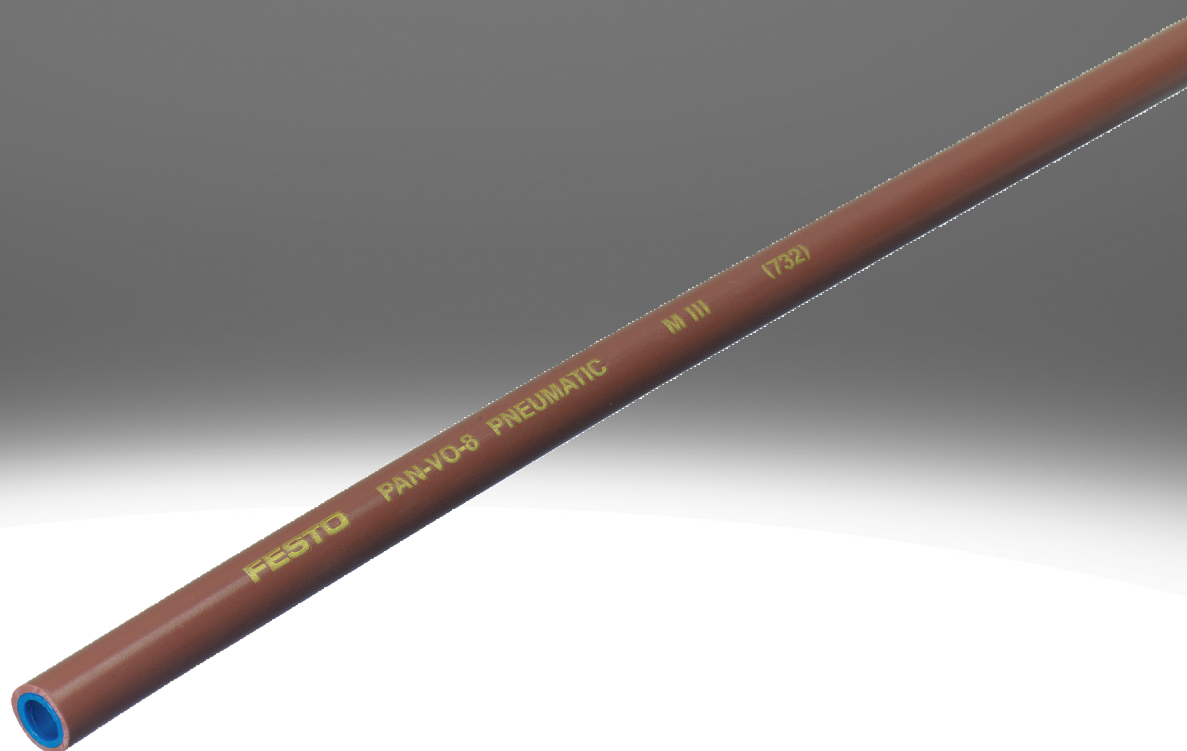


## Plastic tubing PAN-V0

**FESTO**



## Characteristics

### At a glance

Particularly suited for use in areas in close proximity to flying sparks or welding spatter

- Polyvinyl chloride (outer hose), polyamide (inner hose)
- Flame retardant according to UL 94 V0
- High resistance to microbes and UV radiation
- Double-sheath tubing
- Operating medium: compressed air, vacuum, water, mineral oil
- Resistant to welding spatter

Note: Before the plastic tubing PAN-V0 can be inserted into the push-in fitting QS-V0, the PVC sheath of the tubing must be cut by length X (see dimensional drawing). The integrated stop in the tubing cutter PAN-V0S, which is available as an accessory, ensures that the sheath is always cut to the correct length X. The blade design prevents damage to the inner polyamide tubing.

### Additional documents

[Link](#) [pan-v0](#)



The additional document TUBING-ADD contains further information on application details, such as tubing/fitting combinations, installation instructions and measurement procedures.

