

➤ Pneumatic atomizing nozzles for atomizing viscous media

Series 176 ViscoMist

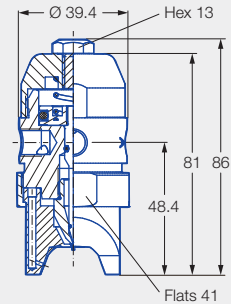
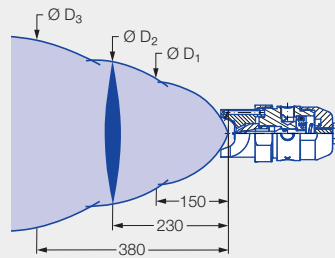


The ViscoMist series enables the independent regulation of both atomizing air and fan air. Spray angle and droplet size can thus be individually adjusted.

The integrated, pneumatically controlled shut-off/clean-out needle opens and closes the liquid orifice and also cleans it during each closing procedure. This is of particular advantage when spraying viscous liquids. Thanks to their modular design, the nozzles of the ViscoMist series can be optimally adapted to the respective spraying process. To do this, it is simply enough to replace the nozzle components relevant for the flow rate and spray pattern. The housing stays the same.



Series 176 ViscoMist



External mixing nozzle for viscous liquids, e.g. for:

- Coating processes
- Moisturising
- Lubrication
- Glazing
- Disinfection

One nozzle – several spray characters:

- Spray characters
 - Solid stream
 - Full cone
 - Flat fan
- Independent regulation of liquid, atomizing air and fan air
- Fluid circulation possible (nozzle body with five connections)

Nozzle sizes:

- \varnothing 0.38 mm to 2.54 mm

Valve position:

- Normally closed, fail-safe with loss of air

Signal air pressure:

- Min. 2 bar, max. 3 bar

Cycles per minute:

- 180 cycles/min (short term)

Connection thread:

- 1/8 BSPP
- NPT thread available on request

Weight:

- 550 g

Material:

- 1Y (stainless steel 316L)

Flow rate range:

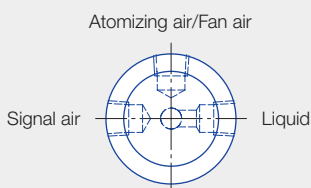
- Water: 7.8 to 307.0 l/h, at 2 bar
- Air 7.5 to 28.4 m³/h in normal condition, at 2 bar

Atomizing air/Signal air/Fan air:

- The atomizing air causes the liquid to atomize at the nozzle orifice. The fan air allows the spray characteristics to be adapted to the application. The nozzle is activated by the signal air.

