

## Push-in fittings NPQR

**FESTO**



## Key features

### Application



Choosing the right fitting is effortless. With a system that includes well over 1000 types of standard and function fittings, Festo offers a secure solution for every connection.

### Suitability for food contact



The push-in fittings NPQR are suitable for contact with food. They have the necessary declaration of conformity in accordance with EU Regulation (EC) No. 1935/2004.

### Summary of tubing/fitting combinations

| Applications                                     | Fitting | Tubing     | Description   |
|--|---------|------------|---|
| Standard   | QS      | PEN        | Suitable for a wide range of tasks and attractively priced. Flexible thanks to highly resistant materials, easy to install thanks to optimised bending radii. High level of abrasion resistance in dynamic applications.    |
|  | QS      | PUN        | Maximum flexibility in standard applications thanks to an extremely wide range of options for combining the different types.  |
|  | QS      | PAN        | Meets all requirements, even for standard applications with increased pressure and temperature ranges.  |
| High pressures                                   | NPQM    | PAN-MF     | Meets DIN standard 73378: ideal for use in mobile pneumatics. Suitable for increased temperature ranges combined with high pressure ranges.   |
|  | NPQH    | PAN-R      | Powerful in pressure ranges up to 20 bar, for example in applications with the pressure booster DPA.  |
| Resistant to chemicals and hydrolysis, food-safe | NPQP    | PLN        | Resistant to cleaning agents, FDA-compliant and economical. Can be used instead of the combination with stainless steel fittings.   |
|  | NPKA    | PUN-H      | Hydrolysis-resistant and suitable for water applications. Combination suitable for use in cleanrooms, FDA-compliant and corrosion-resistant as made from 100% polymer. Very easy to install with the "one click principle". |
|  | NPQH    | PFAN/PTFEN | For high temperatures up to 150°C. Food-safe, FDA-compliant and resistant to cleaning agents.   |
|  | NPCK    | PFAN/PTFEN | Easy to clean thanks to the union nut's edge-free design. Maximum corrosion resistance (CRC 4) and FDA-compliant. Suitable for a wide range of media.   |
|  | CRQS    | PFAN/PTFEN | Maximum corrosion resistance (CRC 4) and maximum resistance to aggressive acids and alkalis.  |
| Resistant to chemicals and hydrolysis            | NPQR    | PFAN/PTFEN | Optimised design, fewer edges where dirt can collect – all at an attractive price. For high temperatures up to 150°C. Pressure range up to 16 bar. Highest level of corrosion resistance (CRC 4).                           |
| Antistatic                                       | NPQM    | PUN-CM     | Antistatic tubing plus solid metal fitting: maximum protection for electric and electronic components.  |
| Flame-retardant                                  | NPQM    | PUN-V0     | Very safe in areas where there is a risk of fire thanks to flame-retardant properties. The tubing has been tested to DIN 5510-2.  |
| Resistant to welding spatter                     | NPQH    | PUN-V0-C   | Ideal for applications involving welding spatter. Reliable thanks to a tubing wall thickness of 2 mm for all diameters.   |
|  | QS-V0   | PAN-V0     | Safe even in the immediate vicinity of welding spatter thanks to double-walled tubing with special fitting.   |

## Key features

### Push-in fittings – Product range

QSM, mini series

Datasheets → Internet: qsm



Miniature push-in fittings for maximum component density in confined spaces. For pneumatic applications with a temperature range up to 80°C and a pressure range up to 14 bar. Tubing O.D. of 2, 3, 4 and 6 mm with connecting threads M3, M5, M6, M7, R1/8 and G1/8.

QS, standard series

Datasheets → Internet: qs



Wide selection of push-in fittings for pneumatic applications with a temperature range up to 80°C and a pressure range up to 14 bar. Tubing O.D. 4, 6, 8, 10, 12, 16 and 22 mm with connecting thread R1/8 ... R1/2 and G1/8 ... G3/4.

CRQS, stainless steel

Datasheets → Internet: crqs



Stainless steel push-in fitting. Maximum corrosion resistance CRC 4 and chemical resistance with approval for use in the food and packaging industry. For pneumatic applications with a temperature range up to 120°C and a pressure range up to 10 bar. Tubing O.D. 4, 6, 8, 10, 12 and 16 mm with connecting threads M5 and R1/8 ... R1/2.

QS-V0, resistant to welding spatter

Datasheets → Internet: qs-v0



Flame-retardant push-in fitting for use in all areas where there is a risk of fire, for example welding systems in the automotive industry, and in the construction industry. For pneumatic applications with a temperature range up to 60°C and a pressure range up to 10 bar. Tubing O.D. 4, 6, 8, 10 and 12 mm with connecting thread R1/8 ... R1/2 and G1/8 ... G1/2.

NPQH

Datasheets → Internet: npqh



All metal push-in fitting made of chemically nickel-plated brass. High corrosion resistance CRC 3 and chemical resistance. For pneumatic applications with a temperature range up to 150°C and a pressure range up to 20 bar. Tubing O.D. 4, 6, 8, 10, 12 and 14 mm with connecting thread M5, M7 and G1/8 ... G1/2.

NPQM

Datasheets → Internet: npqm



Attractively priced metal push-in fitting for pneumatic applications with a temperature range up to 70°C and a pressure range up to 16 bar. Tubing O.D. 3, 4, 6, 8, 10, 12 and 14 mm with connecting thread M5, M7 and G1/8 ... G1/2.

NPQP

Datasheets → Internet: npqp



Polypropylene fitting for use in applications with extreme media influences. For pneumatic applications with a temperature range up to 60°C and a pressure range up to 10 bar. Tubing O.D. 4, 6, 8, 10 and 12 mm with connecting threads R1/8 ... R1/2.

NPQR, stainless steel

Datasheets → Internet: npqr



Stainless steel push-in fitting. Maximum corrosion resistance CRC 4 and chemical resistance. For pneumatic applications with a temperature range up to 150°C and a pressure range up to 16 bar. Tubing O.D. 4, 6, 8, 10, 12, 14 and 16 mm with connecting thread M5, M7 and G1/8 ... G1/2.