### Engineering tools

[Link](#) [engineering tools](#)



Save time with engineering tools: Smart engineering for the optimal solution. Our goal is to increase your productivity. Our engineering tools play an integral part in achieving this goal. They help you size your system correctly, tap into unimagined productivity reserves and generate additional productivity along the entire value chain. In every phase of your project, from the initial contact to the modernisation of your machine, you will come across a number of different tools that will be of use to you.

- Flow calculation: Determine the nominal flow rate by entering parameters such as input pressure, output pressure, tube length and internal diameter ([www.festo.com/x/flowrate-calculation](http://www.festo.com/x/flowrate-calculation)).
- Media resistance: Evaluate the resistance of various types of materials and tubing from Festo to different chemicals and media ([www.festo.com/x/media-resistance](http://www.festo.com/x/media-resistance)).

### Diagrams

[Link](#) [pan-v0](#)



The diagrams shown in this document are also available online. These can be used to display precise values.

### Alternative material characteristic

|      |                 |
|------|-----------------|
| [V0] | Flame-retardant |
|------|-----------------|

With flame retardant properties for applications in areas at risk of fire.

### Pipe/tubing O.D. x wall thickness

For standard O.D. tubing, the outside diameter of the tube and the wall thickness are given as the tube size.

### Packaging unit [m]

Standard: 50 m

## Type code

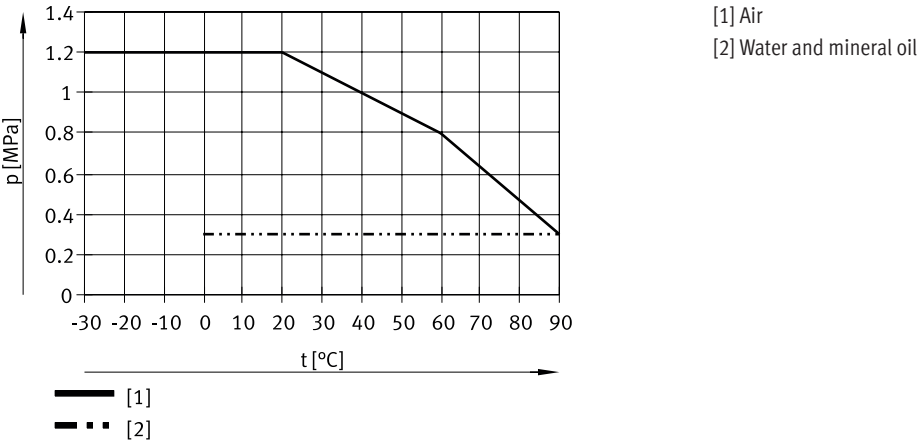
|         |                                     |  |
|---------|-------------------------------------|--|
| 001     | Series                              |  |
| PAN     | Standard O.D. tubing                |  |
| 002     | Alternative material characteristic |  |
| V0      | Flame-retardant                     |  |
| 003     | Pipe/tubing O.D. x wall thickness   |  |
| 4x0,75  | 4x0.75 mm                           |  |
| 6x1     | 6x1 mm                              |  |
| 8x1     | 8x1 mm                              |  |
| 10x1,25 | 10x1.25 mm                          |  |
| 12x1,5  | 12x1.5 mm                           |  |

|     |                    |  |
|-----|--------------------|--|
| 004 | Colour             |  |
| BL  | Blue               |  |
| GE  | Yellow             |  |
| GN  | Green              |  |
| RT  | Red                |  |
| SW  | Black              |  |
| WS  | White              |  |
| 005 | Packaging unit [m] |  |
|     | Standard           |  |

