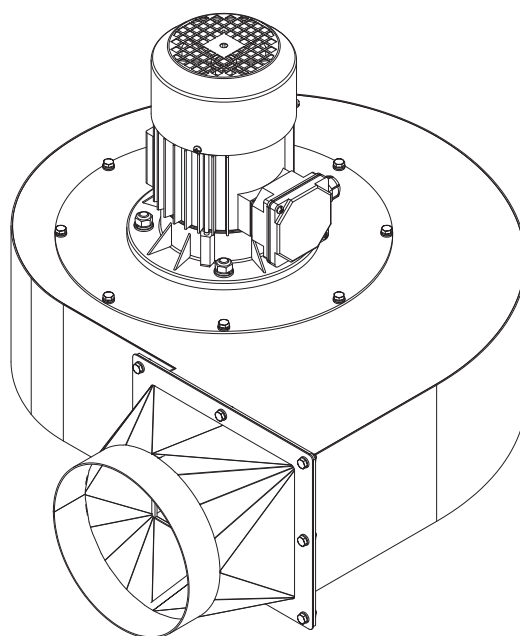


ZWR

Fan units

USER'S MANUAL



GRAPHIC SYMBOLS



important
information



3D file or preview
available



you will need tools,
sub parts,
accessories



keep away from source
of high temperature



warnings,
important notes



use respiratory
protective equipment



protect from noise
or eye damage



switch off before
proceeding

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1. Purpose of this instruction

This instruction manual contains ZWR fan units use and maintenance information. ZWR fan user should become acquainted with contents of this publication to learn about unit construction, principles of operation and means of its safe use. Manufacturer is not responsible for any consequences arising from the use of the unit against its intended purpose. Manufacturer reserves the right to make changes to improve performance and operational qualities of the product in the future without prior notice.

2. Equipment arrival

Upon arrival the user needs to thoroughly inspect the equipment and make sure there was no damage caused by the shipping carrier. If there is damage, the user needs to immediately contact their dealer. Transport of the device on a pallet can be done with a manually lifted forklift or a self-propelled lift truck.

The user should ensure that the following parts are provided in the ZWR sets:

- fan outlet fitting
- fasteners for a self assembly of the fan outlet fitting

In case of lack of any listed items, please contact the dealer.



If the package or device is damaged upon delivery the user needs to immediately contact the dealer and draw up a protocol with a representative of the shipping company (many shipping companies consider acceptance of the shipment to be sufficient to avoid liability for damage caused during shipping).

3. Safety

3.1 General informations

The device has been designed on the basis of the applicable technical knowledge and safety rules contained in the relevant standards harmonized with the Machinery Directive. Use appropriate personal protective equipment according to general health and safety rules. All electrical work must be carried out by qualified personnel. The machine equipped with the accessories complies with the required stability conditions. The device should be installed on flat, properly hardened surfaces.

3.2 Fire risk

Do not extract burning or glowing material (including cigarettes). Do not mix combustible material such as wood dust and rags with weld fume or grinding dust.

3.3 Emergency situations

In case of discovering unusual phenomena such as increased noise, vibrations or smoke you should:

- disconnect the device from the power source
- try to suppress the possible flame source by using a powder extinguisher
- notify relevant services at the workplace

4. Product intended use and reservations

ZWR fans are designed for extraction of air from the dry dust (with particular emphasis on the processes of welding, grinding, polishing, pouring, dispensing, cutting metals and plastics). ZWR extraction fans are perfect for fume and dust extraction especially with Oskar at-point extraction products such as fume extraction arm, extension booms, sliding rails, car exhaust hose reels or hose drops. ZWR fan units can be operated without restriction in the technical areas intended for permanent human habitation.



Manufacturer does not recommend use of the unit for:

