

Rox siphon type DS

Technical Information

03-2023



image: siphon type DS, brand ROX

Characteristics of functions and fields of application

ROX-Siphon Type DS is a chargeable siphon to drain air-handling units in the range of coolers, humidifiers or other wet areas with excess pressure in comparison to the surroundings.

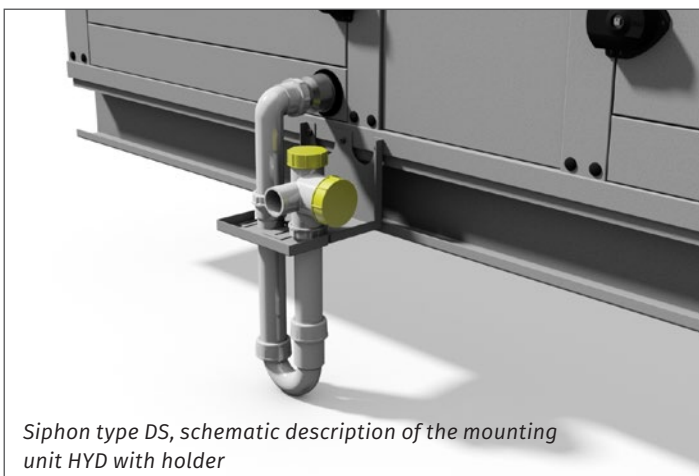
Considering an extra with the factor of $f = 1,5$ for pressure surges during the operation of the system (quick-acting flaps etc.) the pipe heights resist a maximum excess pressure of $P = 1700\text{Pa}$. For higher pressures a prolongation of both pipes (8) and (14) is possible with commercial elements. For lower pressures the pipes can be shortened accordingly or removed. To discharge the parts of the units during non-operation the outlet must be lower than the inlet.

Description

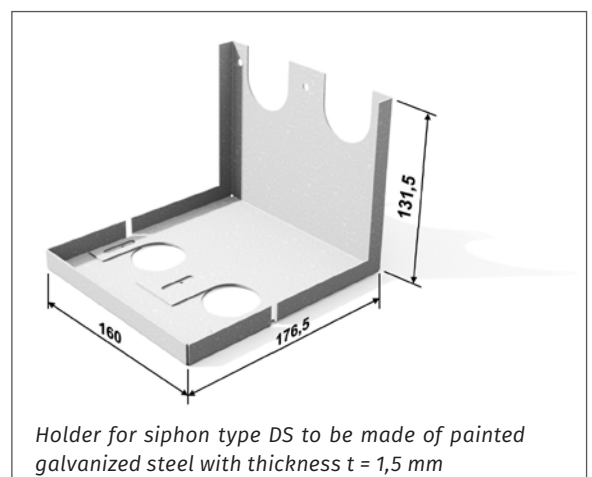
ROX-Siphon with screw cover for charge and revision, for drainage of air-handling units with excess pressure in comparison to the surroundings, ROX-Siphon with screw cover for charge and revision, for drainage of air-handling units with excess pressure in comparison to the surroundings, variable arrangement of discharge and adjustable height of installation. Suitable for maximal excess pressure of $P = 1700\text{ Pa}$ at safety factor $f = 1,5$ for pressure surges in the system.

- Execution in PP (polypropylene)
- Total height max. $h = 405\text{ mm}$
- Connection of inlet by squeezing screw or rubber sleeve for unit discharges $\frac{3}{4}$ ", 1 ", $1\frac{1}{4}$ " or $1\frac{1}{2}$ "
- Diameter of discharge $d = 40\text{ mm}$
- Manufactured by ROX, type DS

Mounting example siphon DS with holder



Siphon type DS, schematic description of the mounting unit HYD with holder



Holder for siphon type DS to be made of painted galvanized steel with thickness $t = 1,5\text{ mm}$

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Mounting instructions

Siphon Installation

One siphon Type DS must be provided for each unit discharge at the pressure side. The installation is shown in the drawing. The length of bend (5) and pipes (6) and (9) must be adapted to the existing excess pressure. For unit discharges from 3/4" to 1 1/2" supply includes connecting pieces and rubber sleeves, parts (1) and (2).

The siphon should not be connected directly to a sewer pipe, but have a free run out. For longer pipes from siphon to outlet provide for sufficient aeration and ventilation, diameter and slope in accordance with the regulations of sanitary techniques.

Before taking the air-handling system into operation the siphon must be filled with water through the fillinghole (locking cap 13). To ensure a faultfree water discharge, the siphon must always be able to run out unhindered. The connection is done by one of the delivered adapters (1) and (2).

