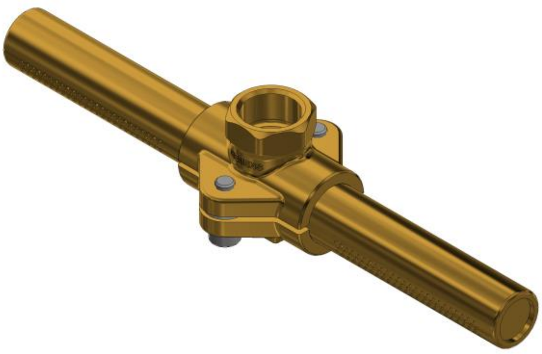
Sinorix™

SDNX-R, SDNX-W

IG-01, IG-55, IG-100, IG-541



Silent nozzle

- Distribution of the extinguishant
- Room protection
- For use in server rooms and data center applications
- Reduced noise during discharge of the extinguishant

Product codes:
SDNX-R – S54476-B280-C3
SDNX-W – S54476-B280-C6

Application

These products are used in Sinorix™ CDT and unregulated fixed automatic inert gas extinguishing systems.

Functions

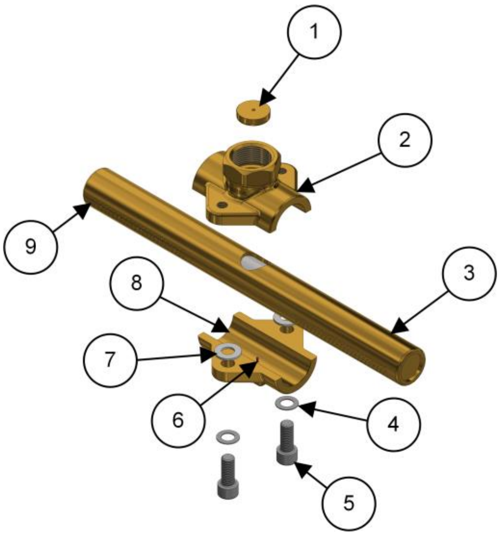
The Sinorix™ Silent Nozzles SDNX-R and SDNX-W are designed to discharge the extinguishant at a reduced noise level compatible with the operation of storage systems (hard disks).

The nozzles help to prevent noise-related disruptions to hard disk drives and entire data storage systems in data centers and server rooms during an extinguishing agent discharge.

The SDNX-R nozzle is designed to be mounted on the ceiling of a room or within a raised floor or false ceiling. The distribution holes are located on both sides of the diffuser.

The SDNX-W nozzle is designed for mounting along a wall. The distribution holes are located on one side of the diffuser only.

Type summary



Item	Description	Item	Description
1	Orifice	6	Guiding pin
2	Upper part of the T-piece with thread G 1"	7	Intermediary washer
3	Diffuser	8	Lower part of the T-piece with marking on the bottom side
4	Spring washer (DIN 137 A)	9	Distribution holes
5	CHC M10x25 8.8 screw (ISO4762)	-	-

Drilling

The orifice of a SDNX nozzle is drilled on request according to the calculation made using the VdS hydraulic calculation software.

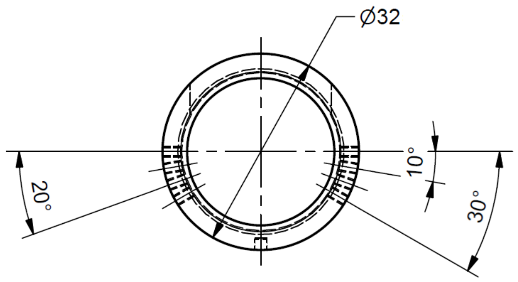
	SDNX-R	SDNX-W
Product code	S54476-B280-C3	S54476-B280-C6
Orifice diameter	3.0 – 20.0 mm	3.0 – 14.8 mm

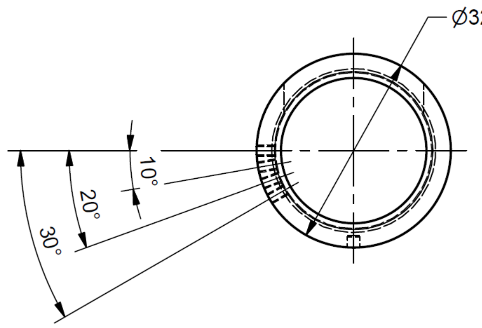
* Fill in the SAP field “Manufacturing instruction” to specify the desired orifice diameter in the T-piece. The orifice diameter should be ordered as a multiple of 0.1 mm (e.g. Ø 12.4 mm).