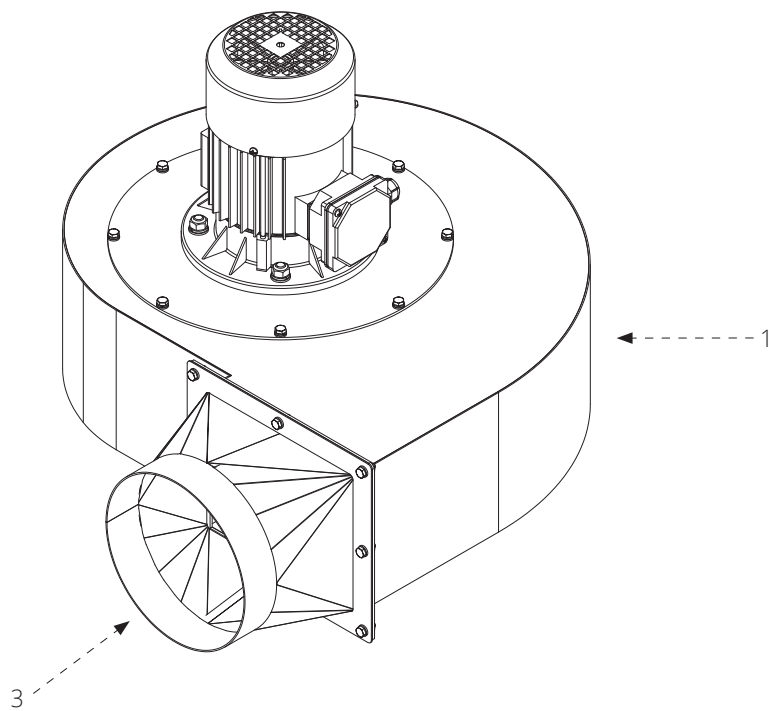
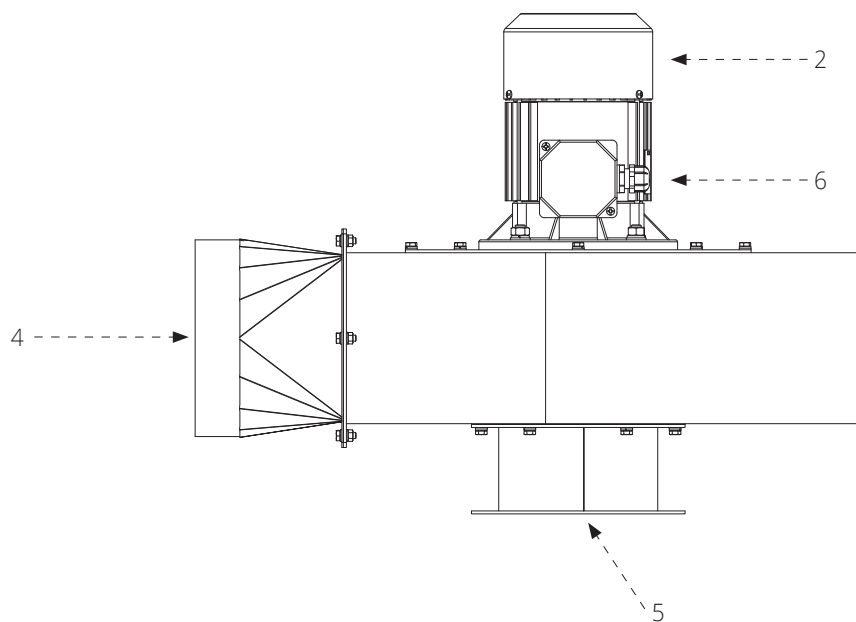
- extraction of aggressive fumes and gases (e.g. from acids, from alkaline, from soldering paste containing lithium)
- extraction of hot gases (more than 40°C/104°F continuously)
- extraction of cement, saw dust, wood dust etc.
- explosive environments or explosive substances/gases
- cleaning air from dusts containing asbestos, cadmium, beryllium, chemically aggressive dusts explosion prone.