Datasheet

| Operating and environmental conditions        |                                                                                     |                                    |                                    |                                     |                                                      |
|-----------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------------------------|
| Outside diameter                              | 6 mm                                                                                | 8 mm                               | 10 mm                              | 12 mm                               | 14 mm                                                |
| Inside diameter                               | 2.5 mm                                                                              | 4 mm                               | 6 mm                               | 7.5 mm                              | 9 mm                                                 |
| Pneumatic connection                          | For push-in connector O.D.<br>4 mm                                                  | For push-in connector O.D.<br>6 mm | For push-in connector O.D.<br>8 mm | For push-in connector O.D.<br>10 mm | For push-in connector out-<br>side diameter of 12 mm |
| Flow-relevant bending radius                  | 20 mm                                                                               | 30 mm                              | 45 mm                              | 56 mm                               | 65 mm                                                |
| Min. bending radius                           | 10 mm                                                                               | 13 mm                              | 24 mm                              | 34 mm                               | 43 mm                                                |
| Temperature-dependent oper-<br>ating pressure | -0.095 ... 1.2 MPa                                                                  |                                    |                                    |                                     |                                                      |
| Temperature-dependent oper-<br>ating pressure | -0.95 ... 12 bar                                                                    |                                    |                                    |                                     |                                                      |
| Temperature-dependent oper-<br>ating pressure | -13.775 ... 174 psi                                                                 |                                    |                                    |                                     |                                                      |
| Operating medium                              | Compressed air to ISO 8573-1:2010 [7:-:]<br>Mineral oil<br>Water (liquid, ice-free) |                                    |                                    |                                     |                                                      |
| Ambient temperature                           | -30 ... 90°C                                                                        |                                    |                                    |                                     |                                                      |
| Fire test material                            | UL94 V-0 (casing)                                                                   |                                    |                                    |                                     |                                                      |

Operating pressure p as a function of temperature t

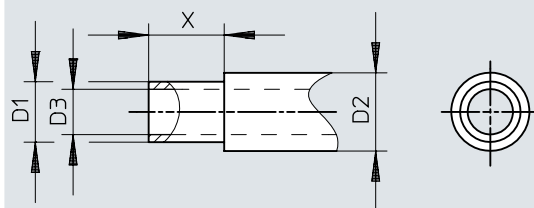


| Materials                     |                        |
|-------------------------------|------------------------|
| Shore hardness <sup>1)</sup>  | A 72 +/-4<br>D 57 +/-3 |
| Material tubing <sup>2)</sup> | PA12-P<br>PVC-P        |
| Note on materials             | RoHS compliant         |
| LABS (PWIS) conformity        | VDMA24364-B2-L         |

1) Outer tube: A 72 ±4, inner tube: D 57 ±3  
 2) Outer tube: polyvinyl chloride, inner tube: polyamide

## Dimensions

**Dimensions – Tubing cutter PAN-V0S**

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


|            | D1<br>ø | D2<br>ø | D3<br>ø | X      |
|------------|---------|---------|---------|--------|
| PAN-V0S-4  | 4       | 6       | 2,5     | 14,7±1 |
| PAN-V0S-6  | 6       | 8       | 4       | 15,7±1 |
| PAN-V0S-8  | 8       | 10      | 6       | 16,7±1 |
| PAN-V0S-10 | 10      | 12      | 7,5     | 19,2±1 |
| PAN-V0S-12 | 12      | 14      | 9       | 22,7±1 |

