

Push-in fittings CRQS, stainless steel



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Features

Application



Effortless selection of the right fitting. Festo offers a secure solution for every connection. The convenient push-in fitting system includes well over 1000 types of standard and function fittings.

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

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Features

CRQS, the stainless steel fitting

Highest process reliability in every case

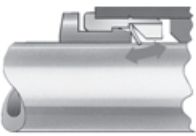
Highest corrosion resistance and maximum robustness: the CRQS stays leak-proof even when subjected to extreme temperature, pressure and resistance.

Unlimited use in the food industry

The push-in fitting CRQS can be used in combination with the plastic tubing PFAN, which is approved for use in the food industry, in all areas of the Food & Packaging industry, e.g. wherever

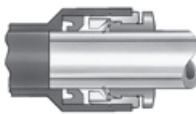
the use of stainless steel is stipulated. Used together, they easily resist all cleaning agents and lubricants and can also be used with highly aggressive acids and lyes.

Simply "plug and work"



The stainless steel retaining claw within the fitting holds the tubing securely without damaging its surface. Vibration and pressure surges are safely absorbed.

Reliably connected



A fluoro elastomer sealing ring guarantees a perfect seal between the standard tubing and the body of the fitting. Standard tubing is suitable for use with compressed air and vacuum.

Orientable



The fitting can be aligned after assembly.

Tube assembly/disassembly

Mounting

The prerequisite for ensuring that the inside seal [3] is securely held and protected against damage is that the tube be cut to straight lengths and deburred.

- 1) Pull out releasing ring [1].
- 2) Insert tubing until the end stop [2].

It is important to ensure that the

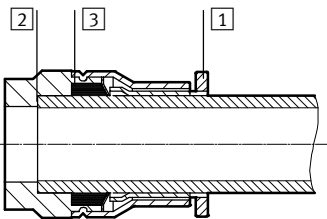
tubing is inserted into the inside seal [3]. Depending on the tolerance position of the tubing and the seal, the contact of the tubing with the seal may be wrongly interpreted as the end stop.

- 3) Check that the tubing connector is securely held by pulling gently on the tube.

Dismantling

- 1) The tubing can be detached easily by pressing down and holding the releasing ring [1]. Remove the tubing carefully from the threaded connector.

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



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Features

Which fitting fits which thread?

Metric thread

- Shorter thread
- Constant installation depth
- Replaceable sealing ring
- Sealing on front face
- Can be re-used a number of times thanks to replaceable sealing ring

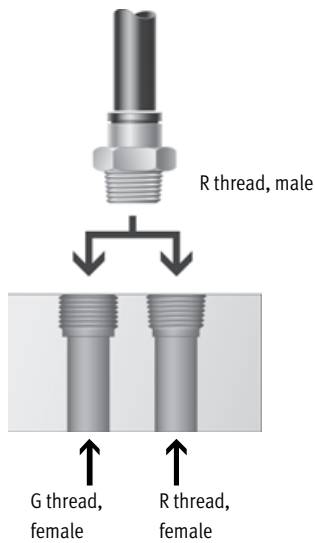
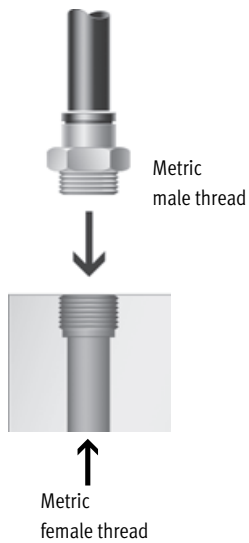
- Sealing is guaranteed as the O-ring sits in a groove that seals against the tube

R thread to EN 10226-1 and ISO 7/1

- Self-sealing thread
- No additional sealing surface required
- Smaller installation dimensions since there is no need for an offset for the sealing surface
- Can be reused up to 5 times

 Note

An appropriate sealing material is required to seal the push-in fitting CRQS with R thread.



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Technical data

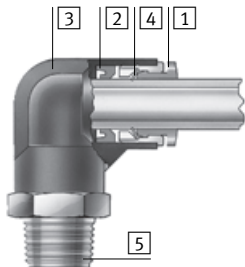
General technical data	
Size	Standard
Design	Push-pull principle
Mounting position	Any
Type of seal on threaded plug	Sealing ring (metric thread only)
Usable lines	PFAN

Operating and environmental conditions	
Operating pressure [bar]	-0.95 ... +10
complete temperature range	
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:--:--] Water as per manufacturer's declaration ²⁾
Note on operating/pilot medium	Operation with lubricated medium possible
Ambient temperature [°C]	-15 ... +120
Corrosion resistance class CRC ¹⁾	4
Food-safe	See supplementary material information ²⁾
Maritime classification	See certificate ²⁾

- 1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.
- 2) Additional information www.festo.com/sp → Certificates.

