

Quick connectors NPCK

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.

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 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.
	NPQR	PUN-H-SF	Use in areas with higher pressure ranges and humidity. Tubing PUN-H-SF is resistant to kinking and hydrolysis and is suitable for water applications.
Resistant to chemicals and hydrolysis	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 because it's 100% polymer. Very easy to install with the "one-click principle".
	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. Maximum corrosion resistance (CRC 4).
	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.
Resistant to chemicals and hydrolysis, food-safe	NPQR	PUN-H-F/PFAN	Food-safe to Regulation (EC) No. 1935/2004 and FDA-listed materials. Can be used in the food and packaging industry in combination with PUN-H-F and PFAN.
	NPQH	PFAN/PTFEN	For high temperatures up to 150 °C. Food-safe to Regulation (EC) No. 1935/2004, FDA-listed materials and resistant to cleaning agents.
Anti-static	NPQM	PUN-CM	Anti-static 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 with 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.
Battery production	NPQE-F1A ¹⁾	PUN-H	Suitable in battery production areas.

1) F1A = Free of copper, zinc and nickel

Key features

Push-in fittings – Product range

QSM, mini series

Datasheets → Internet: qsm



Compact 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. of 4, 6, 8, 10, 12, 16 and 22 mm with connecting thread R1/8 ... R1/2 and G1/8 ... G3/4.

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. of 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 CRC3 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. of 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. of 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. of 4, 6, 8, 10 and 12 mm with connecting thread 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. of 4, 6, 8, 10 and 12 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 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. of 4, 6, 8, 10 and 12 mm with connecting thread 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 by 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. of 4, 6, 8, 10 and 12 mm with connecting thread 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 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. 4, 6, 8 and 10 mm with connecting thread M5 and G1/8 ... G3/8.

Click fittings – Product range

NPKA

Datasheets → Internet: npka



Polymer fitting for easy installation with one hand. 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.

General

The fitting NPCK is safe for use with food and fulfils all the clean design requirements. The special design of the union nut avoids edges and areas where microorganisms

and other forms of contamination might accumulate. The NPCK is made entirely of stainless steel and is ideally suited for use in areas subject to intensive cleaning.

NPCK is thus the ideal addition to the existing range of clean-design drives and valve terminals from Festo.

Mounting:

- [1] Screw the screwed plug (1) and the sealing ring (2) on to the counterpart and tighten in accordance with the nominal tightening torque.
- [2] Push the plastic tubing (3) through the union nut (4) onto the nipple of the screwed plug (→ Fig. 1).

- [3] Screw the union nut into the screwed plug until there is resistance from the counterpart (→ Fig 2). The tubing is thus secured and the sealing ring is pressed between the sealing surface, screwed plug, and union nut.

Dismantling:

- [1] In order to disassemble it, follow the steps in reverse order.

Figure 1:

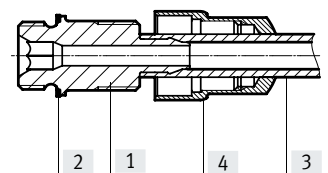
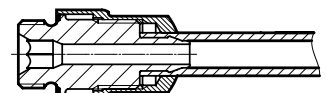


Figure 2:



Type codes

001	Series	
NPCK	Fitting	

002	Product version	
C	Easy-to-clean design	



003	Design	
D	Straight	

004	Pneumatic connection 1	
M5	M5	
G18	G1/8	
G14	G1/4	
G38	G3/8	

005	Pneumatic connection 2	
K4	Terminal connection 4 mm	
K6	Terminal connection 6 mm	
K8	Terminal connection 8 mm	
K10	Terminal connection 10 mm	

Datasheet

Quick connectors NPCK Straight design

-  - Pressure
-0.095 ... +1.2 MPa
-  - Temperature range
-20 ... +120°C



General technical data

Pneumatic connection 1	Male thread						
	M5	G1/8			G1/4		G3/8
Pneumatic connection 2	For tubing O.D. 4 mm	For tubing O.D. 6 mm	For tubing O.D. 8 mm	For tubing O.D. 8 mm	For tubing O.D. 10 mm	For tubing O.D. 10 mm	
Nominal width [mm]	2	2.9	4.9	4.9	6.1	6.2	
Design	Straight shape						
Mounting position	Any						
Type of seal on the screwed plug	O-ring	Sealing ring					
Nominal tightening torque [Nm]	1.5 ±10%	6.5 ±10%			20 ±10%		35 ±10%
Nominal tightening torque MPA-C ¹⁾ [Nm]	-	4 ±10%			7 ±10%		12 ±10%
Degree of protection	IP69K						
Suitable plastic tubing	PAN, PFAN, PFTEN, PEN, PLN, PUN-H, PUN-H-DUO, PUN-H-F						

1) The nominal tightening torque MPA-C applies to the connector used for mounting the fitting NPCK onto the valve terminal MPA-C. The union nut for the NPCK must not exceed these values. Plastic tubing PUN-H should be used.

Operating and environmental conditions

Operating pressure for entire temperature range	[MPa]	-0.095 ... +1.2
	[bar]	-0.95 ... +12
	[psi]	-13.775 ... +174
Note on operating pressure	Water: max. 0.6 MPa at 0 - 85 °C	
	Water vapour: 0 - 0.15 MPa, 0 - 1.5 bar, 0 - 22 psi	
Operating medium	Compressed air to ISO 8573-1:2010 [7:-:-]	
	Water (liquid, ice-free) ¹⁾	
	Steam ¹⁾	
Note on the operating/pilot medium	Lubricated operation possible	
Note on temperature of medium	Steam: max. 120°C	
Ambient temperature [°C]	-20 ... +120 ²⁾	
Corrosion resistance class CRC ³⁾	4 - Particularly high corrosion stress	
Food-safe ¹⁾	See supplementary material information	

1) More information: www.festo.com/catalogue/npck → Support/Downloads.