## Ordering data

| Ordering data                                                                     |                  |                                     |                                          |        |          |                   |
|-----------------------------------------------------------------------------------|------------------|-------------------------------------|------------------------------------------|--------|----------|-------------------|
|                                                                                   | Outside diameter | Packaging unit<br>[m] <sup>1)</sup> | Product weight<br>according to<br>length | Colour | Part no. | Type              |
|  | 6 mm             | Standard                            | 0.034 kg/m                               | Blue   | 132899   | PAN-V0-4X0,75-BL  |
|                                                                                   | 8 mm             |                                     | 0.049 kg/m                               |        | 132905   | PAN-V0-6X1-BL     |
|                                                                                   |                  |                                     |                                          | Yellow | 525482   | PAN-V0-6X1-GE     |
|                                                                                   |                  |                                     |                                          | Green  | 525470   | PAN-V0-6X1-GN     |
|                                                                                   |                  |                                     |                                          | Red    | 525474   | PAN-V0-6X1-RT     |
|                                                                                   |                  |                                     |                                          | Black  | 160550   | PAN-V0-6X1-SW     |
|                                                                                   |                  |                                     |                                          | White  | 525478   | PAN-V0-6X1-WS     |
|                                                                                   | 10 mm            |                                     | 0.065 kg/m                               | Blue   | 132906   | PAN-V0-8X1-BL     |
|                                                                                   |                  |                                     |                                          | Yellow | 525483   | PAN-V0-8X1-GE     |
|                                                                                   |                  |                                     |                                          | Green  | 525471   | PAN-V0-8X1-GN     |
|                                                                                   |                  |                                     |                                          | Red    | 525475   | PAN-V0-8X1-RT     |
|                                                                                   |                  |                                     |                                          | Black  | 160551   | PAN-V0-8X1-SW     |
|                                                                                   |                  |                                     |                                          | White  | 525479   | PAN-V0-8X1-WS     |
|                                                                                   | 12 mm            |                                     | 0.088 kg/m                               | Blue   | 132907   | PAN-V0-10X1,25-BL |
|                                                                                   |                  |                                     |                                          | Yellow | 525484   | PAN-V0-10X1,25-GE |
|                                                                                   |                  |                                     |                                          | Green  | 525472   | PAN-V0-10X1,25-GN |
|                                                                                   |                  |                                     |                                          | Red    | 525476   | PAN-V0-10X1,25-RT |
|                                                                                   |                  |                                     |                                          | Black  | 160552   | PAN-V0-10X1,25-SW |
|                                                                                   |                  |                                     |                                          | White  | 525480   | PAN-V0-10X1,25-WS |
|                                                                                   | 14 mm            |                                     | 0.133 kg/m                               | Blue   | 525469   | PAN-V0-12X1,5-BL  |
|                                                                                   |                  |                                     |                                          | Yellow | 525485   | PAN-V0-12X1,5-GE  |
|                                                                                   |                  |                                     |                                          | Green  | 525473   | PAN-V0-12X1,5-GN  |
|                                                                                   |                  |                                     |                                          | Red    | 525477   | PAN-V0-12X1,5-RT  |
|                                                                                   |                  |                                     |                                          | Black  | 160553   | PAN-V0-12X1,5-SW  |
|                                                                                   |                  |                                     |                                          | White  | 525481   | PAN-V0-12X1,5-WS  |

1) Standard: 50 m

## Accessories

## Ordering data DPA-40-...-MA-SET

|                                                                                   | Inside diameter | Colour | Product weight | Part no. | Type       |
|-----------------------------------------------------------------------------------|-----------------|--------|----------------|----------|------------|
|  | 4 mm            | Grey   | 20 g           | 133180   | PAN-V0S-4  |
|                                                                                   | 6 mm            |        |                | 133181   | PAN-V0S-6  |
|                                                                                   | 8 mm            |        | 21 g           | 133182   | PAN-V0S-8  |
|                                                                                   | 10 mm           |        |                | 133183   | PAN-V0S-10 |
|                                                                                   | 12 mm           |        |                | 133184   | PAN-V0S-12 |