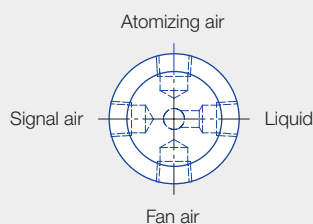
Nozzle body configurations

Nozzle body configuration 2



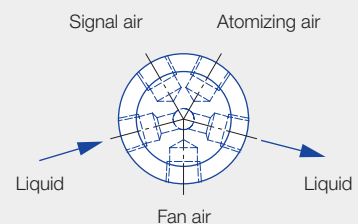
Version with three connections

Nozzle body configuration 4



Version with four connections

Nozzle body configuration 5



Version with five connections

| Ordering no. | Narrowest free cross section Ø [mm] | Liquid | | Air | | | Spray dimensions [mm] at distance D ₁ , D ₂ and D ₃ | | | | | | | | | | | | | | | | |
|--|-------------------------------------|-------------------------|---------------|--------------------------|-----------------------------------|-----------------------------|--|-------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| | | Liquid pressure p [bar] | V water [l/h] | Air pressure p air [bar] | Atomizing air [m ³ /h] | Fan air [m ³ /h] | Atomizing air [bar] | Liquid pressure p [bar] | Fan air [bar] | | | | | | | | | | | | | | |
| | | | | | | | | | 0.00* | | | 0.35 | | | 0.70 | | | 1.00 | | | 1.50 | | |
| | | | | | | | | | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm |
| 176.201.1Y.11.00 176.401.1Y.11.00 176.501.1Y.11.00 | 0.38 | 0.15 | 1.89 | 0.15 | 0.75 | 1.00 | 0.30 | 0.35 | 40 | 60 | 100 | 150 | 180 | 200 | 180 | 230 | 290 | 180 | 230 | 250 | 180 | 230 | 280 |
| | | 0.30 | 2.80 | 0.30 | 1.09 | 1.44 | | 0.70 | 40 | 50 | 80 | 150 | 200 | 280 | 200 | 270 | 330 | 230 | 280 | 330 | 230 | 280 | 330 |
| | | 0.70 | 4.39 | 0.70 | 1.63 | 2.28 | | 1.00 | - | - | - | 170 | 200 | 280 | 200 | 300 | 380 | 230 | 300 | 360 | 250 | 300 | 380 |
| | | 1.00 | 5.49 | 1.00 | 2.02 | 2.89 | | 1.50 | - | - | - | 170 | 200 | 360 | 200 | 250 | 340 | 250 | 300 | 360 | 280 | 320 | 380 |
| | | 1.35 | 6.40 | 1.35 | 2.38 | 3.45 | 1.00 | 0.35 | 40 | 60 | 100 | 100 | 130 | 170 | 130 | 180 | 230 | 150 | 230 | 280 | 170 | 220 | 300 |
| | | 1.70 | 7.19 | 1.70 | 2.77 | 3.99 | | 0.70 | 40 | 60 | 100 | 80 | 110 | 180 | 130 | 180 | 230 | 150 | 200 | 230 | 180 | 230 | 280 |
| | | 2.00 | 7.91 | 2.00 | 3.11 | 4.55 | | 1.00 | 30 | 40 | 80 | 80 | 130 | 180 | 130 | 180 | 250 | 150 | 230 | 280 | 180 | 230 | 330 |
| | | 2.40 | 8.63 | 2.40 | 3.48 | 5.11 | | 1.50 | - | - | - | 100 | 150 | 200 | 150 | 190 | 250 | 180 | 250 | 360 | 190 | 270 | 360 |
| | | 2.75 | 9.24 | 2.75 | 3.87 | 5.67 | 2.00 | 0.35 | 40 | 60 | 100 | 50 | 80 | 110 | 90 | 130 | 150 | 100 | 150 | 190 | 150 | 200 | 240 |
| | | 3.15 | 9.80 | 3.15 | 4.23 | 6.24 | | 0.70 | 40 | 60 | 90 | 60 | 90 | 140 | 80 | 100 | 140 | 110 | 180 | 230 | 150 | 200 | 250 |
| | | 3.50 | 10.33 | 3.50 | 4.60 | 6.78 | | 1.00 | 40 | 60 | 90 | 70 | 90 | 140 | 100 | 130 | 190 | 130 | 200 | 250 | 150 | 200 | 250 |
| | | 4.00 | 11.17 | 4.00 | 5.22 | 7.70 | | 1.50 | - | - | - | 60 | 80 | 130 | 110 | 140 | 180 | 140 | 190 | 230 | 180 | 230 | 300 |