Materials

Sectional view









Push-in fitting CRQS		
1	Releasing ring	High-alloy stainless steel
2	Tubing seal	FPM
3	Housing	High-alloy stainless steel
4	Tube retaining claw	High-alloy stainless steel
5	Threaded coupling	High-alloy stainless steel
-	Nut (push-in bulkhead connector CRQS only)	High-alloy stainless steel
Note on materials		RoHS-compliant

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Product range overview

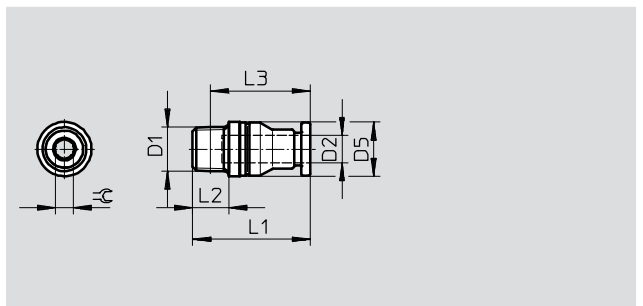
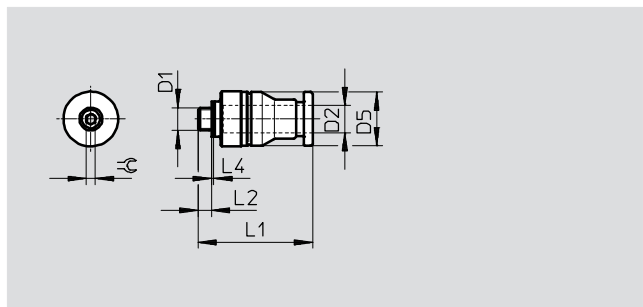


Design	Version	Type	Connection D1			Connection D2		→ Page/ Internet
			M thread	R thread	Tubing O.D.	Tubing O.D.		
Straight design	Push-in fitting – Male thread with internal/external hex							
		CRQS	M5xQ8	–	–	–	4, 6	11
				–	R $\frac{1}{8}$		4, 6, 8	
				–	R $\frac{1}{4}$		6, 8, 10	
				–	R $\frac{3}{8}$		10, 12	
				–	R $\frac{1}{2}$		12, 16	
	Push-in connector							
		CRQS	–	–	–	4	4	13
						6	6	
						8	8	
						10	10	
						12	12	
		CRQS reducing	–	–	–	6	4	13
						8	6	
						10	8	
12						10		
16						12		
Push-in bulkhead connector								
	CRQSS	–	–	–	4	4	13	
					6	6		
					8	8		
					10	10		
					12	12		
L-shape	Push-in L-fitting, orientable – male thread with external hex							
		CRQSL	M5xQ8	–	–	–	4, 6	14
				–	R $\frac{1}{8}$		4, 6, 8	
				–	R $\frac{1}{4}$		6, 8, 10	
				–	R $\frac{3}{8}$		10, 12	
				–	R $\frac{1}{2}$		12, 16	
	Push-in L-connector							
		CRQSL	–	–	–	4	–	15
						6		
						8		
10								
12								
					16			

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Technical data

Push-in fitting CRQS-...-I
Male thread with internal hex



Dimensions and ordering data												
Pneumatic connection		Nominal size	Dimensions [mm]						Weight/ piece	Part No.	Type	PU ¹⁾
Male thread	For tubing O.D.		D5	L1	L2	L3	L4	≈				
D1	D2	[mm]	∅						[g]			
Metric thread with sealing ring												
M5	4	2	10	22.9	3	-	0.5	2	5	132328	CRQS-M5-4-I	1
	6	2	12	25.1	3	-	0.5	2	7.7	132329	CRQS-M5-6-I	1
R thread												
R ¹ / ₈	6	4.1	12	26.1	8	22.2	-	4	8.4	132330	CRQS-1/8-6-I	1
	8	5.1	14	30.4	8	26.5	-	5	12	132331	CRQS-1/8-8-I	1
R ¹ / ₄	8	5.8	14	31.4	11	25.4	-	6	15	132332	CRQS-1/4-8-I	1
	10	5.9	17	36	11	30	-	6	21	132333	CRQS-1/4-10-I	1
R ³ / ₈	10	6	17	34	12	27.7	-	6	24	132334	CRQS-3/8-10-I	1
	12	7.6	20	36.4	12	30.1	-	8	28	132335	CRQS-3/8-12-I	1
R ¹ / ₂	12	8.1	22	39.4	15	31.2	-	8	45	132336	CRQS-1/2-12-I	1
	16	10.1	24	46.7	15	38.6	-	12	47	132337	CRQS-1/2-16-I	1

1) Packaging unit