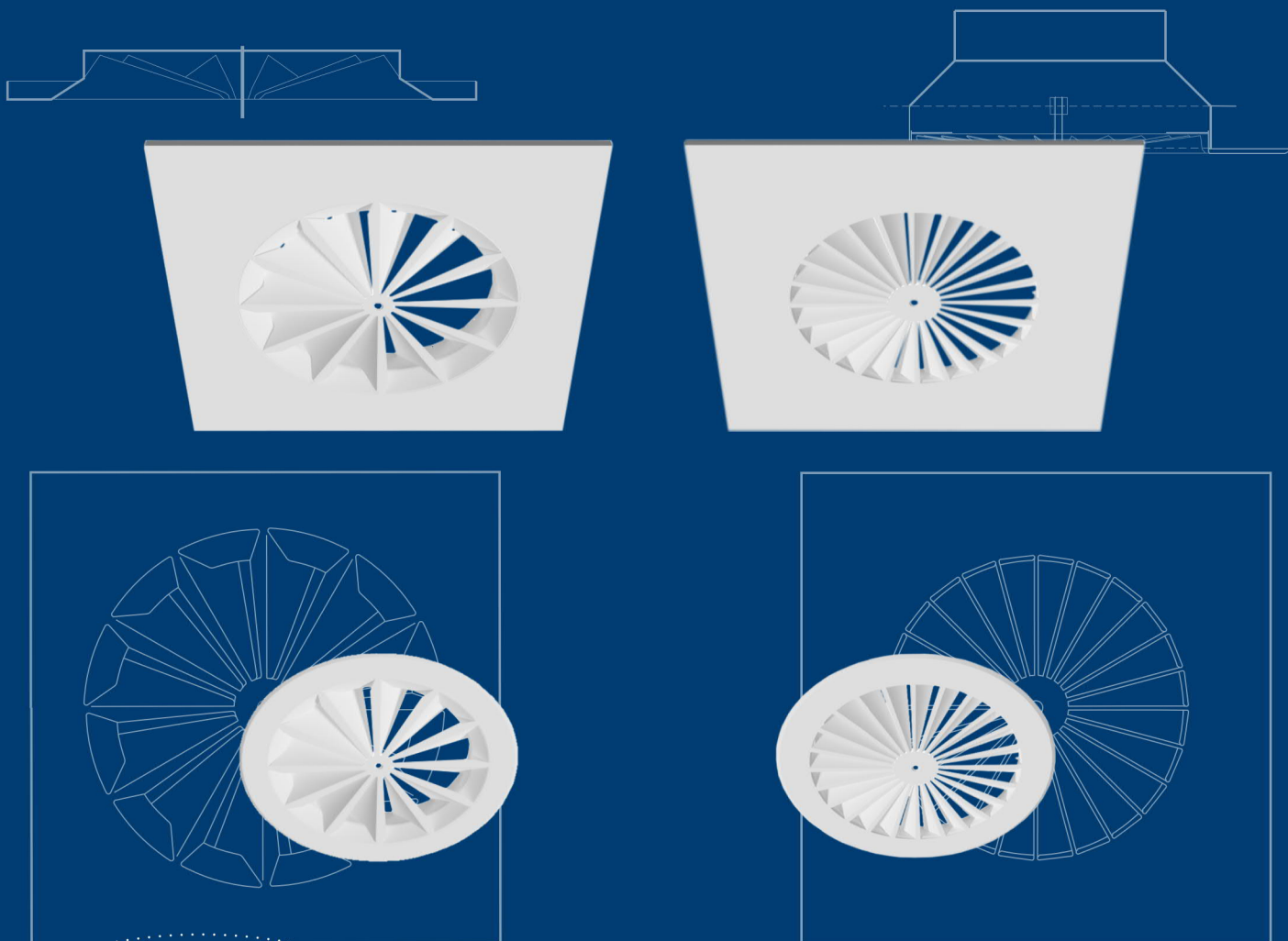




Air & Climate Solutions

Installation Manual

Radial Outlets
RA-N and RA-N3

Durrer-technik

Kranz

Safety

This manual provides essential information for the safe handling and installation of Krantz radial outlets.

