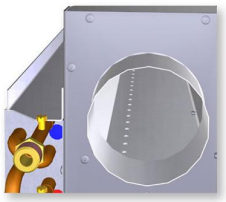
TROX® TECHNIK
The art of handling air



Conforme à VDI 6022

# QLI

## INDUCTION-TYPE DISPLACEMENT FLOW DIFFUSER IN NOMINAL LENGTHS OF 900, 1200 AND 1500 MM, WITH VERTICAL HEAT EXCHANGER AND CONDENSATE DRIP TRAY

Induction-type displacement flow diffuser with 2-pipe or 4-pipe heat exchanger, for installation under a sill. The condensate drip tray is useful if the temperature temporarily falls below the dew point.

- High heating and cooling capacity with a low conditioned primary air volume flow rate and low sound power level
- High comfort levels due to low airflow velocity in the occupied zone
- Three nozzle variants to optimise induction based on demand
- Two different heat exchanger positions

Optional equipment and accessories

- Control package
- Fixing systems for wall and floor fixing
- Powder coating in many different colours, e.g. RAL CLASSIC or NCS

## Application

Application

- Induction-type displacement flow diffusers of Type QLI for installation under a sill
- High comfort levels due to low-turbulence airflow and low airflow velocity in the occupied zone
- 2-pipe or 4-pipe heat exchangers enable good comfort levels with a low conditioned primary air volume flow rate
- Energy-efficient solution since water is used as a medium for heating and cooling
- Inducing displacement flow
- Choice of location for primary air spigot at a narrow side; end cap may have to be changed accordingly

Special characteristics

- Low-turbulence supply air discharge as inducing displacement flow
- Vertical heat exchanger as 2-pipe or 4-pipe system, optional condensate drip tray including condensate drain that can be connected to a condensate pipe (to be provided by others)
- Water connections at the narrow side, G½" external thread and flat seal

## Description

Variants

- WVL: Heat exchanger at the front, water connections on the left
- WVR: Heat exchanger at the front, water connections on the right
- WHL: Heat exchanger at the rear, water connections on the left
- WHR: Heat exchanger at the rear, water connections on the right

Construction

- Galvanised
- P1: Powder-coated RAL 9005, black, gloss level 70 %

Accessories

- W0: Wall fixing
- B0: Floor fixing
- WB: Wall and floor fixing
- Condensate drip tray

Useful additions

- Connecting hoses
- Control equipment consisting of a control panel including a controller with integral room temperature sensor; valves and valve actuators; and compression couplers

Construction features

- Spigot is suitable for circular ducts to EN 1506 or EN 13180
- Three nozzle variants to optimise induction based on demand
- Vent valves

Materials and surfaces

- Casing, supply air grille, and primary air plenum with punched nozzles are made of galvanised sheet steel
- Heat exchanger with copper tubes and aluminium fins
- Exposed surfaces either galvanised or black (RAL 9005)

# INFORMACIÓN TÉCNICA

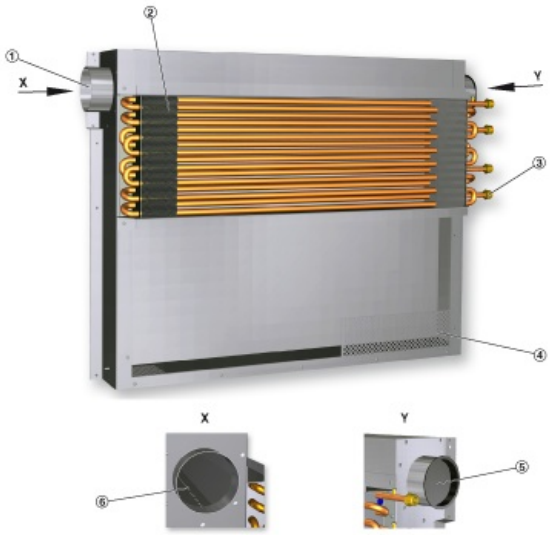
Functional description

Induction-type displacement flow diffusers provide centrally conditioned primary air (fresh air) to the room and use heat exchangers for cooling and/or heating.

