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Operating and maintenance instructions

Nozzles and safety nozzles

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Please read these instructions carefully for your own safety, before proceeding to the installation, use or maintenance of the nozzles and safety nozzles. This instructions must be conserved for future consultation.

General information

These operating instructions are an integral part of the nozzles and safety nozzles. Please read the instructions for use, safety regulations and instructions contained in these operating instructions carefully before installation, commissioning, adjustment or maintenance, as they provide important information regarding safe use and maintenance. To ensure safe use and correct maintenance, the nozzles and safety nozzles may only be used by an operator who is familiar with the contents of the operating instructions. The information contained in these operating instructions is necessary for the correct use of the nozzles and safety nozzles and completes the information that is part of the normal technical knowledge of the persons entrusted with its operation. For further information or specific solutions to problems, please contact our sales engineering.

Therefore, always keep the corresponding operating instructions with your product.
Nozzles and safety nozzles have been developed for specific applications. RIEGLER expressly points out that these must not be changed and/or used in a way that does not correspond to the intended use.
RIEGLER accepts no liability or warranty for injuries and damage resulting from improper use, use for other than the intended purpose or non-compliance with the safety regulations.
In addition, the accident prevention regulations and general safety regulations applicable to the area of use of the nozzles and safety nozzles must be observed.

Technical Data

Medium: clean, oil-free compressed air
Housing materials (depending on nozzle type, see article features): nickel-plated steel, aluminium, die-cast zinc, plastic, nickel-plated brass

They may only be operated with clean, dry and oil-free compressed air.

Description of the nozzles and safety nozzles

Nozzles and safety nozzles are pneumatic accessories through which compressed air is directed. This enables the compressed air to perform certain functions.
Examples of applications include - without claiming to be exhaustive: cleaning, drying, cooling, demolding, transporting, sorting, loosening, dust removal and others. Nozzles and safety nozzles are designed in such a way that they perform the desired functions with the lowest possible noise emission. The noise emissions of the nozzles and safety nozzles can be found in the data sheets. However, it is not possible to make a general statement about a possible noise reduction during use, as this depends to a large extent on the respective application conditions.

Intended Use

Nozzles and safety nozzles must only be used to generate a directed jet of compressed air. Operation with other media and outside the conditions listed under “Technical data” is not in accordance with the intended use and is strictly prohibited. The nozzles and safety nozzles may only be used to apply compressed air to technical products. They must be protected from sudden loads and vibrations. They must not be exposed to solvents, alkalis or acids.

HEALTH HAZARD/DANGER TO LIFE! Under no circumstances may the air jet be directed at persons or other living beings

General safety instructions; Explanation

Explanation of symbols used

	General mandatory sign *This symbol indicates instructions, which, if ignored, will result in damage, malfunction and/or failure of the appliance.*
	General warning sign *This symbol indicates important descriptions, dangerous conditions, safety hazards or safety instructions.*
	Observe instructions *The operator is obliged to read and observe all instructions for use, operating instructions and safety regulations and to instruct all users of the tool in accordance with these.*
	Use eye and ear protection

WARNING! Do not leave connected compressed air tools unattended.

Risks

General safety instructions/risks

The following risks/hazards exist even when used as intended:

Cause of hazard	Hazard	Possible consequences	Safety measures
Air jet escaping from the nozzle Work pieces, particles or emulsions hit and/or whirled up and/or bounced back by the compressed air jet	Penetration of body orifices (eyes, mouth, nose, ears, anus)	Depending on the penetrating medium, can lead to internal and external injuries or chemical burns and even loss of sight or hearing.	Take suitable precautions to protect yourself and your environment. Wear suitable eye and ear protection as well as personal protective equipment (PPE). It is not permitted to blow off dirt particles from clothing, glasses, gloves or the body.
	Contact with the skin	May cause skin damage and external injuries.	
	Contact with persons or other living beings in the vicinity of the workplace	Depending on the penetrating medium, can lead to internal and external injuries or chemical burns and even loss of sight or hearing.	Shield the workplace. Never point the air jet at yourself, other people or animals.
Ausfall der Druckluftversorgung bei der Verwendung in Maschinen oder Vorrichtungen	Malfunctions	Machine/personal injury if the function to be performed by the nozzle is functionally relevant for a machine In this case, the machine manufacturer must ensure a suitable, safe safety shutdown of the machine.	Observe the safety precautions/safety circuits in the machine or device provided by the machine manufacturer Do not use the machine or device if it is not working correctly or has been damaged. Do not attempt any repairs yourself. Check all connections and hoses for proper functioning and secure fit. Loose and damaged hoses can pose a serious risk of injury. Make sure that there is no external damage (e.g. cracks).
Improperly fastened or uncontrollably detached nozzle, e.g. due to vibrations	Nozzle is thrown away uncontrollably by the compressed air.	May cause external injuries.	Check nozzle for tight fit before each use. Any type of modification to the product **is prohibited** and will invalidate liability.

Flying out of the noise reduction insert due to exceeding the maximum operating pressure or the maximum operating temperature	Penetration of nozzle parts into body orifices and contact with the skin	May cause eye injuries and external injuries.	The maximum permissible operating pressure and the maximum operating temperature must never be exceeded.
Flying out due to decomposition of the noise reduction insert due to contact with impermissible media	Penetration of nozzle parts into body orifices and contact with the skin	May cause eye injuries and serious external injuries.	Use is only permitted for compressed air.
Ejection of objects or media that have been improperly inserted into the nozzle	Penetration of “projectile fragments” into body orifices and contact with the skin	May cause eye injuries and serious external injuries.	Any type of modification to the product **is prohibited** and will invalidate liability.