| 176.202.1Y.11.00 176.402.1Y.11.00 176.502.1Y.11.00 | 0.58 | 0.15 | 4.05 | 0.15 | 0.78 | 1.00 | 0.30 | 0.35 | 40 | 60 | 100 | 140 | 190 | 270 | 220 | 250 | 300 | 190 | 240 | 280 | 200 | 230 | 300 |
| | | 0.30 | 5.90 | 0.30 | 1.10 | 1.44 | | 0.70 | - | - | - | 180 | 240 | 250 | 230 | 300 | 360 | 280 | 330 | 410 | 300 | 340 | 410 |
| | | 0.70 | 9.27 | 0.70 | 1.67 | 2.28 | | 1.00 | - | - | - | 150 | 200 | 230 | 250 | 290 | 430 | 300 | 340 | 460 | 300 | 370 | 560 |
| | | 1.00 | 11.47 | 1.00 | 2.06 | 2.89 | | 1.50 | - | - | - | - | - | - | 250 | 290 | 360 | 280 | 340 | 430 | 360 | 410 | 480 |
| | | 1.35 | 13.32 | 1.35 | 2.43 | 3.45 | 1.00 | 0.35 | 40 | 50 | 90 | 110 | 140 | 150 | 130 | 170 | 230 | 150 | 180 | 230 | 180 | 220 | 250 |
| | | 1.70 | 14.99 | 1.70 | 2.79 | 3.99 | | 0.70 | 40 | 60 | 90 | 110 | 130 | 190 | 140 | 180 | 240 | 170 | 220 | 250 | 200 | 230 | 280 |
| | | 2.00 | 16.43 | 2.00 | 3.14 | 4.55 | | 1.00 | - | - | - | 100 | 140 | 200 | 170 | 200 | 280 | 190 | 230 | 330 | 200 | 250 | 330 |
| | | 2.40 | 17.90 | 2.40 | 3.52 | 5.11 | | 1.50 | - | - | - | - | - | - | 170 | 200 | 300 | 200 | 250 | 360 | 250 | 300 | 380 |
| | | 2.75 | 19.23 | 2.75 | 3.91 | 5.67 | 2.00 | 0.35 | 40 | 50 | 80 | 60 | 80 | 110 | 90 | 130 | 170 | 110 | 150 | 180 | 130 | 200 | 230 |
| | | 3.15 | 20.44 | 3.15 | 4.28 | 6.24 | | 0.70 | 40 | 40 | 80 | 70 | 100 | 130 | 110 | 140 | 170 | 140 | 180 | 190 | 150 | 200 | 250 |
| | | 3.50 | 21.57 | 3.50 | 4.66 | 6.78 | | 1.00 | 30 | 50 | 90 | 70 | 100 | 130 | 100 | 150 | 180 | 130 | 180 | 230 | 150 | 200 | 250 |
| | | 4.00 | 23.32 | 4.00 | 5.22 | 7.70 | | 1.50 | - | - | - | 70 | 100 | 150 | 110 | 150 | 230 | 130 | 180 | 240 | 170 | 230 | 300 |
| 176.203.1Y.11.00 176.403.1Y.11.00 176.503.1Y.11.00 | 0.79 | 0.15 | 8.36 | 0.15 | 0.48 | 1.00 | 0.30 | 0.35 | - | - | - | 230 | 300 | 410 | 330 | 410 | 480 | 330 | 410 | 510 | 300 | 380 | 460 |
| | | 0.30 | 12.38 | 0.30 | 0.71 | 1.44 | | 0.70 | - | - | - | 230 | 280 | 330 | 300 | 360 | 510 | 410 | 480 | 610 | 430 | 580 | 740 |
| | | 0.70 | 19.19 | 0.70 | 1.16 | 2.28 | | 1.00 | - | - | - | - | - | - | 330 | 410 | 530 | 410 | 460 | 640 | 460 | 530 | 710 |
| | | 1.00 | 23.77 | 1.00 | 1.46 | 2.89 | | 1.50 | - | - | - | - | - | - | 280 | 360 | 460 | 380 | 460 | 610 | 410 | 510 | 580 |
| | | 1.35 | 27.59 | 1.35 | 1.65 | 3.45 | 1.00 | 0.35 | 40 | 60 | 100 | 150 | 200 | 270 | 170 | 230 | 280 | 230 | 300 | 380 | 280 | 360 | 410 |
| | | 1.70 | 31.04 | 1.70 | 1.89 | 3.99 | | 0.70 | - | - | - | 150 | 200 | 250 | 230 | 300 | 380 | 300 | 360 | 460 | 330 | 380 | 430 |
| | | | | | | | | 1.00 | - | - | - | - | - | - | 230 | 280 | 410 | 300 | 380 | 510 | 300 | 410 | 480 |
| | | | | | | | | 1.50 | - | - | - | - | - | - | 230 | 280 | 380 | 280 | 380 | 510 | 330 | 430 | 530 |