- Radial outlet RA-N
- Radial outlet RA-N3

1. Safety

Read this manual carefully. Make sure that you have understood all the contents of these instructions before you start installation. Following the described work steps and safety guidelines is essential to ensure the functionality and safety of the products mentioned. Act with caution. Also observe the locally applicable accident prevention regulations and the general safety standards to avoid accidents, personal injury, and damage to property.

1.1 Symbols and safety instructions

Safety instructions in this manual are identified by symbols and signal words that indicate the respective hazard potential.

	WARNING
This symbol and signal word combination indicates a potentially hazardous situation that can lead to death or serious injury if not avoided.	

	CAUTION
This symbol and signal word combination indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.	

	NOTE
This combination of symbol and signal word indicates a potentially hazardous situation that can lead to material damage if not avoided.	

	INFORMATION
This combination of symbol and signal word highlights additional information that is helpful for understanding or carrying out the work but is not safety-related.	

	ENVIRONMENTAL PROTECTION
This symbol and signal word combination indicates possible environmental damage.	

1.2 Qualification of the staff

Only persons who can reliably carry out the work are authorized to work with Krantz radial outlets. Persons with impaired reactions, e.g. due to medication, alcohol or drugs, are not permitted to carry out any tasks. Trained specialist personnel are required to carry out the following activities:

- Transport
- Installation
- Commissioning
- Maintenance and cleaning
- Repair

1.3 Intended use

Krantz radial outlets may only be used indoors as an air duct component of the HVAC system. The use of the product must comply with the specifications defined in the Technical Selection. Any other use or use beyond this is considered improper.

	NOTE
Material damage due to misuse	
Improper use of the product can lead to damage to the product! Do not use the product in the following rooms or areas: ▪ Outdoors ▪ Damp rooms ▪ Rooms with aggressive or dusty air	

1.4 Personal protective equipment

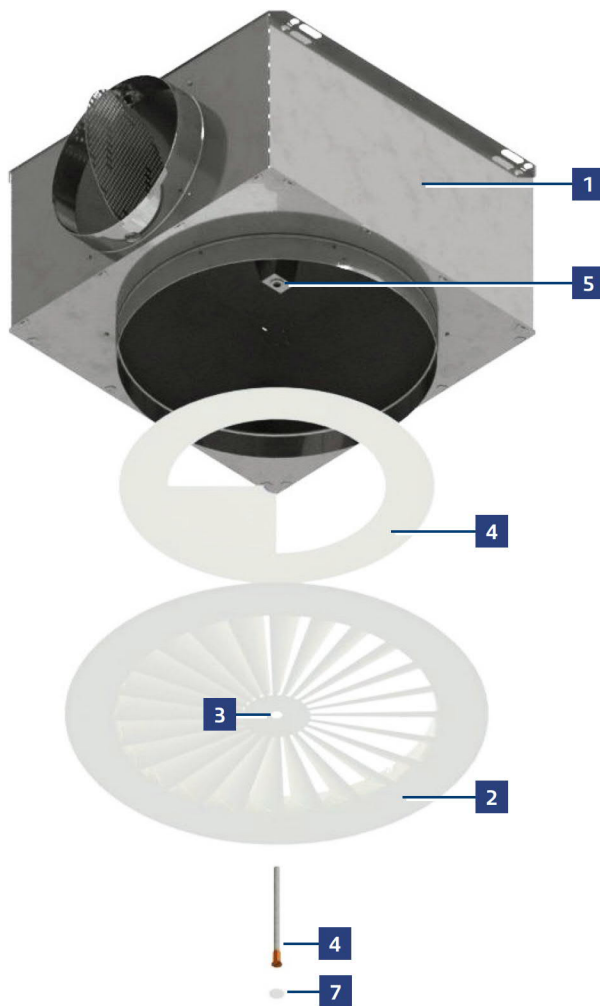
Wear protective equipment when working with the product to minimize health hazards. Additionally, observe and use the prescribed protective equipment for the construction site on which the Krantz radial outlets are installed. The required personal protective equipment includes:

	Protective gloves
Protective gloves are used to shield the hands from friction, abrasions, punctures or deeper injuries, as well as from contact with hot surfaces.	