## Key features

### Functional push-in fittings – Product range

QSK,  
push-in fitting, self-sealing

Datasheets → Internet: qsk



Push-in fitting that blocks the air flow after the tubing is disconnected. For pneumatic applications with a temperature range up to 60°C and a pressure range up to 14 bar.  
Tubing O.D. 4, 6, 8, 10 and 12 mm with connecting threads M5, R1/8 ... R1/2 and G1/8 ... G1/2.

QSR,  
push-in fitting, rotatable

Datasheets → Internet: qsr



Push-in fitting with swivel joint, rotatable 360°. The ball bearing enables rotating movements in the application up to max. 500 rpm. For pneumatic applications with a temperature range up to 60°C and a pressure range up to 14 bar.  
Tubing O.D. 4, 6, 8, 10 and 12 mm with connecting threads M5, R1/8 ... R1/2 and G1/8 ... G1/2.

### Quick connectors – Product range

NPCK

Datasheets → Internet: npck



Stainless steel fitting for use in areas subject to intensive cleaning. Maximum level of corrosion resistance CRC 4. For pneumatic applications with a temperature range up to 120°C and a pressure range up to 12 bar.  
Tubing O.D. of 4, 6, 8 and 10 mm with connecting threads M5 and G1/8 ... G3/8.

### Click fittings – Product range

NPKA

Datasheets → Internet: npka



Polymer fitting for easy one-handed installation. Hydrolysis-resistant, FDA-compliant and easy to clean. For pneumatic applications with a temperature range up to 60°C and a pressure range up to 10 bar.  
Tubing O.D. of 6 mm with connecting thread G1/8.

## Technical data

| General technical data               |  |                        |
|--------------------------------------|--|------------------------|
| Pneumatic connection 1               | Male thread M5; M7; G3/8; G1/2                                       | Male thread G1/8; G1/4 |
| Size                                 | Standard   |                        |
| Design                               | Push-pull principle  |                        |
| Mounting position                    | Any  |                        |
| Type of seal on the screwed trunnion | Sealing ring   |                        |
| Nominal tightening torque [Nm]       | 1 ±20% for connecting thread M5                                      |                        |
|                                      | 3 ±20% for connecting thread M7                                      |                        |
|                                      | 6 ±20% for connecting thread G1/8 (exception NPQR-DK-G18-Q4: 3 ±20%) |                        |
|                                      | 7.5 ±20% for connecting thread G1/4                                  |                        |
|                                      | 9 ±20% for connecting thread G3/8                                    |                        |
|                                      | 9 ±20% for connecting thread G1/2                                    |                        |

| Operating and environmental conditions                             |  |  |                              |
|--|--|--|------------------------------|
| Pneumatic connection 2   |  | For tubing O.D. 4 mm; 6 mm; 8 mm; 10 mm; 12 mm | For tubing O.D. 14 mm, 16 mm |
| Operating pressure for entire temperature range                    | [MPa]  | -0.095 ... +1.6                                | -0.095 ... +1.2              |
|  | [bar]  | -0.95 ... +16                                  | -0.95 ... +12                |
|  | [psi]  | -13.775 ... +232                               | -13.775 ... +174             |
| Operating medium   | Compressed air to ISO 8573-1:2010 [7:-:-]  |  |                              |
| Note on the operating/pilot medium                                 | Lubricated operation possible  |  |                              |
| PWIS conformity  | VDMA24364-B2-L   |  |                              |
| Ambient temperature <sup>1)</sup>                                  | [°C]   | -20 ... +150                                   | -5 ... +150                  |
| Note on ambient temperature  | -  |  | With PUN-H: -20°C - 60°C     |
| Corrosion resistance class CRC <sup>2)</sup>                       | 4 – Particularly high corrosion stress   |  |                              |
| Suitable for the production of lithium-ion batteries <sup>3)</sup> | Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils |  |                              |
| Cleanroom class <sup>3)</sup>                                      | Class 4 to ISO 14644-1   |  |                              |
| Food-safe <sup>3)</sup>  | See declaration of conformity  |  |                              |
|  | NSF/ANSI 169   |  |                              |
| Certificate-issuing authority                                      | NSF C0556009   |  |                              |

1) Observe the range of application of the plastic tubing.

2) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded with special tests (→ also FN 940082) using appropriate media.

3) Additional information: [www.festo.com/catalogue/npqr](http://www.festo.com/catalogue/npqr) → Support/Downloads.

| Materials             |                            |
|-----------------------|----------------------------|
| Housing               | High-alloy stainless steel |
| Releasing ring        | High-alloy stainless steel |
| Retaining ring        | High-alloy stainless steel |
| Tube clamping segment | High-alloy stainless steel |
| Thrust ring           | PPSU                       |
| Nut (NPQR-H only)     | High-alloy stainless steel |
| Tubing seal           | FPM                        |
| Threaded seal         | FPM                        |
| Note on materials     | RoHS-compliant             |

### Tube mounting/dismounting

#### Attaching

The prerequisite for ensuring that the inner seal is securely held and protected against damage is that the tube is cut into straight lengths and deburred.

1) Insert tubing as far as the stop.

It is important to ensure that the tubing is inserted into the inner seal. Depending on the tolerance between the tubing and the seal, the contact of the tubing with the seal may be wrongly interpreted as the stop.

2) Check that the tubing connection is secure by pulling gently on the tube.

#### Dismantling

1) The tubing can be detached easily by pressing and holding down the releasing ring. Remove the tubing carefully from the fitting.

2) Before re-using the tubing, remove the damaged part by cutting it off.