* A cone-shaped spray pattern is produced without fan air.





| Ordering no. | Narrowest free cross section Ø [mm] | Liquid | | Air | | | Spray dimensions [mm] at distance D ₁ , D ₂ and D ₃ | | | | | | | | | | | | | | | | |
|--|-------------------------------------|-------------------------|---------------|--------------------------|-----------------------------------|-----------------------------|--|-------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| | | Liquid pressure p [bar] | V water [l/h] | Air pressure p air [bar] | Atomizing air [m ³ /h] | Fan air [m ³ /h] | Atomizing air [bar] | Liquid pressure p [bar] | Fan air [bar] | | | | | | | | | | | | | | |
| | | | | | | | | | 0.00* | | | 0.35 | | | 0.70 | | | 1.00 | | | 1.50 | | |
| | | | | | | | | | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm |
| 176.203.1Y.11.00 176.403.1Y.11.00 176.503.1Y.11.00 | 0.79 | 2.00 | 33.99 | 2.00 | 2.14 | 4.55 | 2.00 | 0.35 | 30 | 60 | 80 | 100 | 140 | 180 | 150 | 200 | 240 | 190 | 230 | 300 | 200 | 230 | 280 |
| | | 2.40 | 36.75 | 2.40 | 2.40 | 5.11 | | 0.70 | - | - | - | 130 | 150 | 200 | 170 | 230 | 330 | 230 | 300 | 380 | 250 | 300 | 360 |
| | | 2.75 | 39.44 | 2.75 | 2.65 | 5.67 | | 1.00 | - | - | - | 130 | 180 | 200 | 180 | 230 | 330 | 230 | 300 | 410 | 250 | 320 | 410 |
| | | 3.15 | 41.98 | 3.15 | 2.94 | 6.24 | | 1.50 | - | - | - | - | - | - | 180 | 230 | 330 | 240 | 300 | 430 | 250 | 330 | 430 |
| | | 3.50 | 44.32 | 3.50 | 3.16 | 6.78 | 2.75 | 0.35 | 40 | 60 | 90 | 100 | 130 | 180 | 140 | 180 | 230 | 170 | 200 | 280 | 190 | 230 | 300 |
| | | 4.00 | 47.92 | 4.00 | 3.65 | 7.70 | | 0.70 | - | - | - | 110 | 150 | 200 | 150 | 200 | 250 | 180 | 230 | 300 | 230 | 280 | 380 |
| | | | | | | | | 1.00 | - | - | - | - | - | - | 180 | 230 | 300 | 200 | 250 | 360 | 230 | 280 | 380 |
| 176.204.1Y.11.00 176.404.1Y.11.00 176.504.1Y.11.00 | 1.07 | 0.15 | 16.88 | 0.15 | 2.34 | 2.04 | 0.30 | 0.35 | - | - | - | 150 | 200 | 300 | 300 | 410 | 460 | 330 | 410 | 560 | 300 | 410 | 510 |
| | | 0.30 | 24.38 | 0.30 | 3.47 | 2.94 | | 0.70 | - | - | - | - | - | - | 300 | 380 | 1,040 | 360 | 430 | 530 | 410 | 480 | 640 |
| | | 0.70 | 37.28 | 0.70 | 5.59 | 4.60 | | 1.00 | - | - | - | - | - | - | 250 | 380 | 510 | 360 | 460 | 580 | 410 | 510 | 690 |
| | | 1.00 | 45.80 | 1.00 | 7.32 | 5.81 | | 1.50 | - | - | - | - | - | - | 250 | 380 | 480 | 330 | 380 | 530 | 410 | 510 | 660 |
| | | 1.35 | 52.91 | 1.35 | 8.83 | 6.90 | 1.00 | 0.35 | 40 | 60 | 80 | 110 | 140 | 190 | 150 | 200 | 250 | 200 | 250 | 330 | 250 | 300 | 430 |
| | | 1.70 | 59.20 | 1.70 | 10.19 | 7.99 | | 0.70 | - | - | - | 100 | 140 | 230 | 170 | 200 | 270 | 220 | 270 | 380 | 250 | 330 | 430 |
| | | 2.00 | 64.99 | 2.00 | 11.55 | 9.06 | | 1.00 | - | - | - | 100 | 130 | 180 | 150 | 190 | 300 | 220 | 250 | 380 | 250 | 300 | 480 |
