

# ➤ Pneumatic atomizing nozzles, full cone, pressure principle, internal mixing Series 136.1

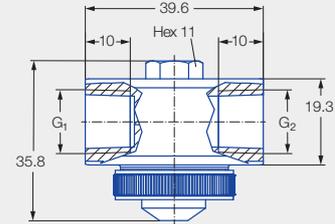


### Features:

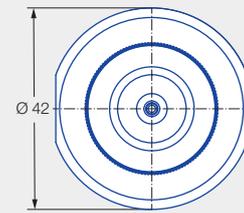
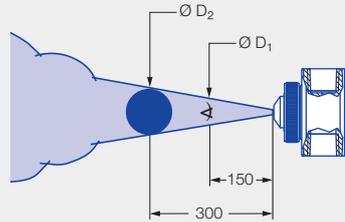
- Fine full cone atomization
- Liquid pressure principle
- Internal mixing

### Applications:

- Humidification of air
- Cooling



Series 136.1



| Liquid connection G <sub>1</sub> | Air connection G <sub>2</sub> | Screw plug thread (size 11) | Weight [g] (Stainless steel 303) |
|----------------------------------|-------------------------------|-----------------------------|----------------------------------|
| 1/4 BSPP                         | 1/4 BSPP                      | 5/16-24 UNF-2A              | 220                              |