Product range overview

| Design  | Version   | Type            | Connection D1 |          |             | Connection D2 |      | → Page |             |
|---|---|-----------------|---------------|----------|-------------|---------------|------|--------|-------------|
|   |   |                 | M thread      | G thread | Tubing O.D. | Tubing O.D.   |      |        |             |
| Straight shape  | <b>Push-in fitting – Male thread with internal hex</b>                              |                 |               |          |             |               |      |        |             |
|   |    | NPQR-DK         | M5            | -        | -           | -             | 4, 6 | 8      |             |
|   |   |                 | M7            |          |             |               | 4, 6 |        |             |
|   |   |                 | -             |          |             |               | G1/8 |        | 4, 6, 8, 10 |
|   |   |                 | -             |          |             |               | G1/4 |        | 6, 8, 10    |
|   |   |                 | -             |          |             |               | G3/8 |        | 8, 10, 12   |
|   | -   | G1/2            | 12, 14, 16    |          |             |               |      |        |             |
|   | <b>Push-in connector</b>  |                 |               |          |             |               |      |        |             |
|   |    | NPQR-D          | -             | -        | -           | 4             | 4    | 9      |             |
|   |   |                 | -             | -        | -           | 6             | 6    |        |             |
|   |   |                 | -             | -        | -           | 8             | 8    |        |             |
|   |   |                 | -             | -        | -           | 10            | 10   |        |             |
|   |   |                 | -             | -        | -           | 12            | 12   |        |             |
|   |   |                 | -             | -        | -           | 14            | 14   |        |             |
|   |    | NPQR-D Reducing | -             | -        | -           | 6             | 4    | 9      |             |
| -   |   |                 | -             | -        | 8           | 6             |      |        |             |
| -   |   |                 | -             | -        | 10          | 8             |      |        |             |
| -   |   |                 | -             | -        | 12          | 10            |      |        |             |
| -   |   |                 | -             | -        | 16          | 12            |      |        |             |
| <b>Push-in bulkhead connector</b>   |   |                 |               |          |             |               |      |        |             |
|   | NPQR-H  | -               | -             | -        | 4           | 4             | 10   |        |             |
|   |   | -               | -             | -        | 6           | 6             |      |        |             |
|   |   | -               | -             | -        | 8           | 8             |      |        |             |
|   |   | -               | -             | -        | 10          | 10            |      |        |             |
|   |   | -               | -             | -        | 12          | 12            |      |        |             |
| <b>Plug screw</b>   |   |                 |               |          |             |               |      |        |             |
|  | NPQR-BK   | M5              | -             | -        | -           | -             | 10   |        |             |
|   |   | M7              |               |          |             |               |      |        |             |
|   |   | -               |               |          |             |               |      | G1/8   |             |
|   |   | -               |               |          |             |               |      | G1/4   |             |
|   |   | -               |               |          |             |               |      | G3/8   |             |
| -   | G1/2  |                 |               |          |             |               |      |        |             |
| L-shape   | <b>Push-in L-fitting – Male thread with external hex</b>                            |                 |               |          |             |               |      |        |             |
|   |  | NPQR-L          | M5            | -        | -           | -             | 4, 6 | 11     |             |
|   |   |                 | -             |          |             |               | G1/8 |        | 4, 6, 8     |
|   |   |                 | -             |          |             |               | G1/4 |        | 6, 8, 10    |
|   |   |                 | -             |          |             |               | G3/8 |        | 10, 12      |
|   |   |                 | -             |          |             |               | G1/2 |        | 12, 14, 16  |
|   | <b>Push-in L-connector</b>  |                 |               |          |             |               |      |        |             |
|   |  | NPQR-L          | -             | -        | -           | 4             | 4    | 11     |             |
|   |   |                 | -             | -        | -           | 6             | 6    |        |             |
|   |   |                 | -             | -        | -           | 8             | 8    |        |             |
| -   |   |                 | -             | -        | 10          | 10            |      |        |             |
| -   |   |                 | -             | -        | 12          | 12            |      |        |             |
| -   |   |                 | -             | -        | 14          | 14            |      |        |             |
| -   | -   | -               | 16            | 16       |             |               |      |        |             |

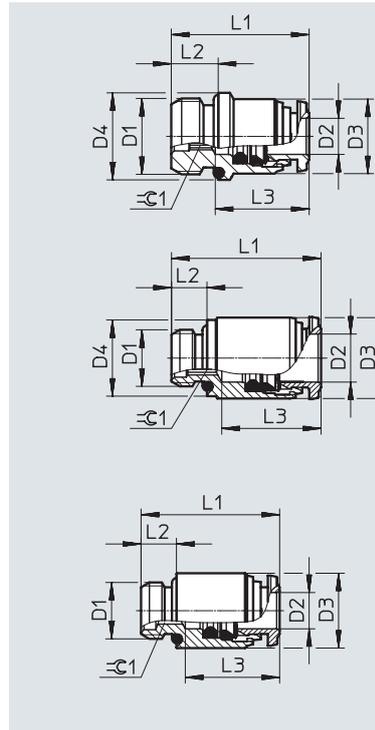
Product range overview

| Design  | Version   | Type   | Connection D1 |          |             | Connection D2 |    | → Page |
|---------|---|--------|---------------|----------|-------------|---------------|----|--------|
|         |   |        | M thread      | G thread | Tubing O.D. | Tubing O.D.   |    |        |
| T-shape | <b>Push-in T-fitting – Male thread with external hex</b>                          |        |               |          |             |               |    |        |
|         |  | NPQR-T | M5            | –        | –           | 4, 6          | 12 |        |
|         |   |        | –             | G1/8     |             |               |    |        |
|         |   |        | –             | G1/4     |             |               |    |        |
|         |   |        | –             | G3/8     |             |               |    |        |
|         |   |        | –             | G1/2     |             |               |    |        |
|         | <b>Push-in T-connector</b>  |        |               |          |             |               |    |        |
|         |  | NPQR-T | –             | –        | 4           | 4             | 12 |        |
|         |   |        | –             | –        | 6           | 6             |    |        |
|         |   |        | –             | –        | 8           | 8             |    |        |
|         |   |        | –             | –        | 10          | 10            |    |        |
|         |   |        | –             | –        | 12          | 12            |    |        |
| –       |   |        | –             | 14       | 14          |               |    |        |
| –       | –   | 16     | 16            |          |             |               |    |        |
| Y-shape | <b>Push-in Y-connector</b>  |        |               |          |             |               |    |        |
|         |  | NPQR-Y | –             | –        | 4           | 4             | 13 |        |
|         |   |        | –             | –        | 6           | 6             |    |        |
|         |   |        | –             | –        | 8           | 8             |    |        |
|         |   |        | –             | –        | 10          | 10            |    |        |
|         |   |        | –             | –        | 12          | 12            |    |        |
| –       |   |        | –             | 16       | 16          |               |    |        |