| | | 2.40 | 70.55 | 2.40 | 12.91 | 10.13 | 2.00 | 0.35 | 40 | 60 | 90 | 80 | 100 | 140 | 100 | 130 | 180 | 110 | 170 | 230 | 150 | 190 | 280 |
| | | 2.75 | 75.51 | 2.75 | 14.31 | 11.21 | | 0.70 | - | - | - | 80 | 100 | 150 | 100 | 130 | 200 | 130 | 170 | 230 | 150 | 200 | 280 |
| | | 3.15 | 80.28 | 3.15 | 15.63 | 12.27 | | 1.00 | - | - | - | 70 | 100 | 150 | 100 | 140 | 200 | 130 | 180 | 250 | 150 | 200 | 280 |
| | | 3.50 | 84.90 | 3.50 | 17.11 | 13.32 | | 1.50 | - | - | - | 70 | 100 | 150 | 110 | 140 | 230 | 130 | 170 | 250 | 150 | 200 | 300 |
| | | 4.00 | 91.56 | 4.00 | 19.49 | 15.12 | 2.75 | 0.35 | 50 | 70 | 100 | 70 | 90 | 140 | 90 | 120 | 180 | 110 | 140 | 200 | 140 | 180 | 250 |
| | | | | | | | | 0.70 | 40 | 70 | 100 | 60 | 90 | 140 | 100 | 130 | 180 | 110 | 150 | 230 | 140 | 190 | 250 |
| | | | | | | | | 1.00 | - | - | - | 70 | 90 | 140 | 100 | 120 | 190 | 110 | 160 | 250 | 150 | 180 | 280 |
| 176.205.1Y.11.00 176.405.1Y.11.00 176.505.1Y.11.00 | 1.32 | 0.15 | 24.60 | 0.15 | 2.17 | 2.04 | 0.30 | 0.35 | - | - | - | 230 | 330 | 460 | 360 | 460 | 530 | 410 | 530 | 640 | 460 | 530 | 660 |
| | | 0.30 | 35.35 | 0.30 | 3.23 | 2.94 | | 0.70 | - | - | - | - | - | - | 330 | 460 | 580 | 410 | 510 | 660 | 410 | 480 | 610 |
| | | 0.70 | 54.31 | 0.70 | 5.16 | 4.60 | | 1.00 | - | - | - | - | - | - | 330 | 410 | 480 | 360 | 460 | 560 | 430 | 560 | 740 |
| | | 1.00 | 66.62 | 1.00 | 6.75 | 5.81 | | 1.50 | - | - | - | - | - | - | - | - | - | 380 | 510 | 660 | 460 | 580 | 810 |
| | | 1.35 | 76.46 | 1.35 | 8.00 | 6.90 | 1.00 | 0.35 | - | - | - | 130 | 170 | 230 | 180 | 230 | 380 | 230 | 290 | 430 | 190 | 360 | 510 |
| | | 1.70 | 86.18 | 1.70 | 9.17 | 7.99 | | 0.70 | - | - | - | 110 | 170 | 230 | 180 | 230 | 330 | 220 | 290 | 410 | 190 | 360 | 510 |
| | | 2.00 | 94.81 | 2.00 | 10.35 | 9.06 | | 1.00 | - | - | - | - | - | - | 190 | 240 | 360 | 230 | 300 | 430 | 270 | 340 | 480 |
| | | 2.40 | 102.95 | 2.40 | 11.55 | 10.13 | 2.00 | 0.35 | 40 | 60 | 90 | 80 | 100 | 150 | 110 | 140 | 200 | 140 | 180 | 250 | 170 | 220 | 330 |
| | | 2.75 | 110.48 | 2.75 | 12.78 | 11.21 | | 0.70 | - | - | - | 70 | 100 | 150 | 110 | 150 | 230 | 130 | 180 | 280 | 170 | 230 | 360 |
| | | 3.15 | 117.52 | 3.15 | 14.00 | 12.27 | | 1.00 | - | - | - | 80 | 100 | 150 | 110 | 140 | 220 | 140 | 190 | 280 | 170 | 230 | 360 |
| | | 3.50 | 124.15 | 3.50 | 15.10 | 13.32 | | 1.50 | - | - | - | 70 | 100 | 150 | 110 | 150 | 200 | 140 | 190 | 300 | 170 | 230 | 360 |
| | | 4.00 | 134.14 | 4.00 | 17.23 | 15.12 | 2.75 | 0.35 | 40 | 60 | 100 | 80 | 100 | 150 | 90 | 130 | 200 | 110 | 150 | 230 | 140 | 180 | 280 |
| | | | | | | | | 0.70 | - | - | - | 60 | 90 | 140 | 100 | 130 | 200 | 110 | 170 | 250 | 150 | 200 | 300 |
| | | | | | | | | 1.00 | - | - | - | 60 | 90 | 130 | 100 | 130 | 200 | 120 | 170 | 240 | 150 | 200 | 300 |
| | | | | | 1.50 | - | - | - | 60 | 90 | 150 | 100 | 130 | 200 | 110 | 180 | 250 | 150 | 200 | 300 | | | |

