

Plastic tubing, inches PUN-H

**FESTO**



## Characteristics

### At a glance

Flexible and hydrolysis-resistant tubing with standard O.D. in various colours.

- Polyurethane
- Highly resistant to microbes and hydrolysis
- Suitable for energy chains
- Operating medium: compressed air, vacuum, water

### Additional documents

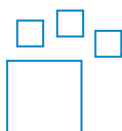
Link [pun-h-inch](#)



The additional document TUBING-NPT-ADD contains further information on tubing/fitting combinations, assembly instructions and measuring procedures.

### Ordering data - modular system

Link [pun-h-inch](#)



Configurable product

This product and all its product options can be ordered online via the configurator.

### Engineering tools

Link [engineering tools](#)



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- 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)).

### Alternative material characteristic

[H] Hydrolysis-resistant

Hydrolysis-resistant and suitable for water applications.

### Tubing outside diameter

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

### Packaging unit [ft]

- In some cases, available in longer lengths on a reel.

## Type code

| 001  | Series                              |  |
|------|-------------------------------------|--|
| PUN  | Plastic tubing, polyurethane        |  |
| 002  | Alternative material characteristic |  |
| H    | Hydrolysis-resistant                |  |
| 003  | Tubing outside diameter             |  |
| 1/8  | 1/8"                                |  |
| 5/32 | 5/32"                               |  |
| 3/16 | 3/16"                               |  |
| 1/4  | 1/4"                                |  |
| 5/16 | 5/16"                               |  |
| 3/8  | 3/8"                                |  |
| 1/2  | 1/2"                                |  |
| 5/8  | 5/8"                                |  |

| 004 | Colour             |  |
|-----|--------------------|--|
| BL  | Blue               |  |
| BR  | Brown              |  |
| GE  | Yellow             |  |
| GN  | Green              |  |
| NT  | Natural            |  |
| RT  | Red                |  |
| SI  | Silver             |  |
| SW  | Black              |  |
| TBL | Translucent blue   |  |
| TGE | Translucent yellow |  |
| TGN | Translucent green  |  |
| TRT | Translucent red    |  |
| TSW | Translucent black  |  |
| WS  | White              |  |

| 005  | Packaging unit [ft] |  |
|------|---------------------|--|
| 150  | 150 ft              |  |
| 500  | 500 ft              |  |
| 1000 | 1000 ft             |  |

| 006 | Packaging     |  |
|-----|---------------|--|
| CB  | Cardboard box |  |
| HA  | Reel          |  |

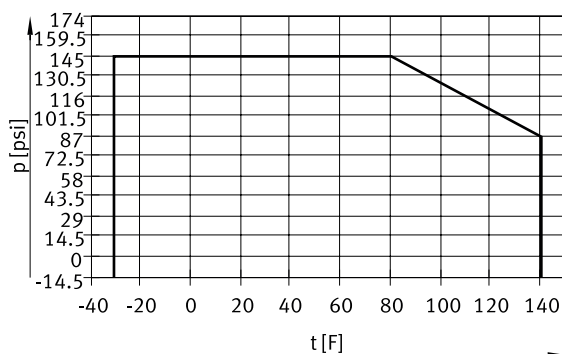
## Datasheet

## Operating and environmental conditions

|                                          |                                                                                      |                                                |                                                 |                                 |                                                                                    |                                 |                                 |                                                |
|------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------|-------------------------------------------------|---------------------------------|------------------------------------------------------------------------------------|---------------------------------|---------------------------------|------------------------------------------------|
| Pneumatic connection                     | For push-in connector O.D. 4 mm<br>For push-in connector outside diameter of 5/32"   | For push-in connector outside diameter of 1/8" | For push-in connector outside diameter of 3/16" | For push-in connector O.D. 1/4" | For push-in connector O.D. 8 mm<br>For push-in connector outside diameter of 5/16" | For push-in connector O.D. 3/8" | For push-in connector O.D. 1/2" | For push-in connector outside diameter of 5/8" |
| Flow-relevant bending radius             | 0.052 Feet                                                                           | 0.039 Feet                                     | 0.069 Feet                                      | 0.085 Feet                      | 0.121 ... 0.123 Feet                                                               | 0.171 Feet                      | 0.204 Feet                      | 0.288 Feet                                     |
| Min. bending radius                      | 0.02 Feet                                                                            |                                                | 0.025 Feet                                      | 0.032 ... 0.046 Feet            | 0.065 ... 0.066 Feet                                                               | 0.081 ... 0.082 Feet            | 0.075 Feet                      | 0.125 Feet                                     |
| Temperature-dependent operating pressure | -14.402 ... 144.994 psi                                                              |                                                |                                                 |                                 |                                                                                    |                                 |                                 |                                                |
| Note on operating pressure               | Water: temperature-dependent operating pressure, see diagram, max. 0.3 MPa at 0–60°C |                                                |                                                 |                                 |                                                                                    |                                 |                                 |                                                |
| Operating medium                         | Compressed air to ISO 8573-1:2010 [7:-:-]<br>Water (liquid, ice-free)                |                                                |                                                 |                                 |                                                                                    |                                 |                                 |                                                |
| Suitable for use with food <sup>1)</sup> | See supplementary material information                                               |                                                |                                                 |                                 |                                                                                    |                                 |                                 |                                                |
| Ambient temperature                      | -31 ... 145.4°F                                                                      |                                                |                                                 |                                 |                                                                                    |                                 |                                 |                                                |
| Fire test material                       | UL94 HB                                                                              |                                                |                                                 |                                 |                                                                                    |                                 |                                 |                                                |
| Tubing characteristics                   | Suitable for energy chains                                                           |                                                |                                                 |                                 |                                                                                    |                                 |                                 |                                                |