## Datasheet

### Push-in fitting NPQR-DK

Male thread with internal hex



NPQR-DK-G18-Q4  
NPQR-DK-G14-Q6  
NPQR-DK-G38-Q8  
NPQR-DK-G38-Q10  
NPQR-DK-G12-Q12  
NPQR-DK-G12-Q14

NPQR-DK-M5-Q4  
NPQR-DK-M7-Q4  
NPQR-DK-G18-Q8  
NPQR-DK-G18-Q10  
NPQR-DK-G14-Q10

NPQR-DK-M5-Q6  
NPQR-DK-M7-Q6  
NPQR-DK-G18-Q6  
NPQR-DK-G14-Q8  
NPQR-DK-G38-Q12  
NPQR-DK-G12-Q16

#### Dimensions and ordering data

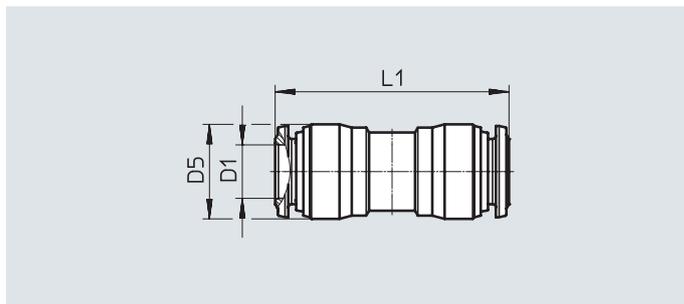
| Pneumatic connection              |                 | Nominal size | Dimensions [mm] |               |      |    |                  |                  | Weight/ piece | Part no. | Type            | PU <sup>2)</sup> |
|-----------------------------------|-----------------|--------------|-----------------|---------------|------|----|------------------|------------------|---------------|----------|-----------------|------------------|
| Male thread                       | For tubing O.D. |              | D3              | D4            | L1   | L2 | L3 <sup>1)</sup> | $\varnothing C1$ |               |          |                 |                  |
| D1                                | D2              | [mm]         | $\varnothing$   | $\varnothing$ |      |    |                  | [g]              |               |          |                 |                  |
| <b>M thread with sealing ring</b> |                 |              |                 |               |      |    |                  |                  |               |          |                 |                  |
| M5                                | 4               | 2.1          | 9.8             | 8             | 19.5 | 4  | 14               | 2                | 5.4           | 8085657  | NPQR-DK-M5-Q4   | 1                |
|                                   | 6               | 2.6          | 10              | –             | 20.1 | 4  | 13.5             | 2.5              | 5.7           | 8085659  | NPQR-DK-M5-Q6   | 1                |
| M7                                | 4               | 2.6          | 9.8             | 9.4           | 21   | 5  | 14               | 2.5              | 6.2           | 8085658  | NPQR-DK-M7-Q4   | 1                |
|                                   | 6               | 4.2          | 10              | –             | 21   | 5  | 13.5             | 4                | 5.8           | 8085660  | NPQR-DK-M7-Q6   | 1                |
| <b>G thread with sealing ring</b> |                 |              |                 |               |      |    |                  |                  |               |          |                 |                  |
| G1/8                              | 4               | 2.6          | 10              | 12.9          | 19.5 | 6  | 14               | 2.5              | 7.5           | 8085661  | NPQR-DK-G18-Q4  | 1                |
|                                   | 6               | 4.2          | 12.8            | –             | 23.5 | 6  | 16               | 4                | 11.4          | 8085662  | NPQR-DK-G18-Q6  | 1                |
|                                   | 8               | 5.3          | 13.8            | 13            | 25.5 | 6  | 16.8             | 5                | 14.7          | 8085663  | NPQR-DK-G18-Q8  | 1                |
|                                   | 10              | 5.3          | 17              | 13            | 28.5 | 6  | 19.35            | 5                | 19.1          | 8087695  | NPQR-DK-G18-Q10 | 1                |
| G1/4                              | 6               | 4.2          | 12.8            | 15            | 23.5 | 8  | 16               | 4                | 12.8          | 8085664  | NPQR-DK-G14-Q6  | 1                |
|                                   | 8               | 6.3          | 15              | –             | 23.5 | 8  | 16.8             | 6                | 14.4          | 8085665  | NPQR-DK-G14-Q8  | 1                |
|                                   | 10              | 6.3          | 16.8            | 16            | 29.5 | 8  | 19.35            | 6                | 22.6          | 8085666  | NPQR-DK-G14-Q10 | 1                |
| G3/8                              | 8               | 6.3          | 14              | 20            | 22   | 9  | 16.8             | 6                | 20.5          | 8086953  | NPQR-DK-G38-Q8  | 1                |
|                                   | 10              | 7.3          | 17              | 20            | 26.5 | 9  | 19.35            | 7                | 24.3          | 8085667  | NPQR-DK-G38-Q10 | 1                |
|                                   | 12              | 8.4          | 20              | –             | 33   | 9  | 22.35            | 8                | 36.5          | 8085668  | NPQR-DK-G38-Q12 | 1                |
| G1/2                              | 12              | 8.4          | 20              | 24.8          | 30.5 | 10 | 22.35            | 8                | 40.7          | 8085669  | NPQR-DK-G12-Q12 | 1                |
|                                   | 14              | 11.6         | 21.5            | 24.8          | 29.5 | 10 | 21.5             | 10               | 46.8          | 8085670  | NPQR-DK-G12-Q14 | 1                |
|                                   | 16              | 12.6         | 24              | 24.8          | 36   | 10 | 23.5             | 12               | 49            | 8085671  | NPQR-DK-G12-Q16 | 1                |