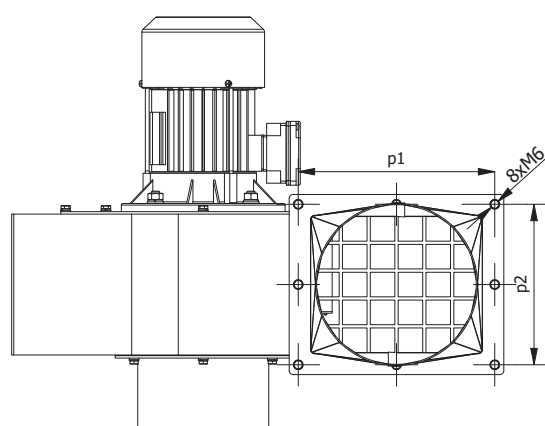
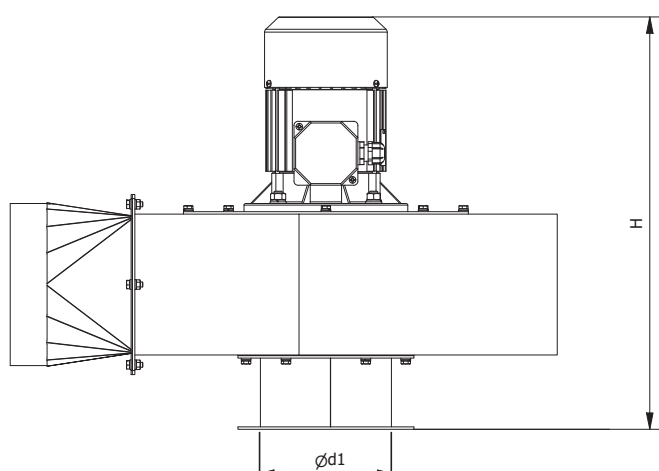
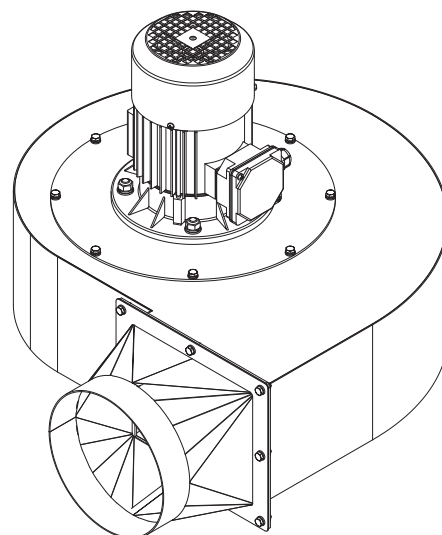
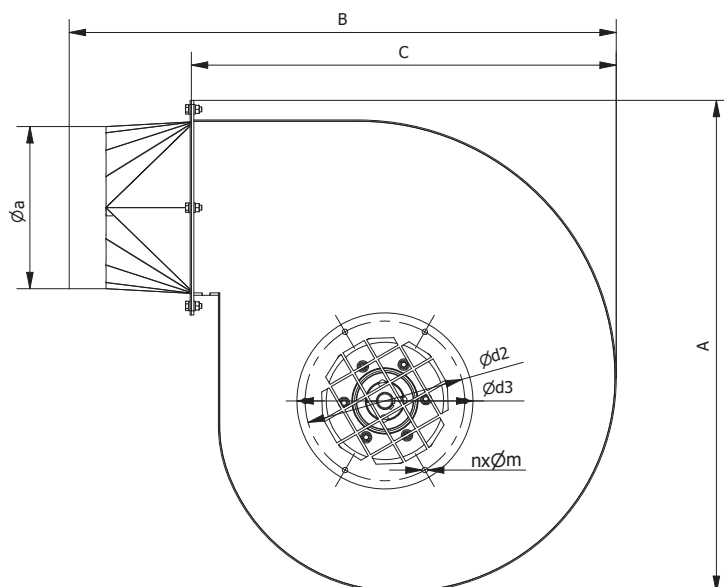
Store in dry and airy rooms. Protect against possibility of shifting during transport

5. Construction

1. Fan housing
2. Motor
3. Fan outlet fitting (for self assembly)
4. Outlet
5. Inlet
6. Motor terminal box



6. Dimensions



Fan	A [mm]	B [mm]	C [mm]	H* [mm]	d1 [mm]	d2 [mm]	d3 [mm]	a [mm]	p1 [mm]	p2 [mm]	n [qty.]	m [mm]
ZWR-03	537	609	465	483	160	195	215	160**	200	175	6	6,5
ZWR-04	601	668	519	504	160	195	215	200	240	196	6	6,5
ZWR-05	674	724	580	559	200	246	275	200	250	180	8	8,5

* Overall height can differ depending on configuration and motor supplier

** For fan with 460V and 110/220V motor, the diameter is 150mm



7. Technical data

Fan	Maximal airflow [m³/h]	Power [kW]	Power supply [V] / [Hz]	RPM [1/min]	Degree of protection	Noise level* [dB(A)]	Weight [kg]
ZWR-03	1550	0,75	3x400 / 50 230 / 50	2800	IP54	77	30
	1920		3x460 / 60 (110/220) / 60	3360		79	
ZWR-04	1900	1,1	3x400 / 50 240 / 50	2800	IP54	79	40
	2380		3x460 / 60	3360		81	
ZWR-05	3000	2,2	3x400 V / 50	2800	IP54	80	50
	3600		3x460 V / 60	3360		82	