Maintenance

To avoid loss of air in the air-handling unit check water level in the siphon in suitable intervals and refill if necessary. Also an eventual necessary cleaning is possible through the locking cap (13). The water inlet of the air-handling unit must be cleaned regularly. The function of the drainage during operation with condensates must be controlled, at least every 3 months.

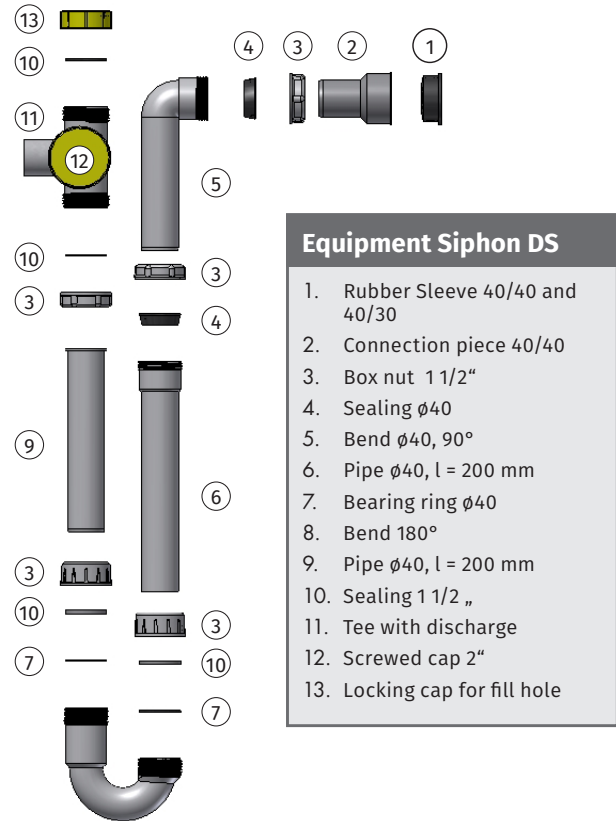


Image 1: exploded view siphon typ DS

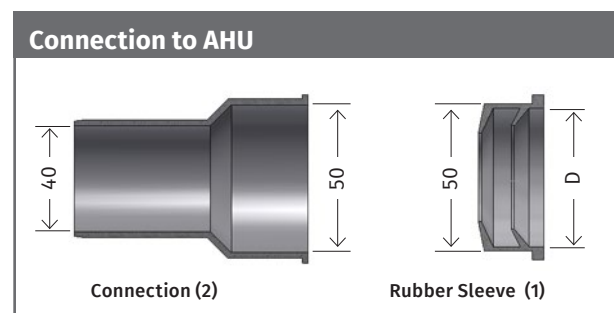


Image 3: Connection to AHU

Code letters

- d** Diameter drain siphon (d = 40 mm)
- f** Safety factor (f = 1,5 mm)
- h** Maximum height of siphon (h ≤ 405 mm)
- x** Height of base frame in mm
- B** Thickness of floor in mm
- D** Diameter drain AHU
- G** Height of base frame in mm
- H** Pressure height
- P** Maximum excess pressure in Pa
- R** Base frame, minimum height

Image 2: Code letters

Usage of connections

Drain	Diameter (mm)	Rubber Sleeve
3/4"	28 – 34	1b
1"	28 – 34	1b
1 1/4"	38 – 44	1a
1 1/2"	without connection piece, should be sealed with permanent elastic material	

Table 1: Connection siphon type DS

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Mounting instructions

Height of base frame

The minimum height of the fundament respectively the base frame R [mm] must be adjusted to the construction of the unit in the range of the condensate inlet, the excess pressure P [Pa] and the height of pressure resulting here of $H = [mm]$. The distance between the middle of the inlet of the siphons and the floor must be at least $x = 1,5xH + 85 [mm]$.

