FESTO

The Pneumatics Installation Guide



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Pneumatic
Installation compass

Version 2020/07

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Festo SE & Co. KG
Legal structure:
Kommanditgesellschaft (limited partnership)
Registered office: Esslingen a.N.
Registry court: Stuttgart
HRA 211583
VAT no.:
DE 145 339 206

Personally liable Partner:
Festo Management SE
Head office: Frankfurt a.M.
Court of register Frankfurt a.M.
HRB 115998

Management Board:
Dipl.-Ing. Gerhard Borho
Dipl.-Ing. Dr. h.c. Oliver D. Jung (chairman)
Dr Ansgar Kriwet
Dr Frank Melzer
Frank Notz, Dipl.-Ing. (qualified engineer, UAS)
Chairman of the Supervisory Board:
Dr. Friedrich Eichiner

73726 Esslingen
Ruiter Straße 82
73734 Esslingen
Germany

Legend

Blue **type code** on the product pages:
Type code for search on → **www.festo.com**

★
Products for easy selection, quick ordering and delivery

D1	Pneumatic port 1
D2	Pneumatic port 2 or tubing O.D.
D3	Pneumatic port 3
I.D.	Tubing I.D.
PN	Part no.
PE	Packaging unit in pieces or metres
n	No. of inputs/outputs
qnN	The standard nominal flow rate qnN is the volumetric flow rate based on standard conditions at an operating pressure of p1=6 bar and an output pressure of p2=5 bar, measured at room temperature t=20 °C

Product finder:

Just open online help!
A specific link and QR code will guide you to the right page.
Enter your application-specific requirements and let our system guide you quickly and reliably to an appropriate solution. This makes searching extremely convenient!

→ **www.festo.com/.../type code**



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

The right installation materials for every application – system solutions from Festo **6**
The core product range from Festo **7**
Easy selection/quick ordering **8**
Festo Online Shop **9**

The right installation materials for every application – system solutions from Festo

"Everything from a single source!" – the variety of our installation range is what enables us to provide a competent solution to all manner of industrial requirements, no matter how diverse these may be.

Festo's Pocket Guide to Pneumatic Installation will help you to select the right combination of products from the many fittings and connectors, the non-return, pressure control and flow control valves and tubing options.

For your convenience: for increased productivity.



→ www.festo.com/catalogue/...
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Whenever you see this symbol in the printed or electronic catalogue, it means the product is from our core product range for the main applications of automation technology.

The symbol provides you with quick guidance and makes it easier to place your order.

Unless otherwise specified, all products included in this range are in stock and ready for immediate delivery.

The systematically faster route to the right solution

It couldn't be easier:
Select the product group you require from the Table of contents → **1**.
Example: push-in fittings for O.D. tubing → **54**
Find the products you want on the product pages using the descriptions.

Quick order placement for selected basic designs

We make it easy for you!
We have compiled a globally standardised core product range that not only offers you faster and easier selection, but also fast delivery.
It has been selected by Festo experts based on actual customer requirements and covers the main applications of automation technology, while offering the best possible value for money.

Products with a star: easy selection and fast delivery guaranteed
You can recognise these outstanding products at a glance: they are marked in the catalogues with a ★ star.

Quick and easy to order
Preconfigured to ensure the best possible value for money, these products can be ordered quickly and easily either via the order code, which is based on the features, or the unique part number.

High level of availability
In stock and ready for dispatch:
These products are generally available in no time at all.



You can benefit from these advantages whenever you need core pneumatic and electrical functions.
Wherever you see this symbol in our printed or electronic catalogue, it identifies a selected product which is perfect for the main applications of automation technology.
The stars will help you to find what you are looking for more quickly and place orders more easily. The award-winning products from this range are in stock and can usually be shipped immediately.

→ www.festo.com/catalogue/...
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Round-the-clock benefits



Continuous availability – production information, documentation, prices, availability, ordering etc.



Complete overview of all orders – order tracking with search function, status display in lists and easy reordering.



No surcharge for small quantities – there are no additional costs for small orders.



Request offers – you can request offers directly from the shopping cart at the push of a button.



Download all documents for a complete basket – complete documentation for the selected products.



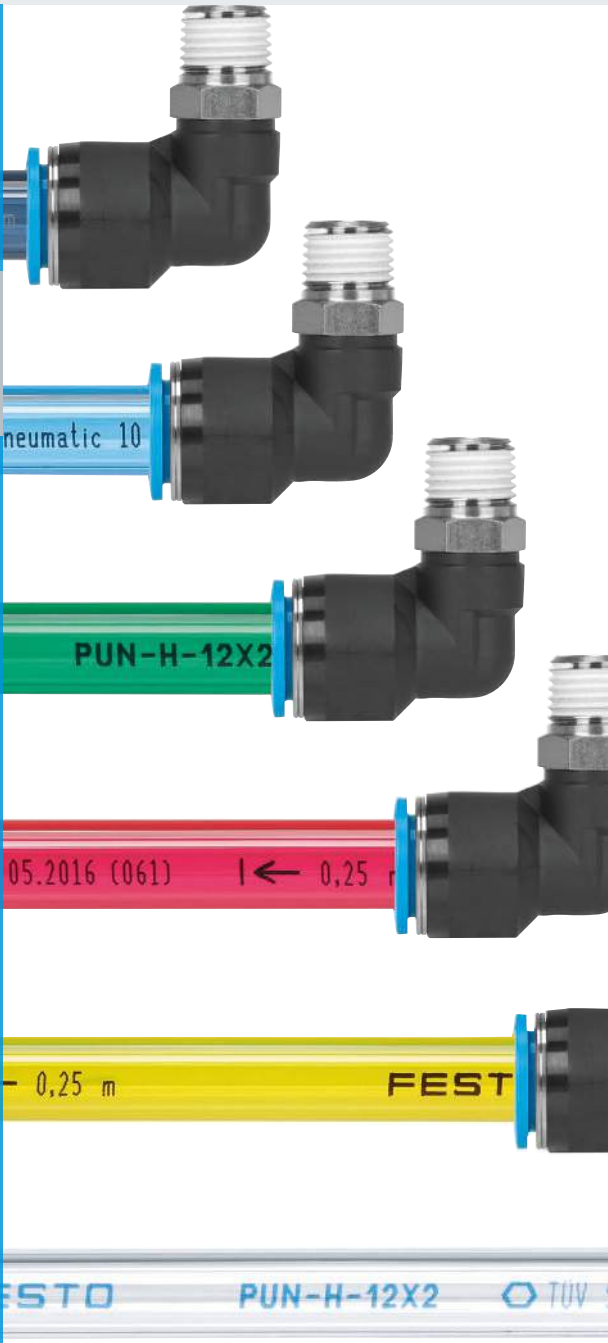
Express shipping – orders placed before 8:30 pm with express delivery selected will be with you by noon the following working day, provided they are in stock.

You can find the Festo online shop at → **www.festo.com** – click on **Basket**

At a glance:

+ Fast: usually ready for shipment within 24 hours
+ Superb: Festo quality at an attractive price
+ Easy: just a few clicks to place an order online

Overview



→ www.festo.com/catalogue/...
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Good combinations:
tubing/fitting combinations for all applications ____ **12**

Overview of combinations:
Standard applications ____ **13**
High pressures ____ **13**
Resistant to chemicals, suitable for use in the food industry and hydrolysis resistant ____ **14**
Antistatic ____ **14**
Flame-retardant ____ **15**
Resistant to welding spatter ____ **15**

Tubing-fitting combinations for all situations

While many of our competitors focus on tubing or on fittings, the Festo range is
characterised by our trademark system solution approach.
This range has been consistently enhanced in recent years in terms of both tubing
and fittings, with considerable effort going into ensuring application-specific tubing/fitting combinations that are optimally harmonised.

The precise selection of the right tubing/fitting
combination is above all dependent on the application.
Every individual case is characterised by a series of different requirements for tubing/fitting
combinations.

However, cases can often be pinned down
using a single feature for rapid orientation.
The overview below of our most popular tubing/fitting combinations will help you to make the right choice quickly and reliably.

Product finder for tubing and pipes:

→ **www.festo.com/productfinder/tubings**

Tubing	Suitable for		Applications
	Fitting	Flow control valve	
Standard applications			
PEN  → **30**	QSM  → **64**	GRLA  → **264**	Suitable for a wide range of tasks and attractively priced. Flexible thanks to high levels of resistance, easy to install thanks to optimised bending radii. High level of abrasion resistance in dynamic applications.
PUN  → **28**	QS  → **74**	GRLA  → **264**	Maximum flexibility in standard applications thanks to an extremely wide range of options for combining the different types.
PAN  → **32**	QS  → **74**	VFOH-LE  → **265**	Meets all requirements, even for standard applications with increased pressure and temperature ranges.
High pressures			
PAN-MF  → **34**	NPQM  → **108**	GRLA  → **264**	Meets DIN standard 73378: ideal for use in mobile pneumatics. Suitable for increased temperature ranges combined with high pressure ranges.
PAN-R  → **34**	NPQH  → **96**	VFOH-LE  → **265**	Powerful in pressure ranges up to 20 bar, for example in applications with the pressure booster DPA.

Product finder for fittings

→ **www.festo.com/productfinder/fittings**

Tubing	Suitable for		Applications
	Fitting	Flow control valve	
Resistant to chemicals, suitable for use in the food industry and hydrolysis resistant			
PUN-H  **→ 35**	NPKA  **→ 190**	–	Hydrolysis-resistant and suitable for water applications. Combination suitable for use in cleanrooms, FDA-compliant and corrosion-resistant because it's 100% polymer. Very lightweight Easy to install with the "one click principle"
PLN  **→ 39**	NPQP  **→ 116**	VFOH-LE  **→ 265**	Resistant to cleaning agents, FDA-compliant and economical. Can be used instead of the combination with stainless steel fittings.
PFAN  **→ 40**	NPQH  **→ 96**	VFOH-LE  **→ 265**	For high temperatures up to 150°C. Food-safe, FDA-compliant and resistant to cleaning agents.
	NPCK  **→ 146**	CRGRLA  **→ 270**	Easy to clean thanks to the edge-free design of the union nut. Maximum resistance to corrosion (CRC 4) and FDA-compliant. Suitable for a wide range of media.
	CRQS  **→ 122**	CRGRLA  **→ 270**	Maximum resistance to corrosion (CRC 4) and to aggressive acids and alkalis.
Antistatic			
PUN-CM  **→ 41**	NPQM  **→ 108**	GRLA  **→ 264**	Antistatic tubing plus solid metal fitting: maximum protection for electrical and electronic components.

Tubing	Suitable for		Applications
	Fitting	Flow control valve	
Flame-retardant			
PUN-V0  → 41	NPQM  → 108	VFOH-LE  → 265	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			
PUN-V0-C  → 42	NPQH  → 96	GRLA  → 264	Ideal for applications involving welding spatter. Reliable thanks to a tubing wall thickness of 2 mm for all diameters.
PAN-V0  → 43	QS-V0  → 128	GRLA  → 264	Safe even in the close vicinity of welding spatter thanks to the double-walled tubing with special fitting.









Media resistance:

You can check the media resistance of various materials here:
→ **www.festo.com/mediaresistance**

02

Tubing & pipes – Product categories



→ www.festo.com/catalogue/...
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Product categories

our tubing & pipes



Tubing _____ **18**



Pipes _____ **48**

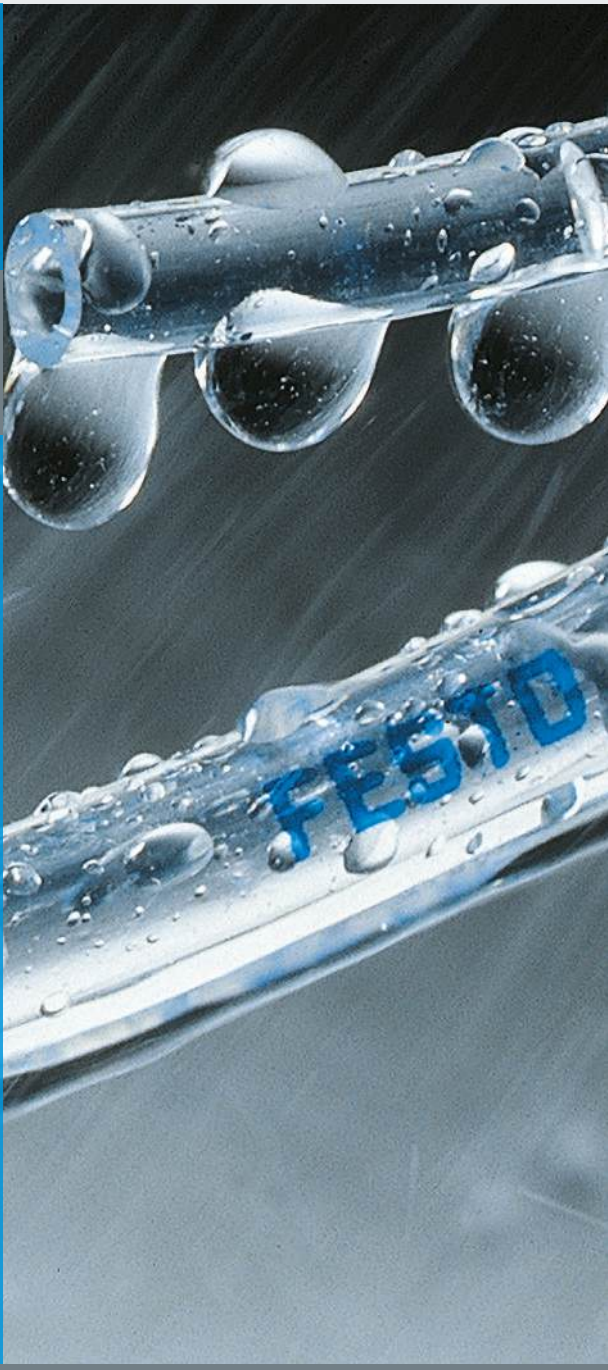
Product finder for tubing and pipes:

→ **www.festo.com/productfinder/tubings**

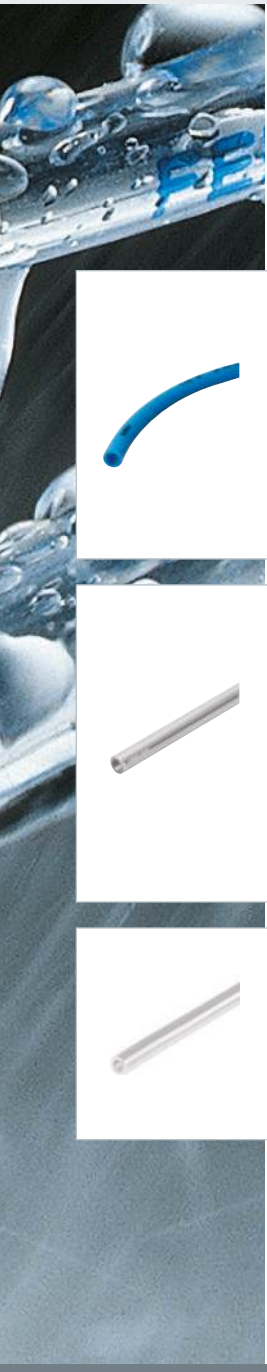
Tubing highlights

02

Tubing & pipes – Tubing highlights



→ www.festo.com/catalogue/...
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Highlights

our tubing

Standard O.D. tubing

PUN-H ★

+ Highly resistant to microbes and hydrolysis
+ Food-safe

→ PUN-H: **35**
→ PUN-H-DUO: **38**

Standard O.D. tubing

PEN

+ Suitable for a wide range of tasks and attractively priced
+ Flexible with high levels of resistance, easy to install with optimised bending radii
+ High level of abrasion resistance in dynamic applications

→ **30**

Standard O.D. tubing

PTFEN

+ Food safe (FDA-compliant)
+ High chemical and temperature resistance

→ **40**

02

Tubing & pipes – Overview of tubing



Product finder for tubing and pipes:

→ **www.festo.com/productfinder/tubings**

→ www.festo.com/catalogue/...
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Tubing – the flexible transmission component
Compressed air tubing with its flexibility and low space requirements is an essential component for connections between pneumatic valves, cylinders and decentralised compressed air preparation. Festo offers a full tubing range, optimised for special requirements.

Preselection ____ **22**
Features ____ **24**
Tubing/fitting combinations ____ **26**
O.D. tubing ★ ____ **28**
Standard I.D. tubing ____ **44**
Spiral tubing ____ **45**

Additional information:

d www.festo.com/tubing

Applications[1]	Tubing	Fitting	
Standard	**PUN → 28** **PUN-DUO → 29**	**QSM ★ → 64** **QS ★ → 74**	
	PEN → 30		
	PAN → 32		
High pressures	**PAN-MF → 34**	**NPQM → 108**	
	PAN-R → 34	**NPQH → 96**	
Suitable for use in the food industry, resistant to chemicals, hydrolysis resistant	**PUN-H ★→ 35** **PUN-H-DUO → 38**	**NPKA → 190**	
	PLN → 39	**NPQP → 116**	
	PTFEN → 40 **PFAN → 40**	**NPQH → 96**	
	PTFEN → 40 **PFAN → 40**	**NPCK → 146**	
	PTFEN → 40 **PFAN → 40**	**CRQS → 122**	
Resistant to chemicals and hydrolysis	**PTFEN → 40** **PFAN → 40**	**NPQR → 104**	
Antistatic	**PUN-CM → 41**	**NPQM → 108**	
Flame-retardant	**PUN-V0 → 41**	**NPQM → 108**	
Resistant to welding spatter	**PUN-V0-C → 42**	**NPQH → 96**	
	PAN-V0 → 43	**QS-V0 → 128**	

1) The detailed properties and applications can be found at
→ **www.festo.com/tubing**

Description
Maximum flexibility in standard applications thanks to an extremely wide range of options for combining the different types.
Suitable for a wide range of tasks and attractively priced. Flexible with high levels of resistance, easy to install with optimised bending radii. High level of abrasion resistance in dynamic applications.
Meets all requirements, even for standard applications with increased pressure and temperature ranges.
Meets DIN standard 73378: ideal for use in mobile pneumatics. Suitable for increased temperature ranges combined with high pressure ranges.
Powerful in pressure ranges up to 20 bar, for example in applications with the pressure booster DPA.
Hydrolysis-resistant and suitable for water applications. Combination suitable for use in cleanrooms, FDA-compliant and corrosion-resistant as it is made of 100% polymer. Very easy to install thanks to the “one click principle”.
Resistant to cleaning agents, FDA-compliant and economical. Can be used instead of the combination with stainless steel fittings.
For high temperatures up to 150°C. Food-safe, FDA-compliant and resistant to cleaning agents.
Easy to clean thanks to the union nut’s edge-free design. Maximum resistance to corrosion (CRC 4) and FDA-compliant. Suitable for a wide range of media.
Maximum resistance to corrosion (CRC 4) and to aggressive acids and alkalis.
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 tubing plus solid metal fitting: maximum protection for electrical and electronic components.
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.
Ideal for applications involving welding spatter. Reliable thanks to a tubing wall thickness of 2 mm for all diameters.
Safe even in the close vicinity of welding spatter thanks to the double-walled tubing with special fitting.

Type	O.D.	Operating medium: Compressed air, vacuum	Water	Mineral oil	Food-safe	Fire test of materials	Antistatic	Halogen-free	Contact with electric cables
PUN	3, 4, 6, 8, 10, 12, 14, 16	■	–	–	–	UL94 HB	–	■	■ 7)
PUN-DUO	4, 6, 8, 10	■	–	–	–	UL94 HB	–	■	■ 7)
PEN	4, 6, 8, 10, 12, 14, 16	■	■	–	–	–	–	■	■
PAN	4, 6, 8, 10, 12, 14, 16	■	–	–	–	–	–	■	■
PAN-MF	4, 6, 8, 10, 12, 14, 16	■	–	■ 7)	–	–	–	■	■
PAN-R	4, 6, 8, 10, 12, (14) 1), 16	■	–	–	–	–	–	■	■
	22, 28	■	–	–	–	–	–	■	■
PUN-H ★	2	■	–	–	–	–	–	■	■
	3, 4, 6, 8, 10, 12, 14, 16	■	■	–	■	UL94 HB	–	■	■
PUN-H-DUO	4, 6, 8, 10	■	■	–	■	UL94 HB	–	■	■
PLN	4, 6, 8, 10, 12, 14, 16	■	■	–	■	–	–	■	■
PTFEN	4, 6, 8, 10, 12, 14, 16	■	–	–	■	UL94 V0	–	–	■
PFAN	3, 4, 6, 8, 10, 12	■	■	–	■	UL94 V0	–	–	■
PUN-CM	4, 6, 8, 10, 12, (14) 1)	■	–	–	–	–	■	■	■
PUN-V0	6, 8, 10, 16	■	■	–	–	UL94 V0...V2	–	■	■
PUN-V0-C	4, 6, 8, 10, 12, 14, 16	■	■	–	–	UL94 V0...V2	–	■	■
PAN-V0	4, 6, 8, 10, 12	■	■	■	–	UL94 V0	–	–	■

+++ Highly suitable
++ Very suitable
\+ Limited suitability (on request)
\- Not suitable

1) Can only be ordered using the configurator.
2) As a precaution, please agree the operating medium with Festo.
3) Applicable for silver and natural
4) Applies to black colour
5) Outer tubing

Suitable for energy chains	Approved by the German Technical Control Board (TÜV)	Maritime classification	Resistance				Flexibility	Shore hardness[8]	→ Page
			Chemicals	Microbes	UV radiation	Hydrolysis			
++	■	–	–	–	++[4]	+	+++	D 52 ±3	**28**
++	■	–	–	–	+	+	++	D 52 ±3	**29**
+++	■	–	++	++	++[4]	+++	++	D 52 ±3	**30**
++	■	■[3]	+	++	+	++	++	D 55 ±3	**32**
+++	–	–	+	++	+	++	+	D 65 ±3	**34**
++	■	–	+	++	+	++	+	D 62 ±3	**34**
++	–	–	+	++	+	++	+	D 62 ±3	
++	–	–	+	++	++[4]	++	+++	D 52 ±3	**35**
++	■	–	+	++	++[4]	++	+++	D 52 ±3	
++	■	–	+	++	+	++	++	D 52 ±3	**38**
–	■	–	++	++	++[4]	+++	+	D 59 ±3	**39**
–	–	–	+++	++	++	+++	+	D 55 ±5	**40**
–	■	–	+++	++	++	+++	+	D 60 +5	**40**
+++	–	–	+	++	++	++	++	D 52 ±3	**41**
++	■	–	+	++	++[4]	++	++	D 54 ±3	**41**
++	■	–	+	++	++[4]	++	++	D 54 ±3	**42**
++	–	–	+	++	++	++	++	A 72 ±4[5] D 57 ±3[6]	**43**

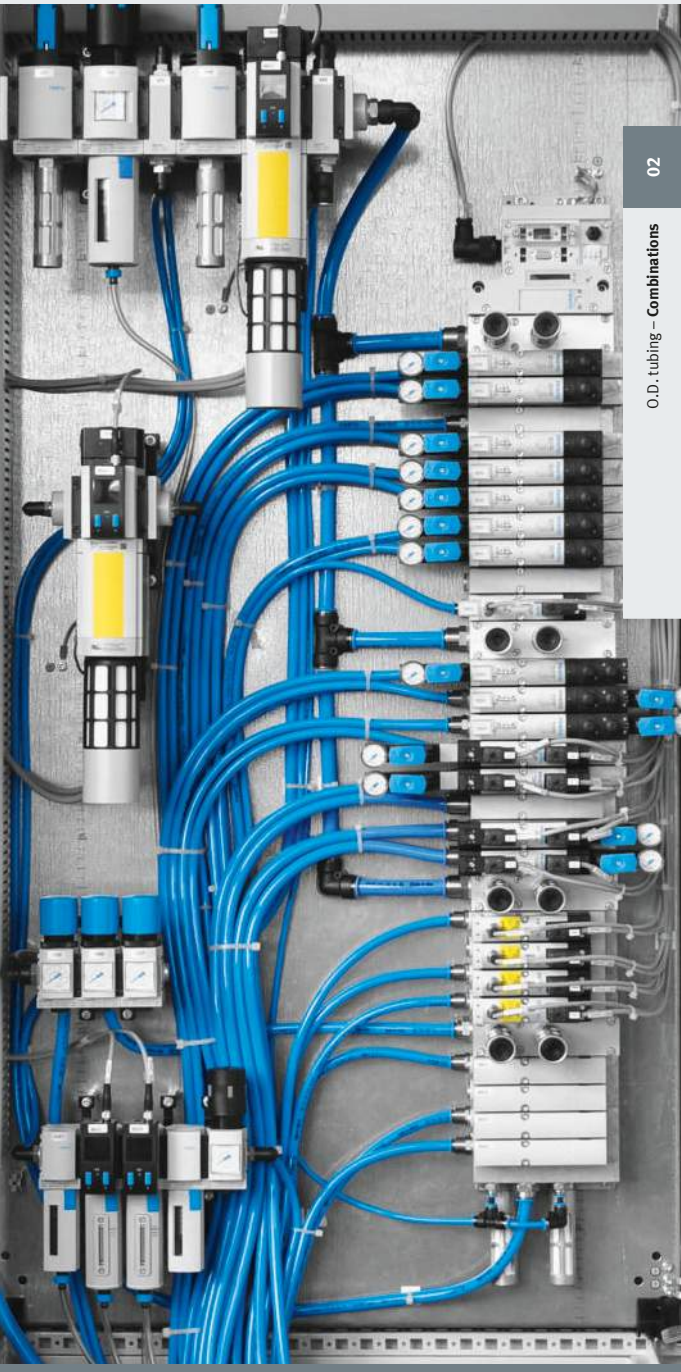
6) Inner tubing
7) Cables containing organophosphates may damage PUN tubing under unfavourable conditions.
8) Values are determined using test boards. Derived values using tubing may vary.

