhaust PRANA ventilation belong to the category of the innovative and reliable goods focused on creation and maintenance of a healthy microclimate in premises of various functional purposes.

Technologically, the system is a monoblock with a highly efficient countercurrent copper heat exchanger, which is ready for use in accordance with the technical specifications and conditions.

High energy efficiency and significant air exchange capabilities allow the use of recuperators for the organization of residential ventilation.

## SYSTEM ASSIGNMENT

---

PRANA ventilation systems are designed to provide air exchange in the premises that creates and maintains a healthy microclimate.

These systems are recommended for use in household facilities (apartments, mansions, offices, classrooms, kindergartens, etc.).

## DEVICE AND SOFTWARE UPDATE

---

Some content may differ from your device depending on the model, region or software version, and may change without prior notice.

The PRANA recuperator is a device that is controlled from a smartphone, so some functions, performance and efficiency may change.

You can always read the updated instructions at the link:  
(<https://prana.help/b22>).

Software update is possible only if the Wi-Fi module is installed (optional) and if the Internet connection is made.

In the quick user's guide (supplied in a standard set), you can view the availability of this module in your recuperator in the «System Configuration» section.

You can also ask for help from the seller at the contacts listed in the warranty card (warranty card is in the technical passport of the product).

## PRINCIPLE OF OPERATION

---

The engineering solution of recuperative ventilation is based on a countercurrent copper heat exchanger with a continuous heat cycle, which allows forming two oppositely directed air flows in the volume of one cylinder.

In this case, warm or cold air, which is removed from the room («exhaust»), passing through a copper heat exchanger, transfers its thermal energy, which is used to heat the cold supply air or for cooling in case of energy conservation of coolness.

Given that the air flows are separated and normalized at the levels of «supply» - «exhaust», mixing of different air flows does not occur.



- 1 - Copper heat exchanger;
- 2 - Supply and exhaust work simultaneously and do not mix;
- 3 - Supply of fresh air in the room;
- 4 - Removal of exhaust air from the room;
- 5 - Outdoor air intake;
- 6 - Exhaust and removed from the room air.

## DELIVERY SET

---

The delivery set includes \*:

- Packing box;
- Ventilation system;
- Remote control;
- Batteries to the remote control;
- Technical passport of the device (residential series);
- Quick user's guide (residential series);
- Installation manual (residential series);

\* - Some content may differ from your device depending on the model, region or software version, and may change without prior notice.

## QUALITY

---

The technological process provides 100% incoming quality inspection for all components, as well as double 100% final inspection after the manufacture of systems.

PRANA ventilation systems are tested for 24 hours at maximum load.

The defined service life of the system is 10 years.

## RULES OF TRANSPORTATION AND STORAGE

---

Transportation and storage of products in individual packing boxes is provided in position according to a mark on a packing box.

The maximum allowable height of setting of packing boxes with devices is in 2 tiers (2 packings in height).

The recuperator should be stored under cover at a relative humidity of not more than 70% and an air temperature from -20°C to +40°C.

## SAFETY REQUIREMENTS

---

After commissioning, the ventilation system must comply with the provisions of the directives:

- Directive 2014/30/EU. Electromagnetic compatibility (EMC);
- Directive 2014/53/EU. Radio Equipment Directive (RED);
- Directive 2009/125/EU. Ecodesign (ErP);
- Directive 2011/65/EU. Restriction of hazardous substances (RoHS);
- Directive 2014/35/EU. Low voltage electrical appliances (LVD).

## TECHNICAL CHARACTERISTICS

TABLE OF TECHNICAL CHARACTERISTICS:		SERIES PRANA 160 M23		
Flow Rate, m <sup>3</sup> /h:		5/14/21/32/52/70*		
ENERGY CONSUMPTION:				
Ventilation: 3,2/4,3/5,2/7,3/16,4/26* Wh	Maximum: 74 Wh	SPI: 0.16 [W/m <sup>3</sup> /h]		
Recuperation efficiency**:		up to 98%		
OTHER PARAMETERS:				
Typology:		BVU		
Type of heat recovery system:		Recuperative		
Sound power level (Lwa):		50 dB (A)		
Packing box size, mm (LxHxW):		≥750x210x210		
System weight in individual packaging:		≥ 4,3 Kg		
TYPE OF CONTROL:				
PRANA 160 STANDARD M23		Clock control		
PRANA 160 ERP M23		Local demand (AUTO)		
PRANA 160 ERP PRO M23		Local demand (AUTO)		
ERP DATA:				
Climate zone	Type of control	SEC [kWh m <sup>2</sup> a]	AEC [kWh/a]	AHS [kWh/a]
Average	Clock control	-27,91 (B)	2,45	33,36
	Local demand	-35,51 (A)	1,39	38,30
Cold	Clock control	-54,44 (A+)	7,82	65,26
	Local demand	-66,76 (A+)	6,76	74,93
Warm	Clock control	-10,08 (E)	2,00	15,08
	Local demand	-17,32 (E)	0,94	17,32