1) More information [www.festo.com/catalogue/pun-h](http://www.festo.com/catalogue/pun-h) → Support/Downloads.

## Operating pressure p as a function of temperature t



## Materials

|                                                                  |                                                                                          |
|------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Shore hardness                                                   | D 52 +/- 3                                                                               |
| Material tubing                                                  | TPE-U(PU)                                                                                |
| Instructions on use                                              | TPE-U, ether-based                                                                       |
| Note on materials                                                | RoHS compliant                                                                           |
| LABS (PWIS) conformity <sup>1)</sup>                             | VDMA24364-B2-L                                                                           |
| Suitability for the production of Li-ion batteries <sup>2)</sup> | Suitable for battery production with reduced Cu/Zn/Ni values (F1a)                       |
| Cleanroom suitability, measured according to ISO 14644-14        | Element installed statically, no meaningful evaluation possible according to ISO 14644-1 |

1) Applies to PUN-H with O.D. 3 ... 16 mm and PUN-H-DUO

2) Applies to PUN-H with O.D. 3 ... 16 mm and PUN-H-DUO

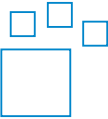
## Ordering data

## Ordering data PUN-H

|                                                                                   | Pneumatic connection                                                             | Packaging unit [ft] | Product weight according to length | Colour             | Part no.             | Type                  |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|---------------------|------------------------------------|--------------------|----------------------|-----------------------|
|  | For push-in connector O.D. 4 mm, For push-in connector outside diameter of 5/32" | 150 ft              | 0.09 oz/ft                         | Blue               | 567946               | PUN-H-5/32-BL-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Brown              | 567994               | PUN-H-5/32-BR-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Natural            | 567962               | PUN-H-5/32-NT-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Black              | 567954               | PUN-H-5/32-SW-150-CB  |
|                                                                                   |                                                                                  | 500 ft              |                                    |                    | 568017               | PUN-H-5/32-SW-500-HA  |
|                                                                                   | For push-in connector O.D. 8 mm, For push-in connector outside diameter of 5/16" | 150 ft              | 0.31 oz/ft                         | Blue               | 567949               | PUN-H-5/16-BL-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Brown              | 567997               | PUN-H-5/16-BR-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Natural            | 567965               | PUN-H-5/16-NT-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Black              | 567957               | PUN-H-5/16-SW-150-CB  |
|                                                                                   |                                                                                  | 500 ft              |                                    | Natural            | 8003127              | PUN-H-5/16-NT-500-HA  |
|                                                                                   |                                                                                  |                     |                                    | Silver             | 568011               | PUN-H-5/16-SI-500-HA  |
|                                                                                   |                                                                                  | 1000 ft             |                                    | Blue               | 568022               | PUN-H-5/16-BL-1000-HA |
|                                                                                   |                                                                                  |                     |                                    | Black              | 568024               | PUN-H-5/16-SW-1000-HA |
|                                                                                   | For push-in connector outside diameter of 1/8"                                   | 150 ft              | 0.06 oz/ft                         | Blue               | 567945               | PUN-H-1/8-BL-150-CB   |
|                                                                                   |                                                                                  |                     |                                    | Brown              | 567993               | PUN-H-1/8-BR-150-CB   |
|                                                                                   |                                                                                  |                     |                                    | Green              | 567977               | PUN-H-1/8-GN-150-CB   |
|                                                                                   |                                                                                  |                     |                                    | Natural            | 567961               | PUN-H-1/8-NT-150-CB   |
|                                                                                   |                                                                                  |                     |                                    | Black              | 567953               | PUN-H-1/8-SW-150-CB   |
|                                                                                   |                                                                                  |                     |                                    | Silver             | 567937               | PUN-H-1/8-SI-150-CB   |
|                                                                                   | For push-in connector outside diameter of 3/16"                                  |                     | 0.13 oz/ft                         | Blue               | 567947               | PUN-H-3/16-BL-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Yellow             | 567971               | PUN-H-3/16-GE-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Green              | 567979               | PUN-H-3/16-GN-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Natural            | 567963               | PUN-H-3/16-NT-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Black              | 567955               | PUN-H-3/16-SW-150-CB  |
