

Push-in fittings CQ, for push-fit piping systems

FESTO



Push-in fittings CQ, for push-fit piping systems

Key features

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General information

- Suitable for polyamide pipes PQ-PA and aluminium pipes PQ-AL
Outer Ø 12, 15, 18, 22 and 28 mm
→ Internet: pq
- Suitable for polyamide tubing PAN, PAN-L and polyurethane tubing PUN
Outer Ø 12 mm
→ Internet: pan, pun
- For compressed air, vacuum or liquids.
- The pipes/tubes are held externally. This ensures that there is no reduction of nominal size.
- Simple, fast installation:
 - cut to length
 - insert
 - and you're done!
- The pipes/tubes can be assembled and dismantled without tools.
- Quick release connection.
- Can be re-used a number of times.
- The releasing tool CQO for size 12 ... 22 is provided for applications requiring frequent dismantling or where the push-in fittings are difficult to access.
- The retaining ring CQSR available as an accessory prevents inadvertent disconnection of the tubing or pipe. Size 28 features an integrated retaining device.
- Screw-in thread cylindrical to ISO 228/1, sealed with chamfered O-ring, size 28 with PVC flat seal.
- No additional thread sealing compound required.
- Plug connector materials approved for use by the FDA (Food and Drug Administration).
Exception: Push-in fitting CQ-1-28-H
- Minimal weight as opposed to steel pipe and die-cast fittings.

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Technical data

Operating and environmental conditions				
	Push-in fitting	Push-in connector	Water separator	Distributor
Operating pressure [bar]	−0.95 ... +15			
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:-:-]			
Note on operating/pilot medium	Operation with lubricated medium possible			
Room temperature [°C]	−25 ... +75			
Temperature of medium [°C]	−		−25 ... +75	
Corrosion resistance class CRC ¹⁾	2			
Food industry approval	FDA			−
Approval	Germanischer Lloyd			

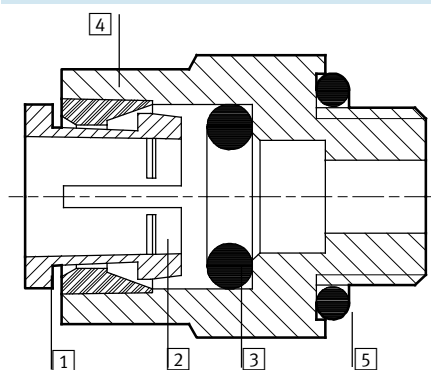
1) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

Operating pressure [bar]							
	Push-in fitting					Water separator	
	CQ...-12	CQ...-15	CQ...-18	CQ...-22	CQ...-28	CQA-22	CQA-28
Room temperature [°C]							
−20	−0.95 ... 15				−0.95 ... 10	−0.95 ... 15	−0.95 ... 10
+23	−0.95 ... 15				−0.95 ... 10	−0.95 ... 15	−0.95 ... 10
+70	−0.95 ... 7					−0.95 ... 7	−
Temperature of medium [°C]							
1 ... 23	10				10	−	
1 ... 65	10				7	−	

Materials

Sectional view



	CQ...	CQ-1-28H
1 Release ring	Polyacetal	Polyacetal
2 Tube retaining claw	High-alloy stainless steel	High-alloy stainless steel
3 O-ring	Nitrile rubber	Nitrile rubber
4 Housing	Polyacetal	Polyacetal
5 Connector thread seal	Nitrile rubber	Polyvinyl chloride
Material note	Contains paint wetting impairment substances	