Tubing/fitting combinations

Type	QS, QSM ★ [1]	NPQH [2]	NPQR [2]	NPQM [2]	NPQP [3]	CRQS [4]	QS-V0 [4]	NPCK [5]	NPKA [6]	CN [7]	CK [8]	→ Page
Standard O.D. tubing												
PUN	++	++	++	++	++	++	+	++	++	++	++	28
PUN-DUO	++	++	++	++	++	++	+	++	++	++	++	29
PEN	++	++	++	++	++	++	+	++	++	++	++	30
PAN	++	++	++	++	++	++	+	++	++	++	++	32
PAN-MF	++	++	++	++	++	++	+	–	–	–	–	34
PAN-R	++	++	++	++	++	++	+	–	++	–	–	34
PUN-H ★	++	++	++	++	++	++	+	++	++	–	++	35
PUN-H-DUO	++	++	++	++	++	++	+	++	++	–	++	38
PLN	++	++	++	++	++	++	+	++	++	+	++	39
PTFEN	++	++	++	++	++	++	+	++	++	++	++	40
PFAN	++	++	++	++	++	++	+	++	++	++	++	40
PUN-CM	+	++	+	++	+	+	+	++	+	+	+	41
PUN-V0	+	++	++	++	+	++	+	++	+	+	++	41
PUN-V0-C	+	++	++	++	+	++	+	–	–	–	–	42
PAN-V0	+	+	+	+	+	+	++	–	–	–	–	43
→ Page	**64**	**96**	**104**	**108**	**116**	**122**	**128**	**146**	**190**	**150**	**158**	

1) not for tubing O.D. 14
2) not for tubing O.D. 3 and 16
3) not for tubing O.D. 3, 14 and 16
4) not for tubing O.D. 3 and 14
5) only for tubing O.D. 4 ... 10
6) only for tubing O.D. 6
7) only for tubing O.D. 3 ... 8
8) only for tubing O.D. 4 ... 8

++ Very suitable
\+ limited suitability (on request)
– not suitable
■ recommended tubing & fitting combination



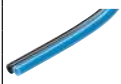
For standard applications

	D1	I.D.	Tubing colour	PN	PE
PUN					
Large number of possible combinations for different types					
	3	2.1	Silver	**152583**	50
			Silver	**525738**	500
			Blue	**159660**	50
			Blue	**525745**	500
			Black	**159661**	50
			Black	**553936**	500
			Yellow	**178416**	50
			Green	**178423**	50
			Red	**178409**	50
	4	2.6	Silver	**152584**	50
			Silver	**525739**	500
			Blue	**159662**	50
			Blue	**525746**	500
			Black	**159663**	50
			Black	**553937**	500
			Yellow	**178417**	50
			Green	**178424**	50
			Red	**178410**	50
	6	4.0	Silver	**152586**	50
			Silver	**525740**	500
			Blue	**159664**	50
			Blue	**525747**	500
			Black	**159665**	50
			Black	**553938**	500
			Yellow	**178418**	50
			Green	**178425**	50
			Red	**178411**	50
	8	5.7	Silver	**152587**	50
			Silver	**525741**	400
			Blue	**159666**	50
			Blue	**525748**	400
			Black	**159667**	50
			Black	**553939**	400
			Yellow	**178419**	50
			Green	**178426**	50
			Red	**178412**	50
	10	7	Silver	**152588**	50
			Silver	**525742**	300
			Blue	**159668**	50
			Blue	**525749**	300
			Black	**159669**	50
			Black	**553940**	300
			Yellow	**178420**	50
			Green	**178427**	50
			Red	**178413**	50

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For standard applications

	D1	I.D.	Tubing colour	PN	PE
PUN					
Large number of possible combinations for different types					
	12	8	Silver	**152589**	50
			Silver	**525743**	200
			Blue	**159670**	50
			Blue	**525750**	200
			Black	**159671**	50
			Black	**553941**	200
			Yellow	**178421**	50
			Green	**178428**	50
			Red	**178414**	50
	14	9.8	Silver	**570389**	50
			Blue	**570390**	50
			Black	**570391**	50
	16	11	Silver	**152590**	50
			Silver	**525744**	100
			Blue	**159672**	50
			Blue	**525751**	100
			Black	**159673**	50
			Black	**553942**	100
			Yellow	**178422**	50
			Green	**178429**	50
			Red	**178415**	50

	D1	I.D.	Tubing colour	PN	PE
PUN-DUO					
	4	2.8	Silver	**152822**	50
		2.6	Blue/black	**159674**	50
	6	4	Silver	**152823**	50
			Blue/black	**159675**	50
	8	5.7	Silver	**152824**	50
			Blue/black	**159676**	50
	10	7	Silver	**152825**	50
			Blue/black	**159677**	50

Configurable product

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

→ **www.festo.com/catalogue/pun**

For standard applications

	D1	I.D.	Tubing colour	PN	PE
PEN					
Flexible due to resistant materials					
	4	2.7	Silver	**551462**	50
			Silver	**551450**	500
			Natural	**543246**	50
			Black	**543240**	50
			Black	**551438**	500
			Blue	**551456**	50
			Blue	**551444**	500
			Green	**551468**	50
			Red	**551474**	50
			Yellow	**551480**	50
	6	4	Silver	**551463**	50
			Silver	**551451**	500
			Natural	**543247**	50
			Black	**543241**	50
			Black	**551439**	500
			Blue	**551457**	50
			Blue	**551445**	500
			Green	**551469**	50
			Red	**551475**	50
			Yellow	**551481**	50
	8	5.7	Silver	**551464**	50
			Silver	**551452**	400
			Natural	**543248**	50
			Black	**543242**	50
			Black	**551440**	400
			Blue	**551458**	50
			Blue	**551446**	400
			Green	**551470**	50
			Red	**551476**	50
			Yellow	**551482**	50
	10	7	Silver	**551465**	50
			Silver	**551453**	300
			Natural	**543249**	50
			Black	**543243**	50
			Black	**551441**	300
			Blue	**551459**	50
			Blue	**551447**	300
			Green	**551471**	50
			Red	**551477**	50
			Yellow	**551483**	50

→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

For standard applications

	D1	I.D.	Tubing colour	PN	PE
PEN **Flexible due to resistant materials**					
	12	8.4	Silver	**551466**	50
			Silver	**551454**	200
			Natural	**543250**	50
			Black	**543244**	50
			Black	**551442**	200
			Blue	**551460**	50
			Blue	**551448**	200
			Green	**551472**	50
			Red	**551478**	50
			Yellow	**551484**	50
	14	9.5	Natural	**570517**	50
			Black	**570516**	50
	16	10.8	Silver	**551467**	50
			Silver	**551455**	100
			Natural	**543251**	50
			Black	**543245**	50
			Black	**551443**	100
			Blue	**551461**	50
			Blue	**551449**	100
			Green	**551473**	50
			Red	**551479**	50
			Yellow	**551485**	50

Configurable product

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

→ **www.festo.com/catalogue/pen**

For standard applications

	D1	I.D.	Tubing colour	PN	PE
PAN					
In increased pressure and temperature ranges					
	4	2.9	Natural	**546284**	50
			Silver	**152697**	50
			Silver	**553888**	500
			Blue	**553906**	50
			Blue	**553894**	500
			Black	**553912**	50
			Black	**553900**	500
			Green	**553918**	50
			Red	**553924**	50
			Yellow	**553930**	50
	6	4	Natural	**546285**	50
			Silver	**152699**	50
			Silver	**553889**	500
			Blue	**553907**	50
			Blue	**553895**	500
			Black	**553913**	50
			Black	**553901**	500
			Green	**553919**	50
			Red	**553925**	50
			Yellow	**553931**	50
	8	5.9	Natural	**546286**	50
			Silver	**152700**	50
			Silver	**553890**	400
			Blue	**553908**	50
			Blue	**553896**	400
			Black	**553914**	50
			Black	**553902**	400
			Green	**553920**	50
			Red	**553926**	50
			Yellow	**553932**	50
	10	7	Natural	**546287**	50
			Silver	**152701**	50
			silver[3)]	**553891**	300
			Blue	**553909**	50
			Blue	**553897**	300
			Black	**553915**	50
			Black	**553903**	300
			Green	**553921**	50
			Red	**553927**	50
			Yellow	**553933**	50

For standard applications

	D1	I.D.	Tubing colour	PN	PE
PAN					
In increased pressure and temperature ranges					
	12	8.4	Natural	**546288**	50
			Silver	**152702**	50
			Silver	**553892**	200
			Blue	**553910**	50
			Blue	**553898**	200
			Black	**553916**	50
			Black	**553904**	200
			Green	**553922**	50
			Red	**553928**	50
			Yellow	**553934**	50
	14	10	Silver	**570392**	50
	16	12	Natural	**546289**	50
			Silver	**152703**	50
			Silver	**553893**	100
			Blue	**553911**	50
			Blue	**553899**	100
			Black	**553917**	50
			Black	**553905**	100
			Green	**553923**	50
			Red	**553929**	50
			Yellow	**553935**	50

Configurable product

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

→ **www.festo.com/catalogue/pan**

Higher and high pressures

	D1	I.D.	Tubing colour	PN	PE
PAN-MF – higher pressures					
For use in mobile pneumatic applications					
	4	2.5	Black	**570357**	50
			Black	**572091**	500
	6	4	Black	**570358**	50
			Black	**572093**	500
	8	6	Black	**570359**	50
	10	7.5	Black	**570360**	50
	12	9	Black	**570361**	50
	14	10	Black	**570362**	50
	16	12	Black	**570363**	50

Configurable product

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

→ **www.festo.com/catalogue/pan-mf**

	D1	I.D.	Tubing colour	PN	PE
PAN-R – high pressures					
	4	2.5	Silver	**541674**	50
	6	3.8	Silver	**541675**	50
	8	5	Silver	**541676**	50
	10	6.2	Silver	**541677**	50
	12	7.6	Silver	**541678**	50
	16	10	Silver	**541679**	50
	22	18	Silver	**8036207**	50
	28	23	Silver	**8036208**	50

Configurable product

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

→ **www.festo.com/catalogue/pan-r**

Suitable for use in the food industry, resistant to chemicals, hydrolysis resistant[1)]

	D1	I.D.	Tubing colour	PN	PE
PUN-H ★					
Various uses → 22					
	2	1.2	Natural	**133038**	50
			Black	**133039**	50
			Red	**133040**	50
	3	2.1	Natural	**197375**	50
			Natural	**558263**	500
			Blue	**197382**	50
			Blue	**558256**	500
			Black	**197389**	50
			Black	**558249**	500
			Silver	**558277**	50
			Silver	**558270**	500
			Red	**558284**	50
			Green	**558291**	50
			Yellow	**558298**	50
	4	2.6	Natural	★ **197376**	50
			Natural	**558264**	500
			Blue	★ **197383**	50
			Blue	**558257**	500
			Translucent blue	★ **8048671**	50
			Translucent blue	**8048672**	500
			Black	★ **197390**	50
			Black	**558250**	500
			Translucent black	★ **8048673**	50
			Translucent black	**8048674**	500
			Silver	★ **558278**	50
			Silver	**558271**	500
			Red	**558285**	50
			Translucent red	**8048675**	50
			Translucent red	**8048676**	500
			Green	**558292**	50
			Translucent green	**8048677**	50
			Translucent green	**8048678**	500
			Yellow	**558299**	50
			Translucent yellow	**8048679**	50
			Translucent yellow	**8048680**	500

1) The detailed properties and applications can be found at
→ **www.festo.com/tubing**

Suitable for use in the food industry, resistant to chemicals, hydrolysis resistant[1)]

	D1	I.D.	Tubing colour		PN	PE
PUN-H ★						
Various uses → 22						
	6	4	Natural	★	**197377**	50
			Natural		**558265**	500
			Blue	★	**197384**	50
			Blue		**558258**	500
			Translucent blue	★	**8048681**	50
			Translucent blue		**8048682**	500
			Black	★	**197391**	50
			Black		**558251**	500
			Translucent black	★	**8048683**	50
			Translucent black		**8048684**	500
			Silver	★	**558279**	50
			Silver		**558272**	500
			Red		**558286**	50
			Translucent red		**8048685**	50
			Translucent red		**8048686**	500
			Green		**558293**	50
			Translucent green		**8048687**	50
			Translucent green		**8048688**	500
			Yellow		**558300**	50
			Translucent yellow		**8048689**	50
			Translucent yellow		**8048690**	500
	8	5.7	Natural	★	**197378**	50
			Natural		**558266**	400
			Blue	★	**197385**	50
			Blue		**558259**	400
			Translucent blue	★	**8048691**	50
			Translucent blue		**8048692**	400
			Black	★	**197392**	50
			Black		**558252**	400
			Translucent black	★	**8048693**	50
			Translucent black		**8048694**	400
			Silver	★	**558280**	50
			Silver		**558273**	400
			Red		**558287**	50
			Translucent red		**8048695**	50
			Translucent red		**8048696**	400
			Green		**558294**	50
			Translucent green		**8048697**	50
			Translucent green		**8048698**	400
			Yellow		**558301**	50
			Translucent yellow		**8048699**	50
			Translucent yellow		**8048700**	400

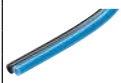
1) The detailed properties and applications can be found at
→ **www.festo.com/tubing**

Suitable for use in the food industry, resistant to chemicals, hydrolysis resistant[1)]

	D1	I.D.	Tubing colour	PN	PE
PUN-H ★					
Various uses → 22					
	10	7	Natural	★ **197379**	50
			Natural	**558267**	300
			Blue	★ **197386**	50
			Blue	**558260**	300
			Translucent blue	★ **8048701**	50
			Translucent blue	**8048702**	300
			Black	★ **197393**	50
			Black	**558253**	300
			Translucent black	★ **8048703**	50
			Translucent black	**8048704**	300
			Silver	★ **558281**	50
			Silver	**558274**	300
			Red	**558288**	50
			Translucent red	**8048705**	50
			Translucent red	**8048706**	300
			Green	**558295**	50
			Translucent green	**8048707**	50
			Translucent green	**8048708**	300
			Yellow	**558302**	50
			Translucent yellow	**8048709**	50
			Translucent yellow	**8048710**	300
	12	8	Natural	★ **197380**	50
			Natural	**558268**	200
			Blue	★ **197387**	50
			Blue	**558261**	200
			Translucent blue	★ **8048711**	50
			Translucent blue	**8048712**	200
			Black	★ **197394**	50
			Black	**558254**	200
			Translucent black	★ **8048713**	50
			Translucent black	**8048714**	200
			Silver	★ **558282**	50
			Silver	**558275**	200
			Red	**558289**	50
			Translucent red	**8048715**	50
			Translucent red	**8048716**	200
			Green	**558296**	50
			Translucent green	**8048717**	50
			Translucent green	**8048718**	200
			Yellow	**558303**	50
			Translucent yellow	**8048719**	50
			Translucent yellow	**8048720**	200

1) The detailed properties and applications can be found at
→ **www.festo.com/tubing**

Suitable for use in the food industry, resistant to chemicals, hydrolysis resistant[1)]

	D1	I.D.	Tubing colour	PN	PE
PUN-H ★					
Various uses → 22					
	14	9.8	Natural	★ **570388**	50
			Black	★ **570387**	50
			Blue	★ **570386**	50
	16	11	Natural	**197381**	50
			Natural	**558269**	100
			Blue	★ **197388**	50
			Blue	**558262**	100
			Black	★ **197395**	50
			Black	**558255**	100
			Silver	★ **558283**	50
			Silver	**558276**	100
			Red	**558290**	50
			Green	**558297**	50
			Yellow	**558304**	50
PUN-H-DUO					
	4	2.6	Blue/black	**197396**	50
	6	4	Blue/black	**197397**	50
	8	5.7	Blue/black	**197398**	50
	10	7	Blue/black	**197399**	50

1) The detailed properties and applications can be found at
→ **www.festo.com/tubing**

Configurable product

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

→ **www.festo.com/catalogue/pun-h**

Suitable for use in the food industry, resistant to chemicals, hydrolysis resistant[1)]

	D1	I.D.	Tubing colour	PN	PE
PLN					
Various uses → 22					
	4	2.9	Silver	**558211**	50
			Natural	**193403**	50
			Black	**195280**	50
			Blue	**558205**	50
			Red	**558217**	50
	6	4	Silver	**558212**	50
			Natural	**193404**	50
			Black	**195281**	50
			Blue	**558206**	50
			Red	**558218**	50
	8	5.9	Silver	**558213**	50
			Natural	**193405**	50
			Black	**195282**	50
			Blue	**558207**	50
			Red	**558219**	50
	10	7	Silver	**558214**	50
			Natural	**193406**	50
			Black	**195283**	50
			Blue	**558208**	50
			Red	**558220**	50
	12	8.4	Silver	**558215**	50
			Natural	**193407**	50
			Black	**195284**	50
			Blue	**558209**	50
			Red	**558221**	50
	14	10	Natural	**570424**	50
			Black	**570423**	50
	16	12	Silver	**558216**	50
			Natural	**539064**	50
			Black	**539065**	50
			Blue	**558210**	50
			Red	**558222**	50

1) The detailed properties and applications can be found at
→ **www.festo.com/tubing**

Configurable product

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

→ **www.festo.com/catalogue/pln**

Suitable for use in the food industry, resistant to chemicals, hydrolysis resistant[1)]

	D1	I.D.	Tubing colour	PN	PE
PTFEN					
Various uses → 22					
	4	2.9	Natural	**8061171**	100
	6	4	Natural	**8061172**	100
			Natural	**8061178**	500
	8	5.9	Natural	**8061173**	50
			Natural	**8061179**	400
	10	7	Natural	**8061174**	50
			Natural	**8061180**	300
	12	8.4	Natural	**8061175**	50
	14	10	Natural	**8061176**	50
	16	12	Natural	**8061177**	50

1) The detailed properties and applications can be found at
→ **www.festo.com/tubing**

Configurable product

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

→ **www.festo.com/catalogue/ptfen**

	D1	I.D.	Tubing colour	PN	PE
PFAN					
Various uses → 22					
	3	2.3	Natural	**8061167**	50
	4	2.9	Natural	**197061**	50
	6	4	Natural	**197062**	50
	8	5.9	Natural	**197063**	50
	10	7	Natural	**197064**	50
	12	8.4	Natural	**197065**	50

1) The detailed properties and applications can be found at
→ **www.festo.com/tubing**

Configurable product

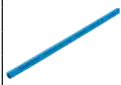
This product and all its product options can be ordered online via the configurator:

→ **www.festo.com/catalogue/pfan**

Antistatic

	D1	I.D.	Tubing colour	PN	PE
PUN-CM					
	4	2.5	Black	**188882**	50
	6	4		**188883**	50
	8	5		**130816**	50
	10	6.5		**130817**	50
	12	8		**130818**	50

Flame-retardant

	D1	I.D.	Tubing colour	PN	PE
PUN-V0					
For use in the immediate vicinity of welding applications					
	6	4	Black	**525438**	50
			Blue	**525442**	50
			Green	**525446**	50
			Red	**525450**	50
			White	**525454**	50
			Yellow	**525458**	50
			Brown	**525462**	50
	8	5.7	Black	**525439**	50
			Blue	**525443**	50
			Green	**525447**	50
			Red	**525451**	50
			White	**525455**	50
			Yellow	**525459**	50
			Brown	**525463**	50
	10	7	Black	**525440**	50
			Blue	**525444**	50
			Green	**525448**	50
			Red	**525452**	50
			White	**525456**	50
			Yellow	**525460**	50
			Brown	**525464**	50
	16	11.8	Black	**570767**	50
			Blue	**570768**	50

Configurable product

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

→ **www.festo.com/catalogue/pun-v0**

Flame-retardant

	D1	I.D.	Tubing colour	PN	PE
PUN-V0-C					
For use in the immediate vicinity of welding applications					
	4	2	Black	**570349**	50
			Blue	**570350**	50
	6	2	Black	**561698**	50
			Blue	**561702**	50
			Green	**561706**	50
			Red	**561710**	50
			White	**561714**	50
			Yellow	**561718**	50
			Brown	**561722**	50
	8	4	Black	**561699**	50
			Blue	**561703**	50
			Green	**561707**	50
			Red	**561711**	50
			White	**561715**	50
			Yellow	**561719**	50
			Brown	**561723**	50
	10	6	Black	**561700**	50
			Blue	**561704**	50
			Green	**561708**	50
			Red	**561712**	50
			White	**561716**	50
			Yellow	**561720**	50
			Brown	**561724**	50
	12	8	Black	**561701**	50
			Blue	**561705**	50
			Green	**561709**	50
			Red	**561713**	50
			White	**561717**	50
			Yellow	**561721**	50
			Brown	**561725**	50
	14	9.8	Black	**570351**	50
			Blue	**570352**	50
	16	11	Black	**570353**	50
			Blue	**570354**	50

Configurable product

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

→ **www.festo.com/catalogue/pun-v0**

Flame-retardant

	D1	I.D.	Tubing colour	PN	PE
PAN-V0					
For use in the immediate vicinity of welding applications					
	4	0.75	Blue	**132899**	50
	6	4	Black	**160550**	50
			Blue	**132905**	50
			Green	**525470**	20
			Red	**525474**	20
			White	**525478**	20
			Yellow	**525482**	20
	8	6	Black	**160551**	50
			Blue	**132906**	50
			Green	**525471**	20
			Red	**525475**	20
			White	**525479**	20
			Yellow	**525483**	20
	10	7.5	Black	**160552**	50
			Blue	**132907**	50
			Green	**525472**	20
			Red	**525476**	20
			White	**525480**	20
			Yellow	**525484**	20
	12	9	Black	**160553**	50
			Blue	**525469**	20
			Green	**525473**	20
			Red	**525477**	20
			White	**525481**	20
			Yellow	**525485**	20

Configurable product

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

→ **www.festo.com/catalogue/pan-v0**

Standard I.D. tubing

	D1	I.D.	Tubing colour	PN	PE
PU **Fabric-reinforced**					
	11.6	9	Black	**12134**	50
	17.6	13	Black	**12133**	50

Configurable product

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

→ **www.festo.com/catalogue/pu**

Spiral tubing

	D1	Working length [m]	Tubing colour	PN	PE
PUN-S					
For standard applications					
	4	0.5	Blue	**197587**	50
			Black	**197602**	50
		1	Blue	**197588**	50
			Black	**197603**	50
		1.5	Blue	**197589**	50
			Black	**197604**	50
	6	1	Blue	**197590**	50
			Black	**197605**	50
		2	Blue	**197591**	50
			Black	**197606**	50
		6	Blue	**197592**	50
			Black	**197607**	50
	8	1	Blue	**197593**	50
			Black	**197608**	50
		2	Blue	**197594**	50
			Black	**197609**	50
		6	Blue	**197595**	50
			Black	**197610**	50
	10	1	Blue	**197596**	50
			Black	**197611**	50
		2	Blue	**197597**	50
			Black	**197612**	50
		6	Blue	**197598**	50
			Black	**197613**	50
	12	1	Blue	**197599**	50
			Black	**197614**	50
		2	Blue	**197600**	50
			Black	**197615**	50
		6	Blue	**197601**	50
			Black	**197616**	50

Spiral tubing

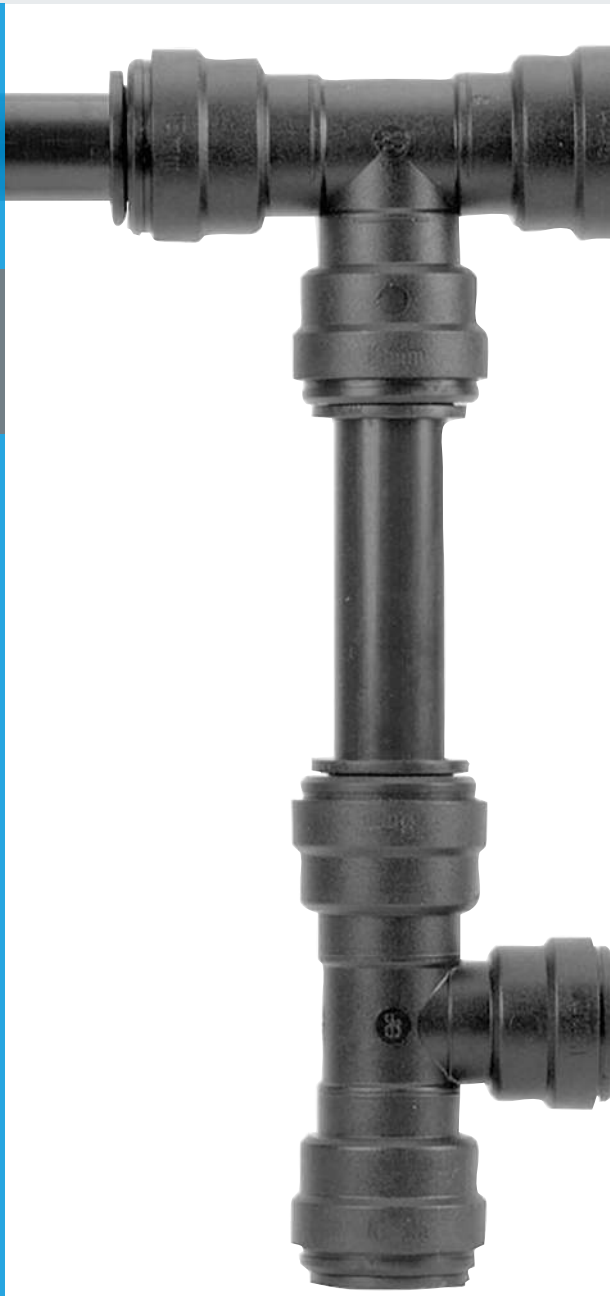
	D1	Working length [m]	Tubing colour	PN	PE
PUN-S-DUO					
For standard applications					
	4	0.5	Blue/black	**197617**	50
		1	Blue/black	**197618**	50
		1.5	Blue/black	**197619**	50
	6	1	Blue/black	**197620**	50
		2	Blue/black	**197621**	50
		6	Blue/black	**197622**	50
	8	1	Blue/black	**197623**	50
		2	Blue/black	**197624**	50
		6	Blue/black	**197625**	50
	10	1	Blue/black	**197626**	50
		2	Blue/black	**197627**	50
		6	Blue/black	**197628**	50
	12	1	Blue/black	**197629**	50

Spiral tubing, pre-assembled

	D1	Working length [m]	Tubing colour	**PN**	PE
PUN-SG					
Pre-assembled with captive rotatable fittings G1/4 and G3/8					
	9.5	2.4	Blue	**533463**	50
		4.8	Blue	**533464**	50
		6	Blue	**533465**	50
	11.7	4.8	Blue	**533466**	50
		6	Blue	**533467**	50

	D1	Working length [m]	Tubing colour	**PN**	PE
PPS					
With 2 rotatable connectors and captive sealing rings OL					
	6.35	7.5	Blue	**19798**	50
		15	Blue	**19799**	50
	7.95	7.5	Blue	**19796**	50
		15	Blue	**19797**	50

Highlights of pipes



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours



Highlights
our pipes



Plastic-coated metal tubes

PM

+ It has the corrosion resistance of plastic and the deformation resistance of metal
+ Can be bent straight and reshaped several times without a pipe-bending device and without being damaged

→ 52



Overview of pipes

02

Tubing & pipes – Overview of pipes



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

Pipes – stable transmission components

Ideally suited for supplying compressed air within machines and also for small compressed air networks within buildings: compressed air piping PQ.

Available in both aluminium and polyamide designs, the PQ range is the perfect complement for the CQ push-fit system. And regardless of whether plastic or aluminium – both designs ensure optimum flow conditions thanks to their smooth inside walls.

Pipes _____ **52**

Additional information:

→ **www.festo.com/piping**

Applications	Pipe	Fitting	
Corrosion-resistant	**PQ-PA**	**CQ → 194**	
	PQ-AL	**CQ → 194**	
	PM	**QS → 56**	

	O.D.	PN	PE
PQ-PA			
Plastic pipe			
	12	**177728**	3 m
	15	**177729**	3 m
	18	**177730**	3 m
	22	**177731**	3 m
	28	**194594**	3 m
PQ-AL			
Aluminium pipe			
	12	**177732**	3 m
	15	**177733**	3 m
	18	**177734**	3 m
	22	**177735**	3 m
	28	**194593**	3 m
PM			
Plastic-coated metal tube			
	6	**9084**	50 m
	8	**9087**	50 m

	Description
	Rigid pipe made from high quality polyamide; corrosion resistant, flexible and maintenance-free. Smooth inside wall ensures optimum flow conditions
	Rigid aluminium pipe, corrosion-resistant. Smooth inside wall ensures optimum flow conditions.
	The PM pipe has the corrosion resistance of plastic and the deformation resistance of metal. It can be bent, straightened and reshaped several times without pipe-bending equipment and without being damaged.