* A cone-shaped spray pattern is produced without fan air.

| Ordering no. | Narrowest free cross section Ø [mm] | Liquid | | Air | | | Spray dimensions [mm] at distance D ₁ , D ₂ and D ₃ | | | | | | | | | | | | | | | | | | | |
|--|-------------------------------------|-------------------------|----------------|--------------------------|-----------------------------------|-----------------------------|--|-------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|-----|-----|-----|
| | | Liquid pressure p [bar] | V̇ water [l/h] | Air pressure p air [bar] | Atomizing air [m ³ /h] | Fan air [m ³ /h] | Atomizing air [bar] | Liquid pressure p [bar] | Fan air [bar] | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.70 | | | 1.00 | | | 1.40 | | | 1.75 | | | 2.00 | | | | | |
| | | | | | | | | | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | | | |
| Type | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 176.206.1Y.11.00 176.406.1Y.11.00 176.506.1Y.11.00 | 1,70 | 0.15 | 41.71 | 0.15 | 1.53 | 2.04 | 1.00 | 0.35 | 220 | 330 | 510 | 280 | 410 | 610 | 360 | 460 | 660 | - | - | - | - | - | - | | | |
| | | 0.30 | 59.54 | 0.30 | 2.24 | 2.94 | | 0.70 | 240 | 360 | 530 | 330 | 430 | 660 | 360 | 510 | 760 | - | - | - | - | - | - | | | |
| | | 0.70 | 90.88 | 0.70 | 3.47 | 4.60 | | 1.00 | 250 | 360 | 510 | 300 | 430 | 610 | 360 | 510 | 690 | - | - | - | - | - | - | | | |
| | | 1.00 | 111.73 | 1.00 | 4.35 | 5.81 | | 1.50 | - | - | - | 300 | 380 | 560 | 330 | 460 | 610 | - | - | - | - | - | - | | | |
| | | 1.35 | 128.99 | 1.35 | 5.15 | 6.90 | 2.00 | 0.35 | 150 | 230 | 330 | 200 | 280 | 410 | 230 | 300 | 460 | 230 | 330 | 460 | 250 | 330 | 430 | | | |
| | | 1.70 | 144.21 | 1.70 | 5.95 | 7.99 | | 0.70 | 180 | 230 | 300 | 200 | 250 | 380 | 230 | 300 | 460 | 250 | 360 | 480 | 280 | 360 | 510 | | | |
| | | 2.00 | 157.91 | 2.00 | 6.71 | 9.06 | | 1.00 | 150 | 230 | 330 | 180 | 250 | 380 | 230 | 300 | 430 | 250 | 330 | 480 | 280 | 360 | 530 | | | |
| | | 2.40 | 170.48 | 2.40 | 7.53 | 10.13 | | 1.50 | - | - | - | 180 | 250 | 360 | 230 | 280 | 430 | 250 | 330 | 510 | 280 | 360 | 510 | | | |
| | | 2.75 | 182.25 | 2.75 | 8.27 | 11.21 | 2.75 | 0.35 | 140 | 180 | 280 | 180 | 230 | 300 | 180 | 250 | 360 | 200 | 280 | 410 | 200 | 280 | 430 | | | |
| | | 3.15 | 193.26 | 3.15 | 9.07 | 12.27 | | 0.70 | 150 | 200 | 300 | 180 | 230 | 330 | 180 | 250 | 380 | 200 | 280 | 410 | 230 | 300 | 410 | | | |
| | | 3.50 | 203.52 | 3.50 | 9.91 | 13.32 | | 1.00 | 140 | 180 | 280 | 180 | 230 | 330 | 190 | 230 | 380 | 200 | 280 | 410 | 230 | 300 | 430 | | | |
| | | 4.00 | 218.85 | 4.00 | 11.13 | 15.12 | | 1.50 | 130 | 180 | 250 | 150 | 200 | 330 | 180 | 250 | 380 | 200 | 280 | 430 | 230 | 330 | 480 | | | |
| | | 4.00 | 218.85 | 4.00 | 11.13 | 15.12 | 4.00 | 0.35 | 130 | 180 | 250 | 150 | 200 | 300 | 170 | 230 | 330 | 180 | 230 | 360 | 180 | 230 | 360 | 180 | 230 | 360 |