## Push-in fitting resistant to weld spatter QS-V0

|                                                                                   | Pneumatic connection, port 1      | Pneumatic connection, port 2         | Nominal size | Part no. | Type          |
|-----------------------------------------------------------------------------------|-----------------------------------|--------------------------------------|--------------|----------|---------------|
|  | Male thread G1/8                  | For tubing outside diameter of 6 mm  | 5 mm         | 186314   | QS-V0-G1/8-6  |
|                                                                                   |                                   | For tubing outside diameter of 8 mm  | 6 mm         | 186315   | QS-V0-G1/8-8  |
|                                                                                   | Male thread G1/4                  | For tubing outside diameter of 6 mm  | 5 mm         | 186316   | QS-V0-G1/4-6  |
|                                                                                   |                                   | For tubing outside diameter of 8 mm  | 7 mm         | 186317   | QS-V0-G1/4-8  |
|                                                                                   |                                   | For tubing outside diameter of 10 mm | 8.5 mm       | 186318   | QS-V0-G1/4-10 |
|                                                                                   |                                   | For tubing outer diameter of 12 mm   |              | 186319   | QS-V0-G1/4-12 |
|                                                                                   | Male thread G3/8                  | For tubing outside diameter of 8 mm  | 7 mm         | 186320   | QS-V0-G3/8-8  |
|                                                                                   |                                   | For tubing outside diameter of 10 mm | 9 mm         | 186321   | QS-V0-G3/8-10 |
|                                                                                   |                                   | For tubing outer diameter of 12 mm   | 11 mm        | 186322   | QS-V0-G3/8-12 |
|                                                                                   | Male thread G1/2                  | For tubing outside diameter of 10 mm | 9 mm         | 186323   | QS-V0-G1/2-10 |
|                                                                                   |                                   | For tubing outer diameter of 12 mm   | 11 mm        | 186324   | QS-V0-G1/2-12 |
|                                                                                   | Male thread R1/8                  | For tubing outside diameter of 4 mm  | 3 mm         | 132888   | QS-V0-1/8-4   |
|                                                                                   |                                   | For tubing outside diameter of 6 mm  | 5 mm         | 160500   | QS-V0-1/8-6   |
|                                                                                   |                                   | For tubing outside diameter of 8 mm  | 6 mm         | 160501   | QS-V0-1/8-8   |
|                                                                                   | Male thread R1/4                  | For tubing outside diameter of 6 mm  | 5 mm         | 160502   | QS-V0-1/4-6   |
|                                                                                   |                                   | For tubing outside diameter of 8 mm  | 7 mm         | 160503   | QS-V0-1/4-8   |
|                                                                                   |                                   | For tubing outside diameter of 10 mm | 8.5 mm       | 160504   | QS-V0-1/4-10  |
|                                                                                   |                                   | For tubing outer diameter of 12 mm   |              | 160505   | QS-V0-1/4-12  |
|                                                                                   | Male thread R3/8                  | For tubing outside diameter of 8 mm  | 7 mm         | 160506   | QS-V0-3/8-8   |
|                                                                                   |                                   | For tubing outside diameter of 10 mm | 9 mm         | 160507   | QS-V0-3/8-10  |
|                                                                                   |                                   | For tubing outer diameter of 12 mm   | 11 mm        | 160508   | QS-V0-3/8-12  |
|                                                                                   | Male thread R1/2                  | For tubing outside diameter of 10 mm | 9 mm         | 160509   | QS-V0-1/2-10  |
|                                                                                   |                                   | For tubing outer diameter of 12 mm   | 11 mm        | 160510   | QS-V0-1/2-12  |
|                                                                                   | For tubing outer diameter of 4 mm | For tubing outside diameter of 4 mm  | 2.8 mm       | 132890   | QS-V0-4       |

## Accessories

| Push-in fitting resistant to weld spatter QS-V0                                  |                                     |                                      |              |               |                 |
|----------------------------------------------------------------------------------|-------------------------------------|--------------------------------------|--------------|---------------|-----------------|
|                                                                                  | Pneumatic connection,<br>port 1     | Pneumatic connection,<br>port 2      | Nominal size | Part no.      | Type            |
|  | For tubing outside diameter of 6 mm | For tubing outside diameter of 6 mm  | 4.3 mm       | <b>160546</b> | <b>QS-V0-6</b>  |
|                                                                                  | For tubing outer diameter of 8 mm   | For tubing outside diameter of 8 mm  | 7 mm         | <b>160547</b> | <b>QS-V0-8</b>  |
|                                                                                  | For tubing outer diameter of 10 mm  | For tubing outside diameter of 10 mm | 9 mm         | <b>160548</b> | <b>QS-V0-10</b> |
|                                                                                  | For tubing outer diameter of 12 mm  | For tubing outer diameter of 12 mm   | 11 mm        | <b>160549</b> | <b>QS-V0-12</b> |