| Spray angle | Ordering no.  |            | Narrowest free cross section Ø [mm] | Liquid pressure p [bar] |               |                |   |             |                |   |             |                |   |             |                | Spray dimensions                        |             |               |                       |                       |     |     |    |    |
|-------------|---------------|------------|-------------------------------------|-------------------------|---------------|----------------|---|-------------|----------------|---|-------------|----------------|---|-------------|----------------|---|-------------|---------------|-----------------------|-----------------------|-----|-----|----|----|
|             | Type          | Mat. no.   |                                     | 0.7                     |               |                |   | 1.5         |                |   |             | 3.0            |   |             |                | 4.0                                     |             |               |                       |                       |     |     |    |    |
|             |               | 1Y         |                                     | 16                      | p air [bar]   | V̇ water [l/h] | V̇ <sub>n</sub> air [m <sup>3</sup> /h] | p air [bar] | V̇ water [l/h] | V̇ <sub>n</sub> air [m <sup>3</sup> /h] | p air [bar] | V̇ water [l/h] | V̇ <sub>n</sub> air [m <sup>3</sup> /h] | p air [bar] | V̇ water [l/h] | V̇ <sub>n</sub> air [m <sup>3</sup> /h] | p air [bar] | p water [bar] | Ø D <sub>1</sub> [mm] | Ø D <sub>2</sub> [mm] |     |     |    |    |
| 20°         | 136.115.xx.A2 | ●          | ●                                   | 0.5                     | 0.4           | <b>5.9</b>     | 0.3                                     | 1.4         | <b>5.8</b>     | 0.8                                     | 2.4         | <b>9.1</b>     | 1.1                                     | 3.0         | <b>11.0</b>    | 1.2                                     | 0.8         | 0.7           | 60                    | 100                   |     |     |    |    |
|             |               |            |                                     |                         | 0.8           | <b>3.8</b>     | 0.6                                     | 1.8         | <b>4.1</b>     | 1.0                                     | 2.8         | <b>7.5</b>     | 1.2                                     | 3.4         | <b>9.6</b>     | 1.4                                     | 1.8         | 1.5           | 60                    | 95                    |     |     |    |    |
|             |               |            |                                     |                         | 1.2           | <b>1.7</b>     | 0.9                                     | 2.2         | <b>2.2</b>     | 1.4                                     | 3.2         | <b>5.9</b>     | 1.5                                     | 3.8         | <b>8.2</b>     | 1.6                                     | 2.6         | 2.0           | 60                    | 100                   |     |     |    |    |
|             |               |            |                                     |                         | -             | -              | -                                       | 2.6         | <b>1.2</b>     | 1.7                                     | 3.6         | <b>4.4</b>     | 1.8                                     | 4.2         | <b>6.8</b>     | 1.9                                     | 3.2         | 3.0           | 55                    | 95                    |     |     |    |    |
|             |               |            |                                     |                         | -             | -              | -                                       | -           | -              | -                                       | 4.0         | <b>2.9</b>     | 2.1                                     | 4.6         | <b>5.5</b>     | 2.2                                     | 4.4         | 4.0           | 55                    | 100                   |     |     |    |    |
|             |               |            |                                     |                         | -             | -              | -                                       | -           | -              | -                                       | 4.4         | <b>2.0</b>     | 2.5                                     | 5.0         | <b>4.1</b>     | 2.5                                     | -           | -             | -                     | -                     | -   |     |    |    |
|             |               |            |                                     |                         | -             | -              | -                                       | -           | -              | -                                       | 4.8         | <b>1.1</b>     | 2.8                                     | 5.4         | <b>2.9</b>     | 2.8                                     | -           | -             | -                     | -                     | -   |     |    |    |
|             |               |            |                                     |                         | -             | -              | -                                       | -           | -              | -                                       | 5.2         | <b>0.4</b>     | 3.0                                     | 5.8         | <b>2.1</b>     | 3.1                                     | -           | -             | -                     | -                     | -   |     |    |    |
|             |               |            |                                     |                         | 136.125.xx.A2 | ●              | ●                                       | 0.5         | 0.8            | <b>4.7</b>                              | 1.5         | 1.2            | <b>7.0</b>                              | 1.8         | 2.8            | <b>9.1</b>                              | 3.3         | 3.4           | <b>10.6</b>           | 3.9                   | 1.4 | 0.7 | 55 | 90 |
|             |               |            |                                     |                         |               |                |   |             | 1.2            | <b>4.4</b>                              | 1.9         | 1.6            | <b>6.6</b>                              | 2.2         | 3.2            | <b>8.7</b>                              | 3.7         | 3.8           | <b>10.3</b>           | 4.3                   | 2.2 | 1.5 | 55 | 95 |
|             | 1.6           | <b>4.0</b> | 2.3                                 | 2.0                     |               |                |   |             | <b>6.2</b>     | 2.6                                     | 3.6         | <b>8.4</b>     | 4.1                                     | 4.2         | <b>9.9</b>     | 4.6                                     | 2.8         | 2.0           | 55                    | 100                   |     |     |    |    |
|             | 2.0           | <b>3.5</b> | 2.6                                 | 2.4                     |               |                |   |             | <b>5.8</b>     | 3.0                                     | 4.0         | <b>8.0</b>     | 4.5                                     | 4.6         | <b>9.6</b>     | 5.0                                     | 3.4         | 3.0           | 60                    | 100                   |     |     |    |    |
|             | 2.4           | <b>3.0</b> | 3.0                                 | 2.8                     |               |                |   |             | <b>5.4</b>     | 3.4                                     | 4.4         | <b>7.7</b>     | 4.8                                     | 5.0         | <b>9.3</b>     | 5.4                                     | 4.2         | 4.0           | 60                    | 100                   |     |     |    |    |
|             | 2.8           | <b>2.7</b> | 3.2                                 | 3.2                     |               |                |   |             | <b>4.9</b>     | 3.7                                     | 4.8         | <b>7.3</b>     | 5.2                                     | 5.4         | <b>8.9</b>     | 5.8                                     | -           | -             | -                     | -                     | -   |     |    |    |
|             | 3.2           | <b>2.0</b> | 3.7                                 | 3.6                     |               |                |   |             | <b>4.4</b>     | 4.1                                     | 5.2         | <b>7.0</b>     | 5.6                                     | 5.8         | <b>8.6</b>     | 6.1                                     | -           | -             | -                     | -                     | -   |     |    |    |
|             | 3.6           | <b>1.6</b> | 4.1                                 | 4.0                     |               |                |   |             | <b>3.9</b>     | 4.5                                     | 5.6         | <b>6.6</b>     | 5.9                                     | -           | -              | -                                       | -           | -             | -                     | -                     | -   |     |    |    |
|             | 4.0           | <b>1.3</b> | 4.5                                 | 4.4                     |               |                |   |             | <b>3.5</b>     | 4.8                                     | 6.0         | <b>6.2</b>     | 6.3                                     | -           | -              | -                                       | -           | -             | -                     | -                     | -   |     |    |    |
|             | 4.4           | <b>1.0</b> | 4.9                                 | 4.8                     |               |                |   |             | <b>3.1</b>     | 5.2                                     | -           | -              | -                                       | -           | -              | -                                       | -           | -             | -                     | -                     | -   |     |    |    |
|             | 4.8           | <b>0.6</b> | 5.2                                 | 5.2                     | <b>2.7</b>    | 5.6            | -                                       | -           | -              | -                                       | -           | -              | -                                       | -           | -              | -                                       | -           |               |                       |                       |     |     |    |    |
|             | -             | -          | -                                   | 5.6                     | <b>2.3</b>    | 5.9            | -                                       | -           | -              | -                                       | -           | -              | -                                       | -           | -              | -                                       | -           |               |                       |                       |     |     |    |    |
| -           | -             | -          | 6.0                                 | <b>1.9</b>              | 6.3           | -              | -                                       | -           | -              | -                                       | -           | -              | -                                       | -           | -              | -                                       |             |               |                       |                       |     |     |    |    |