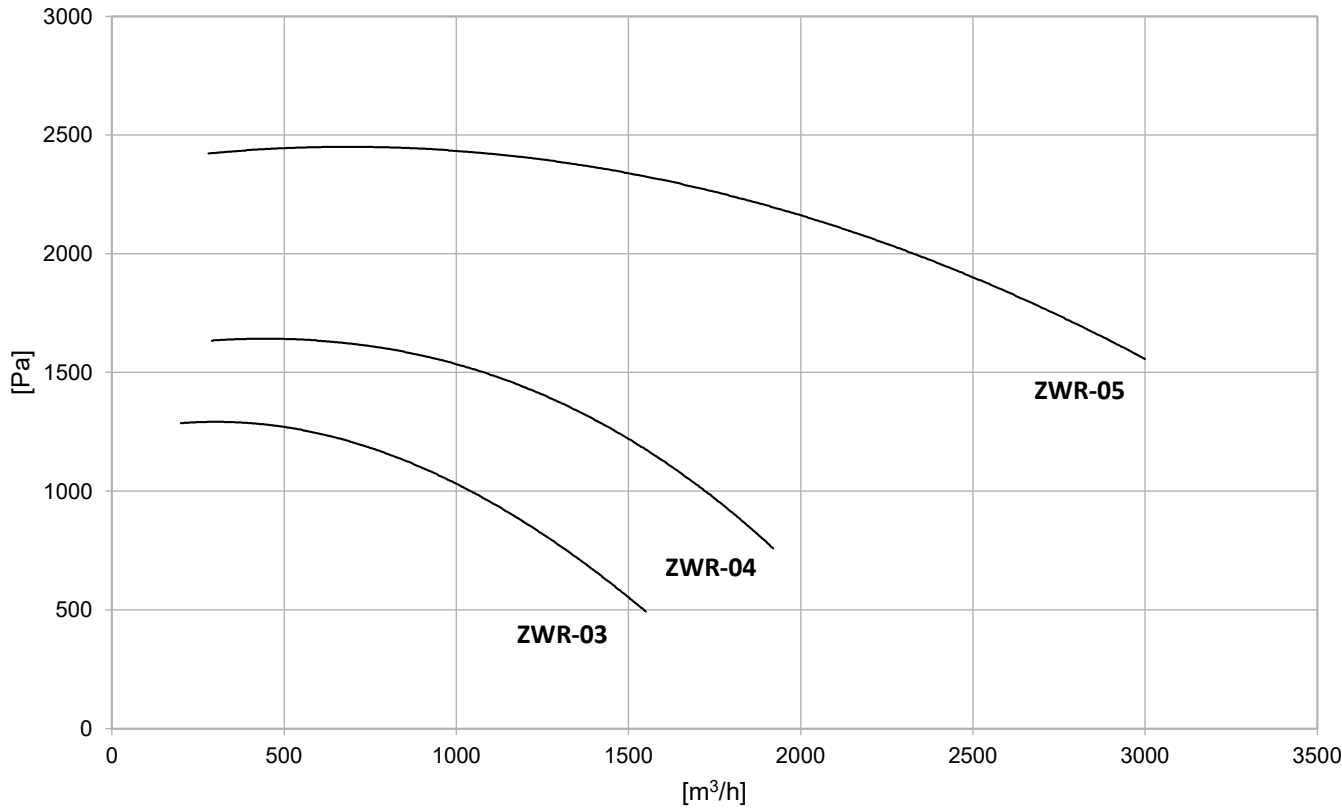
* The noise level may vary depending on the fan operating point