1) Tubing insertion depth

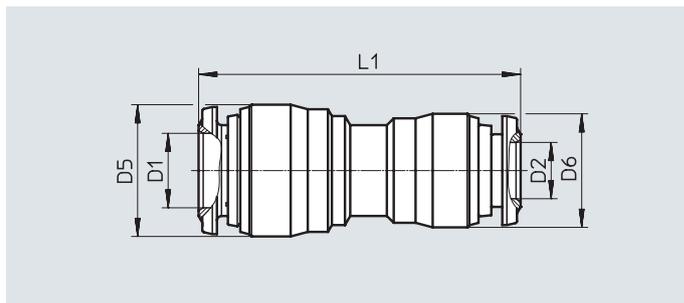
2) Packaging unit

# Datasheet

## Push-in connector NPQR-D



## Reducing

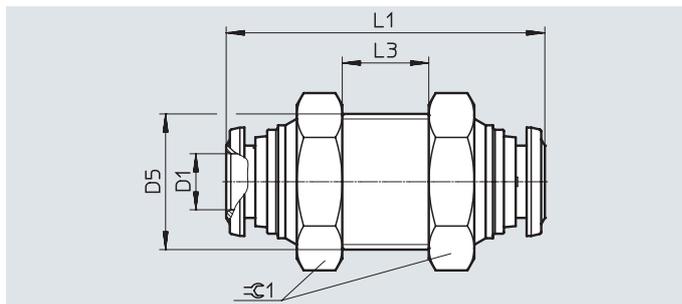


| Dimensions and ordering data |                    |                   |                 |      |      |                             |   |                   |          |                |                  |
|------------------------------|--------------------|-------------------|-----------------|------|------|-----------------------------|---|-------------------|----------|----------------|------------------|
| Pneumatic connection         |                    | Nominal size [mm] | Dimensions [mm] |      |      | Tubing insertion depth [mm] | Note on the tubing insertion depth [mm] | Weight/ piece [g] | Part no. | Type           | PU <sup>1)</sup> |
| For tubing O.D. D1           | For tubing O.D. D2 |                   | D5 Ø            | D6 Ø | L1   |                             |   |                   |          |                |                  |
| 4                            | 4                  | 3                 | 10.3            | –    | 30   | 14                          | –                                       | 9.8               | 8085697  | NPQR-D-Q4-E    | 1                |
| 6                            | 6                  | 5                 | 12.5            | –    | 34   | 16                          | –                                       | 15                | 8085698  | NPQR-D-Q6-E    | 1                |
| 8                            | 8                  | 7                 | 14.5            | –    | 35.5 | 16.8                        | –                                       | 19.4              | 8085699  | NPQR-D-Q8-E    | 1                |
| 10                           | 10                 | 9                 | 17.5            | –    | 41   | 19.35                       | –                                       | 32.4              | 8085700  | NPQR-D-Q10-E   | 1                |
| 12                           | 12                 | 11                | 20.5            | –    | 47   | 22.4                        | –                                       | 49.1              | 8085701  | NPQR-D-Q12-E   | 1                |
| 14                           | 14                 | 13                | 21.5            | –    | 45   | 21.5                        | –                                       | 47.8              | 8085702  | NPQR-D-Q14-E   | 1                |
| 16                           | 16                 | 15                | 24              | –    | 53.5 | 23.5                        | –                                       | 65.6              | 8085703  | NPQR-D-Q16-E   | 1                |
| Reducing                     |                    |                   |                 |      |      |                             |   |                   |          |                |                  |
| 6                            | 4                  | 3                 | 12.5            | 10.3 | 32.1 | 14 - 16.1                   | Ø4 depth 14<br>Ø6 depth 16.1            | 12                | 8085704  | NPQR-D-Q6-Q4   | 1                |
| 8                            | 6                  | 5                 | 14.5            | 12.5 | 35   | 16.1 - 17.05                | Ø6 depth 16.1<br>Ø8 depth 17.05         | 16.7              | 8085705  | NPQR-D-Q8-Q6   | 1                |
| 10                           | 8                  | 7                 | 17.5            | 14.5 | 38.5 | 17.25 - 19.35               | Ø10 depth 19.35<br>Ø8 depth 17.25       | 25.1              | 8085706  | NPQR-D-Q10-Q8  | 1                |
| 12                           | 10                 | 9                 | 20.5            | 17.5 | 44   | 19.6 - 22.4                 | Ø10 depth 19.6<br>Ø12 depth 22.4        | 39.6              | 8085707  | NPQR-D-Q12-Q10 | 1                |
| 16                           | 12                 | 11                | 24              | 20.5 | 52.5 | 22.5 - 23.5                 | Ø12 depth 22.5<br>Ø16 depth 23.5        | 63.7              | 8085708  | NPQR-D-Q16-Q12 | 1                |

1) Packaging unit

## Datasheet

### Push-in bulkhead connector NPQR-H

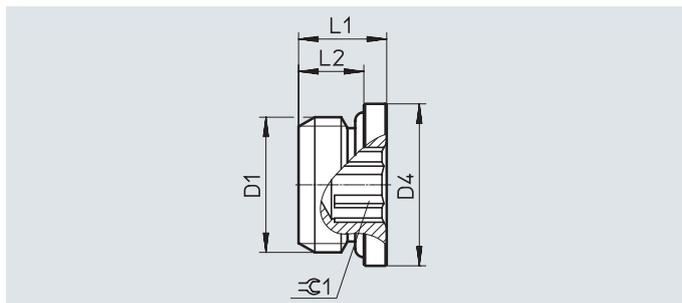


#### Dimensions and ordering data

| Pneumatic connection<br>For tubing O.D.<br>D1 | Nominal size<br>[mm] | Dimensions [mm] |      |            |     | Tubing<br>insertion depth<br>[mm] | Weight/piece<br>[g] | Part no. | Type         | PU <sup>1)</sup> |
|---|----------------------|-----------------|------|------------|-----|-----------------------------------|---------------------|----------|--------------|------------------|
|   |                      | D5              | L1   | L3<br>max. | ≈G1 |                                   |                     |          |              |                  |
| 4   | 3                    | M12x1           | 31   | 7          | 17  | 14                                | 24.3                | 8085729  | NPQR-H-Q4-E  | 1                |
| 6   | 5                    | M14x1           | 35   | 9.5        | 17  | 16                                | 28.3                | 8085730  | NPQR-H-Q6-E  | 1                |
| 8   | 7                    | M16x1           | 36.6 | 10.5       | 19  | 16.8                              | 37.1                | 8085731  | NPQR-H-Q8-E  | 1                |
| 10  | 9                    | M20x1           | 42.1 | 13.3       | 24  | 19.55                             | 66.8                | 8085732  | NPQR-H-Q10-E | 1                |
| 12  | 11                   | M22x1           | 48   | 12.5       | 26  | 22.4                              | 88.1                | 8085733  | NPQR-H-Q12-E | 1                |
| 16  | 15                   | M27x1.5         | 53.5 | 10.4       | 32  | 23.5                              | 153.6               | 8099104  | NPQR-H-Q16-E | 1                |