| Spray angle | Ordering no.         |                     | Narrowest free cross section Ø [mm] | Liquid pressure p [bar] |                |   |             |                |   |             |                |   |             |                |   | Spray dimensions |                       |                       |    |     |   |
|-------------|----------------------|---------------------|-------------------------------------|-------------------------|----------------|---|-------------|----------------|---|-------------|----------------|---|-------------|----------------|---|------------------|-----------------------|-----------------------|----|-----|---|
|             | Mat. no.             |                     |                                     | 0.7                     |                |   | 1.5         |                |   | 3.0         |                |   | 4.0         |                |   | p water [bar]    | Ø D <sub>1</sub> [mm] | Ø D <sub>2</sub> [mm] |    |     |   |
|             | 1Y                   | 16                  |                                     | p air [bar]             | V̇ water [l/h] | V̇ <sub>n</sub> air [m <sup>3</sup> /h] | p air [bar] | V̇ water [l/h] | V̇ <sub>n</sub> air [m <sup>3</sup> /h] | p air [bar] | V̇ water [l/h] | V̇ <sub>n</sub> air [m <sup>3</sup> /h] | p air [bar] | V̇ water [l/h] | V̇ <sub>n</sub> air [m <sup>3</sup> /h] |                  |                       |                       |    |     |   |
| Type        | Stainless steel 316L | Stainless steel 303 |                                     |                         |                |   |             |                |   |             |                |   |             |                |   |                  |                       |                       |    |     |   |
| 20°         | 136.134.xx.A2        | ●                   | ●                                   | 0.7                     | 1.2            | <b>13.2</b>                             | 2.7         | 2.0            | <b>19.4</b>                             | 3.9         | 3.0            | <b>28.3</b>                             | 5.2         | 3.8            | <b>32.6</b>                             | 6.2              | 1.8                   | 0.7                   | 55 | 95  |   |
|             |                      |                     |                                     |                         | 1.6            | <b>12.4</b>                             | 3.3         | 2.4            | <b>18.1</b>                             | 4.4         | 3.4            | <b>27.5</b>                             | 5.7         | 4.2            | <b>32.0</b>                             | 6.8              | 2.8                   | 1.5                   | 60 | 105 |   |
|             |                      |                     |                                     |                         | 2.0            | <b>11.8</b>                             | 3.9         | 2.8            | <b>17.3</b>                             | 4.9         | 3.8            | <b>26.7</b>                             | 6.3         | 4.6            | <b>31.3</b>                             | 7.3              | 3.8                   | 2.0                   | 60 | 105 |   |
|             |                      |                     |                                     |                         | 2.4            | <b>11.4</b>                             | 4.4         | 3.2            | <b>16.7</b>                             | 5.5         | 4.2            | <b>25.9</b>                             | 6.8         | 5.0            | <b>30.6</b>                             | 7.8              | 5.2                   | 3.0                   | 65 | 110 |   |
|             |                      |                     |                                     |                         | 2.8            | <b>11.1</b>                             | 4.9         | 3.6            | <b>16.1</b>                             | 6.0         | 4.6            | <b>25.0</b>                             | 7.3         | 5.4            | <b>29.9</b>                             | 8.4              | 6.0                   | 4.0                   | 65 | 110 |   |
|             |                      |                     |                                     |                         | 3.2            | <b>10.8</b>                             | 5.5         | 4.0            | <b>15.6</b>                             | 6.5         | 5.0            | <b>24.2</b>                             | 7.8         | 5.8            | <b>29.3</b>                             | 8.9              | -                     | -                     | -  | -   | - |
|             |                      |                     |                                     |                         | 3.6            | <b>10.6</b>                             | 6.0         | 4.4            | <b>15.2</b>                             | 7.0         | 5.4            | <b>23.6</b>                             | 8.4         | -              | -                                       | -                | -                     | -                     | -  | -   | - |
|             |                      |                     |                                     |                         | 4.0            | <b>10.4</b>                             | 6.5         | 4.8            | <b>15.0</b>                             | 7.6         | 5.8            | <b>23.1</b>                             | 8.9         | -              | -                                       | -                | -                     | -                     | -  | -   | - |
|             |                      |                     |                                     |                         | 4.4            | <b>10.1</b>                             | 7.0         | 5.2            | <b>14.6</b>                             | 8.1         | -              | -                                       | -           | -              | -                                       | -                | -                     | -                     | -  | -   | - |
|             |                      |                     |                                     |                         | 4.8            | <b>9.9</b>                              | 7.6         | 5.6            | <b>14.1</b>                             | 8.6         | -              | -                                       | -           | -              | -                                       | -                | -                     | -                     | -  | -   | - |
|             | 5.2                  | <b>9.5</b>          | 8.1                                 | 6.0                     | <b>13.8</b>    | 9.1                                     | -           | -              | -                                       | -           | -              | -                                       | -           | -              | -                                       | -                | -                     |                       |    |     |   |