Unpacking

After removing the packaging, ensure that the product is intact and check that no parts are visibly damaged. If in doubt, do not use the product.

Commissioning

To ensure safe use and correct maintenance, the nozzle or safety nozzle may only be used by an operator who is familiar with the contents of the operating instructions. After removing the packaging, ensure that the product is undamaged, checking that there are no visibly damaged parts.

Assembly and disassembly

Before installation and removal, the system in which the nozzles and safety nozzles are to be installed must be disconnected from the compressed air supply and vented.
The nozzles and safety nozzles must be installed in such a way that they cannot become detached during operation. They must be fitted using suitable tools.
All persons handling nozzles and safety nozzles must be instructed in their safe use and informed of the potential hazards.

Use of personal protective equipment when used as intended

Even when used as intended, hazards from particles and substances (e.g. chips, sand, dust, liquids, emulsions, etc.) hit by the air jet and from harmful noise cannot be ruled out. For this reason, the user must always wear eye and/or face protection.

If the permissible limit values for noise exposure at the workplace are exceeded, hearing protection must also be worn. The requirement must be determined by the user through workplace measurements.

Possibilities for noise reduction when used as intended

The following recommendations are made to minimize noise emissions when using nozzles and safety nozzles:

- Use a nozzle or safety nozzle adapted to the application.
- Preferably, use a flat nozzle instead of a round nozzle.
- Reduce the operating pressure to the minimum possible for the application (installation of a permanently adjustable and lockable pressure regulator or a permanently adjusted throttle in the supply line is recommended).
- Avoid blowing onto sharp edges or holes, if possible.

Use of nozzles and safety nozzles in machines and devices

In the event that a user or machine manufacturer installs nozzles and safety nozzles as tools in devices or machines, the latter is responsible for compliance with the requirements of Directive 2006/42/EC in connection with the device or machine. In particular, he must carry out a risk assessment and a safety analysis in accordance with the directive in connection with the function of the nozzles and safety nozzles.

Maintenance and repair

Nozzles and safety nozzles are technical tools and are subject to wear and tear. For this reason, the user is obliged

- to replace them immediately if they are damaged.
- to visually inspect them at least once a month to ensure that they are free of damage.
- at least once a month - or more frequently if the piping is dirty - to check the inside for dirt that could clog the noise reduction insert.
- to clean a contaminated nozzle or safety nozzle before recommissioning.
- If necessary, a suitable filter must be fitted in the supply line to the nozzles and safety nozzles.

The user is responsible for monitoring the test intervals. Any tests carried out must be documented.

Useful Contacts and Addresses

If you need any clarification or in case of doubts about this operating instruction, please contact RIEGLER & Co. KG to the following addresses:

RIEGLER & Co. KG, Sales Engineering
Schützenstraße 27
72574 Bad Urach
Tel. +49 7125 9497-642
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Applies to the following articles:

Safety nozzles for standard blow guns

Low-noise fine-spray nozzle, M12x1.25 connection	
Article No.	Type No.
114354 to 114355	22.101 to 22.102

Low-noise round nozzle, M12x1.25 connection	
Article No.	Type No.
114356 to 114363	22.201 to 22.208
206348	22.202-2
129880	DLRZAM12X125

Low-noise flat nozzle, M12x1.25 connection	
Article No.	Type No.
114364 to 114366	22.401 to 22.403

Adjustable nozzle, M12x1.25 connection	
Article No.	Type No.
146698	22.501

Nozzles for all aluminium and die-cast aluminium nickel-plated blow guns

Standard nozzle with Ø 1.5 mm bore, M12x1.25 connection	
Article No.	Type No.
114344	105/5

Silencer nozzle, M12x1.25 connection	
Article No.	Type No.
114345	106/6

Nozzle with chip shield, M12x1.25 connection	
Article No.	Type No.
114346	107/6

Venturi nozzle (full jet nozzle) with Ø 2.5 mm bore, M12x1.25 connection	
Article No.	Type No.
207588	107/7-V

Nozzle with air shield with Ø 1 mm bore, M12x1.25 connection	
Article No.	Type No.
147790	108/6

Safety nozzles for high-volume blow guns

Low-noise fine-spray nozzle, 1/2 - 27 UNS connection	
Article No.	Type No.
114455 to 114456	29.101 to 29.102

Low-noise round nozzle, 1/2 - 27 UNS connection	
Article No.	Type No.
114457 to 114460	29.201 to 29.206

Low-noise flat nozzle, 1/2 - 27 UNS connection	
Article No.	Type No.
114461 to 114463	29.401 to 29.403

Safety nozzles for universal applications

Low-noise fine-spray nozzle	
Article No.	Type No.
114468 to 114469	30.101 to 30.102

Low-noise round nozzle	
Article No.	Type No.
114470 to 114477	30.201 to 30.208

Low-noise flat nozzle	
Article No.	Type No.
114478 to 114482	30.401 to 30.405

Low-noise combination nozzle	
Article No.	Type No.
114483 to 114484	31.101 to 31.102