The distribution holes are positioned as follows:

- SDNX-R nozzle: 8 rows of 25 holes (1.3 / 1.5 / 1.8 mm) distributed on both sides of the diffuser.
- SDNX-W nozzle: 4 rows of 25 holes (1.3 / 1.5 / 1.8 mm) on one side of the diffuser only.

SDNX-R	SDNX-W





Notes

Safety

This product may only be installed by Siemens-authorized specialized installers, with experience in the design, installation and maintenance of automatic extinguishing systems. During installation, it must be ensured that:

- this product is installed in compliance with the accident prevention regulations and national regulations in force,
- this product is used as intended,
- any danger is avoided,
- Siemens requirements are met (assembly instructions, technical instructions, commissioning, and operating instructions),
- the operators have received and understood the information related to this product.

At commissioning, ensure compliance with the legislation in force, technical regulations and safety instructions.

Failure to comply with Siemens' instructions may result in serious bodily injury or significant property damage, for which Siemens cannot be held liable.

Siemens reserves the right to make technical modifications and/or improvements at any time.

Engineering

Nozzle coefficients:

- SDNX nozzles are designed to be used with Sinorix™ systems (NXN, CDT-R or CDT-V). They can also be used to upgrade existing unregulated Sinorix™ systems based on inert gases (IG-01, IG-100, IG-541, IG-55) as long as the nominal pressure at the nozzles never exceeds 60 bar.
- The nozzle coverage of a SDNX nozzle is the same as for other Sinorix™nozzles with similar orifice diameter, and can be limited by local regulations. The agent flow is only determined by the inlet orifice of the nozzle.
- The nozzle coefficients for SDNX nozzles are stored in the VdS hydraulic calculation software nozzle coefficient files (.noz) (under nozzle name "SDNX-x" in tabs #8 and #9).
- As the nozzle orifice diameter is a flow determining parameter, calculation for a SDNX nozzle is the same as for a nozzle with one drilling.

Mounting

Pre-mounting:

- Check that the nozzle orifice and the location of the nozzle in the discharge piping network are appropriate for the room to be protected.
- Ensure that piping network supports are positioned so that the thrust cannot move the distribution nozzle when the extinguishant is released. This is especially important for the SDNX-W nozzle, whose asymmetrical spray pattern creates a strong force to the nozzle and the piping network.
- Check and clean the piping network from dust and small particles which could obstruct the diffuser holes during discharge.
- Clean and deburr the piping if necessary.
- Check that the nozzle is clean.

To mount the nozzle:

- Apply sealant to the discharge piping thread.
- Screw the nozzle on the piping thread.
- Tighten the nozzle using a 41 mm open-end wrench.
- Direct the nozzle jets to provide an even distribution of the extinguishant in the protected room.
- Check that there are no obstacles in the path of the nozzle jets.
- Ensure that there is sufficient space around the nozzle to guarantee effective discharge of the extinguishant.
- Do not direct nozzle jets towards any sensitive equipment such as servers or storage racks.

Check that the nozzle distribution holes are directed as defined when the installation was designed.

Maintenance

Storage

- Store in its original packaging, protected from shocks.
- Store in a clean and dry location, protected from bad weather.

Inspection

- Check that the product is in good condition.
- Check that each fitting has been tightened using the appropriate wrench. Correct if necessary.
- Check that the nozzle distribution holes are not obstructed.

- Check that the nozzle orifice and the location of the nozzle in the discharge piping network are appropriate for the room to be protected.
- If the diffuser must be cleaned, follow the steps hereafter.

Removing the diffuser

1. Take note of the orifice diameter, location and orientation of the nozzle.
2. Partly loosen both screws [6] using an 8 mm hexagon wrench.
3. Remove the diffuser [2].

