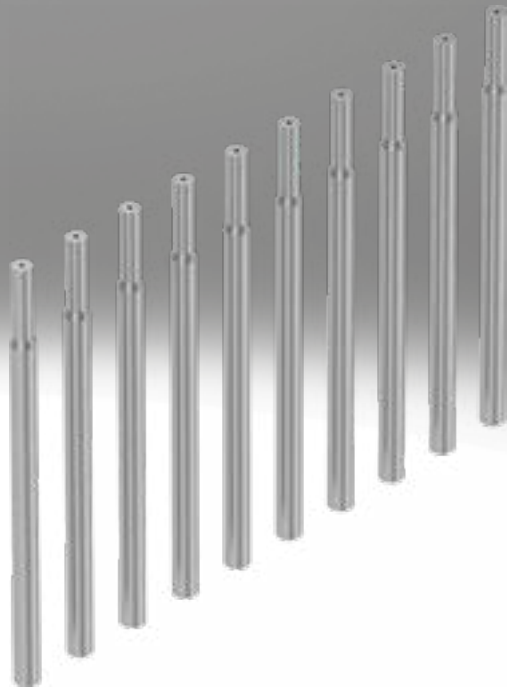


## Dosing elements VAVN

**FESTO**



### Key features

#### At a glance

The dosing needle VAVN-... is a needle for fitting in laboratory devices. The needles can be used to dispense liquids or gases in line with their specifications.

The dosing nozzles VAVN are used in combination with the following products:

- Dispense head VTOE, VTOI
- Solenoid valves VYKA, VYKB, VZDB

Ten different variants each with special features such as tapering or chamfer.

It is the responsibility of the customer to ensure chemical compatibility with the materials of the VAVN that come into contact with the media. A filter with a maximum mesh width of 5 µm must be positioned upstream of the needle. If you have any questions or concerns regarding compatibility and configuration, please contact Festo.

#### Nominal width

The nominal width describes the smallest cross section in the main flow of the dosing element, and thus has a direct influence on the flow rate that can be achieved.

#### Chamfer

The chamfer reduces the surface at the tip of the needle, improving the drop separation.

#### Taper

Reducing the inside diameter for the final 5 mm of the needle improves the flow rate when using media with relatively high viscosity whilst maintaining the pressure.

## Type codes

|      |                          |  |
|------|--------------------------|--|
| 001  | Series                   |  |
| VAVN | Dosing needle VAVN       |  |
| 002  | Product type             |  |
| N    | Dosing nozzle            |  |
| 003  | Outside diameter, nozzle |  |
| A1.6 | 1.6 mm                   |  |
| 004  | Nominal width            |  |
| 03   | 0.3 mm                   |  |
| 06   | 0.6 mm                   |  |
| 12   | 1.2 mm                   |  |
| 005  | Length                   |  |
| 30   | 30 mm                    |  |
| 60   | 60 mm                    |  |
| 006  | Chamfer                  |  |
|      | None                     |  |
| F    | With                     |  |
| 007  | Taper                    |  |
|      | None                     |  |
| V    | With                     |  |
| 008  | Material                 |  |
| V1   | Stainless steel 1.4404   |  |
| 009  | Package unit             |  |
| P10  | 10                       |  |

## Datasheet

| <b>General technical data</b>      |   |
|------------------------------------|---|
| Type ID code                       | VAVN  |
| Outside diameter of dosing needle  | 1.6 mm  |
| Nominal width of dosing needle     | 0.3 mm; 0.6 mm; 1.2 mm                                  |
| Length of dosing needle            | 30 mm; 60 mm  |
| Note on standard nominal flow rate | In case of a pressure drop of 1 → 0 bar (gaseous media) |
| Design of dosing needle            | With chamfer. with taper                                |
| Fluid connector                    | Terminal connection                                     |
| Mounting position                  | Any   |
| Product weight                     | 1.9 ... 8.3 g   |
| Pack size                          | 10  |

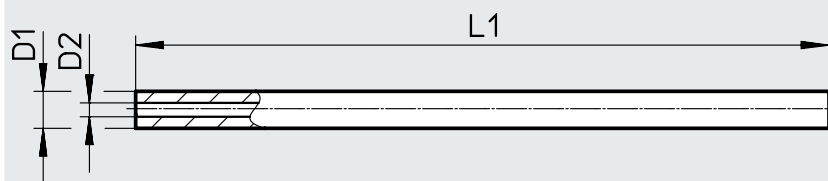
| <b>Operating and environmental conditions</b> |   |
|---|---|
| Type ID code                                  | VAVN  |
| Operating pressure                            | 0 ... 0.4 MPa   |
| Operating pressure                            | 0 ... 4 bar   |
| Medium  | Liquid media, gaseous media   |
| Note on the medium                            | Note resistance of materials in contact with the medium; maximum particle size 5 µm |
| Temperature of medium                         | 5 ... 60°C  |
| Ambient temperature                           | 5 ... 60°C  |
| Storage temperature                           | -20 ... 70°C  |
| Food-safe                                     | See supplementary material information  |
| Corrosion resistance class CRC <sup>1)</sup>  | 3 - High corrosion stress   |

