

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



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

Key features

FESTO



### General information

- Suitable for polyamide pipes PQ-PA and aluminium pipes PQ-AL  
O.D. 12, 15, 18, 22 and 28 mm  
→ Internet: pq
- Suitable for polyamide tubing PAN and polyurethane tubing PUN  
O.D. 12 mm  
→ Internet: pan, pun
- 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, which is 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) as per manufacturer's declaration. Exception: Push-in fitting CQ-1-28-H, distributor CQD-12/15/18/22 and fluid separator CQA-28
- Minimal weight compared to steel pipe and die-cast fittings.

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

Technical data

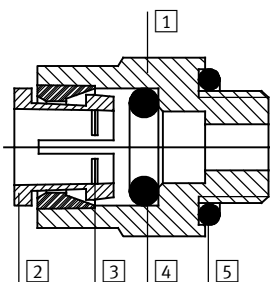
General technical data	
Design	Push-pull principle
Mounting position	Any (fluid separator CQA-28: vertical)
Type of seal on threaded plug	Sealing ring

Operating and environmental conditions		
	Size 12/15/18/22	Size 28
Temperature-dependent operating pressure [bar]	-0.95 ... +15	-0.95 ... +10
operating pressure [bar]	-0.95 ... +7 at +70 °C	-0.95 ... +7 at +70 °C
Operating medium	Compressed air according to ISO 8573-1:2010 [7:-:-]	
Note on operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)	
Ambient temperature [°C]	-25 ... +75	
Temperature of medium [°C]	-25 ... +75	
Corrosion resistance class CRC <sup>1)</sup>	2	
Food industry approval	As per manufacturer's declaration (exception: push-in fitting CQ-1-28H, distributor CQD-12/15/18/22 and fluid separator CQA-28)	
Certification	Germanischer Lloyd	

1) Corrosion resistance class 2 according 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.

## Materials










Sectional view



CQ	
1	Housing POM (push-in fitting CQ-1-28H/separator CQA-28: brass)
2	Releasing ring POM
3	Tube retaining claw High-alloy stainless steel
4	O-ring NBR
5	Connector thread seal NBR (push-in fitting CQ-1-28H: PVC)
Note on materials	
RoHS-compliant	
Contains PWIS (paint-wetting impairment substances)	





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

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	<b>Push-in fitting – Male thread</b>							
		CQ	G $\frac{3}{8}$	–	–	12	–	6
			G $\frac{1}{2}$			12, 15, 18		
			G $\frac{3}{4}$			22		
	<b>Push-in fitting with sleeve</b>							
		CQ-...H	G $\frac{3}{8}$	–	–	12, 15	–	6
			G $\frac{1}{2}$			12, 15, 18, 22		
			G $\frac{3}{4}$			22		
			G1			28		
	<b>Push-in connector</b>							
		CQ	–	–	12	–	–	7
					15			
18								
22								
28								
<b>Push-in connector with sleeve</b>								
	CQ-...H	–	–	12	–	15	7	
				15		18		
				15		22		
				18		22		
				22		28		
<b>Push-in sleeve</b>								
	CQH-...-QS	–	–	15	–	12	8	
				18		16		
				22		16		
<b>Blanking plug</b>								
	CQC-...H	–	–	12	–	–	8	
				15				
				18				
				22				
				28				
L-shape	<b>Push-in L-connector</b>							
		CQL	–	12	–	–	–	9
				15				
				18				
				22				
28								
T-shape	<b>Push-in T-connector</b>							
		CQT	–	12	–	–	–	9
				15				
				18				
				22				
				28				
		CQT Reducing	–	18	–	15	–	9
22				15				

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

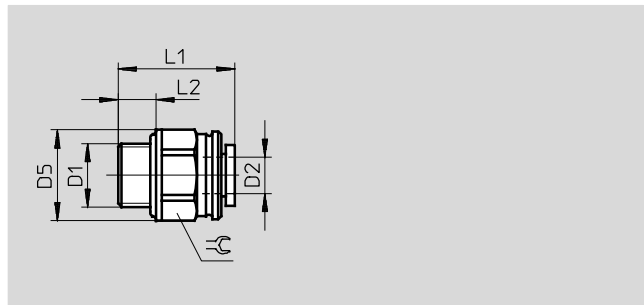
Product range overview

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	<b>Distributor</b>							
		CQD	-					10
	<b>Water separator</b>							
		CQA	-	22 28	-	-	-	10
	<b>Retaining ring</b>							
	CQSR	-					11	
<b>Releasing tool</b>								
	CQO	-					11	