Highlights



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours



Highlights

our push-in fittings for O.D. tubing

Push-in fittings

NPQR

NEW: new series

+ Stainless steel
+ High resistance to chemicals and corrosion
+ High temperature resistance

→ **103**

NEW

Push-in fittings

QSMP

NEW: QSMP-M8X1.25-6

+ Stainless steel
+ High resistance to chemicals and corrosion
+ High temperature resistance

→ **65**

NEW

Push-in fittings

QSM, Mini ★
QS, Standard ★

NEW: QSY-1/2-10

From A to Z, always the fitting of your choice: more than 1000 types

+ Quick installation: simply plug and work
+ Simple uncoupling: just press down the blue releasing ring

→ QSM, mini series: **63**
→ QS, standard series: **73**



Product finder for fittings

→ **www.festo.com/productfinder/fittings**

→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

The right fitting for every application

Festo's range of fittings is incredibly diverse, with a portfolio that consists of materials, designs and connections in a variety of standard or innovative options. And that's not to mention the range of sizes available. This portfolio is sure to include the most appropriate fitting for every application.
Look for our products from the core product range ★

Push-in fittings preselection _____ **58**

Additional information:

→ **www.festo.com/fitting**

Suitable for:

Standard O.D. tubing → **28**

	Type, description
	**QSM, mini series** ★ NEW: QSMP-M8X1.25-6 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. 2, 3, 4 and 6 mm with connecting thread M3, M5, M6, M7, M8, R1/8 and G1/8
	**QS, standard series** ★ NEW: QSY-1/2-10 Wide range 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 ... 3/4
	**NPQH, solid metal push-in fitting** Solid 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 threads M5, M7 and G1/8 ... 1/2
	**NPQR, stainless steel** NEW: new series 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 and 12 mm with connecting thread M5, M7, and G1/8 ... G1/2
	**NPQM, metal** Metal push-in fitting at an economical price 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

	→ Page
Straight shape	**64**
L-shape	**67**
T-shape	**69**
X shape	**70**
Y-shape	**70**
Straight shape	**74**
L-shape	**81**
T-shape	**86**
W-shape	**90**
X shape	**90**
Y-shape	**91**
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Straight shape	**97**
L-shape	**99**
T-shape	**100**
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Straight shape	**104**
L-shape	**105**
T-shape	**105**
Straight shape	**108**
L-shape	**110**
T-shape	**112**
Y-shape	**113**

	Type, description
	**NPQP, resistant to media** Polypropylene fitting for use in applications with extreme influence of media. 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
	**CRQS, stainless steel** High corrosion resistance CRC 4 and chemical resistance with approval for use in the food and pakkaging 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** 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
	**QSK/QSR, self-sealing and rotatable push-in fittings** R and G-thread with sealing ring, R-thread PTFE-coated. Self-sealing push-in fittings and self-sealing push-in connectors, rotatable push-in fittings. Tubing O.D. 4, 6, 8, 10, 12 mm Thread connection M5, R1/8, R1/4, R3/8, R1/2, G1/8, G1/4, G3/8, G1/2

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L-shape	**117**
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Additional information:

→ **www.festo.com/fitting**

Push-in fittings

QSM, mini series ★

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. 2, 3, 4 and 6 mm with connecting threads M3, M5, M6, M7, R1/8 and G1/8.
Look for our products from the core product range ★


Straight shape **64**


L-shape **67**


T-shape **69**


X shape **70**


Y-shape **70**


Accessories **70**

Suitable for:

Standard O.D. tubing → **22**

Straight shape

	D1	D2	PN	PE
QSM males thread with external hexagon				
	M3	2	**133027**	10
		3	**153301**	10
			130775	100
		4	★ **153303**	10
			130776	100
	M5	2	**133028**	10
		3	**153302**	10
			130777	100
		4	★ **153304**	10
			130778	100
		6	★ **153306**	10
			130779	100
	M6	6	★ **132600**	10
	R1/8	4	★ **153305**	10
			130755	100
		6	★ **153307**	10
			130756	100
	G1/8	4	★ **186264**	10
		6	★ **186265**	10
QSM-...-I male thread with internal hexagon				
	M3	2	**133026**	10
		3	**153312**	10
		4	★ **153314**	10
	M5	3	**153313**	10
		4	★ **153315**	10
		6	★ **153317**	10
	M7	4	★ **153319**	10
		4	**133006**	100
		6	★ **153321**	10
	R1/8	4	★ **153316**	10
		6	★ **153318**	10
	G1/8	4	★ **186266**	10
		6	★ **186267**	10
QSM-...-I-R male thread with internal hex, round releasing ring				
	M3	3	**133001**	10
			132914	100
		4	**133002**	10
			132915	100
	M5	3	**133003**	10
			132916	100
		4	**133004**	10
			132917	100
		6	**133005**	10
			132918	100
	M7	6	**133007**	10
			132919	100

Straight shape

	D1	D2	PN	PE
QSMF female thread with external hexagon				
	M3	3	**153308**	10
		4	**153310**	10
	M5	3	**153309**	10
		4	**153311**	10
QSMP male thread with internal hexagon				
	M6x0.75	4	**153320**	10
	M8x0.75	6	**153322**	10
	M8x1.25 **NEW**	6	**154434**	10
QSM-... Push-in connector				
	3	3	**153323**	10
			130757	100
	4	4	★ **153324**	10
			130758	100
	6	6	★ **153325**	10
			130759	100
QSM-... Push-in connector reducing				
	3	2	**133029**	10
	4	3	★ **153326**	10
			130760	100
	6	4	★ **153327**	10
			130761	100
QSMS push-in bulkhead connector				
	3	3	**153375**	10
	4	4	★ **153376**	10
			130780	100
	6	6	★ **153377**	10
			130781	100

Straight shape

	D1	D2	PN	PE
QSM-...H push-in connector with push-in sleeve				
	3	2	**133035**	10
	4	3	★ **153328**	10
			130762	100
	6	4	★ **153329**	10
			130763	100
QSMC push-in cap				
	–	3	**153381**	10
QSMC-...H blanking plug				
	2	–	**133036**	10
	3		**153382**	10

L-shape

	D1	D2	PN	PE
QSML rotatable, male thread, with external hexagon				
	M3	2	**133030**	10
		3	**153330**	10
			130768	100
		4	★ **153332**	10
			130769	100
	M5	2	**133031**	10
		3	**153331**	10
			130770	100
		4	★ **153333**	10
			130771	100
		6	★ **153335**	10
			130772	100
	M7	4	★ **186352**	10
			130773	100
		6	★ **186353**	10
			130774	100
	R1/8	4	★ **153334**	10
			130764	100
		6	★ **153336**	10
			130765	100
	G1/8	4	★ **186268**	10
			132897	100
		6	★ **186269**	10
QSMLL long, rotatable, male thread with external hexagon				
	M3	2	**133032**	10
		3	**153337**	10
			133011	100
		4	**153338**	10
	M5	2	**133033**	10
		3	**130838**	10
			133012	100
		4	**153339**	10
			133013	100
		6	**153341**	10
	M7	4	**186354**	10
			133014	100
		6	**186355**	10
	R1/8	4	**153340**	10
		6	**153342**	10
	G1/8	4	**186270**	10
		6	**186271**	10

L-shape

	D1	D2	PN	PE
QSMLV-...-I rotatable, male thread with internal hexagon				
	M5	3	**130830**	10
		4	**130831**	10
	M7	4	**130832**	10
		6	**130833**	10
QSMLLV-...-I long, rotatable, male thread with internal hexagon				
	M5	3	**130834**	10
		4	**130835**	10
	M7	4	**130836**	10
		6	**130837**	10
QSML-... Push-in connector				
	3	3	**153343**	10
	4	4	★ **153344**	10
			130766	100
	6	6	★ **153345**	10
			130767	100
QSML-...H push-in connector with push-in sleeve				
	3	3	**153346**	10
	4	4	★ **153347**	10
	6	6	★ **153348**	10
QSML-...H push-in connector with push-in sleeve reducing				
	4	3	★ **153349**	10
	6	4	★ **153350**	10

T-shape

	D1	D2	PN	PE
QSMT – rotatable, male thread with external hexagon				
	M3	3	**153351**	10
		4	**153353**	10
	M5	3	**153352**	10
		4	**153354**	10
			130784	100
		6	**153356**	10
			130785	100
	R1/8	4	**153355**	10
		6	**153357**	10
	G1/8	4	**186272**	10
		6	**186273**	10
QSMTL – rotatable, male thread with external hexagon				
	M3	3	**153358**	10
		4	**153360**	10
	M5	3	**153359**	10
		4	**153361**	10
		6	**153363**	10
	R1/8	4	**153362**	10
		6	**153364**	10
	G1/8	4	**186274**	10
		6	**186275**	10
QSMT-... – push-in T-connector				
	2	2	**133034**	10
	3	3	**153365**	10
	4	4	★ **153366**	10
			130782	100
	6	6	★ **153367**	10
			130783	100
QSMT-... – push-in T-connector reducing				
	4	3	★ **153368**	10
	6	4	★ **153369**	10

X shape

	D1	D2	PN	PE
QSMX – push-in connector				
	3	3	**153378**	10
	4	4	**153379**	10
	6	6	**153380**	10

Y-shape

	D1	D2	PN	PE
QSMY – push-in connector				
	2	2	**133037**	10
	3	3	**153370**	10
	4	4	★ **153371**	10
			130786	100
	6	6	★ **153372**	10
			130787	100
QSMY – push-in connector reducing				
	4	3	★ **153373**	10
	6	4	★ **153374**	10

Accessories

	D1	D2	PN	PE
QSO – releasing tool				
	3 ... 10	3 ... 10	**158419**	1

Configurable product

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

→ **www.festo.com/catalogue/qsm**



Push-in fittings **QS, standard series** ★



Additional information:

→ **www.festo.com/fitting**

→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

Push-in fittings

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. 4, 6, 8, 10, 12, 16 and 22 mm with connecting thread R1/8 ... R1/2 and G1/8 ... 3/4
Look for our products from the core product range ★


Straight shape **74**


L-shape **81**


T-shape **86**


W-shape **90**


X shape **90**


Y-shape **91**


Multiple distributor **224**


Accessories **93**

Suitable for:

Standard O.D. tubing → **22**

Straight shape

	D1	D2	PN	PE
QS – B – male thread with external hexagon				
	R1/8	4	★ **153001**	10
			130674	100
		6	★ **153002**	10
			130675	100
		8	★ **153004**	10
			130676	50
		10	★ **190643**	10
	R1/4	4	★ **190644**	10
		6	★ **153003**	10
			130677	100
		8	★ **153005**	10
			130678	50
		10	★ **153007**	10
			130679	50
		12	★ **164980**	10
			130680	20
	R3/8	6	★ **190645**	10
		8	★ **153006**	10
			130681	50
		10	★ **153008**	10
			130682	50
		12	★ **153009**	10
			130683	20
		16	**164957**	1
	R1/2	10	★ **190646**	1
			133189	50
		12	★ **153010**	1
			130684	20
		16	**153011**	1
			130685	20

Straight shape

	D1	D2	PN	PE
QS – B – male thread with external hexagon				
	G1/8	4	★ **186095**	10
			132036	100
		6	★ **186096**	10
			132037	100
		8	★ **186098**	10
			132038	50
	G1/4	6	★ **186097**	10
			132039	100
		8	★ **186099**	10
			132040	50
		10	★ **186101**	10
			132041	50
		12	★ **186350**	10
			132042	20
	G3/8	8	★ **186100**	10
			132043	50
		10	★ **186102**	10
			132044	50
		12	★ **186103**	10
			132045	20
		16	**186347**	1
	G1/2	12	★ **186104**	1
			132046	20
		16	**186105**	1
			132047	20
	G3/4	22	**8040613**	1

Straight shape

	D1	D2	PN	PE
QS-...-I – male thread with internal hexagon				
	R1/8	4	★ **153012**	10
			133191	100
		6	★ **153013**	10
			133186	100
		8	★ **153015**	10
			133187	50
		10	★ **190647**	10
	R1/4	6	★ **153014**	10
			133193	100
		8	★ **153016**	10
			133190	50
		10	★ **153018**	10
			133188	50
		12	★ **190649**	10
	R3/8	8	★ **153017**	10
		10	★ **153019**	10
		12	★ **153020**	10
	R1/2	10	★ **190648**	1
		12	★ **153021**	1
QS-...-I – male thread with internal hexagon				
	G1/8	4	★ **186106**	10
			133008	100
		6	★ **186107**	10
			133009	100
		8	★ **186109**	10
			133010	100
		10	★ **132999**	10
			133000	100
	G1/4	6	★ **186108**	10
		8	★ **186110**	10
		10	★ **186112**	10
	G3/8	8	★ **186111**	10
		10	★ **186113**	10
		12	★ **186114**	10
	G1/2	12	★ **186115**	1

Straight shape

	D1	D2	PN	PE
QSF – female thread with external hexagon				
	G1/8	4	★ **153022**	10
			130709	100
		6	★ **153023**	10
			130710	100
		8	★ **153025**	10
			130711	50
	G1/4	4	★ **190650**	10
		6	★ **153024**	10
			130712	100
		8	★ **153026**	10
			130713	50
		10	★ **153028**	10
			130714	50
		12	★ **190651**	10
	G3/8	6	★ **190652**	10
		8	★ **153027**	10
			130715	50
		10	★ **153029**	10
			130716	50
		12	★ **153030**	10
			130717	20
	G1/2	12	★ **190653**	1
		16	**190654**	1

Straight shape

	D1	D2	PN	PE
QS-... – push-in connector				
	4	4	★ **153031**	10
			130686	100
	6	6	★ **153032**	10
			130687	100
	8	8	★ **153033**	10
			130688	50
	10	10	★ **153034**	10
			130689	50
	12	12	★ **153035**	10
			130690	20
	16	16	**153036**	1
			133195	20
QS-... – push-in connector reducing				
	6	4	★ **153037**	10
			130691	100
	8	4	★ **130606**	10
		6	★ **153038**	10
			130692	50
	10	6	★ **130607**	10
		8	★ **153039**	10
			130693	50
	12	8	★ **130608**	10
		10	★ **153040**	10
			130694	20
QSS – push-in bulkhead connector				
	4	4	★ **153157**	10
			130788	100
	6	6	★ **153158**	10
			130789	100
	8	8	★ **153159**	10
			130790	50
	10	10	★ **153160**	10
			130791	50
	12	12	★ **153161**	10
			130792	20
QSS-...-F – push-in bulkhead connector				
	4	4	**193950**	10
	6	6	**193951**	10
	8	8	★ **130642**	10
	10	10	★ **130643**	10
	12	12	★ **130644**	10

Straight shape

	D1	D2	PN	PE
QSSF – push-in bulkhead connector with female thread				
	G1/8	4	**153162**	10
		6	**153163**	10
		8	**153165**	10
	G1/4	4	**190655**	10
		6	**153164**	10
		8	**153166**	10
		10	**153168**	10
	G3/8	6	**190656**	10
		8	**153167**	10
		10	**153169**	10
		12	**153170**	10
	G1/2	12	**153171**	1
		16	**190657**	1
QS-...H – push-in connector with push-in sleeve				
	6	4	★ **153041**	10
			130695	100
	8	4	★ **130622**	10
		6	★ **153042**	10
			130696	50
	10	6	★ **130623**	10
		8	★ **153043**	10
			130697	50
	12	6	★ **132981**	10
		8	★ **130624**	10
		10	★ **153044**	10
			130698	20
QSH – push-in sleeve				
	4	–	**153251**	10
			130723	100
	6	–	**153252**	10
			130724	100
	8	–	**153253**	10
			130725	50
	10	–	**153254**	10
			130726	50
	12	–	**153255**	10
			130727	20
	16	–	**153256**	1

Straight shape

	D1	D2	PN	PE
QSH – push-in sleeve				
reducing				
	6	4	**153257**	10
			130718	100
	8	4	**130625**	10
		6	**153258**	10
			130719	50
	10	6	**130626**	10
		8	**153259**	10
			130720	50
	12	8	**130627**	10
		10	**153260**	10
			130721	20
	16	12	**153261**	1
			130722	20
QSC – push-in cap				
	4	–	★ **153262**	10
			130704	100
	6		★ **153263**	10
			130705	100
	8		★ **153264**	10
			130706	50
	10		★ **153265**	10
			130707	50
	12		★ **153266**	10
			130708	20
QSC-...H – blanking plug				
	4	–	★ **153267**	10
			130699	100
	6	–	★ **153268**	10
			130700	100
	8	–	★ **153269**	10
			130701	50
	10	–	★ **153270**	10
			130702	50
	12	–	★ **153271**	10
			130703	20
	16	–	**153272**	1

L-shape

	D1	D2	PN	PE
QSL – rotatable, male thread with external hexagon				
	R1/8	4	★ **153045**	10
			130728	100
		6	★ **153046**	10
			130729	100
		8	★ **153048**	10
			130730	50
		10	★ **190658**	10
	R1/4	4	★ **190659**	10
		6	★ **153047**	10
			130731	100
		8	★ **153049**	10
			130732	50
		10	★ **153051**	10
			130733	50
		12	★ **164981**	10
			130734	20
	R3/8	6	★ **190660**	10
		8	★ **153050**	10
			130735	50
		10	★ **153052**	10
			130736	20
		12	★ **153053**	10
			130737	20
		16	**164958**	1
	R1/2	10	★ **190661**	1
			133192	50
		12	★ **153054**	1
			130738	20
		16	**153055**	1
			130739	20

L-shape

	D1	D2	PN	PE
QSL – rotatable, male thread with external hexagon				
	G1/8	4	★ **186116**	10
			132048	100
		6	★ **186117**	10
			132049	100
		8	★ **186119**	10
			132050	50
	G1/4	6	★ **186118**	10
			132051	100
		8	★ **186120**	10
			132052	50
		10	★ **186122**	10
			132053	50
		12	★ **186351**	10
			132054	20
	G3/8	8	★ **186121**	10
			132055	50
		10	★ **186123**	10
			132056	20
		12	★ **186124**	10
			132057	20
		16	**186348**	1
	G1/2	12	★ **186125**	1
			132058	20
		16	**186126**	1
			132059	20
QSLL long, rotatable, male thread with external hexagon				
	R1/8	4	★ **153076**	10
		6	★ **153077**	10
		8	★ **153079**	10
	R1/4	4	★ **190662**	10
		6	★ **153078**	10
		8	★ **153080**	10
		10	★ **153082**	10
	R3/8	6	★ **190663**	10
		8	★ **153081**	10
		10	★ **153083**	10
		12	★ **153084**	10
	R1/2	10	★ **190664**	1
		12	★ **153085**	1

L-shape

	D1	D2	PN	PE
QSLL long, rotatable, male thread with external hexagon				
	G1/8	4	**186127**	10
			133015	100
		6	**186128**	10
			133016	100
		8	**186130**	10
			133017	100
	G1/4	6	**186129**	10
		8	**186131**	10
		10	**186133**	10
		12	**132596**	1
	G3/8	8	**186132**	10
		10	**186134**	10
		12	**186135**	10
	G1/2	12	**186136**	1
		16	**190665**	1
QSLF – female thread with external hexagon				
	G1/8	4	★ **153273**	10
		6	★ **153274**	10
		8	★ **153276**	10
	G1/4	6	★ **153275**	10
		8	★ **153277**	10
		10	★ **153279**	10
	G3/8	8	★ **153278**	10
		10	★ **153280**	10
QSLV-...-I rotatable, male thread with internal hexagon				
	R1/8	6	**153097**	10
		8	**153099**	10
	R1/4	6	**153098**	10
		8	**153100**	10
		10	**153102**	10
	R3/8	8	**153101**	10
		10	**153103**	10
		12	**153104**	10
	R1/2	12	**153105**	1
QSLV-...-I rotatable, male thread with internal hexagon				
	G1/8	6	**186148**	10
		8	**186150**	10
	G1/4	6	**186149**	10
		8	**186151**	10
		10	**186153**	10
	G3/8	8	**186152**	10
		10	**186154**	10
		12	**186155**	10
	G1/2	12	**186156**	1

L-shape

	D1	D2	PN	PE
QSLV rotatable, male thread with external hexagon				
	R1/8	4	★ 153086	10
			130749	100
		6	★ 153087	10
			130750	100
		8	★ 153089	10
			130751	50
	R1/4	6	★ 153088	10
			130752	100
		8	★ 153090	10
			130753	50
		10	★ 153092	10
			130754	50
	R3/8	8	★ 153091	10
		10	★ 153093	10
		12	★ 153094	10
	R1/2	12	★ 153095	1
		16	153096	1
QSLV rotatable, male thread with external hexagon				
	M5	6	★ 190666	10
	G1/8	4	★ 186137	10
			132060	100
		6	★ 186138	10
			132061	100
		8	★ 186140	10
			132062	50
	G1/4	6	★ 186139	10
			132063	100
		8	★ 186141	10
			132064	50
		10	★ 186143	10
			132065	50
	G3/8	8	★ 186142	10
		10	★ 186144	10
		12	★ 186145	10
	G1/2	12	★ 186146	1
		16	186147	1

L-shape

	D1	D2	PN	PE
QSL push-in connector				
	4	4	★ **153070**	10
			130740	100
	6	6	★ **153071**	10
			130741	100
	8	8	★ **153072**	10
			130742	50
	10	10	★ **153073**	10
			130743	50
	12	12	★ **153074**	10
			130744	20
	16	16	**153075**	1
			133194	20
QSL-...H push-in connector with push-in sleeve				
	4	4	★ **153056**	10
			130745	100
	6	6	★ **153057**	10
			130746	100
	8	8	★ **153058**	10
			130747	50
	10	10	★ **153059**	10
			130748	50
	12	12	★ **153060**	10
QSL-...H push-in connector with push-in sleeve reducing				
	6	4	★ **153061**	10
	8	6	★ **153062**	10
	10	8	★ **153063**	10
	12	10	★ **153064**	10
QSL-...HL push-in connector with push-in sleeve Long push-in sleeve				
	4	4	★ **153065**	10
	6	6	★ **153066**	10
	8	8	★ **153067**	10
	10	10	★ **153068**	10
	12	12	★ **153069**	10

T-shape

	D1	D2	PN	PE
QST rotatable, male thread, with external hexagon				
	R1/8	4	★ **153106**	10
			130793	100
		6	★ **153107**	10
			130794	100
		8	★ **153109**	10
			130795	50
		10	★ **190667**	10
	R1/4	4	★ **190668**	10
		6	★ **153108**	10
			130796	100
		8	★ **153110**	10
			130797	50
		10	★ **153112**	10
			130798	50
		12	★ **190669**	10
	R3/8	6	★ **190670**	10
		8	★ **153111**	10
			130799	50
		10	★ **153113**	10
			130800	20
		12	★ **153114**	10
			130801	20
		16	**164959**	1
	R1/2	10	★ **190672**	1
		12	★ **153115**	1
		16	**153116**	1

T-shape

	D1	D2	PN	PE
QST rotatable, male thread, with external hexagon				
	G1/8	4	**186157**	10
			132066	100
		6	**186158**	10
			132067	100
		8	**186160**	10
			132068	50
	G1/4	6	**186159**	10
			132069	100
		8	**186161**	10
			132070	50
		10	**186163**	10
			132071	50
		12	**132597**	1
	G3/8	8	**186162**	10
			132072	50
		10	**186164**	10
			132073	20
		12	**186165**	10
			132074	20
		16	**186349**	1
	G1/2	12	**186166**	1
		16	**186167**	1

T-shape

	D1	D2	PN	PE
QST-... Push-in connector				
	4	4	★ **153128**	10
			130802	100
	6	6	★ **153129**	10
			130803	100
	8	8	★ **153130**	10
			130804	50
	10	10	★ **153131**	10
			130805	50
	12	12	★ **153132**	10
			130806	20
	16	16	**153133**	1
QST-... Push-in connector reducing				
	6	4	★ **153134**	10
			130820	100
	8	4	★ **130613**	10
		6	★ **153135**	10
			130821	50
	10	6	★ **130614**	10
		8	★ **153136**	10
			130822	50
	12	8	★ **130615**	10
		10	★ **153137**	10
			130823	20
	16	12	★ **130616**	1
QSTF rotatable, male and female thread				
	R1/8	4	**153182**	1
		6	**153183**	1
		8	**153185**	1
	R1/4	6	**153184**	1
		8	**153186**	1
		10	**153188**	1
	R3/8	8	**153187**	1
		10	**153189**	1
		12	**153190**	1
	R1/2	12	**153191**	1
	G1/8	4	**186199**	1
		6	**186200**	1
		8	**186202**	1
	G1/4	6	**186201**	1
		8	**186203**	1
		10	**186205**	1
	G3/8	8	**186204**	1
		10	**186206**	1
		12	**186207**	1
	G1/2	12	**186208**	1

T-shape

	D1	D2	PN	PE
QSTL rotatable, male thread with external hexagon				
	R1/8	4	★ **153117**	10
			130824	100
		6	★ **153118**	10
			130825	100
		8	★ **153120**	10
			130826	50
	R1/4	6	★ **153119**	10
			130827	100
		8	★ **153121**	10
			130828	50
		10	★ **153123**	10
			130829	50
	R3/8	8	★ **153122**	10
		10	★ **153124**	10
		12	★ **153125**	10
	R1/2	12	★ **153126**	1
		16	**153127**	1
	G1/8	4	**186168**	10
			132075	100
		6	**186169**	10
			132076	100
		8	**186171**	10
			132077	50
	G1/4	6	**186170**	10
			132078	100
		8	**186172**	10
			132079	50
		10	**186174**	10
			132080	50
	G3/8	8	**186173**	10
		10	**186175**	10
		12	**186176**	10
	G1/2	12	**186177**	1
		16	**186178**	1

W-shape

	D1	D2	PN	PE
QSW rotatable, male thread with external hexagon				
	R1/8	4	**130596**	10
		6	**130597**	10
		8	**130598**	10
	R1/4	6	**130599**	10
		8	**130600**	10
		10	**130601**	10
	R3/8	10	**130602**	10
		12	**130603**	10
	R1/2	12	**130604**	1
		16	**130605**	1
QSW-...HL push-in connector with push-in sleeve				
	4	4	**130617**	10
	6	6	**130618**	10
	8	8	**130619**	10
	10	10	**130620**	10
	12	12	**130621**	10

X-shape

	D1	D2	PN	PE
QSX				
	8	8	**153285**	10
	10	10	**153286**	10
	12	12	**153287**	10

Y-shape

	D1	D2	PN	PE
QSY rotatable, male thread with external hexagon				
	M5	4	★ **190673**	10
		6	★ **190674**	10
	R1/8	4	★ **153138**	10
		6	★ **153139**	10
		8	★ **153141**	10
	R1/4	4	★ **190675**	10
		6	★ **153140**	10
		8	★ **153142**	10
		10	★ **153144**	10
	R3/8	8	★ **153143**	10
		10	★ **153145**	10
		12	★ **153146**	10
	R1/2	10 NEW	**133196**	1
		12	★ **153147**	1
	G1/8	4	**186179**	10
		6	**186180**	10
		8	**186182**	10
	G1/4	6	**186181**	10
		8	**186183**	10
		10	**186185**	10
	G3/8	8	**186184**	10
		10	**186186**	10
		12	**186187**	10
	G1/2	12	**186188**	1
QSY-... Push-in connector				
	4	4	★ **153148**	10
			130807	100
	6	6	★ **153149**	10
			130808	100
	8	8	★ **153150**	10
			130809	50
	10	10	★ **153151**	10
			130810	20
	12	12	★ **153152**	10
			130811	20
	16	16	**130609**	1

Y-shape

	D1	D2	PN	PE
QSY-... Push-in connector **reducing**				
	6	4	★ **153153**	10
			130812	100
	8	4	★ **130610**	10
		6	★ **153154**	10
			130813	50
	10	6	★ **130611**	10
		8	★ **153155**	10
			130814	20
	12	8	★ **130612**	10
		10	★ **153156**	10
			130815	20
	16	12	★ **190708**	1
QSY-...H – push-in connector with push-in sleeve				
	4	4	**130628**	10
	6	6	**133145**	10
	8	8	**133146**	10
	10	10	**133148**	10
	12	12	**133150**	10
QSY-...H – push-in connector with push-in sleeve **reducing**				
	6	4	**130633**	10
	8	6	**133147**	10
	10	8	**133149**	10
	12	10	**133151**	10
QSYL – rotatable, male thread with external hexagon				
	R1/8	4	★ **153172**	1
		6	★ **153173**	1
		8	★ **153175**	1
	R1/4	6	★ **153174**	1
		8	★ **153176**	1
		10	★ **153178**	1
	R3/8	8	★ **153177**	1
		10	★ **153179**	1
		12	★ **153180**	1
	R1/2	12	★ **153181**	1

Y-shape

	D1	D2	PN	PE
QSYL – rotatable, male thread with external hexagon				
	G1/8	4	**186189**	1
		6	**186190**	1
		8	**186192**	1
	G1/4	6	**186191**	1
		8	**186193**	1
		10	**186195**	1
	G3/8	8	**186194**	1
		10	**186196**	1
		12	**186197**	1
	G1/2	12	**186198**	1
QSYLV – rotatable, male thread with external hexagon				
	R1/8	6	**153192**	1
	R1/4	8	**153193**	1
	R3/8	10	**153194**	1
	R1/2	12	**153195**	1
	G1/8	4	**186209**	1
	G1/4	6	**186210**	1
	G3/8	8	**186211**	1
	G1/2	6	**186212**	1

Accessories

	D1	D2	PN	PE
QSO – releasing tool				
	3 ... 10	3 ... 10	**158419**	1

Configurable product

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

→ **www.festo.com/catalogue/qs**

Push-in fittings **NPQH, solid metal**



Additional information:

→ **www.festo.com/fitting**

→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

Push-in fittings

NPQH, solid metal

Solid 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 threads M5, M7 and G1/8 ... 1/2



Straight shape **97**



L-shape **99**



T-shape **100**



Y-shape **101**

Suitable for:

Standard O.D. tubing → **22**

Straight shape

	D1	D2	PN	PE
NPQH-D – male thread with external hexagon				
	M5	4	**578334**	10
		6	**578335**	10
	M7	4	**578336**	10
		6	**578337**	10
	G1/8	4	**578338**	10
		6	**578339**	10
		8	**578340**	10
	G1/4	6	**578341**	10
		8	**578342**	10
		10	**578343**	10
		12	**578344**	10
	G3/8	8	**578345**	10
		10	**578346**	10
		12	**578347**	10
		14	**578348**	10
	G1/2	10	**578349**	1
		12	**578350**	1
		14	**578351**	1
NPQH-D-...F – female thread with external hexagon				
	G1/8	4	**578352**	10
		6	**578353**	10
		8	**578354**	10
	G1/4	4	**578355**	10
		6	**578356**	10
		8	**578357**	10
NPQH-D-...-S... – with push-in sleeve				
	M5	4	**578358**	10
		6	**578359**	10
	G1/8	4	**578360**	10
		6	**578361**	10
		8	**578362**	10
	G1/4	6	**578363**	10
		8	**578364**	10
		10	**578365**	10
		12	**578366**	10
	G3/8	10	**578367**	10
		12	**578368**	10
	G1/2	12	**578369**	1

Straight shape

	D1	D2	PN	PE
NPQH-DK – male thread with internal hexagon				
	M5	4	**578370**	10
		6	**578371**	10
	M7	4	**578372**	10
		6	**578373**	10
	G1/8	4	**578374**	10
		6	**578375**	10
		8	**578376**	10
	G1/4	8	**578377**	10
		10	**578378**	10
	G3/8	12	**578379**	10
NPQH-D – push-in connector				
	4	4	**578323**	10
	6	6	**578324**	10
	8	8	**578325**	10
	10	10	**578326**	10
	12	12	**578327**	10
	14	14	**578328**	10
NPQH-D – push-in connector reducing				
	6	4	**578329**	10
	8	6	**578330**	10
	12	8	**578331**	10
	14	10	**578332**	10
	14	12	**578333**	10
NPQH-D – push-in connector with push-in sleeve				
	4	6	**578304**	10
		8	**578305**	10
		10	**578307**	10
	6	8	**578306**	10
		10	**578308**	10
		12	**578310**	10
		14	**578313**	10
	8	10	**578309**	10
		12	**578311**	10
		14	**578314**	10
	10	12	**578312**	10
		14	**578315**	10
	12	14	**578316**	10

Straight shape

	D1	D2	PN	PE
NPQH-D – push-in sleeve				
	4	4	**578317**	10
	6	6	**578318**	10
	8	8	**578319**	10
	10	10	**578320**	10
	12	12	**578321**	10
	14	14	**578322**	10
NPQH-H – bulkhead push-in fitting, female thread with external hexagon				
	G1/8	4	**578294**	10
		6	**578295**	10
		8	**578296**	10
	G1/4	6	**578297**	10
		8	**578298**	10
NPQH-H – push-in bulkhead connector				
	4	4	**578299**	10
	6	6	**578300**	10
	8	8	**578301**	10
	10	10	**578302**	10
	12	12	**578303**	10
NPQH-P – blanking plug				
	4	4	**578257**	10
	6	6	**578258**	10
	8	8	**578259**	10
	10	10	**578260**	10
	12	12	**578261**	10
	14	14	**578262**	10
NPQH-BK – plug screw				
	M5	–	**578404**	10
	M7	–	**578405**	10
	G1/8	–	**578406**	10
	G1/4	–	**578407**	10
	G3/8	–	**578408**	10
	G1/2	–	**578409**	1

L-shape

	D1	D2	PN	PE
NPQH-L – rotatable, male thread with external hexagon				
	M5	4	**578276**	10
		6	**578277**	10
	M7	4	**578278**	10
		6	**578279**	10
	G1/8	4	**578280**	10
		6	**578281**	10
		8	**578282**	10
	G1/4	6	**578283**	10
		8	**578284**	10
		10	**578285**	10
		12	**578286**	10
	G3/8	8	**578287**	10
		10	**578288**	10
		12	**578289**	10
		14	**578290**	10
	G1/2	10	**578291**	1
		12	**578292**	1
		14	**578293**	1
NPQH-LL – long, rotatable, male thread with external hexagon				
	G1/8	4	**578263**	10
		6	**578264**	10
		8	**578265**	10
	G1/4	6	**578266**	10
		8	**578267**	10
		10	**578268**	10
	G3/8	10	**578269**	10
NPQH-L – push-in connector				
	4	4	**578270**	10
	6	6	**578271**	10
	8	8	**578272**	10
	10	10	**578273**	10
	12	12	**578274**	10
	14	14	**578275**	10

T-shape

	D1	D2	PN	PE
NPQH-T – rotatable, male thread with external hexagon				
	M5	4	**578390**	10
		6	**578391**	10
	G1/8	4	**578392**	10
		6	**578393**	10
		8	**578394**	10
	G1/4	6	**578395**	10
		8	**578396**	10
		10	**578397**	10
		12	**578398**	10
	G3/8	8	**578399**	10
		10	**578400**	10
		12	**578401**	10
	G1/2	10	**578402**	1
		12	**578403**	1
NPQH-T – push-in connector				
	4	4	**578380**	10
	6	6	**578381**	10
	8	8	**578382**	10
	10	10	**578383**	10
	12	12	**578384**	10
	14	14	**578385**	10
NPQH-T – push-in connectors **reducing**				
	6	4	**578386**	10
	8	6	**578387**	10
	10	8	**578388**	10
	12	10	**578389**	10

Y-shape

	D1	D2	PN	PE
NPQH-Y – push-in connectors				
	4	–	**578410**	10
	6	–	**578411**	10
	8	–	**578412**	10
NPQH-Y – push-in connectors reducing				
	6	4	**578413**	10
	8	6	**578414**	10
	10	8	**578415**	10

Configurable product

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

→ **www.festo.com/catalogue/npqh**

NEW



Additional information:

→ **www.festo.com/fitting**

NEW

Push-in fittings

NPQR, stainless steel

NEW: new series

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 and 12 mm with connecting thread M5, M7, and G1/8 ... G1/2



Straight shape **104**



L-shape **105**



T-shape **105**

Suitable for:

Standard O.D. tubing → **22**

NEW

Straight shape

	D1	D2	PN	PE
NPQR-DK – male thread with internal hexagon				
	M5	4	**8085657**	1
		6	**8085659**	1
	M7	4	**8085658**	1
		6	**8085660**	1
	G1/8	4	**8085661**	1
		6	**8085662**	1
		8	**8085663**	1
		10	**8087695**	1
	G1/4	6	**8085664**	1
		8	**8085665**	1
		10	**8085666**	1
	G3/8	8	**8086953**	1
		10	**8085667**	1
		12	**8085668**	1
	G1/2	12	**8085669**	1
NPQR-D – push-in connector				
	4	4	**8085697**	1
	6	6	**8085698**	1
	8	8	**8085699**	1
	10	10	**8085700**	1
	12	12	**8085701**	1
NPQR-D – push-in connector reducing				
	6	4	**8085704**	1
	8	6	**8085705**	1
	10	8	**8085706**	1
	12	10	**8085707**	1
NPQR-H – bulkhead push-in connector				
	4	4	**8085729**	1
	6	6	**8085730**	1
	8	8	**8085731**	1
	10	10	**8085732**	1
	12	12	**8085733**	1
NPQR-BK – plug screw				
	M7	–	**8085672**	1
	G1/8	–	**8085673**	1
	G1/4	–	**8085674**	1
	G3/8	–	**8085675**	1
	G1/2	–	**8085676**	1

→ www.festo.com/catalogue/...

★ Generally ready for dispatch from the Festo factory in 24 hours

NEW

L-shape

	D1	D2	PN	PE
NPQR-L – rotatable, male thread with external hexagon				
	M5	4	**8085679**	1
		6	**8098626**	1
	G1/8	4	**8085680**	1
		6	**8085681**	1
		8	**8085682**	1
	G1/4	6	**8085683**	1
		8	**8085684**	1
		10	**8085685**	1
	G3/8	10	**8085686**	1
		12	**8085687**	1
	G1/2	12	**8085688**	1
NPQR-L – push-in connector				
	4	4	**8085709**	1
	6	6	**8085710**	1
	8	8	**8085711**	1
	10	10	**8085712**	1
	12	12	**8085713**	1

T-shape

	D1	D2	PN	PE
NPQR-T – rotatable, male thread with external hexagon				
	M5	4	**8085691**	1
	G1/8	6	**8085692**	1
		8	**8085693**	1
	G1/4	8	**8085694**	1
		10	**8099100**	1
	G3/8	10	**8085695**	1
		12	**8099101**	1
	G1/2	12	**8099102**	1
NPQR-T – push-in connector				
	4	4	**8085716**	1
	6	6	**8085717**	1
	8	8	**8085718**	1
	10	10	**8085719**	1
	12	12	**8085720**	1

Configurable product

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

→ **www.festo.com/catalogue/npqr**



Additional information:

→ **www.festo.com/fitting**

Push-in fittings

NPQM, metal

Metal push-in fitting at an economical price 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


Straight shape **108**


L-shape **110**


T-shape **112**


Y-shape **113**

Suitable for:

Standard O.D. tubing → **22**

Straight shape

	D1	D2	PN	PE
NPQM-D – male thread with internal/external hexagon				
	G1/8	4	**558661**	10
		6	**558662**	10
		8	**558663**	10
	G1/4	6	**558664**	10
		8	**558665**	10
		10	**558666**	10
		12	**558667**	10
	G3/8	8	**558668**	10
		10	**558669**	10
		12	**558670**	10
		14	**570450**	1
	G1/2	10	**558671**	10
		12	**558672**	10
		14	**570451**	1
NPQM-D – female thread with external hexagon				
	G1/8	4	**558674**	10
		6	**558675**	10
		8	**558676**	10
	G1/4	6	**558678**	10
		8	**558679**	10
		10	**558680**	10
NPQM-DK – male thread with internal hexagon				
	M5	4	**558657**	10
		6	**558658**	10
	M7	4	**558659**	10
		6	**558660**	10
NPQM-D – push-in connector				
	4	4	**558760**	10
	6	6	**558761**	10
	8	8	**558762**	10
	10	10	**558763**	10
	12	12	**558764**	10
	14	14	**570452**	1

Straight shape

	D1	D2	PN	PE
NPQM-D – push-in connector with push-in sleeve				
	4	6	**558765**	10
		8	**558766**	10
	6	4	**558767**	10
		8	**558768**	10
		10	**558769**	10
		12	**558770**	10
		14	**570457**	1
	8	6	**558771**	10
		10	**558772**	10
		12	**558773**	10
		14	**570458**	1
	10	12	**558774**	10
		14	**570456**	1
	12	14	**570459**	1
NPQM-D – push-in sleeve				
	4	4	**558811**	10
	6	6	**558812**	10
	8	8	**558813**	10
	10	10	**558814**	10
	12	12	**558815**	10
	14	14	**570455**	1
NPQM-H – push-in bulkhead connector				
	4	4	**558806**	10
	6	6	**558807**	10
	8	8	**558808**	10
	10	10	**558809**	10
	12	12	**558810**	10

L-shape

	D1	D2	PN	PE
NPQM-L – male thread with external hexagon				
	M5	4	**558704**	10
		6	**558705**	10
	G1/8	4	**558708**	10
		6	**558709**	10
		8	**558710**	10
	G1/4	6	**558711**	10
		8	**558712**	10
		10	**558713**	10
		12	**558714**	10
	G3/8	8	**558715**	10
		10	**558716**	10
		12	**558717**	10
		14	**570460**	1
	G1/2	10	**558718**	10
		12	**558719**	10
		14	**570461**	1
NPQM-LK – male thread with internal hexagon				
	M5	3	**558816**	10
		4	**558817**	10
	G1/8	4	**558818**	10
		6	**558819**	10
		8	**558820**	10
	G1/4	6	**558821**	10
		8	**558822**	10
		10	**558823**	10
	G3/8	12	**558825**	10
NPQM-LH – male thread with external hexagon				
	M5	4	**558827**	10
		6	**558828**	10
	G1/8	4	**558829**	10
		6	**558830**	10
		8	**558831**	10
	G1/4	6	**558832**	10
		8	**558833**	10
	G3/8	8	**558834**	10
		10	**558835**	10
		12	**558836**	10

L-shape

	D1	D2	PN	PE
NPQM-LFK – multiple distributor, male thread with internal hexagon				
	G1/8	4	**558837**	10
		6	**558838**	10
		8	**558839**	10
	G1/4	6	**558840**	10
		8	**558841**	10
NPQM-L – push-in connector				
	4	–	**558776**	10
	6	–	**558777**	10
	8	–	**558778**	10
	10	–	**558779**	10
	12	–	**558780**	10
	14	–	**570453**	1
NPQM-L – push-in connector with push-in sleeve				
	4	4	**558781**	10
	6	6	**558782**	10
	8	8	**558783**	10
	10	10	**558784**	10

T-shape

	D1	D2	PN	PE
NPQM-T – male thread with external hexagon				
	G1/8	4	**558736**	10
		6	**558737**	10
		8	**558738**	10
	G1/4	6	**558739**	10
		8	**558740**	10
		10	**558741**	10
	G3/8	8	**558743**	10
		10	**558744**	10
		12	**558745**	10
	G1/2	12	**558747**	10
NPQM-T – push-in connector				
	4	4	**558786**	10
	6	6	**558787**	10
	8	8	**558788**	10
	10	10	**558789**	10
	12	12	**558790**	10
	14	14	**570454**	1
NPQM-T – push-in connector with push-in sleeve				
	4	4	**558791**	10
	6	6	**558792**	10
	8	8	**558793**	10
	10	10	**558794**	10

Y-shape

	D1	D2	PN	PE
NPQM-Y – push-in connector				
	4	4	**558798**	10
	6	6	**558799**	10
	8	8	**558800**	10
	10	10	**558801**	10
	12	12	**558802**	10
NPQM-Y – push-in connector reducing				
	6	4	**558803**	10
	8	6	**558804**	10
	10	8	**558805**	10

Configurable product

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

→ **www.festo.com/catalogue/npqm**

Push-in fittings **NPQP, resistant to media**



Additional information:

→ **www.festo.com/fitting**

→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

Push-in fittings

NPQP, resistant to media

Polypropylene fitting for use in applications with extreme influence of media. 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



Straight shape **116**



L-shape **117**



T-shape **118**



Y-shape **119**

Suitable for:

Standard O.D. tubing → **22**

Straight shape

	D1	D2	PN	PE
NPQP-D - male thread with external hexagon				
	R1/8	4	**133041**	10
		6	**133043**	10
		8	**133045**	10
	R1/4	4	**133042**	10
		6	**133044**	10
		8	**133046**	10
		10	**133047**	10
	R3/8	10	**133048**	10
		12	**133049**	10
	R1/2	12	**133050**	1
NPQP-D – push-in connector				
	4	4	**133091**	10
	6	6	**133092**	10
	8	8	**133093**	10
	10	10	**133094**	10
	12	12	**133095**	10
NPQP-D – push-in connector reducing				
	6	4	**133096**	10
	8	6	**133097**	10
	10	8	**133098**	10
	12	10	**133099**	10
NPQP-H – push-in bulkhead connector				
	4	4	**133100**	1
	6	6	**133101**	1
	8	8	**133102**	1
	10	10	**133103**	1
	12	12	**133104**	1
NPQP-D – push-in connector with push-in sleeve				
	4	6	**133133**	10
		8	**133134**	10
	6	8	**133135**	10
		10	**133136**	10
	8	10	**133137**	10
		12	**133138**	10
	10	12	**133139**	10
NPQP-P – blanking plug				
	4		**133128**	10
	6		**133129**	10
	8		**133130**	10
	10		**133131**	10
	12		**133132**	10

L-shape

	D1	D2	PN	PE
NPQP-L – male thread with external hexagon				
	R1/8	4	**133051**	10
		6	**133053**	10
		8	**133055**	10
	R1/4	4	**133052**	10
		6	**133054**	10
		8	**133056**	10
		10	**133057**	10
	R3/8	10	**133058**	10
		12	**133059**	10
	R1/2	12	**133060**	1
NPQP-LQ – male thread with external hexagon				
	R1/8	4	**133061**	10
		6	**133063**	10
		8	**133065**	10
	R1/4	4	**133062**	10
		6	**133064**	10
		8	**133066**	10
		10	**133067**	10
	R3/8	10	**133068**	10
		12	**133069**	10
	R1/2	12	**133070**	1
NPQP-L – push-in connector				
	4	–	**133105**	10
	6	–	**133106**	10
	8	–	**133107**	10
	10	–	**133108**	10
	12	–	**133109**	10

T-shape

	D1	D2	PN	PE
NPQP-T – male thread with external hexagon				
	R1/8	4	**133071**	10
		6	**133073**	10
		8	**133075**	10
	R1/4	4	**133072**	10
		6	**133074**	10
		8	**133076**	10
		10	**133077**	10
	R3/8	10	**133078**	10
		12	**133079**	10
	R1/2	12	**133080**	1
NPQP-T – push-in connector				
	4	4	**133110**	10
	6	6	**133111**	10
	8	8	**133112**	10
	10	10	**133113**	10
	12	12	**133114**	10
NPQP-T – push-in connector reducing				
	6	4	**133115**	10
	8	6	**133116**	10
	10	8	**133117**	10
	12	10	**133118**	10

Y-shape

	D1	D2	PN	PE
NPQP-Y – male thread with external hexagon				
	R1/8	4	**133081**	10
		6	**133083**	10
		8	**133085**	10
	R1/4	4	**133082**	10
		6	**133084**	10
		8	**133086**	10
		10	**133087**	10
	R3/8	10	**133088**	10
		12	**133089**	10
	R1/2	12	**133090**	1
NPQP-Y – push-in connector				
	4	4	**133119**	10
	6	6	**133120**	10
	8	8	**133121**	10
	10	10	**133122**	10
	12	12	**133123**	10
NPQP-Y – push-in connector reducing				
	6	4	**133124**	10
	8	6	**133125**	10
	10	8	**133126**	10
	12	10	**133127**	10

Configurable product

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

→ **www.festo.com/catalogue/npqp**

Push-in fittings **CRQS, stainless steel**



Additional information:

→ **www.festo.com/fitting**

→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

Push-in fittings

CRQS, stainless steel

High 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.


Straight shape **122**


Push-in bulkhead connectors **122**


L-shape **123**


T-shape **124**


Y-shape **125**


Accessories **125**

Suitable for:

Standard O.D. tubing → **22**

Straight shape

	D1	D2	PN	PE
CRQS – male thread with external hexagon				
	M5	4	**162860**	1
		6	**162861**	1
	R1/8	4	**132643**	1
		6	**162862**	1
		8	**162863**	1
	R1/4	6	**132644**	1
		8	**162864**	1
		10	**162865**	1
	R3/8	10	**162866**	1
		12	**162867**	1
	R1/2	12	**162868**	1
		16	**162869**	1
CRQS-...-I – male thread with external hexagon				
	M5	4	**132328**	1
		6	**132329**	1
	R1/8	6	**132330**	1
		8	**132331**	1
	R1/4	8	**132332**	1
		10	**132333**	1
	R3/8	10	**132334**	1
		12	**132335**	1
	R1/2	12	**132336**	1
		16	**132337**	1
CRQS – push-in connector				
	4	4	**130645**	1
	6	6	**130646**	1
	8	8	**130647**	1
	10	10	**130648**	1
	12	12	**130649**	1
	16	16	**130650**	1
CRQS – push-in connector reducing				
	6	4	**130651**	1
	8	6	**130652**	1
	10	8	**130653**	1
	12	10	**130654**	1
	16	12	**130655**	1
CRQSS – push-in bulkhead connector				
	4	4	**164210**	1
	6	6	**164211**	1
	8	8	**164213**	1
	10	10	**164215**	1
	12	12	**164217**	1
	16	16	**164219**	1

L-shape

	D1	D2	PN	PE
CRQSL – rotatable, male thread with external hexagon				
	M5	4	**162870**	1
		6	**162871**	1
	R1/8	4	**132598**	1
		6	**162872**	1
		8	**162873**	1
	R1/4	6	**132599**	1
		8	**162874**	1
		10	**162875**	1
	R3/8	10	**162876**	1
		12	**162877**	1
	R1/2	12	**162878**	1
		16	**162879**	1
CRQSL – push-in connector				
	4	4	**130662**	1
	6	6	**130663**	1
	8	8	**130664**	1
	10	10	**130665**	1
	12	12	**130666**	1
	16	16	**130667**	1

T-shape

	D1	D2	PN	PE
CRQST – rotatable, male thread with external hexagon				
	M5	4	**164200**	1
		6	**164201**	1
	R1/8	6	**164202**	1
		8	**164203**	1
	R1/4	8	**164204**	1
		10	**164205**	1
	R3/8	10	**164206**	1
		12	**164207**	1
	R1/2	12	**164208**	1
		16	**164209**	1
CRQST – push-in connector				
	4	–	**130668**	1
	6	–	**130669**	1
	8	–	**130670**	1
	10	–	**130671**	1
	12	–	**130672**	1
	16	–	**130673**	1

Y-shape

	D1	D2	PN	PE
CRQSY – push-in connector				
	4	–	**130656**	1
	6	–	**130657**	1
	8	–	**130658**	1
	10	–	**130659**	1
	12	–	**130660**	1
	16	–	**130661**	1

Accessories

	D1	D2	PN	PE
QSO – releasing tool				
	3 ... 10	3 ... 10	**158419**	1

Configurable product

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

→ **www.festo.com/catalogue/crqs**

Push-in fittings **QS-V0, resistant to welding spatter**



Additional information:

→ **www.festo.com/fitting**

→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

Push-in fittings

QS-V0, resistant to welding spatter

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



Straight shape **128**



L-shape **129**



T-shape **130**



Accessories **131**

Suitable for:

Standard O.D. tubing → **22**

Straight shape

	D1	D2	PN	PE
QS–V0 – male thread with external hexagon				
	R1/8	4	**132888**	10
		6	**160500**	10
		8	**160501**	10
	R1/4	6	**160502**	10
		8	**160503**	10
		10	**160504**	10
		12	**160505**	1
	R3/8	8	**160506**	10
		10	**160507**	10
		12	**160508**	1
	R1/2	10	**160509**	1
		12	**160510**	1
	G1/8	6	**186314**	10
		8	**186315**	10
	G1/4	6	**186316**	10
		8	**186317**	10
		10	**186318**	10
		12	**186319**	1
	G3/8	8	**186320**	10
		10	**186321**	10
		12	**186322**	1
	G1/2	10	**186323**	1
		12	**186324**	1
QS-V0 – push-in connector				
	4	4	**132890**	10
	6	6	**160546**	10
	8	8	**160547**	10
	10	10	**160548**	10
	12	12	**160549**	1

L-shape

	D1	D2	PN	PE
QSL-V0 – male thread with external hexagon				
	R1/8	4	**132891**	10
		6	**160511**	10
		8	**160512**	10
	R1/4	6	**160513**	10
		8	**160514**	10
		10	**160515**	10
		12	**160516**	1
	R3/8	8	**160517**	10
		10	**160518**	10
		12	**160519**	1
	R1/2	10	**160520**	1
		12	**160521**	1
	G1/8	6	**186325**	10
		8	**186326**	10
	G1/4	6	**186327**	10
		8	**186328**	10
		10	**186329**	10
		12	**186330**	1
	G3/8	8	**186331**	10
		10	**186332**	10
		12	**186333**	1
	G1/2	10	**186334**	1
		12	**186335**	1
QSL-V0 – push-in connector				
	4	4	**132893**	10
	6	6	**160540**	10
	8	8	**160541**	10
	10	10	**160542**	10
	12	12	**160543**	1

T-shape

	D1	D2	PN	PE
QST-V0 – male thread with external hexagon				
	R1/8	4	**132894**	10
		6	**160522**	10
		8	**160523**	10
	R1/4	6	**160524**	10
		8	**160525**	10
		10	**160526**	10
		12	**160527**	1
	R3/8	8	**160528**	10
		10	**160529**	10
		12	**160530**	1
	R1/2	10	**160531**	1
		12	**160532**	1
	G1/8	6	**186336**	10
		8	**186337**	10
	G1/4	6	**186338**	10
		8	**186339**	10
		10	**186340**	10
		12	**186341**	1
	G3/8	8	**186342**	10
		10	**186343**	10
		12	**186344**	1
	G1/2	10	**186345**	1
		12	**186346**	1
QST-V0 – push-in connector				
	4	4	**132896**	10
	6	6	**160533**	10
	8	8	**160534**	10
	10	10	**160535**	10
	12	12	**160536**	1

Accessories

	D1	D2	PN	PE
QSO – releasing tool				
	3 … 10	3 … 10	**158419**	1

Configurable product

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

→ **www.festo.com/catalogue/qs-v0**



















Additional information:

→ **www.festo.com/fitting**

Self-sealing/rotatable push-in fittings

QSK/QSR

R and G-thread with sealing ring, R-thread PTFE-coated.
Self-sealing push-in fittings and self-sealing push-in connectors, rotatable push-in fittings.
Tubing O.D. 4, 6, 8, 10, 12 mm
Thread connection M5, R1/8, R1/4, R3/8, R1/2, G1/8, G1/4, G3/8, G1/2


Push-in fitting, self-sealing, straight shape **134**


Push-in fitting, self-sealing, L-shape **135**


Push-in fitting, rotatable, straight shape **136**


Push-in fitting, rotatable, L-shape **137**


Accessories **137**

Suitable for:

Standard O.D. tubing → **22**

Straight shape

	D1	D2	PN	PE
QSK – male thread with external hexagon				
	M5	4	**153291**	1
		6	**153292**	1
	R1/8	4	**153419**	1
		6	**153420**	1
		8	**153422**	1
	R1/4	6	**153421**	1
		8	**153423**	1
		10	**153425**	1
	R3/8	8	**153424**	1
		10	**153426**	1
		12	**153427**	1
	R1/2	12	**153428**	1
	G1/8	4	**186294**	1
		6	**186295**	1
		8	**186297**	1
	G1/4	6	**186296**	1
		8	**186298**	1
		10	**186300**	1
	G3/8	8	**186299**	1
		10	**186301**	1
		12	**186302**	1
	G1/2	12	**186303**	1
QSK - self-sealing push-in connector				
	4	4	**153439**	1
	6	6	**153440**	1
	8	8	**153441**	1
	10	10	**153442**	1
	12	12	**153443**	1
QSSK – push-in bulkhead connector, self-sealing				
	4	4	**130637**	1
	6	6	**130638**	1
	8	8	**130639**	1
	10	10	**130640**	1
	12	12	**130641**	1

L-shape

	D1	D2	PN	PE
QSKL – rotatable, male thread, with external hexagon				
	M5	4	**153294**	1
		6	**153295**	1
	R1/8	4	**153429**	1
		6	**153430**	1
		8	**153432**	1
	R1/4	6	**153431**	1
		8	**153433**	1
		10	**153435**	1
	R3/8	8	**153434**	1
		10	**153436**	1
		12	**153437**	1
	R1/2	12	**153438**	1
	G1/8	4	**186304**	1
		6	**186305**	1
		8	**186307**	1
	G1/4	6	**186306**	1
		8	**186308**	1
		10	**186310**	1
	G3/8	8	**186309**	1
		10	**186311**	1
		12	**186312**	1
	G1/2	12	**186313**	1

Accessories

	D1	D2	PN	PE
QSO – releasing tool				
	3 ... 10	3 ... 10	**158419**	1

Configurable product

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

→ **www.festo.com/catalogue/qsk**

Straight shape

	D1	D2	PN	PE
QSR – 360° rotatable, with ball bearing, male thread with external hexagon				
	M5	4	**153526**	1
		6	**153527**	1
	R1/8	4	**153401**	1
		6	**153402**	1
		8	**153404**	1
	R1/4	6	**153403**	1
		8	**153405**	1
	R3/8	8	**153406**	1
		10	**153407**	1
		12	**153408**	1
	R1/2	12	**153409**	1
	G1/8	4	**186276**	1
		6	**186277**	1
		8	**186279**	1
	G1/4	6	**186278**	1
		8	**186280**	1
	G3/8	8	**186281**	1
		10	**186282**	1
		12	**186283**	1
	G1/2	12	**186284**	1

L-shape

	D1	D2	PN	PE
QSRL – 360° rotatable, with ball bearing, male thread with external hexagon				
	M5	4	**153529**	1
		6	**153530**	1
	R1/8	4	**153410**	1
		6	**153411**	1
		8	**153413**	1
	R1/4	6	**153412**	1
		8	**153414**	1
	R3/8	8	**153415**	1
		10	**153416**	1
		12	**153417**	1
	R1/2	12	**153418**	1
	G1/8	4	**186285**	1
		6	**186286**	1
		8	**186288**	1
	G1/4	6	**186287**	1
		8	**186289**	1
	G3/8	8	**186290**	1
		10	**186291**	1
		12	**186292**	1
	G1/2	12	**186293**	1

Accessories

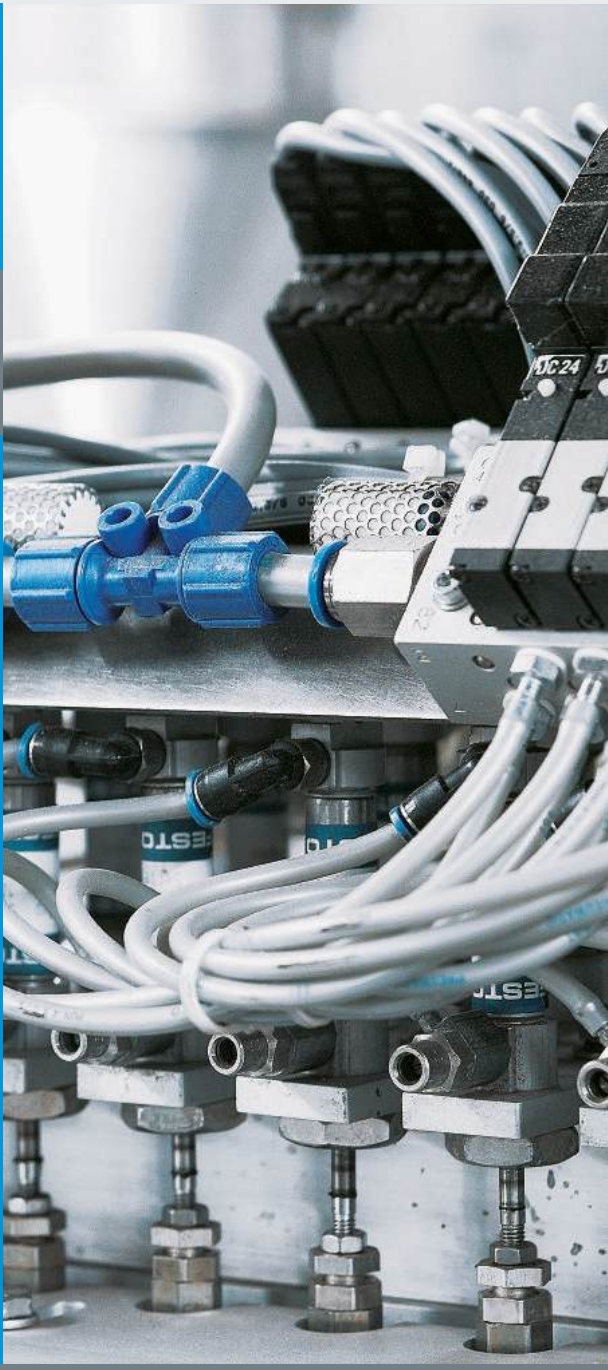
	D1	D2	PN	PE
QSO – releasing tool				
	3 ... 10	3 ... 10	**158419**	1

Configurable product

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

→ **www.festo.com/catalogue/qsr**

Highlights



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours



Highlights

our barbed fittings for I.D. tubing

Quick connectors

NPCK

+ Clean design
+ High resistance to corrosion, chemicals and temperature

→ **144**





Product finder for fittings

→ **www.festo.com/productfinder/fittings**

→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

Reliable and quickly installed: barbed fittings

Fast, safe and very attractively priced:
The tried and tested barbed fittings from the Festo accessories range.
Reliable for use in applications where repeated releasing of the connections is not required.