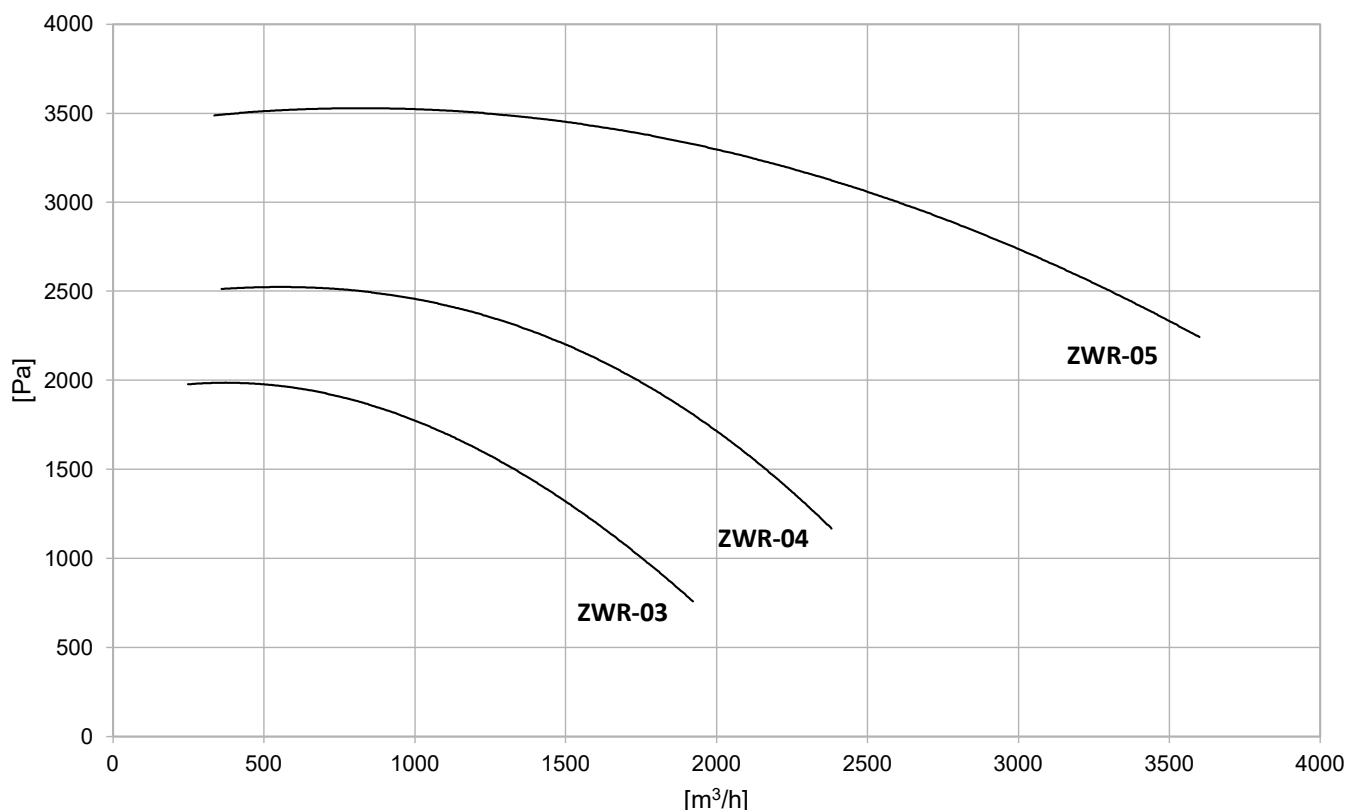
Maximum air temperature at the work place should not exceed 40°C. Fans with a three-phase motor, can cooperate with a frequency converter. The noise level is for a fan with ducted outlet and inlet.

8. Fan performance curves

ZWR -03-04-05 50Hz (STANDARD)



ZWR -03-04-05 60Hz



9. Work environment

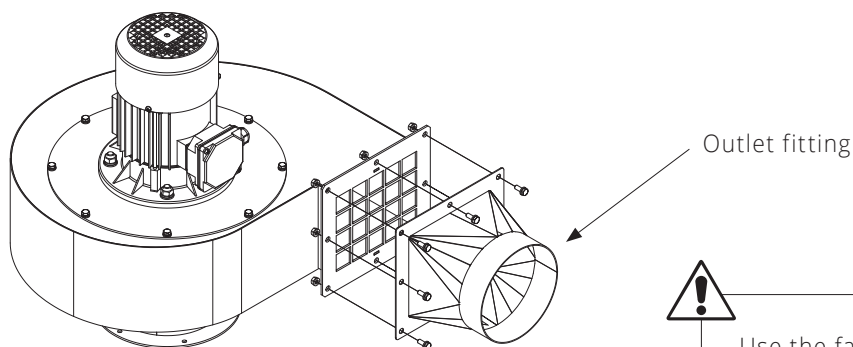
ZWR unit can be operated without restriction in the technical areas intended for permanent human presence.

10. Transport and storage

Transport of the device on a pallet can be done with a manually lifted forklift or a self-propelled lift truck. Store in dry and airy rooms.