1) Packaging unit

### Plug screw NPQR-BK



#### Dimensions and ordering data

| Pneumatic connection<br>Male thread<br>D1 | Dimensions [mm] |      |    |     | Weight/<br>piece<br>[g] | Part no. | Type        | PU <sup>1)</sup> |
|---|-----------------|------|----|-----|-------------------------|----------|-------------|------------------|
|   | D4<br>∅         | L1   | L2 | ≈G1 |                         |          |             |                  |
| <b>M thread with sealing ring</b>         |                 |      |    |     |                         |          |             |                  |
| M5  | 8               | 6    | 4  | 2   | 3.2                     | 8104803  | NPQR-BK-M5  | 1                |
| M7  | 9.5             | 7.5  | 5  | 3   | 2.1                     | 8085672  | NPQR-BK-M7  | 1                |
| <b>G thread with sealing ring</b>         |                 |      |    |     |                         |          |             |                  |
| G1/8                                      | 14              | 8.5  | 6  | 5   | 4                       | 8085673  | NPQR-BK-G18 | 1                |
| G1/4                                      | 18              | 11   | 8  | 6   | 11                      | 8085674  | NPQR-BK-G14 | 1                |
| G3/8                                      | 20              | 12.5 | 9  | 8   | 17                      | 8085675  | NPQR-BK-G38 | 1                |
| G1/2                                      | 25              | 13.5 | 10 | 10  | 29                      | 8085676  | NPQR-BK-G12 | 1                |

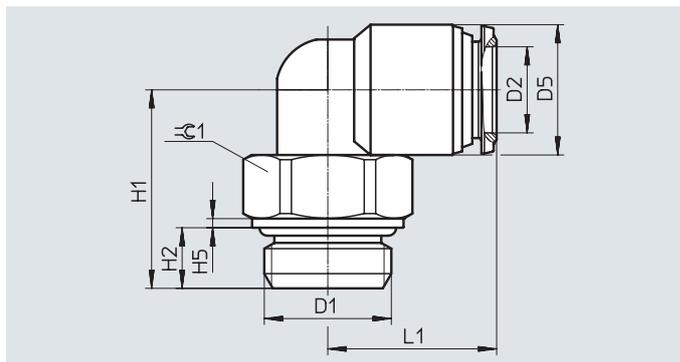
1) Packaging unit

## Datasheet

## Push-in L-fitting NPQR-L

Male thread with external hex

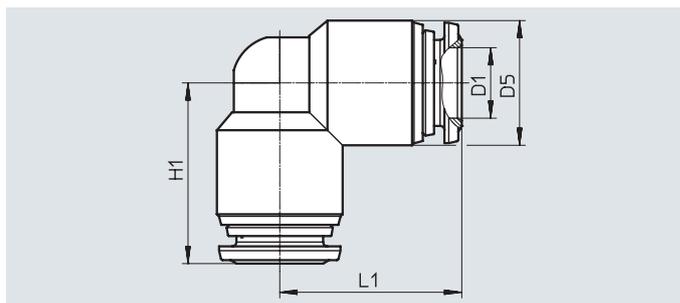
Rotatable 360°



| Dimensions and ordering data      |                 |                   |                 |      |    |     |      |      |                             |                   |          |                |                  |
|-----------------------------------|-----------------|-------------------|-----------------|------|----|-----|------|------|-----------------------------|-------------------|----------|----------------|------------------|
| Pneumatic connection              |                 | Nominal size [mm] | Dimensions [mm] |      |    |     |      |      | Tubing insertion depth [mm] | Weight/ piece [g] | Part no. | Type           | PU <sup>1)</sup> |
| Male thread                       | For tubing O.D. |                   | D5 ø            | H1   | H2 | H5  | L1   | ±0.1 |                             |                   |          |                |                  |
| D1                                | D2              |                   |                 |      |    |     |      |      |                             |                   |          |                |                  |
| <b>M thread with sealing ring</b> |                 |                   |                 |      |    |     |      |      |                             |                   |          |                |                  |
| M5                                | 4               | 2                 | 10              | 16   | 4  | 3   | 15.5 | 8    | 11                          | 8.3               | 8085679  | NPQR-L-M5-Q4   | 1                |
|                                   | 6               | 2                 | 12.5            | 17.5 | 4  | 3   | 18   | 8    | 13.1                        | 13.4              | 8098626  | NPQR-L-M5-Q6   | 1                |
| <b>G thread with sealing ring</b> |                 |                   |                 |      |    |     |      |      |                             |                   |          |                |                  |
| G1/8                              | 4               | 2                 | 10              | 16   | 6  | 1   | 15.5 | 13   | 11                          | 12.1              | 8085680  | NPQR-L-G18-Q4  | 1                |
|                                   | 6               | 4                 | 12.5            | 17.5 | 6  | 1   | 18   | 13   | 13.1                        | 16.4              | 8085681  | NPQR-L-G18-Q6  | 1                |
|                                   | 8               | 6                 | 14.5            | 23   | 6  | 1   | 20   | 13   | 13                          | 23.5              | 8085682  | NPQR-L-G18-Q8  | 1                |
| G1/4                              | 6               | 4                 | 12.5            | 20   | 8  | 1   | 18   | 15   | 13.1                        | 21.6              | 8085683  | NPQR-L-G14-Q6  | 1                |
|                                   | 8               | 6                 | 14.5            | 21   | 8  | 1   | 20   | 15   | 13                          | 24.4              | 8085684  | NPQR-L-G14-Q8  | 1                |
|                                   | 10              | 8                 | 17              | 27.5 | 8  | 0.9 | 23.5 | 15   | 15                          | 36.5              | 8085685  | NPQR-L-G14-Q10 | 1                |
| G3/8                              | 10              | 8                 | 17              | 25   | 9  | 1.5 | 23.5 | 20   | 15                          | 45                | 8085686  | NPQR-L-G38-Q10 | 1                |
|                                   | 12              | 10                | 20.5            | 30.5 | 9  | 1.5 | 27.5 | 20   | 17.4                        | 65.3              | 8085687  | NPQR-L-G38-Q12 | 1                |
| G1/2                              | 12              | 10                | 20.5            | 28.5 | 10 | 1.5 | 27.5 | 25   | 17.4                        | 73.2              | 8085688  | NPQR-L-G12-Q12 | 1                |
|                                   | 14              | 12                | 21.5            | 33   | 10 | 1.5 | 27.5 | 25   | 21.5                        | 83.6              | 8085689  | NPQR-L-G12-Q14 | 1                |
|                                   | 16              | 14                | 24              | 36.5 | 10 | 1.5 | 33   | 25   | 23.5                        | 99.7              | 8085690  | NPQR-L-G12-Q16 | 1                |