	Safety shoes
Safety shoes protect the feet from crushing, falling objects, and slipping on slick surfaces.	

	Industrial safety helmet
The industrial safety helmet protects the head from falling objects, swinging loads and from bumping into fixed objects.	

2. Structural Design

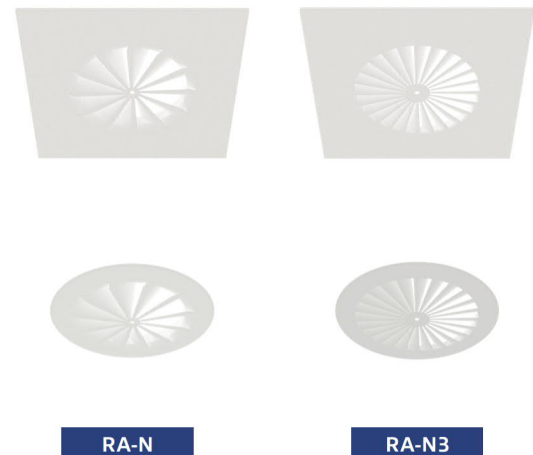


Structural design illustrated with a connection box for closed ceilings and a volume flow damper in the lateral spigot. Installed outlet element: radial outlet RA-N3.

Krantz radial outlets for flush-ceiling or freely suspended installations can be fastened—depending on the installation situation—either to a reducer for connection to a circular or flexible duct or to a **connection box 1**. Each **outlet element 2** features a **central through-bore 3**. The central **fastening screw 4** is guided through the outlet element and securely fixed into the centrally located **rivet nut 5** inside the connection box. For RA-N3, an optional **cover disc 6** can be inserted into the outlet element. The head of the fastening screw is concealed by a **screw cap 7**.

For detailed information on the functionality and dimensions of our products, please refer to the Technical Selection on our website (www.krantz.de).

2.1 Versions of air discharge elements



Radial outlet RA-N

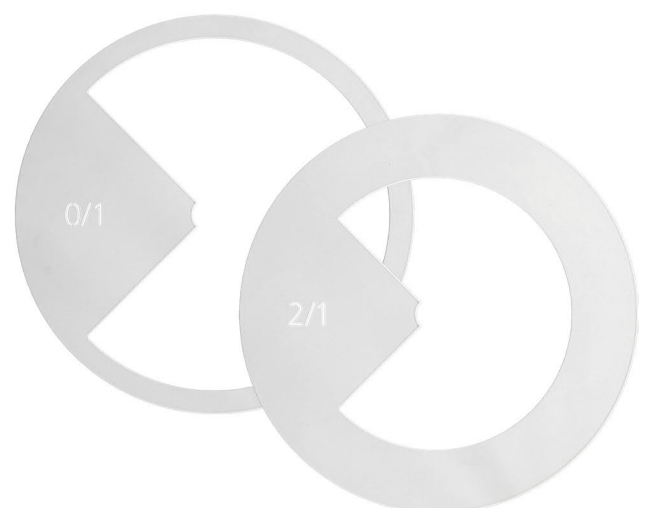
- With square or circular face
- Available sizes: DN 100, DN 125, DN 160, DN 180, DN 200, DN 224, DN 250, DN 315, DN 355, DN 400 and DN 500

Radial outlet RA-N3

- With square or circular face
- Available sizes: DN 355 and DN 500
- Three volume flow ranges (depending on the optional collar)

2.2 Versions of the optional cover discs

Adjustment of volume flow and discharge direction is achieved via optional cover discs that can be inserted into the outlet element. The cover discs combine the characteristics of collars (for regulation of volume flow) and segment cover discs (for adapting the discharge direction). They are available in various versions, enabling optimal alignment to your needs.



Left: Cover disc 0/1 without collar, with segment cover for three-way discharge.

Right: Cover disc 2/1, with collar for volume flow reduction, and segment cover for three-way discharge.