11. Assembly

Before the assembly of the ZWR, check if the load-bearing capacity of the structural elements (walls, columns, brackets) to which the device will be anchored is sufficient to transfer the loads. ZWR fan units are equipped with a connection flange (at the inlet), allowing installation directly to the mounting bracket and swivel of the extraction arm (available on separate order). The air outlet is adapted to be connected with circular ventilation ducts through the provided outlet fitting - it requires self assembly.



Use the fasteners included in the kit to screw the outlet fitting.

12. Use

Read the safety section before using the machine. Set the outlet fitting as described in chapter 11.

12.1 Start-up

The user of the ZWR connects the fan according to wiring diagram in the fan's junction box. Additionally the user, selects the appropriate type and cross section of electric wires and appropriate protection against short-circuits and overloads.



In case of fans equipped with three phase motor the incorrect sequence of phase cables in the power socket will cause improper rotation of the fan impeller and its efficiency. Check that the voltage and frequency of the power supply correspond to the parameters on the motor's rating nameplate.



Appropriate health and safety protection should be applied. All electrical work must be carried out by qualified personnel.

13. Maintenance

Follow the recommendations of the service section to keep the ZWR unit in proper condition.

13.1 Service

DAILY	MONTHLY	YEARLY
Overall control of connection tightness	Visual inspection for signs of corrosion	Inspection of electrical wiring Clean the interior of the device Check the cleanliness of the inlet grate

13.2 Spare parts

In order to determine the type of spare parts, contact an authorized distributor or the Menegon company. Prepare the data from the nameplate: device name, serial number and part number. Use only original parts supplied by Menegon.

14. Troubleshooting

SYMPTOMS	POSSIBLE REASONS	PROCEDURE
Low air flow	Wrong motor rotation direction	Change direction of the motor by changing the phases in power supply socket
	Foreign objects (blocking the air flow) at the inlet grate	Disconnect the fan from the power supply system and remove the obstacle
Vibrations	Unbalanced impeller	Balance the fan to achieve the G 6.3 level in the AMCA standard or replace with a new one
	Worn or damaged bearings	Replace the bearings
	Loose bolts	Tighten the bolts
	Obstacle objects got stack at the impeller	Disconnect the fan from the power supply system and clean the impeller
Loud operation	Loose or damaged bearings	Replace the bearings
	Foreign item blocking the impeller	Remove the foreign item, clean the interior of the device and check the device for damage



Room capacity, partition walls material, architecture of the interior, installation place of the device and other installed machines may increase the total sound pressure level at workplace.



Appropriate health and safety protection should be applied. All electrical work must be carried out by qualified personnel

15. Disposal

Before dismantling, the machine must be disconnected from the power source. The area of work should be properly separated and marked. Plastics and metals must be sorted as far as possible. Disposal must be carried out in accordance with local legal requirements. The machine filters should be disposed of in compliance to relevant local regulations.



Dust on the internal parts of the device can get into the respiratory tract and lead to skin irritation. Appropriate health and safety protection must be taken during disposal work.