1) Packaging unit

## Push-in L-connector NPQR-L



| Dimensions and ordering data |    |                   |                 |      |      |                             |                   |              |      |                  |
|------------------------------|----|-------------------|-----------------|------|------|-----------------------------|-------------------|--------------|------|------------------|
| Pneumatic connection         |    | Nominal size [mm] | Dimensions [mm] |      |      | Tubing insertion depth [mm] | Weight/ piece [g] | Part no.     | Type | PU <sup>1)</sup> |
| For tubing O.D.              | D1 |                   | D5 ø            | H1   | L1   |                             |                   |              |      |                  |
| 4                            | 3  | 10                | 16              | 16   | 11   | 7.8                         | 8085709           | NPQR-L-Q4-E  | 1    |                  |
| 6                            | 5  | 12.5              | 19.5            | 19.5 | 13.1 | 14.9                        | 8085710           | NPQR-L-Q6-E  | 1    |                  |
| 8                            | 7  | 14.5              | 21              | 21   | 13   | 20.4                        | 8085711           | NPQR-L-Q8-E  | 1    |                  |
| 10                           | 9  | 17                | 24.5            | 24.5 | 15   | 29.9                        | 8085712           | NPQR-L-Q10-E | 1    |                  |
| 12                           | 11 | 20.5              | 29              | 29   | 17.4 | 51.8                        | 8085713           | NPQR-L-Q12-E | 1    |                  |
| 14                           | 14 | 21.5              | 28.5            | 28.5 | 21.5 | 60.6                        | 8085714           | NPQR-L-Q14-E | 1    |                  |
| 16                           | 16 | 24                | 33              | 33   | 23.5 | 83.8                        | 8085715           | NPQR-L-Q16-E | 1    |                  |