Preselection _____ **142**

Additional information:

→ **www.festo.com/fitting**

Suitable for:

Standard I.D. tubing → **44**

	Type, description
	**NPCK, quick connectors** First choice for the food and splash zones The NPCK is ideal in these cleaning-intensive areas. It fulfils all Clean Design requirements and is FDA approved. The special union nut design prevents dirty edges and the build-up of microorganisms or other forms of contamination. Also of interest for the process automation and pharmaceutical industry: the NPCK can handle a very wide range of media due to the high-grade stainless steel used. Meets HACCP hygiene requirements, resistant to corrosions, cleaning agents and high temperatures, Clean Design
	**CN, barbed fittings** At home in tight corners Smart connection technology makes this fitting extremely compact. Very popular in the electronics and food industries, in control cabinets or assembly frames. To connect: simply push the tubing onto the ribbed grommet, ideally using the optional Festo connecting and disconnecting pliers. With sealing ring, barbed fitting for Festo plastic tubing, corrosion-resistant, acid-resistant Rotatable. For tubing O.D. from 2 to 6 mm.
	**C-P/N-P, barbed hose fittings for hose clip** Connection G1/8, G1/4, G3/8, G1/2, G3/4 For tubing I.D. 6, 9, 13, 19 mm Threaded connection, G-thread with sealing ring, barbed hose fittings, hose clips
	**CK, quick connectors** Absolutely safe and extremely economical – wherever connectors are to be installed permanently. Easy connection: simply attach the tubing and secure it with the union nut. Many variants. Types: aluminium, polyamide, sealing ring, moulded-on sealing ring. For tubing inner diameter 3 to 13 mm.

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Straight shape	**144**
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L-shape	**152**
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Y-shape	**153**
Barbed T-connector	**153**
Barbed hose fittings	**154**
Straight shape	**158**
L-shape	**160**
T-shape	**161**



Additional information:

→ **www.festo.com/fitting**

Barbed fittings

NPCK, quick connectors

First choice for the food and splash zones

The NPCK is ideal in these cleaning-intensive areas. It fulfils all Clean Design requirements and is FDA approved. The special union nut design prevents dirty edges and the build-up of microorganisms or other forms of contamination.
Also of interest for process automation and the pharmaceutical industry:
the high grade of stainless steel used by the NPCK can handle a very wide range of media.

+ Fulfils the hygiene requirements of HACCP
+ Resistant to corrosion, cleaning agents and high temperatures
+ Clean design

Highest 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. 4, 6, 8 and 10 mm with connecting thread M5 and G1/8 ... G3/8.



Straight shape **146**



Accessories **146**

Suitable for:

Standard I.D. tubing ➔ **44**

Straight shape

	D1	D2	PN	PE
NPCK – male thread with clamp connection				
	M5	4	**1857681**	1
	G1/8	6	**1366257**	1
		8	**1490383**	1
	G1/4	8	**1691701**	1
		10	**1489336**	1
	G3/8	10	**1489614**	1

Sealing rings

	For thread	PN	PE
NPAS – polyether ether ketone, for quick connectors NPCK			
	G1/8	**2652516**	1
	G1/4	**2652517**	1
	G3/8	**2652519**	1

Configurable product

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

→ **www.festo.com/catalogue/npck**


→ www.festo.com/service2see
Festo Service



Additional information:

→ **www.festo.com/fitting**

Barbed fittings

N, CN, C-P/N-P, push-in connector

At home in tight corners

Smart connection technology makes this fitting extremely compact. Very popular in the electronics and food industries, in control cabinets
or in assembly frames. To connect: simply push the tubing onto the ribbed grommet, ideally using the optional Festo connecting and disconnecting pliers.

+ For tubing O.D. from 2 to 6 mm.
+ Many designs and variants
+ Corrosion-resistant
+ Acid-resistant
+ Rotatable


Straight shape **150**


L-shape **152**


T-shape **153**


Y-shape **153**


Barbed T-connector **153**


Barbed hose fitting **154**


Accessories **155**

Suitable for:

Standard I.D. tubing ➔ **44**

Straight shape

	D1	D2	PN	PE
N – with male thread and external hexagon				
With sealing ring				
	M5	PK-3	**4446**	10
		PK-4	**4902**	10
CN – N – with male thread and external hexagon				
With sealing ring				
	M3	PK-2	**15871**	10
		PK-3	**15872**	10
	M5	PK-2	**19521**	10
		PK-3	**12255**	10
		PK-4	**12256**	10
	G1/8	PK-3	**11944**	10
		PK-4	**11945**	10
		PK-6	**11946**	10
	G1/4	PK-4	**11947**	10
		PK-6	**11948**	10
	G3/8	PK-6	**11949**	10
CRCN – stainless steel design with male thread and external hexagon				
With sealing ring				
	M5	PK-2	**30985**	10
		PK-3	**13967**	10
		PK-4	**13968**	10
	G1/8	PK-3	**13969**	10
		PK-4	**13970**	10
		PK-6	**13971**	10
	G1/4	PK-4	**13972**	1
		PK-6	**13973**	1
	G3/8	PK-6	**13974**	1

Straight shape

	D1	D2	PN	PE
SCN – bulkhead fitting				
	PK-2	PK-2	**19528**	10
	PK-3	PK-3	**11972**	10
	PK-4	PK-4	**11973**	10
	PK-6	PK-6	**11974**	10
RTU – barbed tubing connector				
	PK-2	PK-2	**19541**	10
	PK-3	PK-2	**19542**	10
		PK-3	**4805**	10
		PK-4	**4499**	10
	PK-4	PK-4	**4806**	10
		PK-6	**7604**	10
	PK-6	PK-6	**7605**	10

L-shape

	D1	D2	PN	PE
LCN – with male thread, 360° rotatable				
With sealing ring				
	M3	PK-2	**30491**	10
		PK-3	**30982**	10
	M5	PK-2	**19523**	10
		PK-3	**12257**	10
		PK-4	**12258**	10
	G1/8	PK-3	**11955**	10
		PK-4	**11956**	10
		PK-6	**11957**	10
	G1/4	PK-4	**12958**	10
		PK-6	**12959**	10
	G3/8	PK-6	**12960**	10
LCNH – with male thread, 360° rotatable				
With sealing ring				
	M5	PK-2	**35982**	10
		PK-3	**35983**	10
		PK-4	**35984**	10
	G1/8	PK-3	**35985**	10
		PK-4	**35986**	10
		PK-6	**35987**	10
	G1/4	PK-4	**35988**	10
		PK-6	**35989**	10
	G3/8	PK-6	**35990**	10
L-PK – barbed tubing connector				
	PK-2	PK-2	**19539**	10
	PK-3	PK-3	**7473**	10
	PK-4	PK-4	**9584**	10
	PK-6	PK-6	**150012**	10

T-shape

	D1	D2	D3	PN	PE
TCN – with male thread, 360° rotatable **With sealing ring**					
	M3	PK-2	PK-2	**30492**	10
		PK-3	PK-3	**30983**	10
	M5	PK-2	PK-2	**19525**	10
		PK-3	PK-3	**12259**	10
		PK-4	PK-4	**12432**	10
	G1/8	PK-3	PK-3	**11961**	10
		PK-4	PK-4	**11962**	10
		PK-6	PK-6	**11963**	10
	G1/4	PK-4	PK-4	**11964**	10
		PK-6	PK-6	**11965**	10
	G3/8	PK-6	PK-6	**11966**	10
T-PK – barbed tubing connector					
	PK-2	PK-2	PK-2	**30919**	10
	PK-3	PK-3	PK-3	**7267**	10
	PK-4	PK-4	PK-4	**9585**	10
	PK-6	PK-6	PK-6	**150015**	10

Y-shape

	D1	D2	D3	PN	PE
Y-PK – barbed tubing connector					
	PK-2	PK-2	PK-2	**19540**	10
	PK-3	PK-3	PK-3	**7269**	10
	PK-4	PK-4	PK-4	**9586**	10
	PK-6	PK-6	PK-6	**150013**	10

Barbed T-connector

	D1	D2	D3	PN	PE
FCN					
	PK-2	PK-2	PK-2	**30492**	10
		PK-3	PK-3	**30983**	10
	PK-3	PK-3	PK-3	**19525**	10
		PK-4	PK-4	**12259**	10
	PK-4	PK-4	PK-4	**12432**	10
		PK-6	PK-6	**11961**	10
	PK-6	PK-6	PK-6	**11962**	10

Barbed hose fitting

	D1	D2	PN	PE
C-...-P				
	G1/8	PK-6	**2021**	10
	G1/4	PK-6	**2022**	10
		PK-9	**2023**	10
	G3/8	PK-6	**2024**	1
		PK-9	**2025**	1
	G1/2	PK-13	**2026**	1
N-...-P				
Aluminium				
	G1/8	PK-6	**3605**	10
	G1/4	PK-6	**3606**	10
		PK-9	**3607**	10
	G3/8	PK-6	**3608**	10
		PK-9	**3609**	10
		PK-13	**36160**	1
	G1/2	PK-9	**3610**	1
		PK-13	**3611**	1
	G3/4	PK-13	**3612**	1
		PK-19	**3613**	1
	R1	PK-19	**572260**	1
N-...-P-...-MS				
Brass				
	G1/8	PK-6	**15630**	10
	G1/4	PK-6	**15631**	10
		PK-9	**15632**	10
	G3/8	PK-6	**15633**	10
		PK-9	**15634**	10
		PK-13	**36161**	1
	G1/2	PK-9	**15635**	1
		PK-13	**15636**	1
	G3/4	PK-13	**15637**	1
		PK-19	**15638**	1

Hose clip

	Clamping range ∅	PN	PE
SK			
	8 ... 16	**9174**	10
	16 ... 27	**9275**	10
	20 ... 32	**9276**	10

















Additional information:

→ **www.festo.com/fitting**

Barbed fittings

CK, quick connectors

CK quick connectors:
The classic solution for stringent safety requirements

Absolutely safe and extremely economical – wherever connectors are to be installed permanently.
Easy connection: simply attach the tubing and secure it with the union nut.

+ For tubing O.D. from 3 to 13 mm. Many variants.
+ Types: aluminium, polyamide, sealing ring, moulded-on sealing ring

 Straight shape **158**

 L-shape **160**

 T-shape **161**

 Multiple distributor **162**

 Accessories **163**

Suitable for:

Standard I.D. tubing ➔ **44**

Straight shape

	D1	D2	PN	PE
CK – metal design, with male thread and external hexagon				
With sealing ring				
	M5	PK-3	**3561**	10
		PK-4	**3562**	10
	G1/8	PK-3	**3563**	10
		PK-4	**2027**	10
		PK-6	**2028**	10
	G1/4	PK-4	**2029**	10
		PK-6	**2030**	10
		PK-9	**2031**	10
	G3/8	PK-6	**2032**	10
		PK-9	**2033**	10
		PK-13	**4097**	10
	G1/2	PK-13	**4098**	1
CK-...-KU – polymer design with male thread and external hexagon				
	G1/8	PK-3	**6253**	10
		PK-4	**6254**	10
		PK-6	**6255**	10
	G1/4	PK-4	**6256**	10
		PK-6	**6257**	10
		PK-9	**6258**	10
	G3/8	PK-6	**6460**	10
		PK-9	**6468**	10
ACK – female thread				
With sealing ring				
	G1/8	PK-3	**5664**	10
		PK-4	**3714**	10
		PK-6	**7842**	10
	G1/4	PK-4	**3713**	10
		PK-6	**3712**	10
	G3/8	PK-6	**3711**	10
		PK-9	**3710**	10
	G1/2	PK-13	**4099**	1

Straight shape

	D1	D2	PN	PE
QCK – bulkhead quick connector				
With sealing ring				
	M5	PK-3	**9424**	10
	G1/8	PK-4	**9425**	10
	G1/4	PK-6	**9426**	10
	G3/8	PK-9	**9427**	1
SCK – bulkhead quick connector, metal design				
	PK-3	PK-3	**9420**	10
	PK-4	PK-4	**9421**	10
	PK-6	PK-6	**9422**	10
	PK-9	PK-9	**9423**	1
SCK-...-KU – bulkhead quick connector, polymer design				
	PK-3	PK-3	**9387**	10
	PK-4	PK-4	**9388**	10
	PK-6	PK-6	**9389**	10
	PK-9	PK-9	**9390**	1

L-shape

	D1	D2	PN	PE
GCK – with male thread				
	R1/8	PK-4	**6267**	10
		PK-6	**6268**	10
	R1/4	PK-4	**6269**	10
		PK-6	**6270**	10
	R3/8	PK-6	**6271**	10
		PK-9	**6272**	10
LCK – rotatable, metal version **With 2 sealing rings**				
	M5	PK-3	**4468**	10
		PK-4	**4562**	10
	G1/8	PK-3	**4136**	10
		PK-4	**4469**	10
		PK-6	**4470**	10
	G1/4	PK-4	**4471**	10
		PK-6	**4472**	10
		PK-9	**11452**	10
	G3/8	PK-6	**4473**	1
		PK-9	**4474**	1
	G1/2	PK-13	**4100**	1
LCK-...-KU – rotatable, polymer version				
	G1/8	PK-4	**6259**	10
		PK-6	**6260**	10
	G1/4	PK-4	**6261**	10
		PK-6	**6262**	10

T-shape

	D1	D2	PN	PE
TCK – rotatable, metal version				
With 2 sealing rings				
	M5	PK-3	**4484**	10
		PK-4	**4563**	10
	G1/8	PK-3	**4137**	10
		PK-4	**4485**	10
		PK-6	**4486**	10
	G1/4	PK-4	**4487**	10
		PK-6	**4488**	10
	G3/8	PK-6	**4489**	1
		PK-9	**4490**	1
	G1/2	PK-13	**4101**	1
TCK-...-KU – rotatable, polymer version				
	G1/8	PK-4	**6263**	10
		PK-6	**6264**	10
	G1/4	PK-4	**6265**	10
		PK-6	**6266**	10
FCK-PK – manifold-1				
	PK-3	PK-3	**6273**	10
	PK-4	PK-4	**6274**	10
	PK-6	PK-6	**6275**	10
	PK-9	PK-9	**6276**	10

Multiple distributor

	D1	D2	PN	PE
VT-...-2 – hollow bolt with sealing ring				
Die-cast zinc version, for 2 ring pieces with D2				
	M5	PK-3	**206145**	10
	G1/8	PK-3	**4593**	10
		PK-4/PK-6	**206146**	10
	G1/4	PK-4/PK-6	**206147**	10
	G3/8	PK-6	**206148**	1
Die-cast zinc version, for 3 ring pieces with D2				
	M5	PK-3	**4594**	10
	G1/8	PK-3	**4595**	10
		PK-4/PK-6	**4596**	10
	G1/4	PK-4/PK-6	**2335**	10
	G3/8	PK-6	**2336**	1
LK – ring piece, L-shaped				
Die-cast zinc design				
	M5	PK-3	**4475**	10
	G1/8	PK-3	**4597**	10
		PK-4	**4476**	10
		PK-6	**4477**	10
	G1/4	PK-4	**4478**	10
		PK-6	**4479**	10
	G3/8	PK-6	**4480**	1
LK – ring piece, L-shaped				
Polymer version				
	G1/8	PK-4	**6280**	10
		PK-6	**9281**	10
	G1/4	PK-4	**6282**	10
		PK-6	**6283**	10
TK – ring piece, L-shaped				
Die-cast zinc design				
	M5	PK-3	**4491**	1
	G1/8	PK-3	**4598**	1
		PK-4	**4492**	1
		PK-6	**4493**	1
	G1/4	PK-4	**4494**	1
		PK-6	**4495**	1
	G3/8	PK-6	**4496**	1

Multiple distributor

	D1	D2	PN	PE
TK – ring piece, L-shaped				
Polymer version				
	G1/8	PK-4	**6284**	1
		PK-6	**6285**	1
	G1/4	PK-4	**6286**	1
		PK-6	**6287**	1

Accessories

	D1	D2	PN	PE
MCK - union nut				
Aluminium version				
	PK-3	–	**205254**	1
	PK-4	–	**2965**	1
	PK-4	–	**205257**	1
	PK-6	–	**2966**	1
	PK-9	–	**2967**	1
	PK-13	–	**206504**	1
MCK-KU – union nut				
Polymer version				
	PK-3	–	**211289**	1
	PK-4	–	**211291**	1
	PK-6	–	**211292**	1
	PK-9	–	**211293**	1
CV-PK – sealing cap				
	PK-3	–	**6213**	10
	PK-4	–	**6214**	10
	PK-6	–	**6215**	10
	PK-9	–	**6216**	10

Configurable product

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

→ **www.festo.com/catalogue/ck**

Highlights



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours



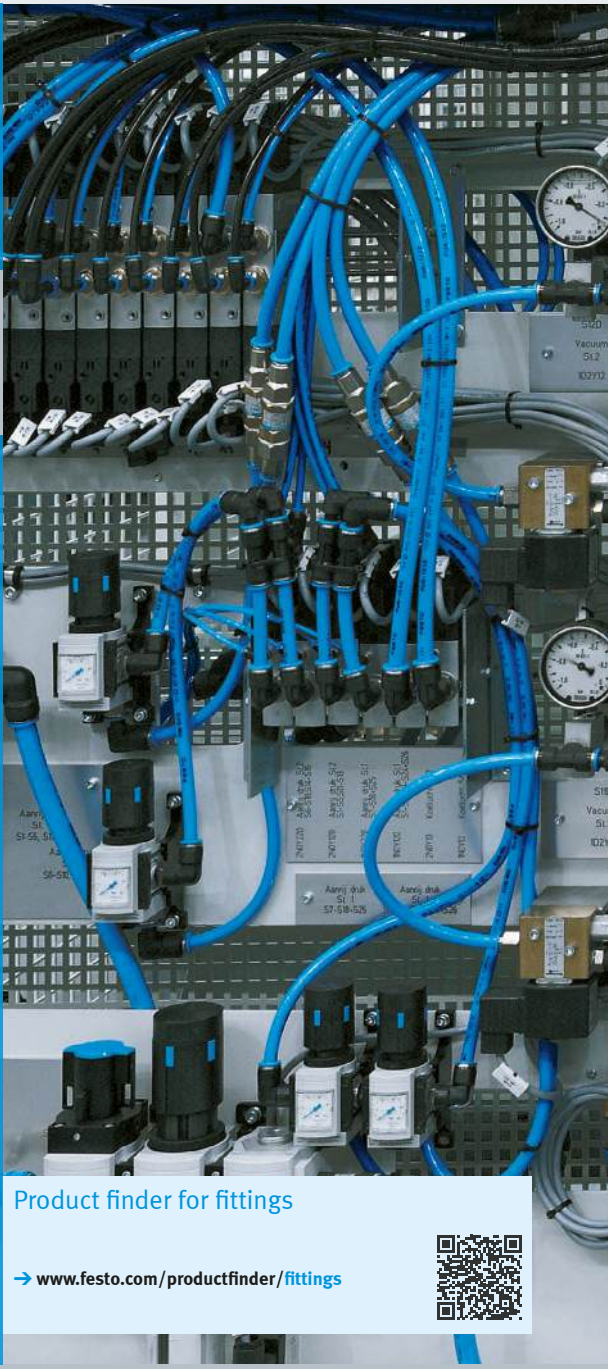
Highlights
our threaded fittings

Threaded fittings

NPFC

+ Threaded connection
+ Metric thread with sealing ring
+ R-thread, PTFE-coated
+ G-thread with sealing ring

→ **174**



Product finder for fittings

→ **www.festo.com/productfinder/fittings**

→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

The threaded fittings

The threaded fittings are ideal for cost-effective installation of service unit components, control cabinets and other pneumatic installations.

+ Operating temperature: –20 ... +150 °C
+ Operating pressure at 20 °C: –0.95 ... +50 bar
+ Medium: compressed air, vacuum, others on request
+ Design: nickel-plated brass

Look for our products from the core product range ★

Threaded fittings preselection _____ **168**

Additional information:

→ **www.festo.com/fitting**

	Type, description
	**B, blanking plug ★**
	**NPFC, threaded fittings** Port M5, R1/8, R1/4, R3/8, R1/2, R3/4, R1, G1/8, G1/4, G3/8, G1/2, G3/4, G1 Threaded connection: metric thread with sealing ring, R-thread with PTFE coating, G-thread with sealing ring.
	**Reducers/sleeves/double nipples** Port M3, M5, M7, R1/8, R1/4, R3/8, R1/2, G1/8, G1/4, G3/8, G1/2, G3/4, G1 Threaded connection: metric thread with sealing ring, R-thread with PTFE coating. G-thread with sealing ring.

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Blanking plug B ★





Additional information:

→ **www.festo.com/fitting**

→ www.festo.com/catalogue/...
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Blanking plug

B ★

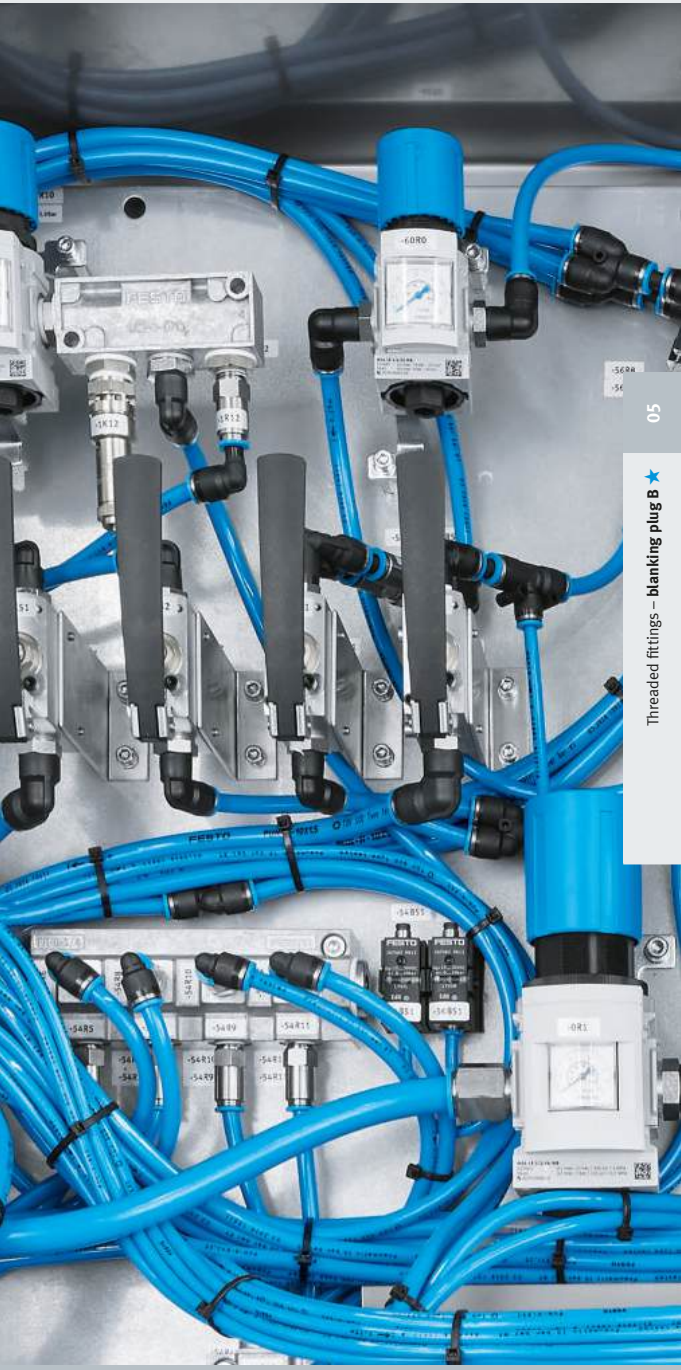
With external or internal hexagon
Connecting thread M3, M5, M7, G1/8, G1/4, G3/8, G1/2, G3/4, G1
Look for our products from the core product range ★



Blanking plug **172**

Blanking plug

	D1	D2	PN	PE
B – male thread with external hexagon				
With sealing ring				
	M3	–	★ **30979**	10
	M5	–	★ **3843**	10
			534212	100
B – male thread with internal hexagon				
With sealing ring				
	M5	–	★ **174308**	10
	M7	–	★ **174309**	10
	G1/8	–	★ **3568**	10
			534213	100
	G1/4	–	★ **3569**	10
			534214	50
	G3/8	–	★ **3570**	10
			534215	20
	G1/2	–	★ **3571**	10
			534216	20
	G3/4	–	★ **3572**	1
	G1	–	★ **5763**	1



Threaded fittings **NPFC**












Additional information:

→ **www.festo.com/fitting**

→ www.festo.com/catalogue/...
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Threaded fittings

NPFC

Port M5, R1/8, R1/4, R3/8, R1/2, R3/4, R1, G1/8, G1/4, G3/8, G1/2, G3/4, G1
Threaded connection: metric thread with sealing ring, R-thread with PTFE coating, G-thread with sealing ring.