2) Other possibilities: the fitting can be used in the temperature range from -40 ... +60°C when suitable tubing is used. The maximum permissible operating pressure of the tubing must not be exceeded.

3) More information: www.festo.com/x/topic/crc

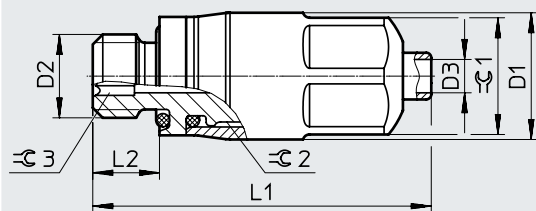
Materials

Pneumatic connection 1	M5	G1/8			G1/4		G3/8
	Pneumatic connection 2	For tubing O.D. 4 mm	For tubing O.D. 6 mm	For tubing O.D. 8 mm	For tubing O.D. 8 mm	For tubing O.D. 10 mm	For tubing O.D. 10 mm
Screwed plug	High-alloy stainless steel						
Sealing ring	EPDM	PEEK					
Note on materials	RoHS-compliant						
LABS (PWS) conformity	VDMA24364 zone III						
Suitable for the production of Li-ion batteries	Metals with more than 1% by mass of copper, zinc or nickel are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils						

Datasheet

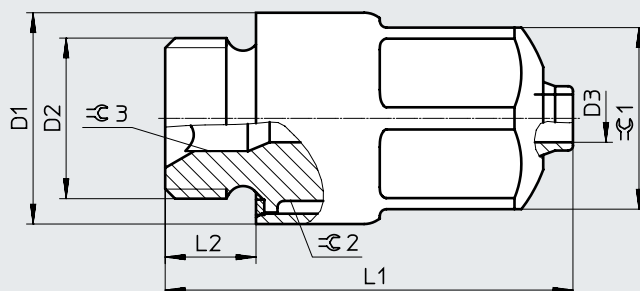
Dimensions

Male thread M5



Download CAD data → www.festo.com

Male thread G...

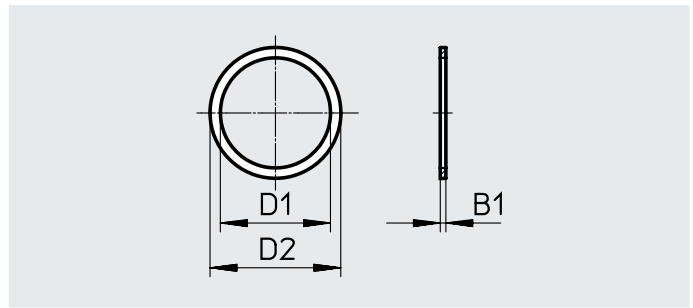
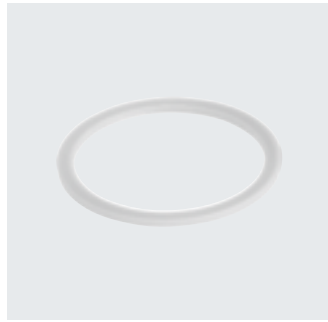


Ordering data

Pneumatic connection		D1	D3	L1	L2	$\varnothing 1$	$\varnothing 2$	$\varnothing 3$	Weight	Part no.	Type
Male thread	For tubing O.D. [mm]	∅	∅						[g]		
M5	4	7.6	2	20.3	4	7	5.5	2	4.2	1857681	NPCK-C-D-M5-K4
G1/8	6	12.8	2.9	24.7	5.5	11	10	4	14.1	1366257	NPCK-C-D-G18-K6
	8		4.9					5	13.4	1490383	NPCK-C-D-G18-K8
G1/4	8	17.9	4.9	28.1	6.4	15	14	6	28.85	1691701	NPCK-C-D-G14-K8
	10		6.1						30.4	32.9	1489336
G3/8	10	21.8	6.2	33.7	7.4	19	18	6	51.15	1489614	NPCK-C-D-G38-K10

Accessories

Sealing ring NPAS



General technical data

Pneumatic connection	G1/8	G1/4	G3/8
Mounting position	Any		
Nominal tightening torque [Nm]	6.5 ±10%	20 ±10%	35 ±10%

Operating and environmental conditions

Operating pressure for entire temperature range	[MPa]	-0,095 ... +1,2
	[bar]	-0,95 ... +12
	[psi]	-13,775 ... +174
Operating medium	Compressed air to ISO 8573-1:2010 [7:-:-] Water (liquid, ice-free) Steam	
Note on the operating/pilot medium	Lubricated operation possible	
Ambient temperature [°C]	-20 ... +120	
Food-safe ¹⁾	See supplementary material information	

1) More information: www.festo.com/catalogue/npas → Support/Downloads.

Materials

Sealing material	PEEK
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

Dimensions and ordering data

Pneumatic connection	B1	D1 ∅	D2 ∅	Weight/piece [g]	Part no.	Type	PU ¹⁾
G1/8	0.5	9.9	11.7	0.02	2652516	NPAS-C1-R-G18-P-FD-P10	10
G1/4	0.5	13.3	16.6	0.05	2652517	NPAS-C1-R-G14-P-FD-P10	10
G3/8	1	16.8	20.7	0.15	2652519	NPAS-C1-R-G38-P-FD-P10	10

1) Packaging unit