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

Technical data

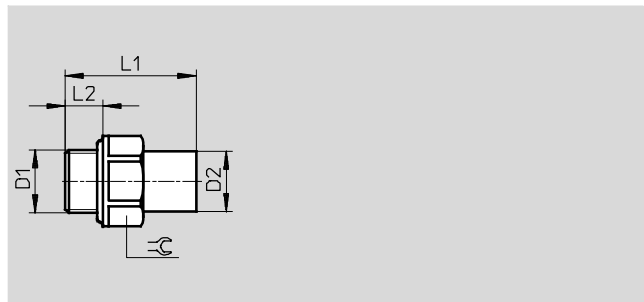
**Push-in fitting CQ**  
with sealing ring



Dimensions and ordering data											
Male thread connection D1	Nominal size [mm]	Pipe/tubing O.D. D2	D5	L1	L2	⌀	Max. tightening torque [Nm]	Weight/piece [g]	Part No.	Type	PU*
G $\frac{3}{8}$	8.65	12	26.4	30.6	9.3	24	3	8	177682	CQ- $\frac{3}{8}$ -12	1
G $\frac{1}{2}$	8.65	12	29.8	34	12.5	27	3	12	177683	CQ- $\frac{1}{2}$ -12	1
	12	15	29.7	38	12.5	27	3	14	177684	CQ- $\frac{1}{2}$ -15	1
	12.7	18	34	54.8	12.5	-	3	24	177685	CQ- $\frac{1}{2}$ -18	1
G $\frac{3}{4}$	17	22	40	60.7	13.4	-	4	36	177686	CQ- $\frac{3}{4}$ -22	1

\* Packaging unit quantity

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



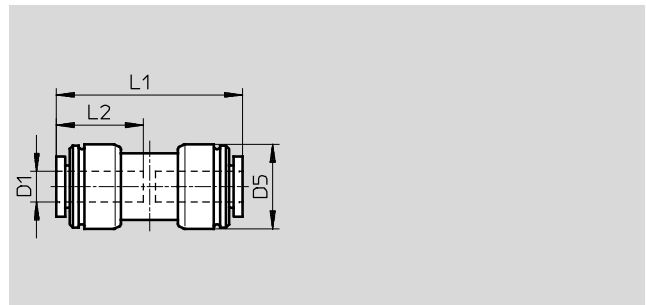
Dimensions and ordering data											
Male thread connection D1	Nominal size [mm]	Push-in sleeve $\varnothing$ D2	L1	L2	⌀	Max. tightening torque [Nm]	Weight/piece [g]	Part No.	Type	PU*	
G $\frac{3}{8}$	8.65	12	39.8	9.3	24	3	4	177705	CQ- $\frac{3}{8}$ -12H	1	
	9.4	15	43.3	12.5	27	3	10	177707	CQ- $\frac{3}{8}$ -15H	1	
G $\frac{1}{2}$	8.65	12	54.4	11.3	22	3	8	177706	CQ- $\frac{1}{2}$ -12H	1	
	10	15	57.9	14.5	27	3	14	177708	CQ- $\frac{1}{2}$ -15H	1	
	12.7	18	62.9	14.5	27	3	18	177709	CQ- $\frac{1}{2}$ -18H	1	
	12.15	22	64.9	14.5	27	3	18	177710	CQ- $\frac{1}{2}$ -22H	1	
G $\frac{3}{4}$	17	22	69	17	37	4	28	177711	CQ- $\frac{3}{4}$ -22H	1	
G1	23	28	80	15	36	-	200	194589	CQ-1-28H	1	

\* Packaging unit quantity

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

Technical data

## Push-in connector CQ

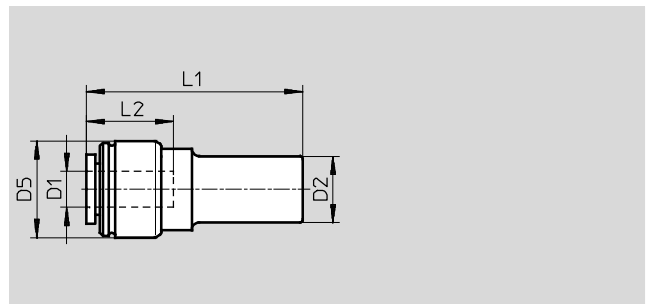


Dimensions and ordering data								
Pipe/tubing	Nominal size	D5	L1	L2	Weight/piece	Part No.	Type	PU*
O.D.		∅						
D1	[mm]	+0.5		+1	[g]			
12	8.65	23	54.4 ±0.5	25	16	177695	CQ-12	1
15	12	26.8	57.8 ±0.5	27.5	18	177696	CQ-15	1
18	16	31.1	64.1 ±0.5	30.5	26	177697	CQ-18	1
22	19.2	35.5	69.6 ±0.5	33	36	177698	CQ-22	1
28	24.9	49.5	91 ±1	44	90	194586	CQ-28	1