Straight shape **176**


L-shape **179**


T-shape **180**


X shape **181**


Y-shape **181**

Straight shape

	D1	D2	PN	PE
NPFC-S – sleeve				
	M5	M5	**8030290**	10
	G1/8	G1/8	**8030291**	10
	G1/4	G1/4	**8030292**	10
	G3/8	G3/8	**8030293**	10
	G1/2	G1/2	**8030294**	10
	G3/4	G3/4	**8030295**	10
NPFC-R – reducing sleeve				
	G1/8	M5	**8069219**	10
	G1/4	G1/8	**8069220**	10
	G3/8	G1/8	**8030296**	10
		G1/4	**8069221**	10
	G1/2	G1/8	**8069222**	10
		G1/4	**8069223**	10
		G3/8	**8069224**	10
	G3/4	G1/2	**8030297**	10
	G1	G1/2	**8069225**	10
		G3/4	**8069226**	10
NPFC-E1 – extension (short)				
	M5	M5	**8069218**	10
	G1/8	G1/8	**8030298**	10
	G1/4	G1/4	**8030299**	10
	G3/8	G3/8	**8030300**	10
	G1/2	G1/2	**8030301**	10
NPFC-E2 – extension (medium)				
	G1/8	G1/8	**8030302**	10
	G1/4	G1/4	**8030303**	10
NPFC-E3 – extension (long)				
	G1/8	G1/8	**8030304**	10
	G1/4	G1/4	**8030305**	10
NPFC-E4 – extension (extra long)				
	G1/8	G1/8	**8030306**	10

Straight shape

	D1	D2	PN	PE
NPFC-D-M – double nipple				
	M3	M3	**8069210**	10
	M5	M5	**8030267**	10
	G1/8	G1/8	**8030269**	10
			8069212	100
	G1/4	G1/4	**8030272**	10
			8069213	100
	G3/8	G3/8	**8030275**	10
			8069214	50
	G1/2	G1/2	**8030277**	10
			8069215	50
	R1/8	R1/8	**8030278**	10
	R1/4	R1/4	**8030281**	10
	R3/8	R3/8	**8030284**	10
	R1/2	R1/2	**8030286**	10
	R3/4	R3/4	**8030288**	10
	R1	R1	**8030289**	10
NPFC-D-M – reducing nipple				
	G1/8	M5	**8069211**	10
		M7	**8030268**	10
	G1/4	G1/8	**8030270**	10
	G3/8	G1/8	**8030271**	10
		G1/4	**8030273**	10
	G1/2	G1/4	**8030274**	10
		G3/8	**8030276**	10
	G3/4	G1/2	**8069216**	10
		G3/4	**8069217**	10
	R1/4	R1/8	**8030279**	10
	R3/8	R1/8	**8030280**	10
		R1/4	**8030282**	10
	R1/2	R1/4	**8030283**	10
		R3/8	**8030285**	10
	R3/4	R1/2	**8030287**	10

Straight shape

	D1	D2	PN	PE
NPFC-R-FM – reducing nipple, female thread/male thread				
	G1/8	M5	**8030314**	10
	G1/4	G1/8	**8030315**	10
	G3/8	G1/8	**8030316**	10
		G1/4	**8030317**	10
	G1/2	G3/8	**8030318**	10
NPFC-R-MF – reducing nipple, male thread/female thread				
	M5	M3	**8069227**	10
	M7	M5	**8069228**	10
	G1/8	M5	**8030307**	10
	G1/4	M5	**8069229**	10
		G1/8	**8030308**	10
			8069230	100
	G3/8	G1/8	**8030309**	10
		G1/4	**8030310**	10
			8069231	50
	G1/2	G1/4	**8030311**	10
			8069232	50
		G3/8	**8030312**	10
			8069233	50
	G3/4	G1/4	**8069234**	10
		G3/8	**8069235**	10
		G1/2	**8030313**	10
			8069236	50
	G1	G1/2	**8069237**	10
		G3/4	**8069238**	10
NPFC-H – bulkhead fitting				
	M5	M5	**8069239**	10
	G1/8	G1/8	**8069240**	10
	G1/4	G1/4	**8069241**	10
	G3/8	G3/8	**8069242**	10
	G1/2	G1/2	**8069243**	10

L-shape

	D1	D2	PN	PE
NPFC-L-F – female thread				
	M5	M5	**8030208**	10
	G1/8	G1/8	**8030209**	10
	G1/4	G1/4	**8030210**	10
	G3/8	G3/8	**8030211**	10
	G1/2	G1/2	**8030212**	10
	G3/4	G3/4	**8030213**	10
	G1	G1	**8030214**	10
NPFC-L-MF – male thread/female thread				
	M5	M5	**8030215**	10
	R1/8	G1/8	**8030216**	10
	R1/4	G1/4	**8030217**	10
	R3/8	G3/8	**8030218**	10
	R1/2	G1/2	**8030219**	10
	R3/4	G3/4	**8030220**	10
	R1	G1	**8030221**	10
NPFC-L-M – male thread				
	M5	M5	**8030222**	10
	R1/8	R1/8	**8030223**	10
	R1/4	R1/4	**8030224**	10
	R3/8	R3/8	**8030225**	10
	R1/2	R1/2	**8030226**	10
	R3/4	R3/4	**8030227**	10

T-shape

	D1	D2	D3	PN	PE
NPFC-T-F – female thread					
	G1/8	G1/8	G1/8	**8030235**	10
	G1/4	G1/4	G1/4	**8030236**	10
	G3/8	G3/8	G3/8	**8030237**	10
	G1/2	G1/2	G1/2	**8030238**	10
	G3/4	G3/4	G3/4	**8030239**	10
	G1	G1	G1	**8030240**	10
NPFC-T-FMF – female thread/male thread/female thread					
	M5	M5	M5	**8030245**	10
	G1/8	R1/8	G1/8	**8030246**	10
	G1/4	R1/4	G1/4	**8030247**	10
	G3/8	R3/8	G3/8	**8030248**	10
	G1/2	R1/2	G1/2	**8030249**	10
	G3/4	R3/4	G3/4	**8030250**	10
	G1	R1	G1	**8030251**	10
NPFC-T-FMM – female thread/male thread/male thread					
	G1/8	R1/8	R1/8	**8030255**	10
	G1/4	R1/4	R1/4	**8030256**	10
	G3/8	R3/8	R3/8	**8030257**	10
	G1/2	R1/2	R1/2	**8030258**	10
NPFC-T-M – male thread					
	R1/4	R1/4	R1/4	**8030252**	10
	R3/8	R3/8	R3/8	**8030253**	10
	R1/2	R1/2	R1/2	**8030254**	10
NPFC-T-MMF – male thread/male thread/female thread					
	R1/8	R1/8	G1/8	**8030259**	10
	R1/4	R1/4	G1/4	**8030260**	10
	R1/2	R1/2	G1/2	**8030261**	10
NPFC-T-MFF – female thread/male thread/female thread					
	M5	M5	M5	**8069244**	10
	R1/8	G1/8	G1/8	**8030241**	10
	R1/4	G1/4	G1/4	**8030242**	10
	R3/8	G3/8	G3/8	**8030243**	10
	R1/2	G1/2	G1/2	**8030244**	10

Y-shape

	D1	D2	D3	PN	PE
NPFC-Y-F – female thread					
	G1/4	G1/4	G1/4	**8030228**	10
	G3/8	G3/8	G3/8	**8030229**	10
	G1/2	G1/2	G1/2	**8030230**	10
NPFC-Y-MFF – male thread/female thread/female thread					
	R1/8	G1/8	G1/8	**8030231**	10
	R1/4	G1/4	G1/4	**8030232**	10
	R3/8	G3/8	G3/8	**8030233**	10
	R1/2	G1/2	G1/2	**8030234**	10

X shape

	D1	D2	D3	D4	PN	PE
NPFC-X-F – female thread						
	G1/4	G1/4	G1/4	G1/4	**8030262**	10
	G3/8	G3/8	G3/8	G3/8	**8030263**	10
	G1/2	G1/2	G1/2	G1/2	**8030264**	10
NPFC-X-MFFF – male thread/female thread/female thread/female thread						
	R1/4	G1/4	G1/4	G1/4	**8030265**	10
	R1/2	G1/2	G1/2	G1/2	**8030266**	10

Configurable product

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

→ **www.festo.com/catalogue/npfc**

Reducers/sleeves/double nipples











Additional information:

→ **www.festo.com/fitting**

→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

Reducers/sleeves/double nipples

D, ESK, QM, LJK, TJK

Port M3, M5, M7, R1/8, R1/4, R3/8, R1/2, G1/8, G1/4, G3/8, G1/2, G3/4, G1
Threaded connection: metric thread with sealing ring, R-thread with PTFE coating, G-thread with sealing ring.


Straight shape **184**


L-shape **185**


T-shape **185**

Straight shape

	D1	D2	PN	PE
D – reducing nipple				
	M5	M7	**161359**	10
ESK – double nipple				
	R1/8	R1/8	**151520**	1
	R1/4	R1/4	**151521**	1
	R3/8	R3/8	**151522**	1
	R1/2	R1/2	**151523**	1
ESK – reducing nipple				
	R1/4	R1/8	**534151**	1
	R3/8	R1/8	**534155**	1
		R1/4	**534152**	1
	R1/2	R1/4	**534153**	1
		R3/8	**534154**	1
QM – sleeve				
	M5	M5	**3560**	10
	G1/8	G1/8	**2254**	10
	G1/4	G1/4	**2255**	10
	G3/8	G3/8	**2256**	10
	G1/2	G1/2	**2257**	10
	G3/4	G3/4	**4226**	1
	G1	G1	**9968**	1

L-shape

	D1	D2	PN	PE
LJK				
With sealing ring				
	G1/8	G1/8	**4945**	1
	G1/4	G1/4	**4946**	1
	G3/8	G3/8	**4947**	1
	G1/2	G1/2	**4948**	1

T-shape

	D1	D2	PN	PE
TJK				
With sealing ring				
	M3	M3	**15874**	10
	G1/8	G1/8	**4949**	1
	G1/4	G1/4	**4950**	1
	G3/8	G3/8	**4951**	1
	G1/2	G1/2	**4952**	1

Highlights



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours





Click fittings

NPKA

+ Low leakage, no scratching of the tubing by retaining claws
+ Easy to clean, sealed shape when tubing fitted
+ Also suitable for pipes with corresponding slot

→ **190**

06

Click fittings for standard O.D. tubing – Overview



Product finder for fittings

→ **www.festo.com/productfinder/fittings**

NPKA makes changing tubing a breeze

With the unique click mechanism, you can change a pipe or tube with one hand.
The audible click noise confirms that a secure and leakproof connection
has been made – even if you connect and disconnect often. The light, corrosion-free polymer has lots of advantages: it is free of non-ferrous metals, fluorine, silicone and grease, it is FDA approved, and it is suitable for clean rooms.
Ideal for the electronics and semiconductor industries, assembly of small parts and battery cells, and for food and beverage production.

+ Very easy to operate with one hand
+ Many possible uses – polymer as the sole material
+ Easy-to-clean Clean Look without corners or edges

Preselection

Straight shape _____ **190**
L-shape _____ **190**
T-shape _____ **190**

Additional information:

→ **www.festo.com/fittings**

Suitable for:

Standard O.D. tubing → **22**

Straight shape

	D1	D2	PN	PE
NPKA – male thread with internal hexagon				
	G1/8	6	**1243489**	10

L-shape

	D1	D2	PN	PE
NPKA-L – male thread with outside hexagon, rotatable				
	G1/8	6	**1655429**	10

T-shape

	D1	D2	PN	PE
NPKA-T				
	6	6	**1590710**	10


→ www.festo.com/service2see
Festo Service

Highlights

07

Push-in fittings for pipes – Highlights



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

Highlights

our push-in fittings for pipes



Push-in fittings

CQ

+ Connection G3/8, G1/2, G3/4, G1
+ Diameter 12, 15, 18, 22 and 28 mm.

→ **196**





07

Push-in fittings for pipes – Overview



Product finder for fittings

→ **www.festo.com/productfinder/fittings**

A comprehensive range of nominal widths

Safe design – for practical use: the CQ system holds the pipes outside so the reduction in nominal width is negligible. Extremely easy and fast to install; simply push in – you don't even need any tools. Suitable for polyamide and aluminium pipes.
Outside diameter: 12, 15, 18, 22 and 28 mm

+ Also suitable for PAN and PUN plastic tubing with O.D. 12 mm
+ For compressed air, vacuum and liquids
+ Can be re-used a number of times
+ Plug materials FDA-approved

Preselection

Straight shape ____ **196**
L-shape ____ **197**
T-shape ____ **197**
Distributor ____ **197**
Fluid separator ____ **198**
Accessories ____ **198**

Additional information:

→ **www.festo.com/fitting**

Suitable for:

Pipes → **52**

Straight shape

	D1	D2	PN	PE
CQ-...-...				
with sealing ring				
	G3/8	12	**177682**	1
	G1/2	12	**177683**	1
		15	**177684**	1
		18	**177685**	1
	G3/4	22	**177686**	1
CQ-...-...H				
with push-in sleeve and sealing ring				
	G3/8	12	**177705**	1
		15	**177707**	1
	G1/2	12	**177706**	1
		15	**177708**	1
		18	**177709**	1
		22	**177710**	1
	G3/4	22	**177711**	1
	G1	28	**194589**	1
CQ-... – push-in connector				
	12	12	**177695**	1
	15	15	**177696**	1
	18	18	**177697**	1
	22	22	**177698**	1
	28	28	**194586**	1
CQ-...H-... – push-in connector				
with push-in sleeve				
	12	15	**177701**	1
	15	18	**177702**	1
	15	22	**177703**	1
	18	22	**177704**	1
	22	28	**196231**	1
CQH – push-in sleeve				
for connecting CQ to QS				
	15	12	**177721**	1
	18	16	**177722**	1
	22	16	**177723**	1
CQC – blanking plug				
	12 ±0.15	12 ±0.15	**177712**	1
	15 ±0.15	15 ±0.15	**177713**	1
	18 ±0.15	18 ±0.15	**177714**	1
	22 ±0.15	22 ±0.15	**177715**	1
	28 ±0.15	28 ±0.15	**194590**	1

L-shape

	D1	D2	PN	PE
CQL				
	12	12	**177691**	1
	15	15	**177692**	1
	18	18	**177693**	1
	22	22	**177694**	1
	28	28	**194587**	1

T-shape

	D1	D2	PN	PE
CQT				
	12	12	**177687**	1
	15	15	**177688**	1
	18	18	**177689**	1
	22	22	**177690**	1
	28	28	**194588**	1
CQT **reducing**				
	18	15	**177699**	1
	22	15	**177700**	1

Distributor

	D1	D2	PN	PE
CQD **With 3 blanking plugs**				
	G1/2	G1/2	**177717**	1

Fluid separators

	D1	D2	PN	PE
CQA				
	22	22	**177716**	1
	28	28	**196984**	1

Retaining ring

	D1	D2	PN	PE
CQSR				
	12	–	**175727**	10
	15	–	**175728**	10
	18	–	**175729**	10
	22	–	**175730**	10

Releasing tool

	D1	D2	PN	PE
CQO				
	15	–	**175725**	1
	22	–	**175726**	1


FESTO
-6OR0
-5GR8
-5GR9
-1K12
-1R12
-5AR5
-5AR9
-5AR11
-5AR10
-5AR7
-5AR8
-5AR6
-5AR4
-5AR3
-5AR2
-5AR1
-5AB5
-5AB6
-0R1



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours



Highlights

our couplings



Coupling socket and plug

NPHS ★

- + Connection male thread G1/8, G1/4, G3/8, G1/2
- + Connection female thread G1/4, G3/8, G1/2
- + Barbed fitting connection N9
- + 3/2 hand slide valve optional.

→ **208**





→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

A comprehensive range of nominal widths

Festo's range of couplings is suitable for all industries and applications.
Whenever and wherever they're needed. Particularly if you are looking for a quick, easy and, if need be, completely safe way of making and releasing connections.

+ Easy and safe handling
+ Quick couplings
+ Safety couplings
+ Wide range of connections: male and female thread, barbed fittings, fittings with union nut, bulkhead fittings

Look for our products from the core product range ★

Preselection _____ **204**

Additional information:

→ **www.festo.com/couplings**

	Type, description
	**NPHS, safety coupling** ★ Connection male thread G1/8, G1/4, G3/8, G1/2 Connection female thread G1/4, G3/8, G1/2 Barbed fitting connection N9 3/2 hand slide valve optional
	**KD, coupling sockets** ★ Connection M3, M5, G1/8, G1/4, G3/8, G1/2 Diameter 2, 3, 4, 6, 9, 13 mm Threaded connection, metric thread with sealing ring, G-thread with sealing ring, shut-off one side Shut-off both sides, safety coupling in accordance with ISO 4414.
	**KS, quick coupling plug** Port M5, R1/8, R1/4, R3/8, R1/2, R3/4, R1, G1/8, G1/4, G3/8, G1/2, G3/4, G1 Threaded connection: metric thread with sealing ring, R-thread with PTFE coating, G-thread with sealing ring.
	**KSV, KDVF, multiple connectors** Multi-plugs KSV and suitable barbed fittings Multi-plugs KDVF and suitable terminal sockets For up to 32 lines
	**KM, multi-tube connectors** For up to 22 lines

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Quick coupling sockets	208
Quick coupling plug	209
Quick coupling sockets	212
Quick coupling plug	213
Multiple connectors	216
Multi-tube connectors	217

Coupling sockets/plugs NPHS ★

NEW



Additional information:

→ www.festo.com/couplings

Quick coupling socket/plug

NPHS ★

Connection male thread G1/8, G1/4, G3/8, G1/2
Connection female thread G1/4, G3/8, G1/2
Barbed fitting connection N9
Coupling socket: 3/2 hand slide valve optional
Look for our products from the core product range ★



Coupling socket **208**



Quick coupling plug **209**

Coupling socket

	D1	D2	PN	PE
NPHS male thread **Plastic releasing sleeve**				
	–	G1/8	**8059266**	1
		G1/4	★ **8059267**	1
		G3/8	★ **8059268**	1
		G1/2	★ **8059269**	1
NPHS male thread **Metal releasing sleeve**				
	–	G1/4	**8059275**	1
		G3/8	**8059276**	1
		G1/2	**8059277**	1
NPHS female thread **Plastic releasing sleeve**				
	–	G1/4	**8059271**	1
		G3/8	**8059272**	1
		G1/2	**8059273**	1
NPHS for plug-in sleeve **Plastic releasing sleeve**				
	–	I.D. 9 mm	**8059274**	1

Quick coupling plug

	D1	D2	PN	PE
NPHS male thread				
	–	G1/8	★ **8059257**	10
		G1/4	★ **8059258**	10
		G3/8	★ **8059259**	10
		G1/2	★ **8059260**	10
NPHS female thread				
	–	G1/4	★ **8059262**	10
		G3/8	★ **8059263**	10
		G1/2	★ **8059264**	10
NPHS for plug-in sleeve				
	–	I.D. 9 mm	**8059265**	10



Additional information:

→ **www.festo.com/couplings**

Quick coupling sockets and plugs

KD/KS ★

Connection M3, M5, G1/8, G1/4, G3/8, G1/2
Diameter 2, 3, 4, 6, 9, 13 mm
Threaded connection
Metric thread with sealing ring
G thread with sealing ring
Shut-off at one side
Shut off on both sides
Safety coupling in accordance with ISO 4414.
Look for our products from the core product range ★



Coupling socket **212**



Quick coupling plug **213**

Coupling socket

	D1	D2	PN	PE
KD male thread				
	6.5	M3	**151995**	1
	10	M5	**4087**	1
	16	G1/8	**2142**	1
	16	G1/4	**531626**	1
	26.4	G1/4	★ **2143**	1
	26.4	G3/8	★ **2144**	1
	26.4	G1/2	★ **2145**	1
KD female thread				
	10	M5	**531620**	1
	16	G1/8	**531627**	1
	16	G1/4	**531628**	1
	26.4	G1/4	**531636**	1
	26.4	G3/8	**531637**	1
	26.4	G1/2	**531638**	1
KD quick connector with union nut				
	10	CK-3	**531621**	1
	10	CK-4	**531622**	1
	16	CK-4	**531629**	1
	16	CK-6	**531630**	1
	26.4	CK-6	**531639**	1
	26.4	CK-9	**531640**	1
KD barbed fitting				
	26.4	N9	**531641**	1

Quick coupling plug

	D1	D2	PN	PE
KS male thread				
	10	M5	**531658**	1
	16	G1/8	**3492**	1
	16	G1/4	**531666**	1
	26.4	G1/4	**2154**	1
	26.4	G3/8	**2155**	1
	26.4	G1/2	**531676**	1
KS female thread				
	10	M5	**531660**	1
	16	G1/8	**531668**	1
	16	G1/4	**531669**	1
	26.4	G1/4	**531678**	1
	26.4	G3/8	**531679**	1
	26.4	G1/2	**531680**	1
KS quick connector with union nut				
	10	CK-3	**4091**	1
	10	CK-4	**4090**	1
	16	CK-4	**3326**	1
	16	CK-6	**3478**	1
	26.4	CK-4	**2150**	1
	26.4	CK-6	**2151**	1
	26.4	CK-9	**531683**	1
KS barbed fitting				
	4	CN-2	**151996**	1
	26.4	N6	**2152**	1
	26.4	N9	**2153**	1



Additional information:

→ **www.festo.com/couplings**

Multiple connectors

KSV/KDVF

Multi-plugs KSV and suitable barbed fittings
Multi-sockets KDVF and suitable terminal sockets

Multi-tube connector

KM

KM coupling and suitable terminal sockets


Multi-plug KSV **216**


Multi-sockets KDV **216**


Accessories **216**


Coupling **217**


Accessories **217**

Multi-plug

	Max. number of connections	Pneumatic connection	PN	PE
KSV male thread				
	5	PK-2, PK-3, PK-4	**7557**	1
	7	PK-6	**152506**	1
	8	PK-2, PK-3, PK-4	**7558**	1
	12	PK-6	**152507**	1
	16	PK-2, PK-3, PK-4	**7559**	1
	22	PK-6	**152508**	1
	32	PK-2, PK-3, PK-4	**7560**	1

Multi-sockets

	Max. number of connections	Pneumatic connection	PN	PE
KDVF male thread				
	5	PK-2, PK-3, PK-4	**7562**	1
	7	PK-6	**152509**	1
	8	PK-2, PK-3, PK-4	**7563**	1
	12	PK-6	**152510**	1
	16	PK-2, PK-3, PK-4	**7564**	1
	22	PK-6	**152511**	1
	32	PK-2, PK-3, PK-4	**7565**	1

Accessories

	Pneumatic connection	PN	PE
KSV barbed fitting			
	PK-2	**33384**	10
	PK-3	**7215**	10
	PK-4	**7216**	10
	PK-6	**117945**	10
KDV terminal socket			
	PK-2	**244937**	10
	PK-3	**208378**	10
	PK-4	**208380**	10
	PK-6	**337348**	10

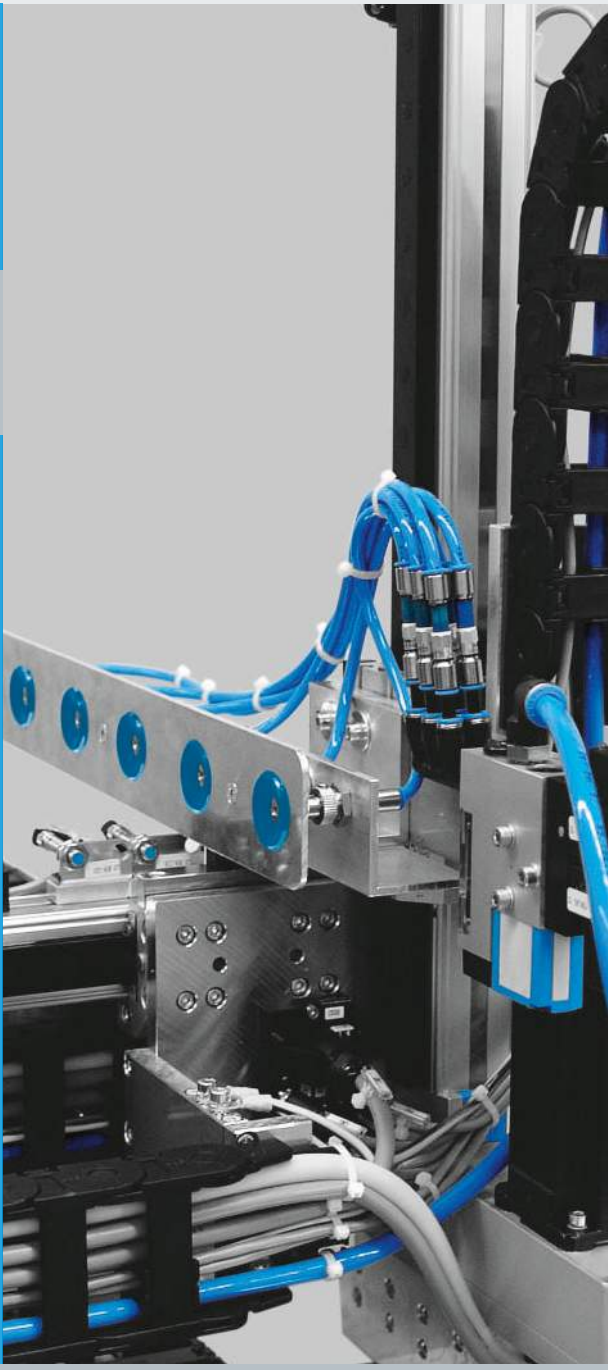
Coupling

	Max. number of connections	Pneumatic connection	PN	PE
KM				
	22	For PK-2, PK-3, PK-4	**13694**	1

Terminal socket

	Pneumatic connection	PN	PE
KDV			
	PK-2	**244937**	10
	PK-3	**208378**	10
	PK-4	**208380**	10

Highlights



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours



Highlights
our distributors

Distributor blocks

FR

+ Supply line female thread G1/8, G1/4, G3/8, G1/2
+ Outlet female thread M3, M5, G1/8, G1/4, G3/8, G1/2

→ **222**

Rotary distributors

GF

+ Radial and axial outlets with multiple rotary distributors
+ Sturdy design with double bearings to protect against mechanical loads

→ **223**

Multiple distributors

QSLV...

+ Simple connection and release
+ Up to 6 outlets
+ Rotatable 360°

→ **224**

09

Distributors – Overview



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

Completely flexible media supply and return

Whether it's compressed air, vacuum, liquids or gases – the distributor blocks FR, rotary distributors GF and multiple distributors of the QS series from Festo guarantee the secure transmission of media from stationary sources to fixed or rotating machine parts.