|                                                                                   | For push-in connector O.D. 1/4"                                                  | 150 ft              | 0.23 oz/ft                         | Translucent blue   | 8203970              | PUN-H-1/4-TBL-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Translucent yellow | 8203974              | PUN-H-1/4-TGE-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Translucent green  | 8203973              | PUN-H-1/4-TGN-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Translucent red    | 8203972              | PUN-H-1/4-TRT-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Translucent black  | 8203971              | PUN-H-1/4-TSW-150-CB  |
|                                                                                   |                                                                                  |                     |                                    | Blue               | 567948               | PUN-H-1/4-BL-150-CB   |
|                                                                                   |                                                                                  |                     |                                    | Yellow             | 567972               | PUN-H-1/4-GE-150-CB   |
|                                                                                   |                                                                                  |                     |                                    | Green              | 567980               | PUN-H-1/4-GN-150-CB   |
|                                                                                   |                                                                                  |                     |                                    | Natural            | 567964               | PUN-H-1/4-NT-150-CB   |
|                                                                                   |                                                                                  |                     |                                    | Red                | 567988               | PUN-H-1/4-RT-150-CB   |
|                                                                                   |                                                                                  | 500 ft              |                                    | Black              | 567956               | PUN-H-1/4-SW-150-CB   |
|                                                                                   |                                                                                  |                     |                                    | Silver             | 567940               | PUN-H-1/4-SI-150-CB   |
|                                                                                   |                                                                                  |                     |                                    | White              | 568004               | PUN-H-1/4-WS-150-CB   |
|                                                                                   |                                                                                  |                     |                                    | Blue               | 568014               | PUN-H-1/4-BL-500-HA   |
|                                                                                   |                                                                                  |                     |                                    | Natural            | 8003126              | PUN-H-1/4-NT-500-HA   |
|                                                                                   |                                                                                  |                     |                                    | Black              | 568018               | PUN-H-1/4-SW-500-HA   |
|                                                                                   |                                                                                  |                     |                                    | Silver             | 568010               | PUN-H-1/4-SI-500-HA   |
|                                                                                   |                                                                                  |                     |                                    | Blue               | 568021               | PUN-H-1/4-BL-1000-HA  |
|                                                                                   |                                                                                  |                     |                                    | Black              | 568023               | PUN-H-1/4-SW-1000-HA  |
|                                                                                   |                                                                                  |                     |                                    | 1000 ft            |                      |                       |
|                                                                                   |                                                                                  |                     |                                    |                    |                      |                       |
|                                                                                   |                                                                                  |                     |                                    |                    |                      |                       |
|                                                                                   |                                                                                  |                     |                                    |                    |                      |                       |
|                                                                                   |                                                                                  |                     |                                    |                    |                      |                       |
|                                                                                   | For push-in connector O.D 3/8"                                                   |                     | 0.48 oz/ft                         | Translucent blue   | 8203975              | PUN-H-3/8-TBL-150-CB  |
| Translucent yellow                                                                |                                                                                  |                     |                                    | 8203979            | PUN-H-3/8-TGE-150-CB |                       |
| Translucent green                                                                 |                                                                                  |                     |                                    | 8203978            | PUN-H-3/8-TGN-150-CB |                       |
| Translucent red                                                                   |                                                                                  |                     |                                    | 8203977            | PUN-H-3/8-TRT-150-CB |                       |
| Translucent black                                                                 |                                                                                  |                     |                                    | 8203976            | PUN-H-3/8-TSW-150-CB |                       |