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Product range overview

Design	Version	Type	Connection D1		Connection D2			→ Page/ Internet
			G thread	Tube/piping O.D.	Push-in sleeve Ø	Tube/piping O.D.	Push-in sleeve Ø	
Straight design	Push-in fitting – Male thread							
		CQ	G3/8	–	–	12	–	6
			G1/2			12, 15, 18		
			G3/4			22		
	Push-in fitting with sleeve							
		CQ-...H	G3/8	–	–	12, 15	–	6
			G1/2			12, 15, 18, 22		
			G3/4			22		
			G1			28		
	Push-in connector							
		CQ	–	12	–	–	–	7
				15				
18								
22								
28								
Push-in connector with sleeve								
	CQ-...H	–	12	–	–	15	7	
			15			18		
			15			22		
			18			22		
			22			28		
Push-in sleeve								
	CQH-...-QS	–	–	15	–	12	8	
				18		16		
				22		16		
Blanking plug								
	CQC-...H	–	–	12	–	–	8	
				15				
				18				
				22				
				28				
L-shape	Push-in L-connector							
		CQL	–	12	–	–	–	9
				15				
				18				
				22				
				28				
T-shape	Push-in T-connector							
		CQT	–	12	–	–	–	9
				15				
				18				
				22				
				28				
		CQT Reducing	–	18	–	15	–	9
				22		15		

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Product range overview

Design	Version	Type	Connection D1		Connection D2			→ Page/ Internet
			G thread	Tube/piping O.D.	Push-in sleeve Ø	Tube/piping O.D.	Push-in sleeve Ø	
Straight design	Distributor							
		CQD	–					10
	Water separator							
		CQA	–	22 28	–	–	–	10
	Retaining ring							
		CQSR	–					11
	Releasing tool							
	CQO	–					11	

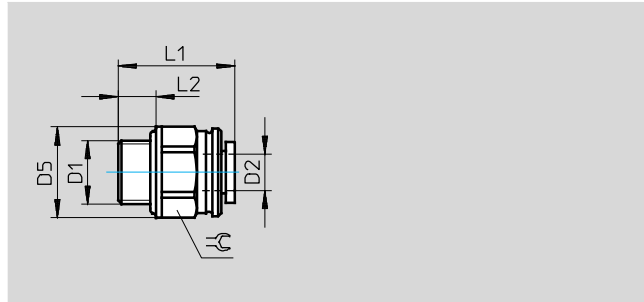
Push-in fittings CQ, for push-fit piping systems

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Technical data

Push-in fitting CQ
with sealing ring

Material:
Polyacetal

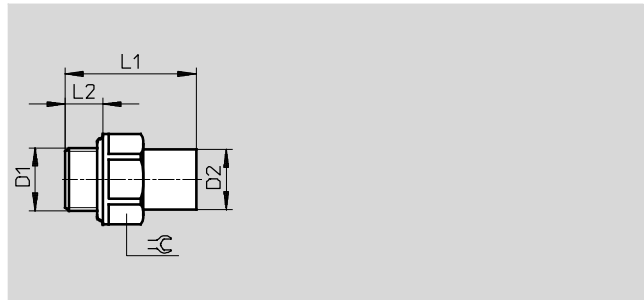


Dimensions and ordering data										
Connection	Nominal size	Pipe/tubing O.D.	D5	L1	L2	≡	Weight/piece	Part No.	Type	PU*
D1	[mm]	D2					[g]			
G3/8	8.65	12	26.4	30.6	9.3	24	8	177 682	CQ-3/8-12	1
G1/2	8.65	12	29.8	34	12.5	27	12	177 683	CQ-1/2-12	1
	12	15	29.7	38	12.5	27	14	177 684	CQ-1/2-15	1
	12.7	18	34	54.8	12.5	–	24	177 685	CQ-1/2-18	1
G3/4	17	22	40	60.7	13.4	–	36	177 686	CQ-3/4-22	1

* Packaging unit quantity

Push-in fitting CQ-...H
with push-in sleeve and sealing ring

Material:
Polyacetal
(G1 connection: Brass)