Structural Design, Delivery and Transport

2.3 Connection types



Connection type A:
*Reducer for connection to
a circular duct or a flexible
duct*



Connection Type D:
*Connection box for
closed ceilings.*



Connection type E:
*Connection box for flush
mounting of the outlet
element.*



Connection type F:
*Connection box for
square tile ceilings.*

3. Delivery and Transport

Check the delivery immediately upon receipt to ensure that it is complete and undamaged. Compare the contents with the delivery bill and ensure that all parts are present and undamaged. Report any discrepancies or damage to our customer service immediately.

	CAUTION
Risk of injury due to improper handling	
The weight of transport packaging and products can cause injuries if not lifted or carried correctly.	
▪ Avoid improper lifting or carrying techniques to prevent injuries. ▪ If necessary, use aids or support to minimize the risk of accidents.	

	CAUTION
Risk of injury from sharp edges, pointed corners, and thin-walled sheet metal parts	
Both the packaging and the products themselves may have sharp edges that could cause cuts or injuries.	
▪ Handle the delivery with care when unpacking. ▪ Wear protective gloves and safety shoes.	

	CAUTION
Safety risk due to damaged or incomplete products	
Damaged or incomplete products can lead to dangerous situations.	
▪ Strictly follow the instructions and guidelines in the installation manual. ▪ Never install damaged or incomplete products.	

	ENVIRONMENTAL PROTECTION
Disposal of the packaging material	
▪ Separate the packaging waste (e.g. cardboard, plastic film) and dispose of the different materials according to local recycling regulations. ▪ Take packaging materials that cannot be disposed of with household waste to the appropriate collection points or recycling centers.	

4. Installation

Depending on the installation situation, Krantz radial outlets can be flexibly adapted to the building conditions. The radial outlets can be mounted either to the connection box or, via a reducer, to a spiral seam duct.

	WARNING
	Hazard due to falling parts
	Incorrect installation of the ceiling air outlet entails a risk of falling parts that may cause serious injury. Ensure that all system components are installed properly and securely. After installation, carefully check all fastenings to ensure safe operation.

	NOTE
	Avoid soiling the outlet element
	Wear clean work gloves throughout installation to prevent soiling of the outlet element with grease or dirt residues.

4.1 Inserting the optional cover disc

If a cover disc is specified and has not already been factory-installed in the outlet element, proceed as follows:

1. Place the outlet element on a clean, soft surface to avoid damage to the face.
2. Insert the cover disc into the outlet element.

Check that the cover disc identification matches what was specified in the order.



The identification on the cover disc should be readable from the underside of the outlet.



3. Fix the cover disc.

There are four circumferential metal tabs on the outlet element used to secure the cover disc by bending them over with a screwdriver.

Start with two opposite tabs to ensure uniform retention. Then proceed with the remaining two tabs to fix the cover disc securely.

Bend the tabs with particular care to avoid surface damage from the sharp-edged tool.



Installation

4.2 Mounting to the connection spigot (connection type A)

To mount the radial outlet to the reducer for connection to a circular or flexible duct, proceed as follows:

1. Insert the outlet element into the spigot.



2. Guide the central fastening screw through the outlet element and screw it into the rivet nut provided in the perforated plate.



3. Tighten the screw hand-tight using a screwdriver.



If the outlet element is fitted with a segment cover disc, ensure that it is correctly positioned to direct the air discharge to the intended side.



INFORMATION

Installation in closed false ceilings

For installation in a closed false ceiling, insert the outlet element through the ceiling cutout into the reducer and then fix it flush with the ceiling.

4. Screw the cap into the threaded recess of the screw head.



5. The radial outlet is now fully assembled.



Installation

4.3 Mounting to the connection box (connection types D, E, and F)

To mount the radial outlet to the connection box, proceed as follows.

4.3.1 Adjusting the volume flow damper

The damper inside the connection box can be easily opened or closed by hand.

Set the damper to the desired position before installing the outlet element.



4.3.2 Attaching the outlet element

1. Insert the outlet element into the spigot on the connection box.



If the outlet element is fitted with a segment cover disc, ensure it is positioned as required.

	INFORMATION
	Installation in closed false ceilings
	For installation in a closed false ceiling, the outlet element is inserted through the ceiling cutout into the spigot on the connection box and finally fixed flush with the ceiling.

2. Guide the screw through the outlet element and screw it into the rivet nut of the cross member inside the connection box.