TABLE OF TECHNICAL CHARACTERISTICS:		SERIES PRANA 210G M23		
Flow Rate, m <sup>3</sup> /h:		5/20/28/38/65/85*		
ENERGY CONSUMPTION:				
Ventilation: 3,2/4/4,8/6,9/18,5/26* Wh		Maximum: 74 Wh		SPI: 0.13 [W/m <sup>3</sup> /h]
Recuperation efficiency**:		up to 97%		
OTHER PARAMETERS:				
Typology:		BVU		
Type of heat recovery system:		Recuperative		
Sound power level (Lwa):		50 dB (A)		
Packing box size, mm (LxHxW):		≥750x260x260		
System weight in individual packaging:		≥ 5,8 Kg		
TYPE OF CONTROL:				
PRANA 210G STANDARD M23		Clock control		
PRANA 210G ERP M23		Local demand (AUTO)		
PRANA 210G ERP PRO M23		Local demand (AUTO)		
ERP DATA:				
Climate zone	Type of control	SEC [kWh m <sup>2</sup> a]	AEC [kWh/a]	AHS [kWh/a]
Average	Clock control	-29,71 (B)	2,13	34,36
	Local demand	-36,57 (A)	1,24	38,90
Cold	Clock control	-57,20 (A+)	7,50	67,21
	Local demand	-68,48 (A+)	6,61	76,26
Warm	Clock control	-11,34 (E)	1,68	15,54
	Local demand	-17,63 (E)	0,79	17,63

TABLE OF TECHNICAL CHARACTERISTICS:		SERIES PRANA 210C M23				
Flow Rate, m <sup>3</sup> /h:		6/25/35/48/90/140*				
ENERGY CONSUMPTION:						
Ventilation: 3,2/4,8/6,4/7,1/19,5/41,5* Wh		Maximum: 91 Wh		SPI: 0.12 [W/m <sup>3</sup> /h]		
Recuperation efficiency**:			up to 92%			
OTHER PARAMETERS:						
Typology:		BVU				
Type of heat recovery system:		Recuperative				
Sound power level (Lwa):		50 dB (A)				
Packing box size, mm (LxHxW):		≥750x260x260				
System weight in individual packaging:		≥ 6 Kg				
TYPE OF CONTROL:						
PRANA 210C STANDARD M23		Clock control				
PRANA 210C ERP M23		Local demand (AUTO)				
PRANA 210C ERP PRO M23		Local demand (AUTO)				
ERP DATA:						
Climate zone	Type of control	SEC [kWh m <sup>2</sup> a]	AEC [kWh/a]	AHS [kWh/a]		
Average	Clock control	-29,05 (B)	2,00	33,36		
	Local demand	-36,04 (A)	1,17	38,30		
Cold	Clock control	-55,58 (A+)	7,37	65,26		
	Local demand	-67,30 (A+)	6,54	74,93		
Warm	Clock control	-11,22 (E)	1,55	15,08		
	Local demand	-15,51 (E)	0,72	17,32		

Function descriptions and controls are described in the user manual.

Power supply. AC:  $230 \pm 10\%$  V.

Insulation class II. Degree of protection IPX2.

Use of the system is designed for long-term operation at an outdoor temperature in the range from  $-30\text{ }^{\circ}\text{C}$  to  $+50\text{ }^{\circ}\text{C}$ , and at an indoor temperature from  $+10\text{ }^{\circ}\text{C}$  to  $+40\text{ }^{\circ}\text{C}$ .