Dimensions and ordering data									
Connection	Nominal size	Push-in sleeve ⌀	L1	L2	⌀	Weight/piece	Part No.	Type	PU*
D1	[mm]	D2				[g]			
G $\frac{3}{8}$	8.65	12	39.8	9.3	24	4	177 705	CQ- $\frac{3}{8}$ -12H	1
	9.4	15	43.3	12.5	27	10	177 707	CQ- $\frac{3}{8}$ -15H	1
G $\frac{1}{2}$	8.65	12	54.4	11.3	22	8	177 706	CQ- $\frac{1}{2}$ -12H	1
	10	15	57.9	14.5	27	14	177 708	CQ- $\frac{1}{2}$ -15H	1
	12.7	18	62.9	14.5	27	18	177 709	CQ- $\frac{1}{2}$ -18H	1
	12.15	22	64.9	14.5	27	18	177 710	CQ- $\frac{1}{2}$ -22H	1
G $\frac{3}{4}$	17	22	69	17	37	28	177 711	CQ- $\frac{3}{4}$ -22H	1
G1	23	28	80	15	36	200	194 589	CQ-1-28H	1

* Packaging unit quantity

Push-in fittings CQ, for push-fit piping systems

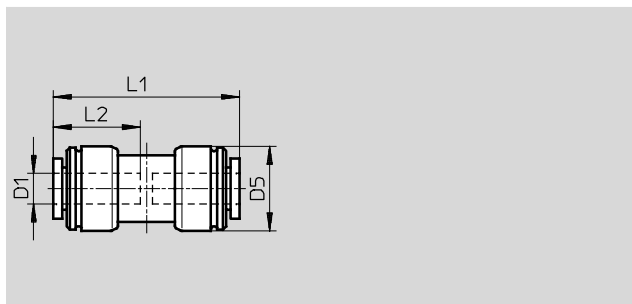
FESTO

Technical data

Push-in connector CQ

Material:

Polyacetal



Dimensions and ordering data								
Pipe/tubing O.D. D1	Nominal size [mm]	D5 Ø ±0.5	L1	L2 ±1	Weight/piece [g]	Part No.	Type	PU*
12	8.65	23	54.4 ±0.5	25	16	177 695	CQ-12	1
15	12	26.8	57.8 ±0.5	27.5	18	177 696	CQ-15	1
18	16	31.1	64.1 ±0.5	30.5	26	177 697	CQ-18	1
22	19.2	35.5	69.6 ±0.5	33	36	177 698	CQ-22	1
28	24.9	49.5	91 ±1	44	90	194 586	CQ-28	1

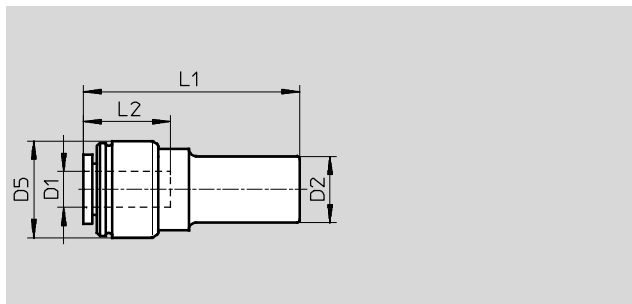
* Packaging unit quantity

Push-in connector CQ-...H

with push-in sleeve

Material:

Polyacetal



Dimensions and ordering data								
Pipe/tubing O.D. D1	Nominal size [mm]	Push-in sleeve Ø D2	D5 Ø ±0.5	L1	L2 ±1	Weight/piece [g]	Part No.	Type
12	9.15	15	27.5	60.2 ±0.5	25	12	177 701	CQ-15H-12
15	12.15	18	26.8	70.5 ±0.5	27.5	16	177 702	CQ-18H-15
15	12.15	22	26.8	71.5 ±0.5	27.5	16	177 703	CQ-22H-15
18	17.3	22	31.1	70.7 ±0.5	30.5	22	177 704	CQ-22H-18
22	19.2	28	35.5	81.8 ±1	33	34	196 231	CQ-28H-22