The primary air is discharged through nozzles and induces secondary air (room air), which passes through the heat exchanger.

Primary and secondary air mix and are then supplied to the room, causing only very little turbulence.

**Schematic illustration of QLI**




① Primary air spigot
② Heat exchanger
③ Water connections
④ Supply air grille
⑤ End cap
⑥ Primary air plenum with integral nozzles

| | |
|---|---|
| **Nominal length** | 900, 1200, 1500 mm |
| **Length** | 975, 1275, 1575 mm |
| **Width** | 195 mm |
| **Height** | 729 mm |
| **Primary air volume flow rate** | 4 – 50 l/s, 14 – 180 $m^3/h$ |
| **Cooling capacity** | Up to 1000 W |
| **Heating capacity** | Up to 750 W |
| **Max. operating pressure, water side** | 6 bar |
| **Max. operating temperature, water side** | 75 °C |

**Quick sizing**

| $L_N$ | ① | Primary air | | | ② | Cooling | | | | Heating | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $\dot{V}_{Pr}$ | | $\Delta p_t$ | $L_{WA}$ | 2-pipe and 4-pipe systems | | | | 4-pipe system | | |
| | | | | | | $\dot{Q}_{tot}$ | $\dot{Q}_{WK}$ | $\Delta t_W$ | $\Delta p_W$ | $\dot{Q}_{WH} = \dot{Q}_{tot}$ | $\Delta t_W$ | $\Delta p_W$ |
| | | l/s | m³/h | Pa | dB (A) | W | | K | kPa | W | K | kPa |
| 900 | M | 4 | 14 | 53 | <20 | 237 | 188 | 1.5 | 3.1 | 228 | 3.9 | 0.2 |
| | | 6 | 22 | 121 | 24 | 332 | 260 | 2.0 | 3.1 | 314 | 5.4 | 0.2 |
| | | 8 | 29 | 217 | 32 | 415 | 318 | 2.5 | 3.1 | 386 | 6.6 | 0.2 |
| | G | 7 | 25 | 40 | <20 | 317 | 233 | 1.8 | 3.1 | 281 | 4.8 | 0.2 |
| | | 11 | 40 | 102 | 22 | 456 | 323 | 2.5 | 3.1 | 392 | 6.7 | 0.2 |
| | | 15 | 54 | 191 | 31 | 571 | 391 | 3.1 | 3.1 | 474 | 8.2 | 0.2 |
| | U | 17 | 43 | 42 | <20 | 387 | 242 | 1.9 | 3.1 | 293 | 5.0 | 0.2 |
| | | 19 | 68 | 108 | 28 | 550 | 321 | 2.5 | 3.1 | 389 | 6.7 | 0.2 |
| | | 26 | 94 | 204 | 37 | 677 | 364 | 2.8 | 3.1 | 441 | 7.6 | 0.2 |
| 1200 | M | 5 | 18 | 45 | <20 | 293 | 233 | 1.8 | 3.8 | 281 | 4.8 | 0.3 |
| | | 8 | 29 | 117 | 23 | 431 | 335 | 2.6 | 3.8 | 406 | 7.0 | 0.3 |
| | | 11 | 40 | 222 | 32 | 548 | 416 | 3.3 | 3.8 | 505 | 8.7 | 0.3 |
| | G | 9 | 32 | 37 | <20 | 401 | 293 | 2.3 | 3.8 | 355 | 6.1 | 0.3 |
| | | 15 | 54 | 106 | 23 | 601 | 420 | 3.3 | 3.8 | 510 | 8.8 | 0.3 |
| | | 21 | 46 | 208 | 33 | 761 | 508 | 4.0 | 3.8 | 618 | 10.6 | 0.3 |
| | U | 16 | 58 | 45 | <20 | 506 | 313 | 2.4 | 3.8 | 379 | 6.5 | 0.3 |
| | | 25 | 90 | 112 | 31 | 709 | 408 | 3.2 | 3.8 | 495 | 8.5 | 0.3 |
| | | 34 | 122 | 207 | 40 | 871 | 461 | 3.6 | 3.8 | 560 | 9.6 | 0.3 |
| 1500 | M | 6 | 22 | 41 | <20 | 347 | 275 | 2.2 | 4.5 | 333 | 5.7 | 0.4 |
| | | 10 | 36 | 115 | 23 | 526 | 405 | 3.2 | 4.5 | 492 | 8.5 | 0.4 |
| | | 14 | 50 | 228 | 33 | 674 | 505 | 3.9 | 4.5 | 614 | 10.6 | 0.4 |
| | G | 11 | 40 | 36 | <20 | 483 | 350 | 2.7 | 4.5 | 424 | 7.3 | 0.4 |
| | | 19 | 68 | 111 | 25 | 737 | 508 | 4.0 | 4.5 | 618 | 10.6 | 0.4 |
| | | 27 | 97 | 225 | 35 | 939 | 613 | 4.8 | 4.5 | 747 | 12.9 | 0.4 |
| | U | 20 | 72 | 49 | 23 | 621 | 380 | 3.0 | 4.5 | 461 | 7.9 | 0.4 |
| | | 28 | 101 | 98 | 33 | 802 | 464 | 3.6 | 4.5 | 564 | 9.7 | 0.4 |
| | | 36 | 130 | 163 | 41 | 956 | 521 | 4.1 | 4.5 | 634 | 10.9 | 0.4 |