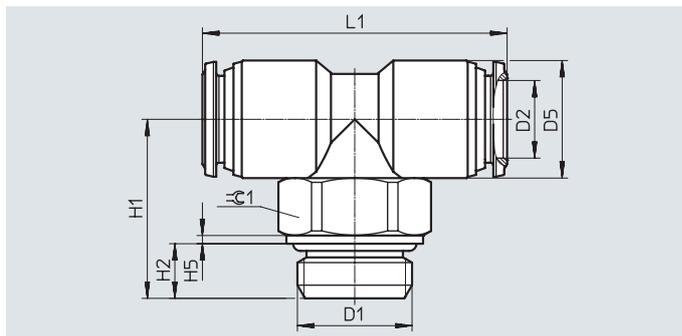
1) Packaging unit

## Datasheet

### Push-in T-fitting NPQR-T

Male thread with external hex

Rotatable 360°

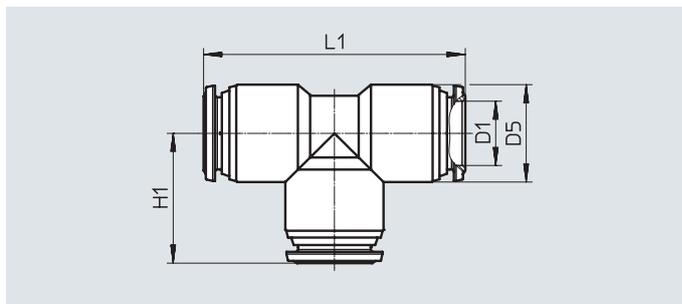


#### Dimensions and ordering data

| Pneumatic connection              |                 | Nominal size<br>[mm] | Dimensions [mm] |      |    |     |      |     |      | Tubing insertion depth<br>[mm] | Weight/<br>piece<br>[g] | Part no.       | Type | PU <sup>1)</sup> |
|-----------------------------------|-----------------|----------------------|-----------------|------|----|-----|------|-----|------|--------------------------------|-------------------------|----------------|------|------------------|
| Male thread                       | For tubing O.D. |                      | D5<br>∅         | H1   | H2 | H5  | L1   | ±G1 |      |                                |                         |                |      |                  |
| D1                                | D2              |                      |                 |      |    |     |      |     |      |                                |                         |                |      |                  |
| <b>M thread with sealing ring</b> |                 |                      |                 |      |    |     |      |     |      |                                |                         |                |      |                  |
| M5                                | 4               | 2                    | 10              | 16   | 4  | 3   | 30.5 | 8   | 11   | 10.4                           | 8085691                 | NPQR-T-M5-Q4   | 1    |                  |
|                                   | 6               | 2.2                  | 12.5            | 17.5 | 4  | 3   | 36   | 8   | 16   | 21.8                           | 8099103                 | NPQR-T-M5-Q6   | 1    |                  |
| <b>G thread with sealing ring</b> |                 |                      |                 |      |    |     |      |     |      |                                |                         |                |      |                  |
| G1/8                              | 6               | 4                    | 12.5            | 17.5 | 6  | 1   | 36   | 13  | 13.1 | 20.4                           | 8085692                 | NPQR-T-G18-Q6  | 1    |                  |
|                                   | 8               | 6                    | 14.5            | 23   | 6  | 1   | 40   | 13  | 13   | 28.9                           | 8085693                 | NPQR-T-G18-Q8  | 1    |                  |
| G1/4                              | 8               | 6                    | 14.5            | 21   | 8  | 1   | 40   | 15  | 13   | 29.9                           | 8085694                 | NPQR-T-G14-Q8  | 1    |                  |
|                                   | 10              | 8                    | 17              | 27.5 | 8  | 1   | 47   | 15  | 5.1  | 44                             | 8099100                 | NPQR-T-G14-Q10 | 1    |                  |
| G3/8                              | 10              | 8                    | 17              | 25   | 9  | 1.5 | 47   | 20  | 15.1 | 52.5                           | 8085695                 | NPQR-T-G38-Q10 | 1    |                  |
|                                   | 12              | 10                   | 20.5            | 30.5 | 9  | 1.5 | 55   | 20  | 17.4 | 79.8                           | 8099101                 | NPQR-T-G38-Q12 | 1    |                  |
| G1/2                              | 12              | 10                   | 20.5            | 28.5 | 10 | 1.5 | 55   | 25  | 17.4 | 87.7                           | 8099102                 | NPQR-T-G12-Q12 | 1    |                  |
|                                   | 16              | 14                   | 24              | 36.5 | 10 | 1.5 | 65.5 | 25  | 23.5 | 132                            | 8085696                 | NPQR-T-G12-Q16 | 1    |                  |

1) Packaging unit

### Push-in T-connector NPQR-T



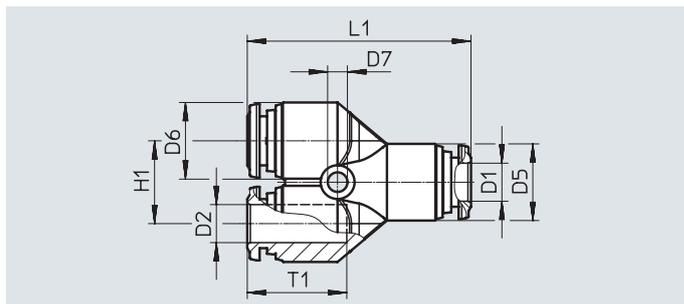
#### Dimensions and ordering data

| Pneumatic connection |    | Nominal size<br>[mm] | Dimensions [mm] |      |      | Tubing insertion depth<br>[mm] | Weight/<br>piece<br>[g] | Part no.     | Type | PU <sup>1)</sup> |
|----------------------|----|----------------------|-----------------|------|------|--------------------------------|-------------------------|--------------|------|------------------|
| For tubing O.D.      | D1 |                      | D5<br>∅         | H1   | L1   |                                |                         |              |      |                  |
| 4                    | 3  | 10                   | 16              | 32   | 11   | 10                             | 8085716                 | NPQR-T-Q4-E  | 1    |                  |
| 6                    | 5  | 12.5                 | 19.5            | 39.5 | 13.1 | 19.2                           | 8085717                 | NPQR-T-Q6-E  | 1    |                  |
| 8                    | 7  | 14.5                 | 21              | 42   | 13   | 26.1                           | 8085718                 | NPQR-T-Q8-E  | 1    |                  |
| 10                   | 9  | 17                   | 24.5            | 49   | 15.1 | 37.7                           | 8085719                 | NPQR-T-Q10-E | 1    |                  |
| 12                   | 11 | 20.5                 | 29              | 58   | 17.4 | 66.7                           | 8085720                 | NPQR-T-Q12-E | 1    |                  |
| 14                   | 14 | 21.5                 | 28.5            | 57.5 | 21.5 | 64.5                           | 8085721                 | NPQR-T-Q14-E | 1    |                  |
| 16                   | 16 | 24                   | 32.8            | 65.5 | 23.5 | 114.7                          | 8085722                 | NPQR-T-Q16-E | 1    |                  |

1) Packaging unit

# Datasheet

## Push-in Y-connector NPQR-Y



| Dimensions and ordering data |              |                 |         |         |         |      |      |                  |               |          |              |                  |
|------------------------------|--------------|-----------------|---------|---------|---------|------|------|------------------|---------------|----------|--------------|------------------|
| Pneumatic connection         | Nominal size | Dimensions [mm] |         |         |         |      |      |                  | Weight/ piece | Part no. | Type         | PU <sup>1)</sup> |
| For tubing O.D.              |              | D2<br>∅         | D5<br>∅ | D6<br>∅ | D7<br>∅ | H1   | L1   | T1 <sup>1)</sup> |               |          |              |                  |
| D1                           | [mm]         |                 |         |         |         |      |      |                  | [g]           |          |              |                  |
| 4                            | 3            | 4               | 10      | 10      | 3.2     | 11   | 31   | 14               | 18.2          | 8085723  | NPQR-Y-Q4-E  | 1                |
| 6                            | 5            | 6               | 12.5    | 12.5    | 3.2     | 13.5 | 36   | 16               | 30.6          | 8085724  | NPQR-Y-Q6-E  | 1                |
| 8                            | 7            | 8               | 14.5    | 14.5    | 3.2     | 15.5 | 40   | 17               | 37.8          | 8085725  | NPQR-Y-Q8-E  | 1                |
| 10                           | 9            | 10              | 17      | 17      | 4.2     | 18.5 | 47.5 | 19.5             | 65.2          | 8085726  | NPQR-Y-Q10-E | 1                |
| 12                           | 11           | 12              | 20.5    | 20.5    | 4.2     | 21.5 | 56.2 | 22.5             | 106.4         | 8085727  | NPQR-Y-Q12-E | 1                |
| 16                           | 15           | 16              | 24      | 24      | 5.2     | 25   | 62   | 23.5             | 140.9         | 8085728  | NPQR-Y-Q16-E | 1                |

1) Tubing insertion depth

2) Packaging unit

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