* Packaging unit quantity

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Technical data

Push-in sleeve CQH-...-QS

reducer for connecting CQ to QS

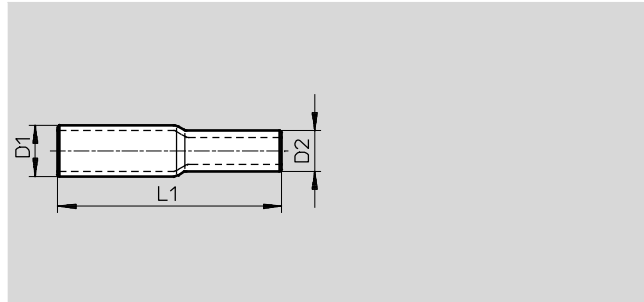
Material:

Polyacetal

Contains paint wetting impairment substances

Approval:

Germanischer Lloyd



Dimensions and ordering data						
Push-in sleeve $\varnothing$ D1	Push-in sleeve $\varnothing$ D2	Nominal size [mm]	L1	Weight/piece [g]	Part No. Type	PU*
15	12	8	66.5	4	177 721 CQH-15-QS-12	1
18	16	11	71.5	8	177 722 CQH-18-QS-16	1
22	16	11	80	10	177 723 CQH-22-QS-16	1

* Packaging unit quantity

Blanking plug CQC-...H

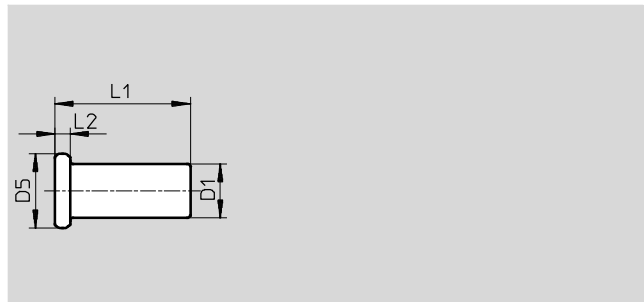
Material:

Polyacetal

Contains paint wetting impairment substances

Approval:

Germanischer Lloyd



Dimensions and ordering data						
Push-in sleeve $\varnothing$ D1	D5 $\varnothing$	L1	L2	Weight/piece [g]	Part No. Type	PU*
12 ± 0.15	21.6	38.8 ± 0.5	4.7	4	177 712 CQC-12H	1
15 ± 0.15	25	45 ± 0.3	5	6	177 713 CQC-15H	1
18 ± 0.15	30	41.5 ± 0.3	4	8	177 714 CQC-18H	1
22 ± 0.15	32	45 ± 0.3	4.7	10	177 715 CQC-22H	1
28 ± 0.15	40	56	4	22	194 590 CQC-28H	1

* Packaging unit quantity

Push-in fittings CQ, for push-fit piping systems

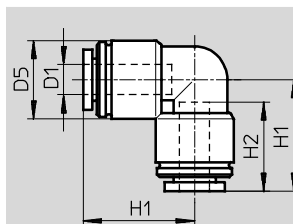
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Technical data

Push-in L-connector CQL

Material:

Polyacetal



Dimensions and ordering data								
Pipe/tubing O.D. D1	Nominal size [mm]	D5 Ø ±0.5	H1	H2 ±1	Weight/piece [g]	Part No.	Type	PU*
12	8.65	23	32.2 ±0.5	25	16	177 691	CQL-12	1
15	12	26.8	37.2 ±0.5	27.5	20	177 692	CQL-15	1
18	16	31.1	44.1 ±0.5	30.5	32	177 693	CQL-18	1
22	19.2	35.5	48.3 ±0.5	33	46	177 694	CQL-22	1
28	24.9	49.2	61.4 ±1	44	106	194 587	CQL-28	1