① Nozzle variant ② Air-regenerated noise

**Reference values**

| Parameter | Cooling | Heating |
|---|---|---|
| $t_{RL}$ | 26 °C | 22 °C |
| $t_{Pr}$ | 16 °C | 22 °C |
| $t_{WV}$ | 16 °C | 50 °C |
| $\dot{V}_W$ | 110 l/h | 50 l/h |

Induction-type displacement flow diffuser of Type QLI, with one-way discharge and high thermal output, providing high thermal comfort levels.

For installation on a wall or under the sill

The units consist of a casing with a primary air plenum, spigot, non-combustible nozzles, and vertical heat exchanger; a condensate drip tray is optional.

Special characteristics

- Low-turbulence supply air discharge as inducing displacement flow
- Vertical heat exchanger as 2-pipe or 4-pipe system, optional condensate drip tray including condensate drain that can be connected to a condensate pipe (to be provided by others)
- Water connections at the narrow side, G½" external thread and flat seal

Materials and surfaces

- Casing, supply air grille, and primary air plenum with punched nozzles are made of galvanised sheet steel
- Heat exchanger with copper tubes and aluminium fins
- Exposed surfaces either galvanised or black (RAL 9005)

Construction

- Galvanised
- P1: Powder-coated RAL 9005, black, gloss level 70 %

Technical data

- Nominal length: 900, 1200, 1500 mm
- Length: 975, 1275, 1575 mm
- Width: 195 mm
- Height: 729 mm
- Primary air volume flow rate: 4 – 50 l/s or 14 – 180 m³/h
- Cooling capacity: up to 1000 W
- Heating capacity: up to 750 W
- Max. operating pressure: 6 bar
- Max. operating temperature: 75 °C

## QLI

**QLI – 2 – M – WVR – KW / 900 / W0 / P1 / VS**

1 2 3 4 5 6 7 8 9

### 1 Type
**QLI** Under sill induction unit

### 2 Heat exchanger
**2** 2-pipe
**4** 4-pipe

### 3 Nozzle variants
**M** Medium
**G** Large
**U** Extra large

### 4 Arrangement of heat exchanger and water connections
**WVL** Heat exchanger at the front, water connections on the left
**WVR** Heat exchanger at the front, water connections on the right
**WHL** Heat exchanger at the rear, water connections on the left
**WHR** Heat exchanger at the rear, water connections on the right

### 5 Condensate drip tray
No entry: none
**KW** With

### 6 Nominal length [mm]
**900**
**1200**
**1500**

### 7 Fixing material (supplied separately)
No entry: none
**W0** Wall fixing
**B0** Floor fixing
**WB** Wall and floor fixing

### 8 Surface
No entry: galvanised steel
**P1** Powder-coated RAL 9005, black, gloss level 70 %

### 9 Valves and actuators
No entry: none
**VS** With