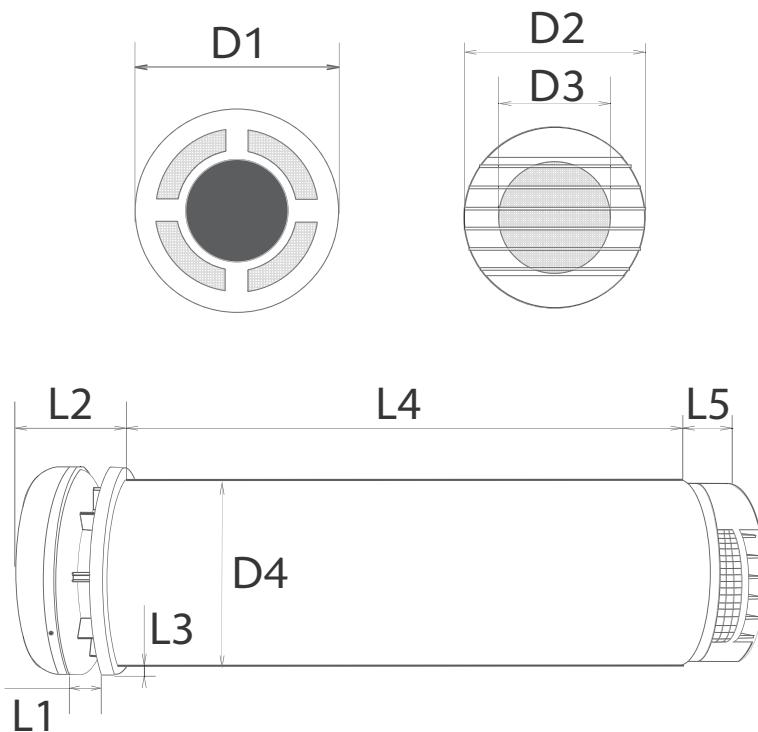
\* - Unregulated mode, maximum performance, not recommended for continuous use.

\*\* - The value of efficiency is reached in the laboratory and depends on the speed of the fans.

## OVERALL DIMENSIONS

---

The scheme of schematic symbols of the sizes of PRANA ventilation systems of a residential series.



Systems with a working module length of L4 up to 1000 mm are made in the form of a monoblock.

Systems with the length of the working module L4 from 1001 to 2000 mm are made in the form of a construct of two parts.

Systems with a working module length of L4 more than 2001 mm are made as a special order on individual request.

Series 160 M23

Series 210G M23

Series 210C M23

D1 (Diameter of the inner cover)

175 mm

235 mm

235 mm

D2 (Diameter of the outer cover)

150 mm

200 mm

200 mm

D3 (The inner diameter of the outer cover)

95 mm

115 mm

115 mm

D4 (Diameter of the working module)

160 mm

210 mm

210 mm

L1 (Length of the lift mechanism)

0-25 mm

0-30 mm

0-30 mm

L2 (Length with open lift mechanism)

50-75 mm

50-75 mm

50-75 mm

L3 (Distance from the working module to the flange)

10 mm

15 mm

15 mm

L4 (The minimum length of the working module)

≥ 450 mm

≥ 440 mm

≥ 490 mm

L4 (The minimum length of the working module RS)

495 mm

X

510 mm

L5 (Length of the outer cover)

40 mm

40 mm

40 mm

The warranty period of the product set by the manufacturer is 24 (Twenty-four) months.

During this period, the use of the goods for their intended purpose is guaranteed, subject to compliance with the rules of transportation, storage and operation.

The warranty period of operation of the goods, which is sold through the distribution network, is deducted from the date of its sale to the consumer.

Necessary, accessible and reliable information about the goods that are subject to warranty repair (maintenance) or warranty replacement is provided by the manufacturer (seller) to the consumer in the exploitative documents attached to the product.

Exploitative documents include text, graphic, design documents, which separately or together provide an opportunity to get acquainted with the consumer properties of the product and which determine the rules of its transportation, storage and operation.

Goods are accepted for warranty service only in the presence of exploitative documents and factory packaging.

The warranty card must be filled in by the seller when transferring the goods.

In case of failure of the product due to non-compliance with the rules of storage, transportation and operation, in the absence of warranty card, factory packaging; damage resulting from accidental rise of voltage or misuse of the product or with existing mechanical damage, the consumer loses the right to warranty service.

Air purification filters belong to the category of goods that cannot be exchanged (returned).

Accordingly, no warranty is provided on them.