* Packaging unit quantity

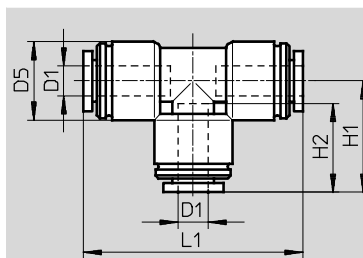
Push-in T-connector CQT

Outlets: 2

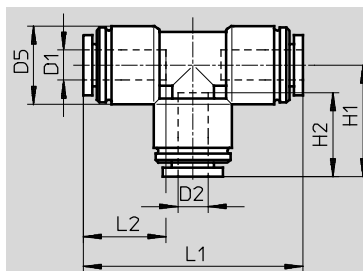
Supply lines: 1

Material:

Polyacetal



Reducing



Dimensions and ordering data											
Pipe/tubing O.D. D1	Nominal size [mm]	Pipe/tubing O.D. D2	D5 Ø	H1	H2 ±1	L1	L2	Weight/ piece [g]	Part No.	Type	PU*
12	8.65	–	23	32.2 ±0.5	25	64.4 ±0.5	–	26	177 687	CQT-12	1
15	12	–	26.8	37.2 ±0.5	27.5	74.4 ±0.5	–	30	177 688	CQT-15	1
18	16	–	31.1	44.1 ±0.5	30.5	88.2 ±0.5	–	46	177 689	CQT-18	1
22	19.2	–	35.5	48.3 ±0.5	33	96.6 ±0.5	–	66	177 690	CQT-22	1
28	24.9	–	49.2	61.4 ±1	44	121 ±1	–	152	194 588	CQT-28	1
Reducing											
18	12	15	31.1	37.9	27.5	84.5	30.5	42	177 699	CQT-18-15	1
22	12,15	15	35.5	41.6	27.5	89.6	33	56	177 700	CQT-22-15	1

* Packaging unit quantity

Push-in fittings CQ, for push-fit piping systems

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Technical data

Distributor CQD

with 3 blanking plugs

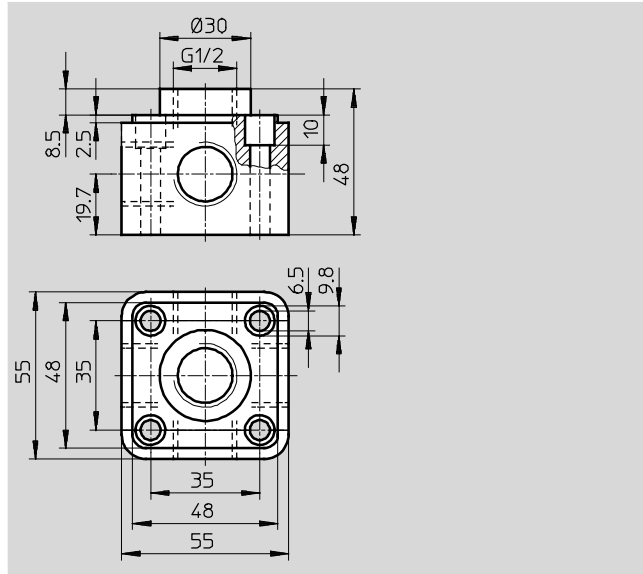
Outlets: 2

Supply lines: 1

Material:

Polyacetal

Contains paint wetting impairment substances



Dimensions and ordering data				
Connection	Weight/piece	Part No.	Type	PU*
D1	[g]			
G1/2	181	177 717	CQD-12/15/18/22	1

* Packaging unit quantity

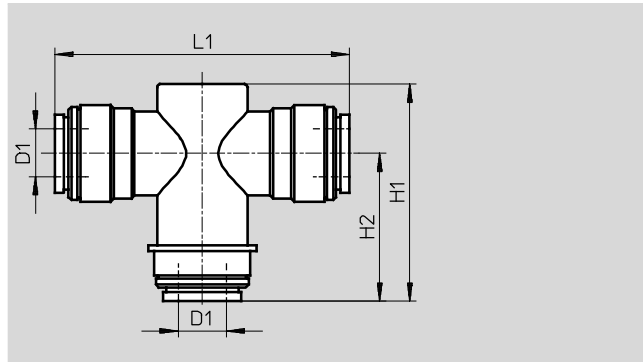
Water separator CQA

The water separator has been designed for air flows up to 300 l/min. The condensate remains in the ring line and does not enter the branch line vertically downwards.