| | | 3.50 | 203.52 | 3.50 | 9.91 | 13.32 | | 0.70 | 130 | 170 | 250 | 150 | 200 | 300 | 180 | 230 | 330 | 180 | 230 | 360 | 180 | 250 | 380 | | | |
| | | 3.15 | 193.26 | 3.15 | 9.07 | 12.27 | | 1.00 | 130 | 180 | 280 | 150 | 200 | 300 | 150 | 230 | 330 | 180 | 250 | 360 | 200 | 250 | 410 | | | |
| | | 2.75 | 182.25 | 2.75 | 8.27 | 11.21 | | 1.50 | - | - | - | 150 | 200 | 300 | 150 | 230 | 360 | 180 | 250 | 380 | 200 | 280 | 430 | | | |
| 176.207.1Y.11.00 176.407.1Y.11.00 176.507.1Y.11.00 | 2,05 | 0.15 | 59.20 | 0.15 | 3.64 | 3.36 | 1.00 | 0.35 | 200 | 280 | 410 | 280 | 360 | 480 | 330 | 430 | 530 | 330 | 480 | 690 | 410 | 480 | 660 | | | |
| | | 0.30 | 84.97 | 0.30 | 5.37 | 4.91 | | 0.70 | 200 | 280 | 410 | 280 | 360 | 480 | 300 | 410 | 580 | 360 | 460 | 710 | 410 | 530 | 760 | | | |
| | | 0.70 | 129.79 | 0.70 | 8.53 | 7.87 | | 1.00 | 150 | 230 | 360 | 230 | 300 | 460 | 280 | 360 | 530 | 300 | 430 | 610 | 360 | 510 | 740 | | | |
| | | 1.00 | 159.42 | 1.00 | 10.84 | 10.08 | | 1.50 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | |
| | | 1.35 | 184.59 | 1.35 | 12.98 | 12.16 | 2.00 | 0.35 | 100 | 140 | 220 | 140 | 190 | 280 | 180 | 230 | 360 | 230 | 280 | 380 | 250 | 330 | 480 | | | |
| | | 1.70 | 206.70 | 1.70 | 14.92 | 14.07 | | 0.70 | 100 | 150 | 230 | 140 | 190 | 280 | 180 | 250 | 380 | 200 | 280 | 410 | 250 | 330 | 480 | | | |
| | | 2.00 | 226.76 | 2.00 | 16.91 | 15.97 | | 1.00 | 100 | 150 | 250 | 130 | 180 | 280 | 170 | 220 | 330 | 200 | 280 | 410 | 240 | 300 | 480 | | | |
| | | 2.40 | 245.27 | 2.40 | 18.94 | 17.69 | | 1.50 | - | - | - | - | - | - | 150 | 230 | 330 | 190 | 250 | 380 | 230 | 300 | 430 | | | |
| | | 2.75 | 262.64 | 2.75 | 20.86 | 19.64 | 2.75 | 0.35 | 90 | 130 | 180 | 110 | 170 | 250 | 150 | 200 | 300 | 180 | 230 | 330 | 200 | 280 | 380 | | | |
| | | 3.15 | 279.03 | 3.15 | 22.82 | 21.53 | | 0.70 | 90 | 130 | 200 | 130 | 170 | 250 | 150 | 200 | 300 | 180 | 230 | 360 | 200 | 280 | 410 | | | |
| | | 3.50 | 293.98 | 3.50 | 24.72 | 23.33 | | 1.00 | 90 | 110 | 180 | 120 | 150 | 250 | 140 | 190 | 300 | 170 | 230 | 330 | 200 | 280 | 380 | | | |
| | | 4.00 | 317.15 | 4.00 | 27.80 | 26.33 | | 1.50 | 90 | 130 | 200 | 110 | 150 | 250 | 140 | 200 | 300 | 150 | 230 | 360 | 200 | 280 | 380 | | | |
| | | 4.00 | 317.15 | 4.00 | 27.80 | 26.33 | 4.00 | 0.35 | 90 | 110 | 150 | 110 | 150 | 230 | 140 | 190 | 250 | 150 | 220 | 360 | 180 | 250 | 410 | | | |
| | | 3.50 | 293.98 | 3.50 | 24.72 | 23.33 | | 0.70 | 90 | 110 | 180 | 100 | 140 | 220 | 130 | 190 | 290 | 150 | 200 | 330 | 180 | 250 | 360 | | | |
| | | 3.15 | 279.03 | 3.15 | 22.82 | 21.53 | | 1.00 | 80 | 110 | 190 | 110 | 150 | 230 | 130 | 180 | 280 | 150 | 230 | 330 | 170 | 250 | 380 | | | |
| | | 2.75 | 262.64 | 2.75 | 20.86 | 19.64 | | 1.50 | - | - | - | 100 | 150 | 230 | 130 | 180 | 250 | 150 | 200 | 330 | 170 | 240 | 360 | | | |