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

| <b>Materials</b>                    |                            |
|-------------------------------------|----------------------------|
| Type ID code                        | VAVN                       |
| Dosing needle material              | High-alloy stainless steel |
| Material number for dosing needle   | 1.4404                     |
| Materials in contact with the media | High-alloy stainless steel |
| Note on materials                   | RoHS-compliant             |
| PWIS conformity                     | VDMA24364 zone III         |

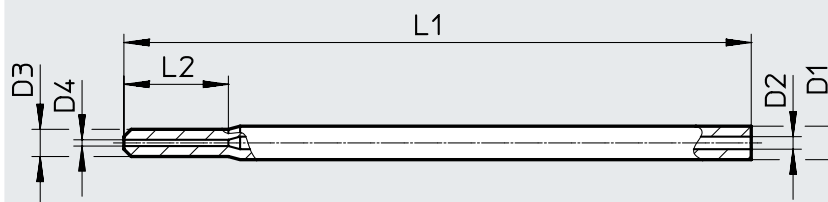
## Dimensions

## Dimensions – Standard

Download CAD data → [www.festo.com](http://www.festo.com)

| Type                     | D1<br>∅ | D2<br>∅ | L1 |
|--------------------------|---------|---------|----|
| VAVN-N-A1.6-06-30-V1-P10 | 1.6     | 0.6     | 30 |
| VAVN-N-A1.6-12-30-V1-P10 | 1.6     | 1.2     | 30 |
| VAVN-N-A1.6-06-60-V1-P10 | 1.6     | 0.6     | 60 |
| VAVN-N-A1.6-12-60-V1-P10 | 1.6     | 1.2     | 60 |

## Dimensions – With taper and optionally with chamfer

Download CAD data → [www.festo.com](http://www.festo.com)


| Type                      | D1<br>∅ | D2<br>∅ | D3<br>∅ | D4<br>∅ | L1 | L2 |
|---------------------------|---------|---------|---------|---------|----|----|
| VAVN-N-A1.6-03-30-VV1-P10 | 1.6     | 0.6     | 1.3     | 0.3     | 30 | 5  |
| VAVN-N-A1.6-03-30-FV1-P10 | 1.6     | 0.6     | 1.3     | 0.3     | 30 | 5  |
| VAVN-N-A1.6-06-30-VV1-P10 | 1.6     | 1.2     | 1       | 0.6     | 30 | 5  |
| VAVN-N-A1.6-03-60-VV1-P10 | 1.6     | 0.6     | 1.3     | 0.3     | 60 | 5  |
| VAVN-N-A1.6-03-60-FV1-P10 | 1.6     | 0.6     | 1.3     | 0.3     | 60 | 5  |
| VAVN-N-A1.6-06-60-VV1-P10 | 1.6     | 1.2     | 1       | 0.6     | 60 | 5  |

## Ordering data

| Ordering data                          |                                 |   |   |          |                            |                            |
|--|---------------------------------|---|---|----------|----------------------------|----------------------------|
| Nominal width of dosing needle<br>[mm] | Length of dosing needle<br>[mm] | Flow rate Kv <sup>1)</sup><br>[m <sup>3</sup> /h] <sup>2)</sup> | Standard nominal flow rate <sup>1)</sup><br>[l/min] | Part no. | Type                       |                            |
| 0.3                                    | 30                              | 0.003   | 1.37  | 8104295  | VAVN-N-A1.6-03-30-F-V1-P10 |                            |
|  |                                 |   | 1.38  | 8104294  | VAVN-N-A1.6-03-30-V-V1-P10 |                            |
|  | 60                              |   | 1.31  | 8104298  | VAVN-N-A1.6-03-60-F-V1-P10 |                            |
|  |                                 |   | 1.32  | 8104297  | VAVN-N-A1.6-03-60-V-V1-P10 |                            |
| 0.6                                    | 30                              | 0.01  | 4.76  | 8104290  | VAVN-N-A1.6-06-30-V1-P10   |                            |
|  |                                 |   | 5.60  | 8104296  | VAVN-N-A1.6-06-30-V-V1-P10 |                            |
|  | 60                              |   | 0.008   | 3.91     | 8104292                    | VAVN-N-A1.6-06-60-V1-P10   |
|  |                                 |   | 0.012   | 5.47     | 8104299                    | VAVN-N-A1.6-06-60-V-V1-P10 |
| 1.2                                    | 30                              | 0.039   | 20.19   | 8104291  | VAVN-N-A1.6-12-30-V1-P10   |                            |
|  | 60                              | 0.034   | 18.15   | 8104293  | VAVN-N-A1.6-12-60-V1-P10   |                            |

- 1) As a result of production methods, there may be fluctuations in the flow rate or flow behaviour; these should be taken into account during use.  
 2) For water as medium

## Accessories

| Fittings   | Description   | Part no.       | Type                          |
|--|---|----------------|-------------------------------|
| <br>Fitting | Straight design; fluidic connection 1 1/4-28 UNF; fluidic connection 2; clamped terminal connection 1.6 mm;<br>pack of 10 | <b>8104285</b> | <b>NLFA-D-U14-K1.6-PP-P10</b> |