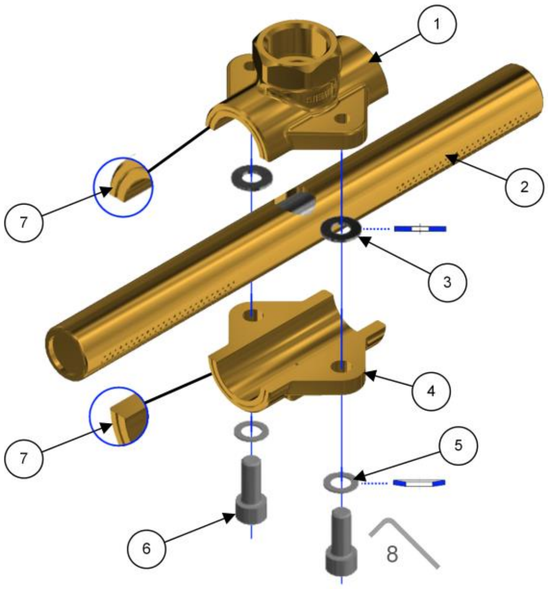
Putting the diffuser back in place

1. Insert the diffuser [2] between the upper [4] and lower [1] parts of the T-piece and fix it using the guiding pin.
2. Carefully tighten both screws symmetrically using an 8 mm hexagon wrench.
   Torque: 25 Nm.
3. Ensure that the gap between the upper and lower parts of the T-Piece is the same on both sides.

Reassembling the SDNX nozzle

If the nozzle has been disassembled, reassemble it as follows:

1. Insert the diffuser [2] between the upper [4] and lower [1] parts of the T-piece and fix it using the guiding pin.
   NOTICE! **Make sure to mount the T-piece placing the grooves [7] on one side of the upper and lower parts.**
2. Piece together the two T-piece parts:
   - slide the spring washers [5] onto the screws [6],
   - place the intermediary washers [3],
   - screw in both screws.
3. Carefully tighten both screws symmetrically using an 8 mm hexagon wrench.
   Torque: 25 Nm.
4. Check that the gap between the upper and lower parts of the T-Piece is the same on both sides.
5. Place the SDNX nozzle back to its initial location, as noted before disassembly.



The frequency of the product inspection is subject to applicable local regulations. For more information, refer to the maintenance documentation.

Technical data

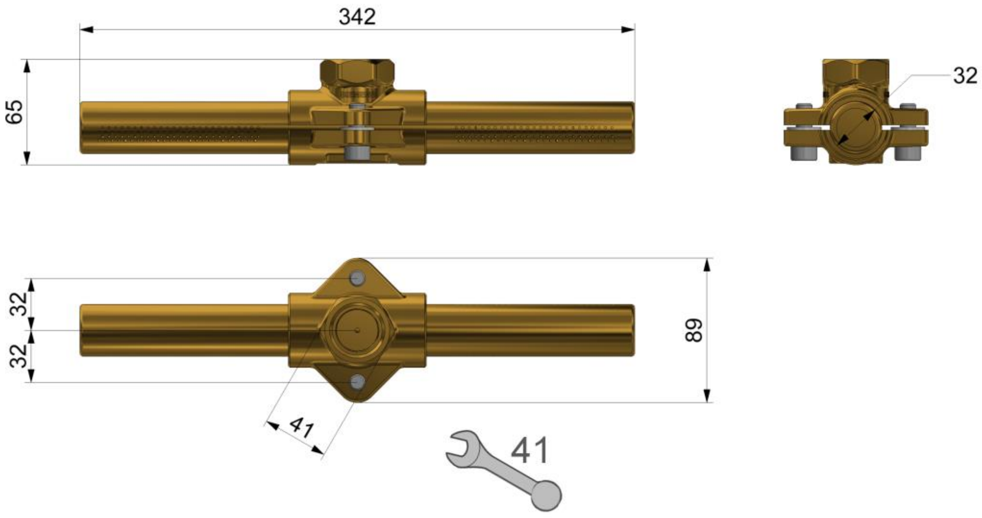
Technical data	
Nominal diameter	DN25
Maximum operating pressure	100 bar
Thread	G 1"
Extinguishant	IG-01, IG-55, IG-100, IG-541
Material	Brass (CW614N/CW617N), stainless steel
Operating temperature	-20 °C to +50 °C
Transport and storage temperature	-40 °C to +65 °C
Weight	2.50 kg

Marking	
	SDNX-x S54476-C280-Cx ØX.X (orifice diameter) WP 100B VdS G323003 Revision WW/YY (Week / Year)

Certifications and compliances	
RoHS	Compliant
VdS	G323003

Dimensions

Dimensions in mm



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