Material:

Polyacetal

Contains paint wetting impairment substances



Dimensions and ordering data							
Pipe/tubing	Nominal size	H1	H2	L1	Weight/piece	Part No.	Type
O.D.	D1				[g]		
	[mm]						
22	12	71.8	48.3	97.8	76	177 716	CQA-22

* Packaging unit quantity

Push-in fittings CQ, for push-fit piping systems

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Technical data

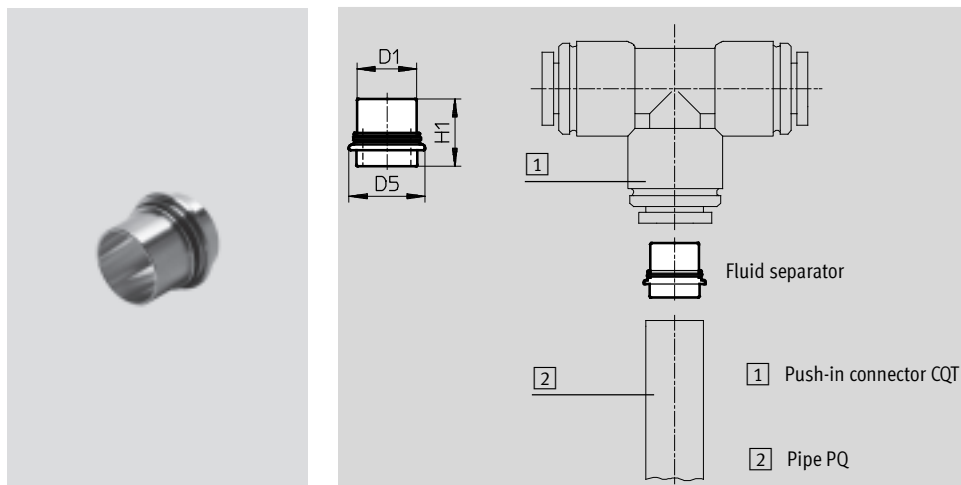
Water separator CQA

A water separator is created through the introduction of a fluid separator CQA-28 into a standard push-in T-connector. The fluid separator consists of a brass insert with an O-ring. The short section of the brass insert is pushed into the PA or aluminium pipe. This assembly is then joined to the push-in T-connector.

Material:

Brass

Contains paint wetting impairment substances



Dimensions and ordering data							
Pipe/tubing O.D.	Nominal size	D5	H1	Weight/piece	Part No.	Type	PU*
D1	[mm]			[g]			
22	20	28	24.8	18	196 984	CQA-28	1

* Packaging unit quantity

Retaining ring CQSR

The retaining ring prevents inadvertent disconnection of the tubing or pipe.

Material:

Polyacetal

Contains paint wetting impairment substances



Dimensions and ordering data				
Pipe/tubing O.D.	Weight/piece	Part No.	Type	PU*
D1	[g]			
12	1	175 727	CQSR-12	10
15	0.5	175 728	CQSR-15	10
18	0.5	175 729	CQSR-18	10
22	0.4	175 730	CQSR-22	10

* Packaging unit quantity

Push-in fittings CQ, for push-fit piping systems

Technical data

FESTO

Releasing tool CQ0

Material:

Polyacetal

Contains paint wetting impairment substances

Approval:

Germanischer Lloyd



Dimensions and ordering data				
Pipe/tubing O.D. D1	Weight/piece [g]	Part No.	Type	PU*
15	2	175 725	CQ0-15	1
22	4	175 726	CQ0-22	1

* Packaging unit quantity