+ Distributor blocks FR
  1 or 2 supply lines, 3 to 12 outlets **222**
+ Rotary distributor GF with 1 or 2 supply lines, radial and axial outlets, robust design with double ball bearings for protection against mechanical loads
  Simple **223**
  Double **223**
+ Series QS multiple distributors in many variants with up to 6 outlets
  Straight shape QSQ, 4 outlets **224**
  L-shape QSLV, 2 ... 6 outlets **224**
  L-shape QST3, 4 outlets **227**
  L-shape QSYTF, 3 outlets **227**

Additional information:

→ **www.festo.com/pneumatic-distributors**

Distributor blocks FR

	D1	D2	PN	PE
FR-4				
1 supply line, 3 outlets				
	G1/8	G1/8	**6701**	1
	G1/4	G1/4	**7849**	1
	G3/8	G3/8	**6703**	1
	G1/2	G1/2	**6704**	1
FR-8				
2 supply lines, 8 outlets				
	G3/8	G1/8	**2077**	1
	G1/2	G1/4	**2078**	1
	G3/4	G1/2	**6411**	1
FR-9				
1 supply line, 9 outlets				
	G1/8	M3	**30981**	1
FR-12				
2 supply lines, 12 outlets				
	G1/8	M5	**4525**	1

Rotary distributor GF, single

1 axial inlet, 4 radial outlets

	D1	D2	PN	PE
	G1/8	M5	**539290**	1
	G1/4	G1/8	**539291**	1
	G1/2	G1/4	**539292**	1

Rotary distributor GF, dual

2 separate inlets[1] and outlets[2]

	D1[1]	D2[2]	PN	PE
	G1/8	G1/8	**539287**	1
	G1/4	G1/4	**539288**	1
	G1/2	G1/2	**539289**	1

1) axial und radial inlets
2) radial outlets

Multiple distributors

	D1	D2	PN	PE
QSQ **Straight shape, 4 outlets**				
	R1/8	4	**153206**	1
		6	**153208**	1
	R1/4	4	**153207**	1
		6	**153288**	1
	G1/8	4	**186220**	1
		6	**186222**	1
	G1/4	4	**186221**	1
		6	**186263**	1
	6	4	**153209**	1
	8	6	**153210**	1
QSLV2 **L-shape, 2 outlets**				
	R1/8	4	**153211**	1
		6	**153212**	1
		8	**153214**	1
	R1/4	6	**153213**	1
		8	**153215**	1
		10	**153217**	1
	R3/8	8	**153216**	1
		10	**153218**	1
		12	**153219**	1
	R1/2	12	**153220**	1
	G1/8	4	**186223**	1
		6	**186224**	1
		8	**186226**	1
	G1/4	6	**186225**	1
		8	**186227**	1
		10	**186229**	1
	G3/8	8	**186228**	1
		10	**186230**	1
		12	**186231**	1
	G1/2	12	**186232**	1

Multiple distributors

	D1	D2	PN	PE
QSLV3				
L-shape, 3 outlets				
	R1/8	4	**153221**	1
		6	**153222**	1
		8	**153224**	1
	R1/4	6	**153223**	1
		8	**153225**	1
		10	**153227**	1
	R3/8	8	**153226**	1
		10	**153228**	1
		12	**153229**	1
	R1/2	12	**153230**	1
	G1/8	4	**186233**	1
		6	**186234**	1
		8	**186236**	1
	G1/4	6	**186235**	1
		8	**186237**	1
		10	**186239**	1
	G3/8	8	**186238**	1
		10	**186240**	1
		12	**186241**	1
	G1/2	12	**186242**	1
QSLV4				
L-shape, 4 outlets				
	R1/8	4	**153231**	1
		6	**153232**	1
		8	**153234**	1
	R1/4	6	**153233**	1
		8	**153235**	1
		10	**153237**	1
	R3/8	8	**153236**	1
		10	**153238**	1
		12	**153239**	1
	R1/2	12	**153240**	1
	G1/8	4	**186243**	1
		6	**186244**	1
		8	**186246**	1
	G1/4	6	**186245**	1
		8	**186247**	1
		10	**186249**	1
	G3/8	8	**186248**	1
		10	**186250**	1
		12	**186251**	1
	G1/2	12	**186252**	1

Multiple distributors

	D1	D2	PN	PE
QSLV6 **L-shape, 6 outlets**				
	R1/8	4	**153241**	1
		6	**153242**	1
		8	**153244**	1
	R1/4	6	**153243**	1
		8	**153245**	1
		10	**153247**	1
	R3/8	8	**153246**	1
		10	**153248**	1
		12	**153249**	1
	R1/2	12	**153250**	1
	G1/8	4	**186253**	1
		6	**186254**	1
		8	**186256**	1
	G1/4	6	**186255**	1
		8	**186257**	1
		10	**186259**	1
	G3/8	8	**186258**	1
		10	**186260**	1
		12	**186261**	1
	G1/2	12	**186262**	1

Multiple distributors

	D1	D2	D3	PN	PE
QST3					
L-shape, 4 outlets					
	R1/8	6	4	**153200**	1
	R1/4	8	6	**153201**	1
	R3/8	10	8	**153202**	1
	G1/8	6	4	**186217**	1
	G1/4	8	6	**186218**	1
	G3/8	10	8	**186219**	1
	6	6	4	**153203**	1
	8	8	6	**153204**	1
	10	10	8	**153205**	1
QSYTF					
L-shape, 3 outlets					
	R1/8	6	G1/8	**153196**	1
	R1/4	8	G1/4	**153197**	1
	R3/8	10	G3/8	**153198**	1
	R1/2	12	G1/2	**153199**	1
	G1/8	6	G1/8	**186213**	1
	G1/4	8	G1/4	**186214**	1
	G3/8	10	G3/8	**186215**	1
	G1/2	12	G1/2	**186216**	1

Configurable product

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

→ **www.festo.com/catalogue/qs**

Highlights



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours



Highlights

our stop valves

Quick exhaust valves

VBQF

+ Female thread connection G1/8, G1/4
+ Ducted or non-ducted exhaust air

→ **239**

Hand slide valves

VBOH

+ Connection M5, G1/8, G1/4, G3/8, G1/2, G3/4

→ **243**


FESTO

Stop valves – „Stop & Go“ for your compressed air

Whether used in maintenance tasks, for rapid stopping during horizontal movements or as part of a backup system in the event of a pressure failure – Festo's stop valves are the obvious choice for applications requiring complete shut-off of compressed air thanks to their impressive ability to shut off and quickly restore the supply of compressed air.

+ Piloted check valves HGL are activated as soon as a control signal is no longer pending.
+ Quick exhaust valves SE/SEU/VBQF for increased speeds with single-acting or double-acting cylinders.
  Quick exhaust valves SE with ducted exhaust air.
+ Ball valves QH, shut-off valves HE and hand slide valves VBOH for shutting off the compressed air.
+ Piloted check valves VBNF with manual exhaust function.

Look for our products from the core product range ★

Stop valves preselection _____ **232**

Additional information:

→ **www.festo.com/shut-off-valves**

	Type, description
	**H-QS, HA, HB, H, check valves** **HGL-QS, HGL, check valves, piloted** With connecting thread or QS push-in connection Manual override
	**VBNF, check valves, piloted** With connecting thread or QS push-in connection With piloted non-return function
	**SEU, SE, VBQF, quick exhaust valves** With or without silencer Flat design
	**QH, QHS, ball valves, manually actuated** With connecting thread or QS push-in connection With bulkhead fitting
	**HE, shut-off valves** With connecting thread or QS push-in connection
	**VBOH, hand slide valves** With connecting thread

→ www.festo.com/catalogue/...
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Check valves

	D1	D2	qnN [l/min]	PN	PE
h-qs					
QS push-in connector at both ends					
	4	4	136	**153462**	1
	6	6	282	**153463**	1
	8	8	681	**153464**	1
	10	10	1480	**153465**	1
	10	12	1715	**153466**	1
HA					
with male thread and QS push-in connector					
Flow direction male thread ···⁘ push-in connector					
	M5	4	148	**153444**	1
	R1/8	4	138	**153446**	1
		6	311	**153448**	1
		8	331	**153452**	1
	R1/4	6	302	**153450**	1
		8	670	**153454**	1
	R3/8	10	1740	**153456**	1
		12	1876	**153458**	1
	R1/2	12	2230	**153460**	1
HB					
with male thread and QS push-in connector					
Flow direction push-in connector ···⁘ male thread					
	4	M5	144	**153445**	1
	4	R1/8	142	**153447**	1
	6		335	**153449**	1
	8		314	**153453**	1
	6	R1/4	294	**153451**	1
	8		696	**153455**	1
	10	R3/8	1700	**153457**	1
	12		1886	**153459**	1
	12	R1/2	2206	**153461**	1

Check valves

	D1	D2	qnN [l/min]	PN	PE
H **with female thread both sides**					
	M5	M5	115	**3671**	1
H **with female and male thread**					
	G1/8[1]	G1/8[2]	280	**3324**[3]	1
H **with male thread at both ends**					
	G1/4[1]	G1/4[2]	1000	**11689**[3]	1
	G3/8[1]	G3/8[2]	2000	**11690**[3]	1
	G1/2[1]	G1/2[2]	5500	**11691**[3]	1
	G3/4[1]	G3/4[2]	5900	**11692**[3]	1

1) Female thread
2) Male thread
3) Sealing rings for male thread are included in the scope of delivery.

Configurable product

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

→ **www.festo.com/catalogue/h**

Check valves, piloted

	D1	D2	qnN [l/min]	PN	PE
HGL					
with female and male thread					
	M5[1]	M5[2]	130	★ **530029**[3]	1
	G1/8[1]	G1/8[2]	300	**543253**[3]	1
	G1/8[1]	G1/8[2]	300	★ **530030**[3]	1
	G1/4[1]	G1/4[2]	550	★ **530031**[3]	
	G3/8[1]	G3/8[2]	1100	★ **530032**[3]	
	G1/2[1]	G1/2[2]	1600	★ **530033**[3]	
HGL					
with male thread and QS push-in connector					
	M5	4	130	★ **530038**[3]	1
	G1/8	4	200	★ **530039**[3]	1
		6	270	★ **530040**[3]	1
	G1/4	8	390	★ **530041**[3]	1
		10	400	★ **530042**[3]	1
	G3/8	8	830	★ **530043**[3]	1
		10	890	★ **530044**[3]	1
	G1/2	12	1400	★ **530045**[3]	1
HAB					
Manual override, with female and male thread					
	G1/8[1]	G1/8[2]	165	**184585**	1
	G1/4[1]	G1/4[2]		**184586**	1
	G3/8[1]	G3/8[2]		**184587**	1
	G1/2[1]	G1/2[2]		**184588**	1

1) Female thread
2) Male thread
3) Sealing rings for male thread are included in the scope of delivery.

Check valves, piloted

	D1	D2	qnN [l/min]	PN	PE
VBNF **with male thread and QS push-in connector**					
	6	G1/8	260	**8001460**	1
	8	G1/4	62	**1927027**	1

Configurable product

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

→ **www.festo.com/catalogue/vbnf**

Quick exhaust valves

	D1	D2	D3	qnN [l/min]		PN	PE
				1 → 2	2 → 3		
SE							
Ducted exhaust air							
	G1/8	G1/8	G1/8	300	660	**9685**	1
	G1/4	G1/4	G1/4	960	1200	**9686**	1
	G3/8	G3/8	G3/8	2880	2760	**9687**	1
	G1/2	G1/2	G1/2	4560	6480	**9688**	1
	G3/4	G3/4	G3/4	2500	7500	**2280**	
SEU							
with silencer							
	G1/8	G1/8	–	300	550	**4616**	1
	G1/4	G1/4	–	960	1100	**6753**	1
	G3/8	G3/8	–	2880	2280	**6755**	1
	G1/2	G1/2	–	4560	4020	**6822**	1

Quick exhaust valves, flat design

	D1	D2	D3	qnN [l/min]		PN	PE
				1 → 2	2 → 3		
VBQF-D **Ducted exhaust air**							
	G1/8	G1/8	G1/8	350	850	**547533**	1
		QS-6	QS-8	350	850	**547534**	1
	G1/4	G1/4	G1/4	960	1500	**548003**	1
VBQF-U **with silencer**							
	G1/8	G1/8	–	350	–	**547531**	1
		QS-6	–	350	–	**547532**	1
	G1/4	G1/4	–	960	–	**548001**	1
		QS-8	–	800	–	**548002**	1

Configurable product

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

→ **www.festo.com/catalogue/vbqf**

Ball valves with plastic housing

	D1	D2	qnN [l/min]	PN	PE
QH-QS					
QS push-in connector at both ends					
	4	4	148	**153483**	1
	6	6	533	**153484**	1
with male thread and QS push-in connector					
	R1/8	4	235	**153486**	1
		6	560	**153487**	1
QHS-QS					
with male thread and QS push-in connector, bulkhead fitting					
	6	6	528	**153485**	1

Ball valves with brass housing

	D1	D2	qnN [l/min]	PN	PE
QH					
with female thread					
	G1/4	G1/4	3400	**9541**	1
	G3/8	G3/8	7500	**9542**	1
	G1/2	G1/2	11500	**9543**	1
	G3/4	G3/4	21000	**9544**	1
	G1	G1	33000	**9545**	1
	G1 1/2	G1 1/2	84000	**6837**	1

→ www.festo.com/catalogue/...
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shut-off valves, 2/2 way

	D1	D2	qnN [l/min]	PN	PE
HE-2-QS **QS push-in connector at both ends**					
	6	6	278	**153467**	1
	8	8	388	**153468**	1
	10	10	761	**153469**	1
	12	12	830	**153470**	1
HE-2-...-QS **with male thread and QS push-in connector**					
	6	R1/8	307	**153471**	1
	8	R1/4	396	**153472**	1
	10	R3/8	728	**153473**	1
	12	R1/2	776	**153474**	1

Configurable product

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

→ **www.festo.com/catalogue/he**

shut-off valves, 2/3 way

	D1	D2	qnN [l/min]	PN	PE
HE-3-QS **QS push-in connector at both ends**					
	6	6	270	**153475**	1
	8	8	390	**153476**	1
	10	10	780	**153477**	1
	12	12	840	**153478**	1
HE-3-...-QS **with male thread and QS push-in connector**					
	6	R1/8	301	**153479**	1
	8	R1/4	380	**153480**	1
	10	R3/8	733	**153481**	1
	12	R1/2	796	**153482**	1
HE-3 **Male thread at both ends**					
	R1/8	R1/8	301	**153296**	1
	R1/4	R1/4	380	**153297**	1
	R3/8	R3/8	730	**153298**	1

Configurable product

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

→ **www.festo.com/catalogue/he**

Hand slide valves

	D1	D2	qnN [l/min]	PN	PE
VBOH					
Female thread at both ends					
	M5	M5	236	**1609969**	1
	G1/8	G1/8	777	**1558073**	1
	G1/4	G1/4	1675	**1302994**	1
	G3/8	G3/8	2201	**1482679**	1
	G1/2	G1/2	3420	**1587988**	1
	G3/4	G3/4	7691	**1629664**	1

Configurable product

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

→ **www.festo.com/catalogue/vboh**

Highlights



→ www.festo.com/catalogue/...
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Highlights
our pressure regulators

Pressure regulator
VRPA
- + Regulates operating pressure independently of fluctuating input pressure
- + With secondary exhaust and with return flow function
- + With or without pressure gauge
- + Screw-in or inline variants

→ **250**

NEW

Overview



→ www.festo.com/catalogue/...
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Pressure regulators – optimum prerequisites
You need your system to operate at peak performance every day. Your system always operates properly with pressure control valves and differential pressure regulators. They guarantee the required pressure directly at the system, regardless of the input pressure, and compensate pressure peaks on the supply side.

+ Pressure regulator VRPA – our classic in a new design
+ Pressure control valves LR-... and LRMA-... keep the output pressure stable
+ Differential pressure regulators LRL-... and LRLL-... maintain a manually set differential pressure between the primary pressure at the screw-in thread and the secondary pressure at the QS connection.

Pressure regulator preselection _____ **248**

Additional information:

→ **www.festo.com/pressure-control-valves**

	Type, description
	**VRPA, pressure regulator, inline** with or without pressure gauge QS push-in connector at both ends
	**VRPA, pressure regulator, L-outlet** with pressure gauge with male thread and QS push-in connector
	**LR-QS, pressure regulators** with male thread and QS push-in connector QS push-in connector at both ends
	**LRMA-QS, pressure regulators with pressure gauge** with male thread and QS push-in connector QS push-in connector at both ends
	**LRL, LRLL, differential pressure regulators** with male thread and QS push-in connector at top with male thread and QS push-in connector on side

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Pressure regulator without pressure gauge

	D1	D2	qnN [l/min]	PN	PE
VRPA **QS push-in connector at both ends**					
	4	4	80	**8086000**	1
	6	6	90	**8086001**	1
	8	8	130	**8086002**	1

Pressure regulator with pressure gauge

	D1	D2	qnN [l/min]	PN	PE
VRPA **QS push-in connector at both ends**					
	4	4	80	**8086003**	1
	6	6	90	**8086004**	1
	8	8	130	**8086005**	1
VRPA **with male thread and QS push-in connector**					
	M5	4	80	**8086007**	1
		6	90	**8086008**	1
	R1/8	4	90	**8086009**	1
		6	100	**8086010**	1
		8	130	**8086011**	1
	R1/4	6	115	**8086012**	1
		8	130	**8086014**	1

Configurable product

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

→ **www.festo.com/catalogue/vrpa**

→ www.festo.com/catalogue/...
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Pressure regulators without pressure gauge

	D1	D2	qnN [l/min]	PN	PE
LR-QS-... **QS push-in connector at both ends**					
	4	4	67	**153540**	1
	6	6	70	**153541**	1
	8	8	127	**153542**	1
LR-...-QS **with male thread and QS push-in connector**					
	M5	4	22	**153532**	1
		6	41	**153533**	1
	R1/8	4	46	**153534**	1
		6	63	**153535**	1
		8	69	**153536**	1
	R1/4	6	98	**153537**	1
		8	101	**153538**	1

Pressure regulators with pressure gauge

	D1	D2	qnN [l/min]	PN	PE
LRMA-QS-... **QS push-in connector at both ends**					
	4	4	67	**153495**	1
	6	6	70	**153496**	1
	8	8	127	**153497**	1
LRMA-...-QS **with male thread and QS push-in connector**					
	M5	4	22	**153488**	1
		6	41	**153489**	1
	R1/8	4	46	**153490**	1
		6	63	**153491**	1
		8	69	**153492**	1
	R1/4	6	98	**153493**	1
		8	101	**153494**	1

Differential pressure regulators

	D1	D2	qnN [l/min]	PN	PE
LRL					
with male thread and QS push-in connector at top					
	M5	4	30/30	**153510**	1
		6	30/30	**153512**	1
	R1/8	4	96/93	**153511**	1
		6	115/115	**153513**	1
		8	120/115	**153515**	1
	R1/4	6	241/240	**153514**	1
		8	224/224	**153516**	1
		10	231/231	**153518**	1
	R3/8	8	463/393	**153517**	1
		10	476/423	**153519**	1
		12	438/379	**153520**	1
	R1/2	12	760/700	**153521**	1
LRLL					
with male thread and QS push-in connector on side					
	M5	4	30/30	**153498**	1
		6	32/31	**153500**	1
	R1/8	4	100/96	**153499**	1
		6	155/140	**153501**	1
		8	115/110	**153503**	1
	R1/4	6	267/266	**153502**	1
		8	268/264	**153504**	1
		10	269/262	**153506**	1
	R3/8	8	474/340	**153505**	1
		10	456/411	**153507**	1
		12	518/423	**153508**	1
	R1/2	12	730/700	**153509**	1

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FESTO
-6R8
-6R9
-6R1
-5R1
-5R5
-5R9
-5R11
-5R10
-5R3
-5B5
-5K12
-5R12

Highlights



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Highlights

our flow control valves

One-way flow control valves

GRLA, GRLZ

+ Large selection of connections
+ Actuation with slotted head screw, knurled screw or external hexagon

→ 264

One-way flow control valves

VFOF

+ Exhaust air one-way flow control function, actuation with internal hexagon
+ Piloted non-return function, manual exhaust function

→ 271



One-way flow control valves – the right setting is crucial!

Adjusting made easy: such as metering a flow rate, for example for speed regulation of single- or double-acting cylinders as supply air or exhaust air flow control. Festo's compact and sturdy one-way flow control valves provide the right solution for every application. The numerous variants suit every environment and are quick and easy to fit.

+ Fast installation with QS connections
+ Maximum adaptability – directly at the cylinder or inline
+ Wide range of variants – GRLA/Z/O, GRGA/Z/O, GR/O, VFOC, VFOF
+ Also available as precision flow control valves for particularly accurate adjustments
+ Screw-in or inline variants

Functional combination – multiple control function integrate into one component:
variable piston speeds, momentary intermediate stop and individual manual exhaust - saves time, cost and space.

Look for our products from the core product range ★

Flow control valves preselection _____ **258**

Additional information:

→ **www.festo.com/flow-control-valves**

	Type, description
	**GRLA, GRLZ: one-way flow control valve, series D** With male thread and QS push-in connector
	**GRLO: flow control valve, series D** With male thread and QS push-in connector
	**GRLA: one-way flow control valve, series B** High flow rate With male thread and QS push-in connector
	**GRLA, GRLZ: one-way flow control valve** With male and female thread
	**GRLO: flow control valve** With male and female thread
	**GRLA, GRLZ: one-way flow control valve** With male thread and barbed fitting connection PK

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L-shaped outlet, actuation with knurled screw ★	→ 266
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L-shaped outlet, actuation with slotted head screw	→ 267
L-shaped outlet, actuation with slotted head screw	→ 269

	Type, description
	**GRLO: flow control valve** With male thread and barbed fitting connection PK
	**GRLSA: one-way flow control valve with scale** Preselection of the flow rate range in 5 steps by a rotary switch Fine adjustment with internal hexagon With male thread and QS push-in connector
	**CRGRLA: corrosion-resistant one-way flow control valve** With male and female thread
	**VFOF: function combination** Exhaust air one-way flow control function Piloted non-return function, manual exhaust function With male thread and QS push-in connector
	**VFOC: one-way flow control valve** With barbed fitting connection and QS push-in connector
	**GR: one-way flow control valve for in-line installation** With QS push-in connector

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L-shaped outlet, actuation with rotary switch and internal hexagon	→ 270
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L-shaped outlet, actuation with slotted head screw	→ 271
Actuation with knurled screw	→ 272
Retaining bracket	→ 272

	Type, description
	**GRO: flow control valve for in-line installation** With QS push-in connector
	**GR, GRA: one-way flow control valve for in-line installation** With female thread
	**GR-...X2: one-way flow control valve for in-line installation** Two one-way flow control valves in one housing Supply and exhaust air flow control separately adjustable With female thread
	**GRP: precision one-way flow control valve** With barbed fitting connection PK for front panel mounting With male thread on sub-base
	**GRPO: precision flow control valve** With barbed fitting connection PK for front panel mounting With male thread on sub-base
	**VFFK, GRE, GRU: flow control/silencer combination** With male thread

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Actuation with knurled screw	→ 273
Actuation with knurled screw	→ 273
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Mounting plate	→ 275
Actuation with rotary knob	→ 274
Mounting plate	→ 275
Actuation with knurled screw	→ 275
Actuation with slotted head screw	→ 275

One-way flow control valves

	D1	D2	qnN [l/min][1]	PN	PE
GRLA					
Exhaust air flow control, actuation with slotted head screw					
With male thread and QS push-in connector					
	M3	3	41/50	**175041**	1
	M5	3	40/70	**175053**	1
		4	40/75	**175056**	1
	M5	3	100/100	★ **193137**	1
		4	110/110	★ **193138**	1
		6	115/110	★ **193139**	1
	G1/8	3	130/130	★ **193142**	1
		4	160/190	★ **193143**	1
		6	185/240	★ **193144**	1
		8	215/250	★ **193145**	1
	G1/4	6	400/420	★ **193146**	1
		8	475/500	★ **193147**	1
		10	480/500	★ **193148**	1
	G3/8	6	495/495	★ **193149**	1
		8	820/850	★ **193150**	1
		10	900/975	★ **193151**	1
	G1/2	12	1580/1605	★ **193152**	1
High flow rate					
	G1/8	6	400/420	★ **537075**	1
		8	475/500	★ **537076**	1
GRLZ					
Supply air flow control, actuation with slotted head screw					
With male thread and QS push-in connector					
	M3	3	41/44	**175043**	1
	M5	3	48/52	**175055**	1
		4	48/65	**175058**	1
	M5	3	100/100	★ **193153**	1
		4	110/110	★ **193154**	1
		6	115/110	★ **193155**	1
	G1/8	3	130/130	★ **193156**	1
		4	160/190	★ **193157**	1
		6	185/240	★ **193158**	1
		8	215/250	★ **193159**	1

1) Flow control direction/non-return direction

Flow control valves

	D1	D2	qnN [l/min]	PN	PE
GRLO **Flow control in both directions, actuation with slotted head screw** **With male thread and QS push-in connector**					
	M3	3	41	**175042**	1
	M5	3	40	**175054**	1
		4	40	**175057**	1

Configurable product

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

→ **www.festo.com/catalogue/grla**

One-way flow control valves

	D1	D2	qnN [l/min][1)]	PN	PE
VFOH-LE **Exhaust air flow control, actuation with external hexagon** **Nickel-plated, with male thread and QS push-in connector**					
	G1/8	4	180/188	**578797**	1
		6	255/280	**578798**	1
		8	275/307	**578799**	1
	G1/4	8	530/578	**578800**	1
		10	520/535	**578801**	1

1) Flow control direction/non-return direction

Configurable product

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

→ **www.festo.com/catalogue/vfoh**

One-way flow control valves

	D1	D2	qnN [l/min][1]	PN	PE
GRLA					
Exhaust air flow control, actuation with knurled screw					
With male thread and QS push-in connector					
	M5	3	100/100	★ **197576**	1
		4	110/110	★ **197577**	1
		6	115/110	★ **197578**	1
	G1/8	3	130/130	★ **197579**	1
		4	160/190	★ **197580**	1
		6	185/240	★ **197581**	1
		8	215/250	★ **534337**	1
	G1/4	6	400/420	★ **534338**	1
		8	475/500	★ **534339**	1
		10	480/500	★ **534340**	1
	G3/8	6	495/495	★ **534341**	1
		8	820/850	★ **534342**	1
		10	900/975	★ **534343**	1
	G1/2	12	1580/1605	★ **534344**	1
High flow rate					
	G1/8	6	520/550	**162965**	1
		8	650/750	**162966**	1
	G1/4	6	520/550	**162967**	1
		8	650/750	**162968**	1
	G3/8	6	530/550	**162969**	1
		8	650/750	**162970**	1

1) Flow control direction/non-return direction

Configurable product

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

→ **www.festo.com/catalogue/grla**

One-way flow control valves

	D1	D2	qnN [l/min][1)]	PN	PE
GRLA					
Exhaust air flow control, actuation with slotted head screw					
With male and female thread					
	M3	M3	18/20	**175038**	1
	M5	M5	95/95	**151160**	1
	G1/8	G1/8	340/420	**151165**	1
	G1/4	G1/4	610/820	**151172**	1
	G3/8	G3/8	1450/1600	**151178**	1
	G1/2	G1/2	2100/2200	**151179**	1
	G3/4	G3/4	4320/4720	**151180**	1
GRLZ					
Supply air flow control, actuation with slotted head screw					
With male and female thread					
	M3	M3	18/20	**175040**	1
	M5	M5	95/95	**151183**	1
	G1/8	G1/8	340/420	**151188**	1
	G1/4	G1/4	610/820	**151195**	1

1) Flow control direction/non-return direction

Flow control valves

	D1	D2	qnN [l/min]	PN	PE
GRLO					
Flow control in both directions, actuation with slotted head screw					
With male and female thread					
	M3	M3	18	**175039**	1
	M5	M5	95	**151181**	1

One-way flow control valves

	D1	D2	qnN [l/min][1)]	PN	PE
GRLA **Exhaust air flow control, actuation with knurled screw** **With male thread and QS push-in connector**					
	M5	M5	95/95	**151163**	1
	G1/8	G1/8	340/420	**151169**	1
	G1/4	G1/4	610/820	**151175**	1
GRLZ **Supply air flow control, actuation with knurled screw** **With male thread and QS push-in connector**					
	M5	M5	95/95	**151186**	1
	G1/8	G1/8	340/420	**151192**	1
	G1/4	G1/4	610/820	**151198**	1

1) Flow control direction/non-return direction

Configurable product

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

→ **www.festo.com/catalogue/grla**

One-way flow control valves

	D1	D2	qnN [l/min][1]	PN	PE
GRLA					
Exhaust air flow control, actuation with slotted head screw					
With male thread and barbed fitting connection PK					
	M5	3	83/83	**151161**	1
		4	83/88	**151162**	1
	G1/8	3[2]	110/110	**151166**	1
		4[2]	230/240	**151167**	1
		6[2]	300/290	**151168**	1
	G1/4	4[2]	260/260	**151173**	1
		6[2]	540/585	**151174**	1
GRLZ					
Supply air flow control, actuation with slotted head screw					
With male thread and barbed fitting connection PK					
	M5	3	83/83	**151184**	1
		4	83/88	**151185**	1
	G1/8	3[2]	110/110	**151189**	1
		4[2]	230/240	**151190**	1
		6[2]	300/290	**151191**	1
	G1/4	4[2]	260/260	**151196**	1
		6[2]	540/585	**151197**	1