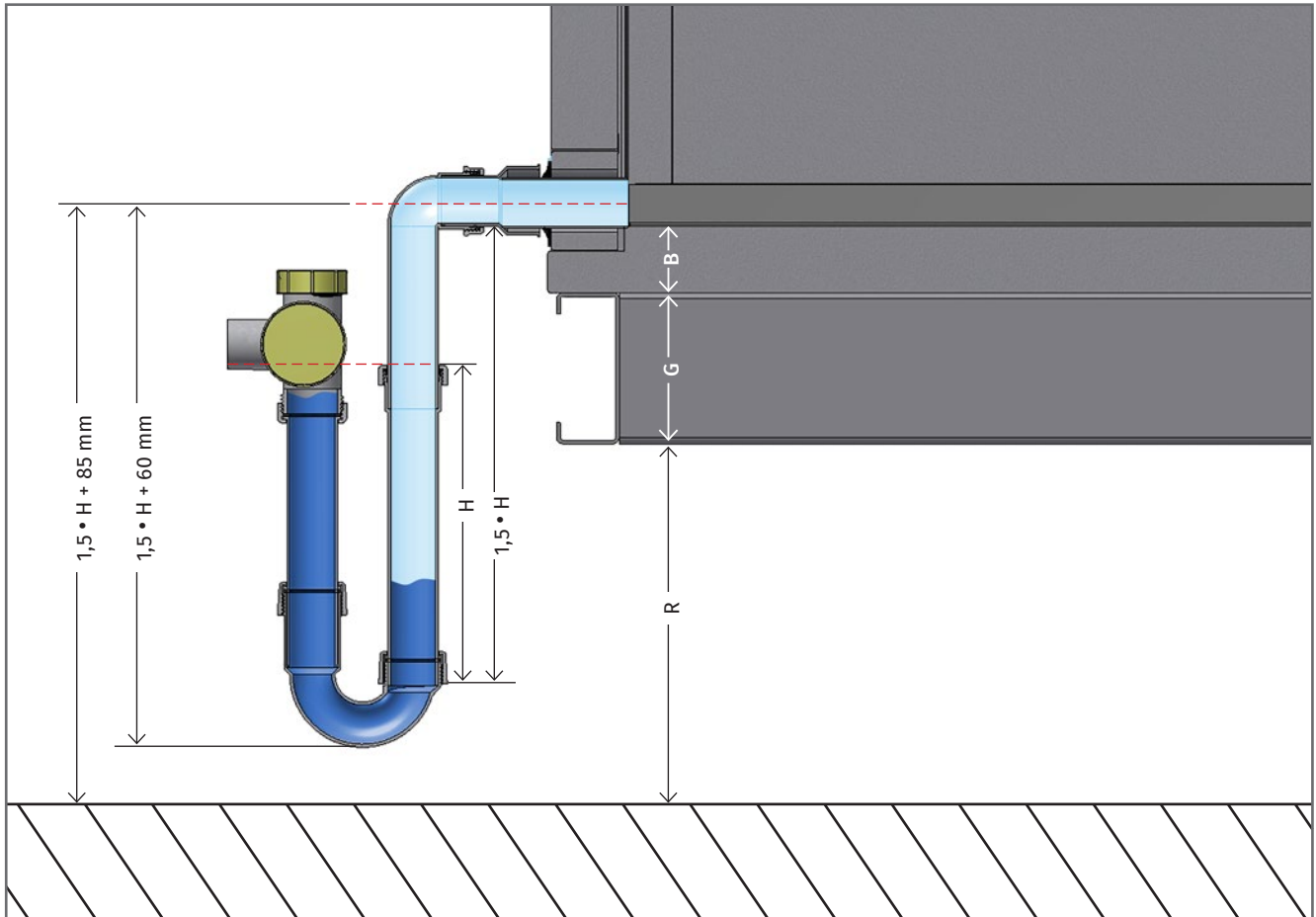


Image 4: Presentation of installation (check code letters under image 2)

Calculation of the installation length

With the help of the system overpressure (P), the minimum height H of the siphon can be calculated with formula 1. Then, with formula 2 and the result for H, the minimum height of the base frame (R) above the ground can be calculated. In addition, the basic frame thickness (G) and the bottom thickness (B) must be known. All lengths are in mm. The typical floor thickness (B) is 53 mm. The exact dimensions for B and G must always be taken from the technical documentation, as device-dependent deviations are possible.

The calculation formulae:

Pressure height H (in mm)

$$H = \frac{P}{10}$$

Minimum height of base frame R (in mm)

$$R = 1,5 \cdot H + 85 \text{ mm} - (G + B + 21 \text{ mm})$$

Minimum distance of bottom to the input middle of siphon x (in mm)

$$x = 1,5 \cdot H + 85 \text{ mm}$$

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Price

Siphon, type DS, brand ROX

Order number: 1270948

Siphon holder

Order number: 5400530



Designation	Order number
Siphon DS	1270948
Siphon holder DS	5400530

Contact	
Company	
Name	
City	
Street	
Phone number	

Order options:

- ✓ Phone +49 2743 807-0 or Fax +49 2743 807-153
- ✓ Sent by email to info@rox-online.de
- ✓ Online under www.rox-online.de/shop



Kälteanlagen zertifiziert
nach Druckgeräterichtlinie
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