| Ordering no. | Narrowest free cross section Ø [mm] | Liquid | | Air | | | Spray dimensions [mm] at distance D ₁ , D ₂ and D ₃ | | | | | | | | | | | | | | | | | | |
|--|-------------------------------------|--|----------------|--------------------------|----------------------|----------------|--|-------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|-----|-----|
| | | Liquid pressure p [bar] | V̇ water [l/h] | Air pressure p air [bar] | Atomizing air [m³/h] | Fan air [m³/h] | Atomizing air [bar] | Liquid pressure p [bar] | Fan air [bar] | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.70 | | | 1.00 | | | 1.40 | | | 1.75 | | | 2.00 | | | | |
| | | | | | | | | | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | Ø D ₁ = 150 mm | Ø D ₂ = 230 mm | Ø D ₃ = 380 mm | | |
| 176.208.1Y.11.00 176.408.1Y.11.00 176.508.1Y.11.00 | 2.36 | 0.15 | 97.20 | 0.15 | 3.84 | 4.40 | 1.00 | 0.35 | 190 | 280 | 430 | 280 | 360 | 610 | 300 | 460 | 710 | - | - | - | - | - | - | | |
| | | 0.30 | 114.76 | 0.30 | 4.64 | 5.28 | | 0.70 | 190 | 280 | 430 | 250 | 360 | 610 | 330 | 480 | 760 | - | - | - | - | - | - | | |
| | | 0.70 | 162.98 | 0.70 | 6.80 | 7.87 | | 1.00 | - | - | - | 230 | 330 | 560 | 300 | 430 | 690 | - | - | - | - | - | - | | |
| | | 1.00 | 199.13 | 1.00 | 8.63 | 10.08 | | 1.50 | - | - | - | 250 | 360 | 530 | 300 | 380 | 580 | - | - | - | - | - | - | | |
| | | 1.35 | 229.60 | 1.35 | 10.21 | 12.16 | 2.00 | 0.35 | 110 | 190 | 300 | 170 | 250 | 360 | 200 | 280 | 410 | 230 | 330 | 460 | 280 | 460 | 560 | | |
| | | 1.70 | 256.24 | 1.70 | 11.86 | 14.07 | | 0.70 | 110 | 180 | 250 | 170 | 230 | 360 | 220 | 280 | 410 | 230 | 360 | 510 | 270 | 380 | 530 | | |
| | | 2.00 | 280.70 | 2.00 | 13.37 | 15.97 | | 1.00 | 110 | 170 | 230 | 140 | 200 | 330 | 190 | 250 | 410 | 230 | 300 | 480 | 280 | 380 | 610 | | |
| | | 2.40 | 302.99 | 2.40 | 14.99 | 17.69 | | 1.50 | - | - | - | 150 | 200 | 330 | 200 | 280 | 380 | 220 | 300 | 460 | 270 | 380 | 560 | | |
| | | 2.75 | 324.03 | 2.75 | 16.33 | 19.64 | 2.75 | 0.35 | 110 | 170 | 230 | 140 | 190 | 280 | 170 | 250 | 360 | 200 | 280 | 380 | 250 | 360 | 460 | | |
| | | 3.15 | 343.22 | 3.15 | 17.99 | 21.53 | | 0.70 | 100 | 150 | 230 | 140 | 200 | 300 | 170 | 240 | 360 | 200 | 280 | 430 | 230 | 330 | 480 | | |
| | | 3.50 | 361.32 | 3.50 | 19.27 | 23.33 | | 1.00 | 100 | 140 | 200 | 130 | 180 | 280 | 170 | 230 | 380 | 200 | 280 | 410 | 230 | 330 | 480 | | |
| | | 4.00 | 388.72 | 4.00 | 21.73 | 26.33 | | 1.50 | 90 | 130 | 200 | 130 | 180 | 280 | 150 | 220 | 360 | 190 | 280 | 460 | 230 | 320 | 460 | | |
| | | 176.209.1Y.11.00 176.409.1Y.11.00 176.509.1Y.11.00 | 2.54 | 0.15 | 82.06 | 0.15 | 1.87 | 3.36 | 1.00 | 0.35 | 200 | 300 | 460 | 280 | 380 | 610 | 330 | 460 | 710 | 410 | 530 | 760 | 460 | 660 | 810 |
| | | | | 0.30 | 119.53 | 0.30 | 3.77 | 4.91 | | 0.70 | 200 | 280 | 430 | 280 | 410 | 610 | 330 | 480 | 690 | 410 | 560 | 740 | 460 | 640 | 810 |
| | | | | 0.69 | 180.05 | 0.69 | 6.58 | 7.87 | | 1.00 | - | - | - | - | - | - | 300 | 460 | 690 | 410 | 510 | 690 | 430 | 580 | 810 |
| | | | | 1.03 | 221.23 | 1.03 | 8.50 | 10.08 | | 1.50 | - | - | - | - | - | - | 300 | 460 | 690 | 380 | 530 | 760 | 430 | 580 | 810 |
| 1.38 | 255.60 | | | 1.38 | 10.13 | 12.16 | 2.00 | 0.35 | 130 | 200 | 300 | 180 | 250 | 380 | 200 | 280 | 460 | 250 | 330 | 510 | 280 | 360 | 560 | | |
| 1.72 | 285.50 | | | 1.72 | 11.57 | 14.07 | | 0.70 | 130 | 180 | 280 | 170 | 230 | 360 | 200 | 280 | 460 | 230 | 330 | 560 | 280 | 380 | 610 | | |
| 2.07 | 312.94 | | | 2.07 | 13.13 | 15.97 | | 1.00 | 100 | 170 | 280 | 170 | 230 | 360 | 200 | 280 | 430 | 230 | 330 | 510 | 280 | 380 | 560 | | |
| 2.41 | 338.83 | | | 2.41 | 14.71 | 17.69 | | 1.50 | - | - | - | - | - | - | 200 | 250 | 430 | 230 | 300 | 460 | 250 | 380 | 560 | | |
| 2.76 | 362.49 | | | 2.76 | 16.26 | 19.64 | 2.75 | 0.35 | 100 | 150 | 230 | 150 | 200 | 330 | 170 | 230 | 410 | 200 | 280 | 460 | 240 | 360 | 510 | | |
| 3.10 | 384.75 | | | 3.10 | 17.75 | 21.53 | | 0.70 | 100 | 150 | 230 | 140 | 190 | 300 | 180 | 240 | 410 | 200 | 280 | 460 | 230 | 360 | 560 | | |
| 3.45 | 405.71 | | | 3.45 | 19.33 | 23.33 | | 1.00 | 90 | 140 | 230 | 140 | 190 | 300 | 180 | 250 | 410 | 200 | 280 | 460 | 250 | 360 | 560 | | |
| 4.00 | 436.86 | | | 4.00 | 21.83 | 26.33 | | 1.50 | 100 | 140 | 200 | 140 | 190 | 300 | 180 | 250 | 410 | 200 | 280 | 460 | 230 | 330 | 510 | | |
| 176.209.1Y.11.00 176.409.1Y.11.00 176.509.1Y.11.00 | 2.54 | | | 3.10 | 384.75 | 3.10 | 17.75 | 21.53 | 4.00 | 0.35 | 100 | 140 | 200 | 130 | 180 | 250 | 140 | 190 | 280 | 180 | 250 | 360 | 190 | 250 | 410 |
| | | | | 3.45 | 405.71 | 3.45 | 19.33 | 23.33 | | 0.70 | 90 | 130 | 200 | 130 | 180 | 280 | 150 | 200 | 300 | 170 | 230 | 360 | 200 | 280 | 410 |
| | | | | 4.00 | 436.86 | 4.00 | 21.83 | 26.33 | | 1.00 | 90 | 130 | 180 | 110 | 150 | 250 | 140 | 200 | 300 | 180 | 230 | 410 | 200 | 280 | 460 |
| | | | | | | | | | | 1.50 | - | - | - | 110 | 150 | 250 | 140 | 180 | 300 | 170 | 230 | 410 | 190 | 280 | 460 |

Notice:

The fourth digit in the order number (2, 4 or 5) stands for the housing variant (for details see Page 54).