3. Tighten the screw hand-tight using a screwdriver.



4. Screw the cap into the threaded recess in the screw head.



5. The radial outlet is now fully assembled.



Maintenance and Cleaning, Recycling

5. Maintenance and Cleaning

The need to clean ceiling air outlets depends on factors such as occupancy, air quality, and building function. In high-traffic areas, ceiling air outlets should be inspected and cleaned by qualified personnel every six months. They are, however, strongly recommended to be serviced at least once per year. Regular maintenance helps improve air quality and maintain the efficiency of the ventilation system.

	WARNING
Health hazards due to inadequate cleaning	
Inadequate cleaning of ceiling air outlets can promote the spread of potentially harmful germs such as fungi, viruses, and bacteria. Ensure that the ceiling air outlets are cleaned regularly and with appropriate means.	

	NOTE
Material damage due to improper cleaning	
Ceiling air outlets can be damaged by unsuitable cleaning agents. ▪ Check whether the cleaning agents are suitable for the materials of the ceiling air outlets. ▪ Do not use harsh or alcohol-based cleaners, as these can attack the surfaces and cause damage to the products. ▪ Use mild soap solutions, neutral cleaners, or specialized cleaners that meet the specific material requirements. ▪ Do not use hard brushes or tools that could damage the surface. ▪ For any further questions regarding the cleaning of our products, please contact our customer service.	

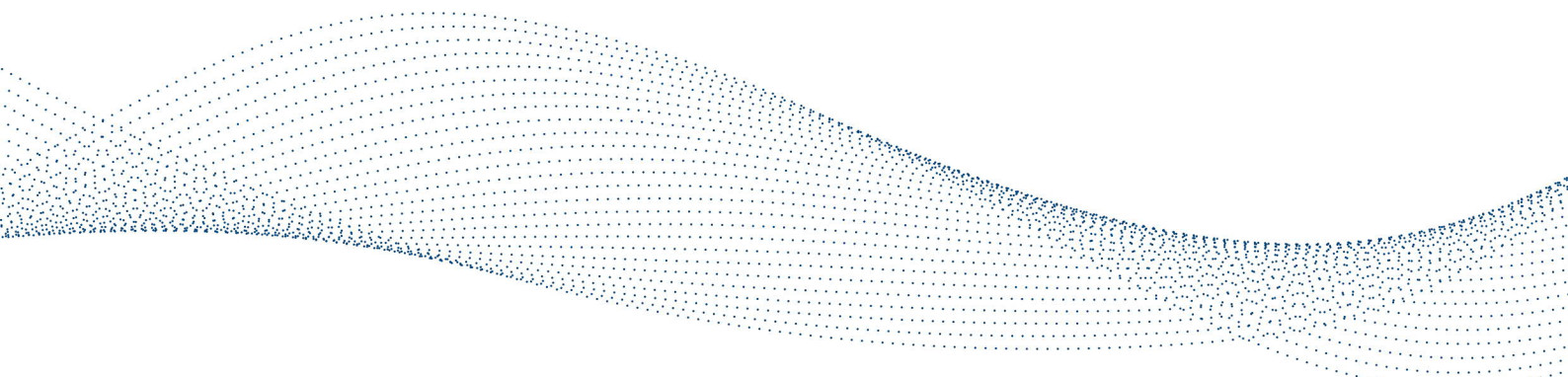
6. Recycling

Our products are made from valuable materials that should be recycled when they need to be replaced at the end of their service life. Krantz radial outlets are almost entirely made of recyclable materials, making their disposal particularly environmentally friendly. Proper disposal of used components not only conserves natural resources but also supports the circular economy.

If you have any questions about recycling our products, feel free to contact us.

	ENVIRONMENTAL PROTECTION
Proper disposal of products	
▪ Separate the different materials, where possible, to facilitate the recycling process. Metal and plastic parts should be disposed of separately. ▪ Take the separated materials to a local recycling center or appropriate collection point. These facilities specialize in properly processing recyclable materials. ▪ Ensure compliance with applicable environmental regulations and disposal guidelines. This ensures environmentally friendly and legally compliant disposal.	

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