



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	
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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.
andard QS PEN S S PEN S S S PEN S S S PEN S S S PUN PUN PUN PUN PUN PUN PAN-MF PUN S S S S S S S S S S S S S S S S S S S	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.
esistant to chemicals, food- afe and hydrolysis-resistant	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-com- pliant 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. Maximum 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-VO	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-VO-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



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.

CRQS, stainless steel



NPQH



NPQP



Stainless steel push-in fitting. Maximum corrosion resistance CRC 4 and chemical resistance with approval for use in the food and packaging indus-

Datasheets \rightarrow Internet: crgs

try. For pneumatic applications with a temperature range up to 120 °C and a pressure range up to 10 bar. Tubing O.D. of 4, 6, 8, 10, 12 and 16 mm with connecting thread M5 and R1/8 ... R1/2.

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. of 4, 6, 8, 10, 12 and 14 mm with connecting thread M5, M7 and G1/8 ... G1/2.

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.



QS-V0, resistant to welding spatter

NPQM



NPQR, stainless steel



Datasheets \rightarrow Internet: gs-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.

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.

Datasheets \rightarrow 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



Quick connectors – Product range NPCK



QSR,

push-in fitting, rotatable

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. of 4, 6, 8, 10 and 12 mm with connecting thread M5, R1/8 ... R1/2 and G1/8 ... G1/2.



Click fittings – Product range

NPKA



Datasheets \rightarrow 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. of 4, 6, 8, 10 and 12 mm with connecting thread M5, R1/8 ... R1/2 and G1/8 ... G1/2.

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.



Datasheets \rightarrow 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. of 6 mm with connecting thread G1/8.

Key features

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The click fitting NPKA is suitable for use in the food industry.

The NPKA is made entirely of plastic and is ideally suited for use in areas subject to intensive cleaning.

Quick and easy tube installation using one hand

Reliable assembly: click sound indicates that the open or closed position has been reached

Low leakage, no scratching of the tube by retaining claws. Easy to clean, sealed shape when tube

fitted.

Suitable for tubes with corresponding slot.

Fitting 3 4 2 1

Fitting and removal

6

4

5

[1] Screwed trunnion [2] Sealing ring [3] Allen key

[4] Sleeve

- Screw the screwed trunnion and the sealing ring on to the counterpart and tighten in accordance with the nominal tightening torque.
- Special feature of the straight design NPKA-D: insert the long side of an Allen key completely into the click fitting through the sleeve. Use the entire contact surface of the internal hexagon.

- Sleeve [4]
- [5] Stop contour 1
- [6] Plastic tubing
- Pull the sleeve as far as the stop contour 1 of the clamping collet, until you hear and feel the sleeve click in.
- Insert the plastic tubing through the open sleeve, clamping collet and tubing seal as far as the tube bearing shoulder.

[7] Stop contour 2

- Push the sleeve as far as the stop contour 2 of the clamping collet, until you hear and feel the sleeve click in.
- The closed sleeve pushes the clamping segment of the clamping collet against the plastic tubing, holding it in place.

Removal

It is removed in the reverse sequence to assembly.

Datasheet

General technical data

General technical uata		
Size		Standard
Design		Push-pull principle
Mounting position		Any
Type of seal on the screwed trunn	ion	Sealing ring
Max. tightening torque	[Nm]	2
Nominal tightening torque	[Nm]	1.25
Tolerance for nominal tightening	[%]	±20
torque		
Tubing insertion depth	[mm]	25.8
Suitable plastic tubing		PAN, PAN-R, PAN-MF, PAN-VO, PFAN, PEN, PLN, PUN, PUN-DUO, PUN-CM, PUN-H, PUN-H-DUO, PUN-VO

Operating and environmental conditions

Operating pressure [bar]	-0.95 +10							
Operating medium	ompressed air to ISO 8573-1:2010 [7:-:-]							
	Water as per manufacturer's declaration ¹⁾							
Note on the operating/pilot medium	Lubricated operation possible							
Ambient temperature [°C]	-10+60							
Food-safe ¹⁾	See supplementary material information							

1) Additional information: www.festo.com/sp \rightarrow Certificates.

Materials										
Sleeve	POM									
Housing	PA66-GF30									
Threaded seal	PA66-GF30 / TPE-U									
Tubing seal	NBR									
Note on materials	RoHS-compliant									

Product range overview

Design	Embodiment	Туре	Pneumatic connection 1		Pneumatic connection 2	→ Page/					
			G thread	Tubing O.D.	Tubing O.D.	Internet					
Straight shape	Click fitting – M	ale thread with i	nternal hexagon								
	6000	NPKA-D	G1/8	-	6	8					
L-shape	Elbow click fitting – Male thread with external hexagon, rotatable										
		NPKA-L	G1/8	-	6	8					
T-shape	Click T-connecto)r	L	l							
	Carlo	NPKA-T	-	6	6	9					

Datasheet

Click fitting NPKA-D Male thread with internal hex



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	L1 -	-

 $\mathsf{PU}^{(1)}$

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Dimensions and ordering data Download CAD data \rightarrow <u>www.festo.com</u> Pneumatic connection Nominal =C Weight/ D5 L1 L2 Part no. Туре Male thread For tubing O.D. size Ø piece D1 D2 [mm] [mm] [g] G1/8 6 4 14.2 33.6 4.2 1243489 NPKA-D-G18-Q6-P10 6 4

1) Packaging unit

Elbow click fitting NPKA-L

Male thread with external hex, rotatable





Dimensions and o	Dimensions and ordering data Download CAD data → www.festo.com												
Pneumatic connectio	n	Nominal	D5	H1	H2	H3	L1	L2	= ©1	Weight/	Part no.	Туре	PU ¹⁾
Male thread	For tubing O.D.	size	Ø							piece			
D1	D2 [mm]	[mm]								[g]			
G1/8	6	4	14.2	25.6	6	32.7	32.3	25.8	13	7.5	1655429	NPKA-L-G18-Q6-P10	10

1) Packaging unit

Datasheet

Click T-connector NPKA-T





Dimensions and ordering data Download CAD data → <u>www.festo.com</u>												
Pneumatic connection	Nominal	D5	D6	H1	H2	L1	L2	L3	Weight/	Part no.	Туре	PU ¹⁾
For tubing O.D.	size	Ø	Ø						piece			
D1 [mm]	[mm]								[g]			
6	4	14.2	4.3	35	5.7	70.6	12	25.8	12.5	1590710	NPKA-T-Q6-E-P10	10

1) Packaging unit

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