## Ordering data

| Ordering data PUN-H                                                              |                                                |                     |                                    |                    |          |                      |
|----------------------------------------------------------------------------------|------------------------------------------------|---------------------|------------------------------------|--------------------|----------|----------------------|
|                                                                                  | Pneumatic connection                           | Packaging unit [ft] | Product weight according to length | Colour             | Part no. | Type                 |
|  | For push-in connector O.D 3/8"                 | 150 ft              | 0.48 oz/ft                         | Blue               | 567950   | PUN-H-3/8-BL-150-CB  |
|                                                                                  |                                                |                     |                                    | Brown              | 567998   | PUN-H-3/8-BR-150-CB  |
|                                                                                  |                                                |                     |                                    | Yellow             | 567974   | PUN-H-3/8-GE-150-CB  |
|                                                                                  |                                                |                     |                                    | Green              | 567982   | PUN-H-3/8-GN-150-CB  |
|                                                                                  |                                                |                     |                                    | Natural            | 567966   | PUN-H-3/8-NT-150-CB  |
|                                                                                  |                                                |                     |                                    | Red                | 567990   | PUN-H-3/8-RT-150-CB  |
|                                                                                  |                                                |                     |                                    | Black              | 567958   | PUN-H-3/8-SW-150-CB  |
|                                                                                  |                                                |                     |                                    | Silver             | 567942   | PUN-H-3/8-SI-150-CB  |
|                                                                                  |                                                |                     |                                    | White              | 568006   | PUN-H-3/8-WS-150-CB  |
|                                                                                  |                                                |                     |                                    | Blue               | 568016   | PUN-H-3/8-BL-500-HA  |
|                                                                                  | For push-in connector O.D 1/2"                 | 500 ft              | 0.48 oz/ft                         | Natural            | 8003128  | PUN-H-3/8-NT-500-HA  |
|                                                                                  |                                                |                     |                                    | Black              | 568020   | PUN-H-3/8-SW-500-HA  |
|                                                                                  |                                                | 150 ft              | 0.88 oz/ft                         | Translucent blue   | 8203980  | PUN-H-1/2-TBL-150-CB |
|                                                                                  |                                                |                     |                                    | Translucent yellow | 8203984  | PUN-H-1/2-TGE-150-CB |
|                                                                                  |                                                |                     |                                    | Translucent green  | 8203983  | PUN-H-1/2-TGN-150-CB |
|                                                                                  |                                                |                     |                                    | Translucent red    | 8203982  | PUN-H-1/2-TRT-150-CB |
|                                                                                  |                                                |                     |                                    | Translucent black  | 8203981  | PUN-H-1/2-TSW-150-CB |
|                                                                                  |                                                |                     |                                    | Blue               | 567951   | PUN-H-1/2-BL-150-CB  |
|                                                                                  |                                                |                     |                                    | Yellow             | 567975   | PUN-H-1/2-GE-150-CB  |
|                                                                                  |                                                |                     |                                    | Green              | 567983   | PUN-H-1/2-GN-150-CB  |
|                                                                                  |                                                |                     |                                    | Natural            | 567967   | PUN-H-1/2-NT-150-CB  |
|                                                                                  | For push-in connector outside diameter of 5/8" |                     | 1.38 oz/ft                         | Red                | 567991   | PUN-H-1/2-RT-150-CB  |
|                                                                                  |                                                |                     |                                    | Black              | 567959   | PUN-H-1/2-SW-150-CB  |
|                                                                                  |                                                |                     |                                    | Silver             | 567943   | PUN-H-1/2-SI-150-CB  |
|                                                                                  |                                                |                     |                                    | White              | 568007   | PUN-H-1/2-WS-150-CB  |
|                                                                                  |                                                |                     |                                    | Blue               | 567952   | PUN-H-5/8-BL-150-CB  |
|                                                                                  |                                                |                     |                                    | Brown              | 568000   | PUN-H-5/8-BR-150-CB  |
|                                                                                  |                                                |                     |                                    | Yellow             | 567976   | PUN-H-5/8-GE-150-CB  |
|                                                                                  |                                                |                     |                                    | Green              | 567984   | PUN-H-5/8-GN-150-CB  |
|                                                                                  |                                                |                     |                                    | Red                | 567992   | PUN-H-5/8-RT-150-CB  |
|                                                                                  |                                                |                     |                                    | White              | 568008   | PUN-H-5/8-WS-150-CB  |

| Ordering data – Modular product system                                             |                 |          |       |
|------------------------------------------------------------------------------------|-----------------|----------|-------|
|                                                                                    | Short type code | Part no. | Type  |
|  | PUN-            | 567446   | PUN-U |