1) Flow control direction/non-return direction
2) with union nut

Flow control valves

	D1	D2	qnN [l/min]	PN	PE
GRLO					
Flow control in both directions, actuation with slotted head screw					
With male thread and barbed fitting connection PK					
	M5	3	83	**151182**	1

One-way flow control valves

	D1	D2	qnN [l/min][1]	PN	PE
GRLSA **Exhaust air flow control, preselection of the flow rate range in 5 steps by a rotary switch, fine adjustment with internal hexagon** **With male thread and QS push-in connector**					
	G1/8	6[1]	250/310	**540661**	1
	G1/4	8[1]	450/500	**540662**	1
CRGRLA **Exhaust air flow control, corrosion resistant** **With male and female thread**					
	M5	M5	95/95	**161403**	1
	G1/8	G1/8	340/420	**161404**	1
	G1/4	G1/4	610/820	**161405**	1
	G3/8	G3/8	1450/1600	**161406**	1
	G1/2	G1/2	2100/2200	**161407**	1

1) Flow control direction/non-return direction

One-way flow control valves

	D1	D2	qnN [l/min][1]	PN	PE
VFOF **Exhaust air one-way flow control function, actuation with internal hexagon** **Piloted non-return function, manual exhaust function** **With male thread and QS push-in connector**					
	G1/8	G1/8	240/230	**8001459**	1
	G1/4	G1/4	590/540	**1927030**	1

1) Flow control direction/non-return direction

Configurable product

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

→ **www.festo.com/catalogue/vfof**

One-way flow control valves

	D1	D2	qnN [l/min][1]	PN	PE
VFOC **Supply air flow control, actuation with slotted head screw** **With barbed fitting connection and QS push-in connector**					
	4	4	100/100	**559723**	1
	6	6	270/260	**559724**	1

1) Flow control direction/non-return direction

Configurable product

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

→ **www.festo.com/catalogue/vfoc**

One-way flow control valves

	D1	D2	qnN [l/min][1)]	PN	PE
GR **Supply air or exhaust air flow control depending in installation direction, actuation with knurled screw** **QS push-in connector at both ends**					
	3	3	25/70	**193965**	1
	4	4	85/110	**193967**	1
	6	6	160/270	**193969**	1
	8	8	225/400	**193970**	1

1) Flow control direction/non-return direction

Flow control valves

	D1	D2	qnN [l/min]	PN	PE
GRO **Flow control in both directions, actuation with knurled screw** **QS push-in connector at both ends**					
	3	3	25	**193971**	1
	4	4	85	**193972**	1
	6	6	160	**193973**	1

Retaining bracket

	For push-in connector	PN	PE
GR-H-QS **For flow control valves and check valves GR/GRO**			
	QS-3/QS-4	**195495**	1
	QS-6/QS-8	**195496**	1

One-way flow control valves

	D1	D2	qnN [l/min][1)]	**PN**	PE
GR **Supply air or exhaust air flow control depending in installation direction, actuation with knurled screw** **With male and female thread**					
	M3	M3	29.5/27.5	**15899**	1
	M5	M5	94/115	**151213**	1
	G1/8	G1/8	220/217	**151215**	1
	G1/4	G1/4	370/150	**2101**	1
			420/780	**6509**	
	G3/8	G3/8	1010/1150	**6308**	1
	G1/2	G1/2	1620/2760	**3720**	1
	G3/4	G3/4	3300/4800	**2103**	1
GR-...X2 **Two one-way flow control valves in one housing** **Supply and exhaust air flow control separately adjustable, actuation with knurled screw** **With male and female thread**					
	M5	M5	95/75	**152611**	1
	G1/8	G1/8	205/190	**152612**	1

1) Flow control direction/non-return direction

Precision one-way flow control valves

	D1	D2	qnN [l/min][1)]	PN	PE
GRP-...-PK **Supply air or exhaust air flow control depending in installation direction, actuation with rotary knob with scale** **For front panel installation, barbed fitting connection PK on both sides**					
	3	3	3.8/95	**12743**	1
			40.7/88	**10802**	1
	4	4	75.8/245	**12961**	1
GRP-...-AL **Supply air or exhaust air flow control depending in installation direction, actuation with rotary knob with scale** **On sub-base, female thread both sides**					
	G1/8	G1/8	40.7/88	**542022**	1
			75.8/245	**542023**	1

1) Flow control direction/non-return direction

Precision flow control valves

	D1	D2	qnN [l/min]	PN	PE
GRPO-...-PK **Flow control in both directions, actuation with rotary knob with scale** **For front panel installation, barbed fitting connection PK on both sides**					
	3	3	3.8	**13229**	1
			40.7	**10803**	1
	4	4	75.8	**13230**	1
GRPO-...-AL **Flow control in both directions, actuation with rotary knob with scale** **On sub-base, female thread both sides**					
	G1/8	G1/8	40.7	**542024**	1
			75.8	**542025**	1

Mounting plate

	Number of bores	PN	PE
APL-2N			
For flow control valves and check valves GRP/GRPO			
	1	**10391**	1
	2	**10392**	1

Flow control/silencer combination

	D1	D2	qnN [l/min]	PN	PE
VFFK					
Actuation with knurled screw					
With male thread					
	M5	M5	80	**133140**	1
	M7	M7	100	**133141**	1
	R1/8	R1/8	270	**133142**	1
	R1/4	R1/4	420	**133143**	1
GRE					
Actuation with slotted head screw					
With male thread					
	G1/8	G1/8	520	**10351**	1
	G1/4	G1/4	996	**10352**	1
	G3/8	G3/8	2000	**35310**	1
	G1/2	G1/2	3600	**10353**	1
GRU					
Actuation with slotted head screw					
With male thread					
	G1/8	G1/8	1000	**9516**	1
	G1/4	G1/4	1500	**9517**	1
	G3/8	G3/8	1700	**9518**	1
	G1/2	G1/2	4000	**9519**	1
	G3/4	G3/4	8000	**9520**	1

Highlights



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours



Highlights

Pressure gauge

MA

+ Display ranges –1 ... 16 bar
+ Scales with bar, psi, MPa, also combined

→ **286**


0
2
4
6
8
10
20
40
60
80
120
140
bar/psi
FESTO
1 bar =
0,1 MPa
162835 W1

Festo pressure gauge for every application:
Whether they're being used for compressed air or vacuum. Measured in bar, psi or MPa. On a service unit component or flanged in a control cabinet. The broad range of pressure gauges offers the right solution for every application.

+ Easy installation
+ Scales with bar, psi, MPa
+ Rapid pressure monitoring thanks to the red-green pressure gauge

Pressure gauge preselection _____ **280**

Additional information:

→ **www.festo.com/pressure-gauges**

	Type, description
	**MA-...-EN, pressure gauge in accordance with DIN EN 837-1** With male thread Display range bar/psi
	**MA, pressure gauge** With male thread Display range bar, psi, MPa, bar/psi
	**MA-...-QS, pressure gauge** With QS push-in connector Display range bar
	**PAGN, pressure gauge** With male thread With cartridge 10 mm Display range MPa, bar/psi
	**MA-...-RG, pressure gauge DIN EN 837-1** With male thread With red-green range Display range bar, psi, MPa
	**PAGN-...-P10-RG, pressure gauge** With cartridge connector P10 With red-green range Display range bar/MPa

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	Type, description
	**MAP-...-EN, precision pressure gauge in accordance with DIN EN 837-1** With male thread Display range bar/psi
	**PAGN-...-1.6, precision pressure gauge in accordance with DIN EN 837-1** With male thread Display range bar/psi, MPa/bar
	**FMA, flanged pressure gauge in accordance with DIN EN 837-1/DIN EN 837-3** For front panel mounting, with male thread Display range bar/psi
	**FMAP, flanged precision pressure gauge in accordance with DIN EN 837-1** For front panel mounting, with male thread Display range bar/psi
	**VAM, vacuum gauge in accordance with DIN EN 837-1** With male thread Display range bar/inHg, bar/inHg/psi
	**VAM-...-RG, vacuum gauge in accordance with DIN EN 837-1** With male thread With red-green range Display range bar

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	Type, description
	**FVAM-...-EN, flanged vacuum gauge in accordance with DIN EN 837-1** For front panel mounting, with male thread Display range bar/inHg

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Pressure gauge

	Nominal size	Display range [bar]	[MPa]	[psi]	D1	PN*)
MA-...-EN						
With male thread						
	40	0 ... 10[1)]	–	0 ... 145[2)]	R1/8	**162835**
		0 ... 16[1)]	–	0 ... 232[2)]		**162836**
		0 ... 25[1)]	–	0 ... 360[2)]		**526167**
		0 ... 6[1)]	–	0 ... 87[2)]	R1/4	**187078**
		0 ... 10[1)]	–	0 ... 145[2)]		**187079**
		0 ... 16[1)]	–	0 ... 232[2)]		**187080**
		0 ... 6[1)]	–	0 ... 87[2)]	G1/4	**183899**
		0 ... 10[1)]	–	0 ... 145[2)]		**183900**
		0 ... 16[1)]	–	0 ... 232[2)]		**183901**
		0 ... 25[1)]	–	0 ... 360[2)]		**183902**
	50	0 ... 2.5[1)]	–	0 ... 36[2)]	G1/4	**162837**
		0 ... 10[1)]	–	0 ... 145[2)]		**162838**
		0 ... 16[1)]	–	0 ... 232[2)]		**162839**
	63	0 ... 1[1)]	–	0 ... 14.5[2)]	G1/4	**162844**
MA						
With male thread						
	15	0 ... 10	–	–	M5	**132340**
		–	–	0 ... 145[2)]	M5	**132341**
	23	0 ... 6[1)]	–	0 ... 87[2)]	R1/8	**183896**
		0 ... 10[1)]	–	0 ... 145[2)]		**183897**
		0 ... 16[1)]	–	0 ... 232[2)]		**183898**
	27	0 ... 10[1)]	–	0 ... 145[2)]	R1/8	**541733**
		0 ... 16[1)]	–	0 ... 232[2)]		**541734**
		0 ... 10	–	–	M5	**526323**
		–	0 ... 1	–		**526324**
		–	–	0 ... 160		**527405**
	40	0 ... 10[1)]	–	0 ... 145[2)]	G1/8	**359874**
		0 ... 16[1)]	–	0 ... 232[2)]		**345395**
		–	0 ... 1	–		**192732**
		–	0 ... 1.6	–		**192733**
	50	0 ... 10[1)]	–	0 ... 145[2)]	G1/4	**359873**
		0 ... 16[1)]	–	0 ... 232[2)]		**356759**
		–	0 ... 1	–		**192734**
	63	0 ... 0.25[1)]	–	0 ... 3.6[2)]	G1/4	**7169**

1) Outer scale
2) Inner scale
*) Packaging unit 1 piece

Pressure gauge

	Nominal size	Display range [bar]	[MPa]	[psi]	D1	PN*)
MA-...-QS						
With QS push-in connector						
	15	0 ... 8	–	–	QS-4	**153383**
					QS-6	**153384**
					QS-8	**183385**
PAGN-23						
With male thread						
	23	0 ... 10[1]	–	0 ... 145[2]	G1/8	**8088991**
		–	0 ... 1	–		**8088992**
PAGN-...-P10						
Connection with cartridge 10 mm						
	26	0 ... 10[1]	–	0 ... 145[2]	P10[3]	**543488**
		0 ... 16[1]	–	0 ... 232[2]		**543487**
		0 ... 10[2]	–	0 ... 145[1]		**563732**
		0 ... 16[2]	–	0 ... 232[1]		**563731**
		–	0 ... 1	–		**563736**
		–	0 ... 1.6	–		**563735**
	40	0 ... 10[1]	–	0 ... 145[2]		**548009**
		0 ... 16[1]	–	0 ... 232[2]		**548010**
		0 ... 10[2]	–	0 ... 145[1]		**563734**
		0 ... 10[2]	–	0 ... 232[1]		**563733**
		–	0 ... 1	–		**563738**
		–	0 ... 1.6	–		**563737**
PAGN-63						
With male thread						
Temperature of medium –40 ... +200°C						
	63	0 ... 10	–	–	G1/4	**8081401**

1) Outer scale
2) Inner scale
3) Cartridge 10 mm
*) Packaging unit 1 piece

Pressure gauge

	Nominal size	Display range [bar]	[MPa]	[psi]	D1	PN*)
MA-...-RG **With male thread** **With red-green range**						
	40	0 ... 2.5	–	–	R1/8	**546963**
		0 ... 10	–	–		**525725**
		0 ... 16	–	–		**525726**
		–	0 ... 1	–		**526778**
		–	0 ... 1.6	–		**526779**
		–	–	0 ... 145		**526786**
		–	–	0 ... 232		**526787**
	50	0 ... 2.5	–	–	R1/4	**525727**
		0 ... 10	–	–		**525728**
		0 ... 16	–	–		**525729**
		–	0 ... 0.25	–		**526780**
		–	0 ... 1	–		**526781**
		–	0 ... 1.6	–		**526782**
		–	–	0 ... 36		**526788**
		–	–	0 ... 145		**526789**
		–	–	0 ... 232		**526790**
PAGN-...-P10-RG **Connection with cartridge 10 mm** **With red-green range**						
	26	0 ... 10[1)]	0 ... 1[2)]	–	P10[3)]	**8090378**

1) Outer scale
2) Inner scale
3) Cartridge 10 mm
*) Packaging unit 1 piece

Configurable product

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

→ **www.festo.com/catalogue/ma**

Pressure gauge

	Nominal size	Display range [bar]	[MPa]	[psi]	D1	PN*)
MAP-...-EN						
With male thread						
Precision pressure gauge						
	40	0 ... 1[1)]	–	0 ... 15[2)]	R1/8	**161126**
		0 ... 4[1)]	–	0 ... 58[2)]		**162842**
		0 ... 6[1)]	–	0 ... 87[2)]		**161127**
		0 ... 16[1)]	–	0 ... 232[2)]		**161128**
PAGN-...-1.6						
Connection with cartridge 10 mm						
Precision pressure gauge						
	40	0 ... 10[1)]	–	0 ... 145[2)]	R1/8	**2849914**
		0 ... 10[2)]	0 ... 1[1)]	–		**2849916**

1) Outer scale
2) Inner scale
*) Packaging unit 1 piece

Pressure gauge

	Nominal size	Display range [bar]	[MPa]	[psi]	D1	PN*)
FMA-...-EN						
With male thread						
Flanged pressure gauge for panel mounting						
	40	0 ... 10[1)]	–	0 ... 145[2)]	G1/4	**159596**
		0 ... 16[1)]	–	0 ... 232[2)]		**159597**
	50	0 ... 2.5[1)]	–	0 ... 36[2)]		**159598**
		0 ... 10[1)]	–	0 ... 145[2)]		**159599**
		0 ... 16[1)]	–	0 ... 232[2)]		**159600**
	63	0 ... 2.5[1)]	–	0 ... 36[2)]		**159601**
		0 ... 10[1)]	–	0 ... 145[2)]		**159602**
		0 ... 16[1)]	–	0 ... 232[2)]		**159603**
FMA-63						
With male thread						
Flanged pressure gauge for panel mounting						
	63	0 ... 0.25[1)]	–	0 ... 3.6[2)]	G1/4	**225783**
FMAP-63						
With male thread						
Flanged precision pressure gauge for front panel mounting						
	63	0 ... 1[1)]	–	0 ... 15[2)]	G1/4	**161129**
		0 ... 4[1)]	–	0 ... 58[2)]		**162843**
		0 ... 6[1)]	–	0 ... 87[2)]		**161130**
		0 ... 16[1)]	–	0 ... 232[2)]		**161131**

1) Outer scale
2) Inner scale
*) Packaging unit 1 piece

Vacuum gauge

	Nominal size	Display range [bar]	[inchHg]	[psi]	D1	PN*)
VAM-...-EN **With male thread**						
	40	–1 ... 0[1)]	–30 ... 0[2)]	–	R1/8	**537810**
	63	–1 ... 0[1)]	–30 ... 0[2)]	–	R1/4	**537811**
		–1 ... 9[1)]	–30 ... 0[2)]	0 ... 130[2)]		**537814**
VAM-...-RG **With male thread** **With red-green range**						
	40	–1 ... 0	–	–	R1/8	**547842**
	63	–1 ... 0	–	–	R1/4	**547843**
FVAM-...-EN **With male thread** **Flanged vacuum gauge for panel mounting**						
	40	–1 ... 0[1)]	–30 ... 0[2)]	–	G1/8	**537812**
	63	–1 ... 0[1)]	–30 ... 0[2)]	–	G1/4	**537813**

1) Outer scale
2) Inner scale
*) Packaging unit 1 piece

Highlights



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours





Pneumatic silencers

AMTE

+ Sintered metal, short and long design

→ **302**



Overview



→ www.festo.com/catalogue/...
★ Generally ready for dispatch from the Festo factory in 24 hours

Accessories – you don't need a magnifying glass to find them

You only really notice accessories when you need them and you can't find them:
Then it's like searching for a needle in the proverbial haystack. Not with Festo! Our comprehensive range of accessories including sealing rings, tubing cutters or silencers is carefully thought through – to ensure you have everything you need for speedy installation.

Look for our products from the core product range ★

+ Sealing material
Sealing rings **296**
Sealing ring assortment **297**
Thread sealing tape **298**
+ Cutting tools for tubing
Tubing cutter, pipe cutter **299**
Connecting pliers **299**
Tubing strap, tubing supports **300**
+ Silencers ★
Silencers **301**
Filter silencers **303**
+ Air guns
Low consumption air guns **304**
Air gun nozzles **304**

Sealing rings

	For thread	PN	PE
O – polyvinyl chloride			
	M3	**30290**	1
	M5	**3565**	1
		534226	500
	G1/8	**2223**	1
		534227	500
	G1/4	**2224**	1
		534228	200
	G3/8	**2225**	1
		534229	200
	G1/2	**2226**	1
		534230	100
	G3/4	**2227**	1
	G1	**210893**	1
CRO – polyvinylidene chloride			
	M5	**165191**	1
	G1/8	**575895**	1
	G1/4	**165193**	1
	G3/8	**165194**	1
	G1/2	**165195**	1
	G3/4	**165196**	1
	G1	**165197**	1
OL – nitrile rubber **Stainless steel metal housing**			
	M5	**34634**	1
		534231	500
	M6	**161180**	1
	M10	**161181**	1
	M12	**161182**	1
	M14	**161183**	1
	M16	**165298**	1
	M22	**165299**	1
OL – nitrile rubber **Aluminium housing**			
	G1/8	**33840**	1
		534232	500
	G1/4	**34635**	1
		534233	200
	G3/8	**34636**	1
		534234	200
	G1/2	**34637**	1
		534235	100
	G3/4	**34638**	1

Sealing rings

	For thread	PN	PE
OK – nitrile rubber			
Stainless steel support ring			
	M3	**130849**	1
	M5	**130850**	1
	M7	**130851**	1
OK – thermoplastic polyurethane			
Polyamide support ring			
	G1/8	**531771**	1
	G1/4	**531772**	1
	G3/8	**531773**	1
	G1/2	**531774**	1
	G3/4	**531775**	1
NPAS – polyether ether ketone			
for NPCK quick connectors			
	G1/8	**2652516**	1
	G1/4	**2652517**	1
	G3/8	**2652519**	1

Sealing ring assortment

	Sealing rings	No. of	PN	PE
OL-S1				
	OL-M5	50	**161355**	1
	OL-1/8	100		
	OL-1/4	100		
	OL-3/8	40		
	OL-1/2	30		
	OL-3/4	10		
OK-S1				
	OK-M3	50	**570465**	1
	OK-M5	100		
	OK-M7	50		
	OK-1/8	100		
	OK-1/4	100		
	OK-3/8	40		
	OK-1/2	30		
	OK-3/4	10		

Sealing band

	Length	Width	PN	PE
GWB				
	12.5 m	10 mm	**9076**	1

Cutting tools for tubing

	for D1	PN	PE
ZRS – pipe and tubing cutter **for plastic tubing with and without fabric reinforcement**			
	2 ... 20	**7658**	1
	Spare blades	**218606**	10
ZR – pipe cutter **for plastic pipes PQ-PA**			
	12 ... 28	**194592**	1
PAN-V0S – tubing cutter **for flame-retardant PAN-V0 tubing**			
	4	**133180**	1
	6	**133181**	1
	8	**133182**	1
	10	**133183**	1
	12	**133184**	1
ZMS – connecting pliers **Cutter for connecting plastic tubing PP-3, PU-3, PP-4 and PU-4 to barbed fittings**			
	3, 4	**9341**	1
ZDS – disconnecting pliers **Cutter for removing plastic tubing PP-3, PU-3, PP-4 and PU-4 from barbed fittings**			
	3	**9090**	1
	4	**9522**	1

Cutting tools for tubing

	Max. bundle ∅	D1	PN	PE
PB – tubing strap				
	30	–	**6741**	10
	45	–	**6742**	10
	100	–	**6743**	10
NPAW – tubing support				
	30	–	**554026**	10
	50	–	**554027**	10
	50	–	**554028**	10
PKS – tubing support				
	–	6	**4132**	1
	–	8	**4133**	1
	–	11	**4134**	1
PKB – spiral tubing binder				
	50	–	**3656**	50 m
KK – multi-tube holder				
	–	4.3 (10x)	**3635**	10
	–	6 (9x)	**2147**	10
	–	8 (10x)	**2148**	10
	–	11.5 (6x)	**2149**	10
	–	17.6 (4x)	**4463**	10

Silencers

	Connection	PN	PE
U – sintered metal			
	PK-3	**4646**	1
	PK-4	**4932**	1
U – polymer, male thread			
	G1/8	★ **2307**	1
		534222	50
	G1/4	★ **2316**	1
		534223	20
	G3/8	★ **2309**	1
		534224	20
	G1/2	★ **2310**	1
		534225	20
	G3/4	★ **2311**	1
	G1	★ **2312**	1
U – polymer, female thread			
	G1/8	**3670**	1
U-...-B – die-cast metal			
	G1/8	**6841**	1
	G1/4	**6842**	1
	G3/8	**6843**	1
	G1/2	**6844**	1
	G3/4	**6845**	1
	G1	**151990**	1
UC-QS – with push-in sleeve for push-in fitting QS			
	Push-in sleeve 3 mm	**165005**	1
	Push-in sleeve 4 mm	**165006**	1
	Push-in sleeve 6 mm	**165007**	1
	Push-in sleeve 8 mm	**175611**	1
	Push-in sleeve 10 mm	**526475**	1

Silencers

	Connection	PN	PE
UC – for solenoid valves CPE			
	M5	**165003**	1
		534217	50
	M7	**161418**	1
		534218	50
	G1/8	**161419**	1
		534219	50
	G1/4	**164004**	1
		534220	20
	G3/8	**1707427**	1
		576759	20
AMTC – for solenoid valves VUVB-ST12/valve terminal VTUB-12			
	Cartridge 10 mm	**1224460**	1
AMTE-M-H – metal, short design			
	M5	**1206621**	20
	G1/8	**1206622**	20
	G1/4	**1206623**	20
	G3/8	**1206624**	10
	G1/2	**1206625**	10
AMTE-M-LH – metal, long design			
	M3	**1231120**	20
	M5	★ **1205858**	20
	G1/8	★ **1205860**	20
	G1/4	★ **1205861**	20
	G3/8	★ **1205862**	10
	G1/2	★ **1205863**	10
	G3/4	**1205864**	10
	G1	**1205865**	10

Silencers

	Connection	PN	PE
UO – for vacuum generators VN-T2/T3			
	M7	**197582**	1
	G1/8	**197583**	1
	G1/4	**197584**	1
UOM – for vacuum generators VN-T4/T6			
	G1/4	**538432**	1
	G3/8	**538433**	1
	Extension UOMS	**538436**	1
UOS-1 – for soft start/quick exhaust valve MS6-SV			
	G1	**552252**	1
	G1, low design	**1901207**	1
LFU – filter silencer			
	G1/4	**539132**	1
	G3/8	**539133**	1
	G1/2	**10494**	1
	G1	**10495**	1

Air guns

	Connection	PN	PE
LSP-1/4-D – aluminium			
	G1/4	**35528**	1
LSP-1/4-C – polyamide, reinforced			
	G1/4	**184318**	1
LPZ-SD – air gun nozzle with protective air shield			
	M12x1.25	**184321**	1
LPZ-LD – air gun nozzle with noise reduction			
	M12x1.25	**184322**	1
LPZ-RG – air gun nozzle with straight pipe			
	M12x1.25	**565317**	1
LPZ-RB – air gun nozzle with elbow pipe			
	M12x1.25	**565316**	1


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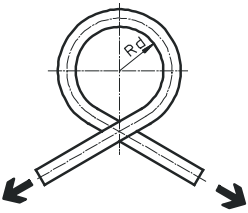


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Measurement methods _____ **308**
Determining the optimum tubing dimensions _____ **309**
Electronic catalogue and design software _____ **310**
Air consumption of cylinders_____ **310**

Measurement methods

Flow-relevant bending radius Rd

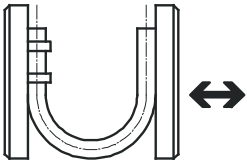


The tubing is bent in the direction of its own curve until the tubing outer diameter is flattened by 5%.
Rd is then calculated mathematically. The flow rate is not reduced until Rd is reached.



Cross section flattened by bending the tube.
d = non-deformed tubing O.D.
d1 = deformed tubing O.D.∅

Minimum bending radius Rmin



The tubing fixed to the base plate is bent until the deformation results in a kink. The measured value is the minimum bending radius Rmin.
This Rmin results in significant reductions in flow rate.

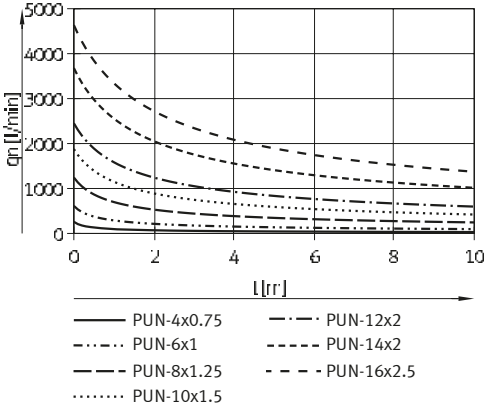
Determining the optimum tubing dimensions

Be sure to select the correct barbed tubing connector when installing an application.
The available cross-section from the air preparation unit to the valve should be as wide as possible to ensure an optimum air supply. This does not result in any loss of air. For the application, on the other hand, the tube cross-section from the valve to the drive should be kept as small as possible. This keeps the air consumption as low as possible. The appropriate tubing diameter depends on the amount of air required by the application.

Install the shortest possible tubing to ensure that the required volume is not lost along the tubing length. The diagram below uses a Festo tubing/fitting combination (QS and PUN) to illustrate how the volumetric flow rate decreases the longer the tube length. Festo push-in fittings do not restrict the nominal diameter of the barbed tubing connector.

The shape of the tube also influences the pressure drop. if a high flow rate is required, then straight tubes are the best choice. Spiral tubing is characterised by its compact design, although friction losses are increased due to the many coils.

Volumetric flow rate qn as a function of tube length l
Example: PUN (P1 = 6 bar, P2 = 5 bar)



Electronic catalogue and design software

With the electronic catalogue you can quickly and easily find the product you need.
Use the integrated product configurator to select the required technical properties step by step to find a valid configuration. Coloured identifications and symbols support you in this process. The product graphics for complex products change dynamically to match your configuration. In the end you can also access all the more detailed product information, such as CAD files, accessories or documentation. Simply save your configuration as a favourite to be able to access frequently required components at any time, or simply save the configuration in the shopping basket.

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Air consumption of cylinders

Determine your system's air consumption quickly and conveniently. Simply enter all the drives and tubing, set the cycle times and working pressure and the air consumption per minute and per day will be calculated for you. The input table and results can be exported directly to Excel.

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