|             | 5.6                  | <b>9.0</b>          | 8.6                                 | -                       | -              | -                                       | -           | -              | -                                       | -           | -              | -                                       | -           | -              | -                                       | -                | -                     |                       |    |     |   |
|             | 6.0                  | <b>8.5</b>          | 9.2                                 | -                       | -              | -                                       | -           | -              | -                                       | -           | -              | -                                       | -           | -              | -                                       | -                | -                     |                       |    |     |   |
|             | 136.142.xx.A2        | ●                   | ●                                   | 2.5                     | 1.4            | <b>24.2</b>                             | 5.1         | 1.6            | <b>53.4</b>                             | 4.7         | 3.2            | <b>70.8</b>                             | 8.0         | 3.8            | <b>93.2</b>                             | 9.2              | 0.8                   | 0.7                   | 60 | 100 |   |
|             |                      |                     |                                     |                         | 1.8            | <b>20.4</b>                             | 6.3         | 2.0            | <b>42.6</b>                             | 5.9         | 3.6            | <b>62.5</b>                             | 9.2         | 4.2            | <b>83.1</b>                             | 10.1             | 1.6                   | 1.5                   | 65 | 105 |   |
|             |                      |                     |                                     |                         | 2.2            | <b>20.0</b>                             | 7.2         | 2.4            | <b>35.3</b>                             | 7.2         | 4.0            | <b>55.7</b>                             | 10.6        | 4.6            | <b>75.3</b>                             | 11.3             | 3.0                   | 2.0                   | 60 | 105 |   |
|             |                      |                     |                                     |                         | 2.6            | <b>19.3</b>                             | 8.2         | 2.8            | <b>30.4</b>                             | 8.4         | 4.4            | <b>49.3</b>                             | 11.7        | 5.0            | <b>69.0</b>                             | 12.5             | 4.0                   | 3.0                   | 65 | 110 |   |
|             |                      |                     |                                     |                         | 3.0            | <b>17.6</b>                             | 9.3         | 3.2            | <b>28.6</b>                             | 9.5         | 4.8            | <b>44.6</b>                             | 12.9        | 5.4            | <b>63.4</b>                             | 13.7             | 6.0                   | 4.0                   | 65 | 110 |   |
|             |                      |                     |                                     |                         | 3.4            | <b>16.5</b>                             | 10.4        | 3.6            | <b>28.2</b>                             | 10.5        | 5.2            | <b>41.9</b>                             | 14.1        | 5.8            | <b>57.5</b>                             | 14.9             | -                     | -                     | -  | -   |   |
|             |                      |                     |                                     |                         | 3.8            | <b>17.0</b>                             | 11.4        | 4.0            | <b>27.3</b>                             | 11.5        | 5.6            | <b>40.4</b>                             | 15.1        | -              | -                                       | -                | -                     | -                     | -  | -   |   |
| 4.2         |                      |                     |                                     |                         | <b>16.3</b>    | 12.4                                    | 4.4         | <b>25.9</b>    | 12.5                                    | 6.0         | <b>39.7</b>    | 16.1                                    | -           | -              | -                                       | -                | -                     | -                     | -  |     |   |
| 4.6         |                      |                     |                                     |                         | <b>15.1</b>    | 13.3                                    | 4.8         | <b>24.3</b>    | 13.5                                    | -           | -              | -                                       | -           | -              | -                                       | -                | -                     | -                     | -  |     |   |
| 5.0         |                      |                     |                                     |                         | <b>14.0</b>    | 14.3                                    | 5.2         | <b>22.3</b>    | 14.6                                    | -           | -              | -                                       | -           | -              | -                                       | -                | -                     | -                     | -  |     |   |
| 5.4         | <b>13.1</b>          | 15.3                | 5.6                                 | <b>21.8</b>             | 15.7           | -                                       | -           | -              | -                                       | -           | -              | -                                       | -           | -              | -                                       |                  |                       |                       |    |     |   |
| 5.8         | <b>12.4</b>          | 16.2                | 6.0                                 | <b>21.4</b>             | 16.7           | -                                       | -           | -              | -                                       | -           | -              | -                                       | -           | -              | -                                       |                  |                       |                       |    |     |   |

Ordering Type + Material no. = Ordering no.  
 example: 136.134.xx.A2 + 1Y = 136.134.1Y.A2