16. General terms and conditions of warranty

1. The present warranty is granted by Menegon Spółka z o.o. with its registered office in Mokry Dwór (postcode 83-021) at Mokry Dwór 6c, Tax ID No. (NIP): 583-27-65-135, National Business Registry No. (REGON): 192622385, entered into the Register of Entrepreneurs of the National Court Register at the District Court for Gdańsk-Północ in Gdańsk, 7th Commercial Division of the National Court Register, under No. KRS 000072042, hereinafter referred to as the "Manufacturer" or "Warrantor".
2. The provisions hereof shall apply only to purchasers who are entrepreneurs understood as natural persons, legal persons or organisational units referred to in Article 33(1) §1 of the Civil Code, pursuing business activity on their own account.
3. The Manufacturer shall grant warranty for the period of 12 months as of the date of purchase, however not longer than 18 months of the date of manufacture (for possible extension of the warranty period please contact the authorised sales representative).
4. The warranty shall include defects caused by the fault of the manufacturer, i.e. physical defects of the Manufacturer's Products arising from reasons inherent in the product and resulting from the use of defective materials, caused by structural errors, or defective workmanship, provided that operation and maintenance of the device was performed always in accordance with the appended Operation and Maintenance Documentation and that the other conditions specified herein have been met.
5. The warranty shall not include parts of devices subject to normal wear, consumable materials (filters, gaskets, bulbs, fuses, etc.).
6. A warranty repair shall take place by means of replacement of the damaged components with others - the replaced components become the property of the Warrantor. If it is impossible to determine the cause of damage, the Warrantor shall repair the product within 14 business days of the date of reporting the defect at the latest, unless there is a need to import untypical or not easily available parts.
7. The warranty shall not include: mechanical damage or damage resulting from improper operation, improper exploitation, natural wear of materials, partial or as a whole, random events or abnormal atmospheric phenomena (force majeure events), improper transport, storage or use, improper installation or installation performed by an entity which is not authorised by the Manufacturer, modifications or structural changes made by the user or third parties without the consent of the Manufacturer.
8. Loss of warranty shall take place in case of: independent repair and modifications without a written notification and consent of the Manufacturer, breaking the seals placed by the Manufacturer, using other consumable components than those indicated and recommended by the Manufacturer.
9. The Warrantor shall be liable for physical defects only up to the standard value of components. The standard value of components shall be understood as their value according to the prices applied by the Manufacturer on the date of warranty repair.
10. The warranty shall not include losses caused by downtime while awaiting for warranty repair and property damage, i.e. indirect and direct losses and costs connected with the need of disassembly and reassembly of the device. The Warrantor shall not be liable for any lost profits.
11. This warranty shall only be valid if the invoice for purchase of the products was paid and if the maintenance inspections are performed each year (in case of extension of the warranty period).
12. The Warrantor shall reserve the right to charge the costs of inspection to the claimant if the claimed product proved to be functional and if the defects to be repaired or the components to be replaced are not subject to warranty or the terms and conditions of the warranty exclude the liability of the Warrantor.
13. A defect shall be reported within 14 days after its discovery. Failure to comply with the above deadline shall result in expiration of the warranty entitlements.
14. The Warrantee shall report a failure, defect or fault only in writing by sending a complaint by e-mail or letter to the address of the manufacturer. The complaint shall contain an accurate description of the defect and indicate the date on which it occurred.
15. The Warrantor shall handle the complaint within 14 days of delivery of the defective goods to the Warrantor or verification at the location where the goods are installed, subject to a possibility of extension of the above period if it is necessary to perform detailed technical tests, of which fact the Warrantor shall immediately inform the Warrantee.
16. The Warrantor shall inform the Warrantee on handling the complaint in writing, by phone, fax or e-mail.
17. If the guarantee claim is accepted, the Warrantor shall decide each time on the repair of the defective product, its replacement with a product free of defects, reduction of its price or replacement with a product of the same intended use and similar technical parameters if the product subject to claim was withdrawn from the offer.
18. The defective product shall be repaired within 30 business days of the date of handling the complaint. If there is a need to import spare parts from abroad, perform additional laboratory testing, etc., the deadline for repair may be extended until the time of performance of necessary actions, however not more than up to 90 business days of the date of handling the complaint. The deadlines specified in the preceding sentences shall apply also to replacement of the product with a product free of defects, reduction of its price and replacement of a defective product with a product of the same intended use and similar technical parameters respectively.
19. In connection with the granted warranty the parties hereby exclude application of the provisions of the Civil Code regarding warranty for defects, therefore the Customer shall not be entitled to any other claims resulting from defects of the delivered product apart from those referred to above.
20. Any disputable matters arising in connection with the granted warranty shall be settled by the court competent for the registered office of the Manufacturer.
21. This warranty shall be governed by the Polish law.

17. EC declaration of conformity

menegon

The manufacturer:

Menegon Sp. z o.o., Mokry Dwór 6c, 83-021 Mokry Dwór, Poland

Confirms the following products:

ZWR fan

Meets the requirements of the following European directives:

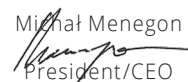
- Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006. on machinery and amending Directive 95/16/EC (recast).
- Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014. on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits (recast).

and the following standards:

- EN 60204-1:2018 Safety of machinery - Electrical equipment of machines - Part 1 General Requirements.
- EN 12100:2012 Safety of machinery - General principles for design - Risk assessment and risk reduction.
- EN 13857:2020 Safety of machinery - Safety distances to prevent reaching the upper and lower limbs to hazardous areas.
- EN 60034-1:2011 Rotating electrical machines - Part 1 Rating and performance.

Confirmed in: PL-Mokry Dwór
Confirmed on: 2021-02-01



Michał Menegon

President/CEO







www.menegon.com.pl

Authorised representative