\* Packaging unit quantity

## Push-in connector CQ-...H

with push-in sleeve



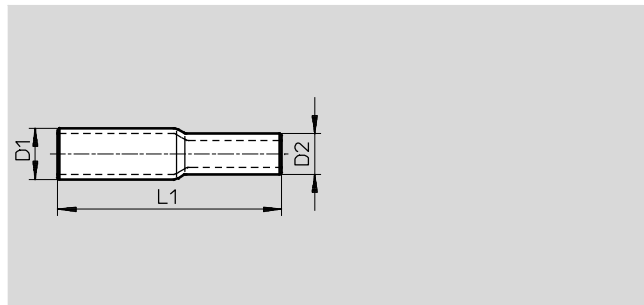
Dimensions and ordering data									
Pipe/tubing	Nominal size	Push-in sleeve ∅	D5	L1	L2	Weight/piece	Part No.	Type	PU*
O.D.		D2	∅						
D1	[mm]		+0.5		+1	[g]			
12	9.15	15	27.5	60.2 ±0.5	25	12	177701	CQ-15H-12	1
15	12.15	18	26.8	70.5 ±0.5	27.5	16	177702	CQ-18H-15	1
15	12.15	22	26.8	71.5 ±0.5	27.5	16	177703	CQ-22H-15	1
18	17.3	22	31.1	70.7 ±0.5	30.5	22	177704	CQ-22H-18	1
22	19.2	28	35.5	81.8 ±1	33	34	196231	CQ-28H-22	1

\* Packaging unit quantity

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

Technical data

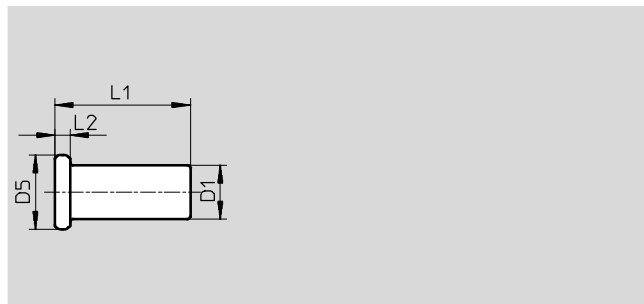
**Push-in sleeve CQH-...-QS**  
for connecting CQ to QS



Dimensions and ordering data							
Push-in sleeve $\varnothing$ D1	Nominal size [mm]	Push-in sleeve $\varnothing$ D2	L1	Weight/piece [g]	Part No.	Type	PU*
15	8	12	66.5	4	177721	CQH-15-QS-12	1
18	11	16	71.5	8	177722	CQH-18-QS-16	1
22	11	16	80	10	177723	CQH-22-QS-16	1

\* Packaging unit quantity

**Blanking plug CQC-...H**



Dimensions and ordering data							
Push-in sleeve $\varnothing$ D1	D5 $\varnothing$	L1	L2	Weight/piece [g]	Part No.	Type	PU*
12 $\pm 0.15$	21.6	38.8 $\pm 0.5$	4.7	4	177712	CQC-12H	1
15 $\pm 0.15$	25	45 $\pm 0.3$	5	6	177713	CQC-15H	1
18 $\pm 0.15$	30	41.5 $\pm 0.3$	4	8	177714	CQC-18H	1
22 $\pm 0.15$	32	45 $\pm 0.3$	4.7	10	177715	CQC-22H	1
28 $\pm 0.15$	40	56	4	22	194590	CQC-28H	1

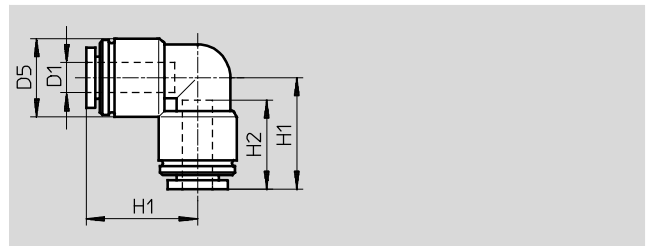
\* Packaging unit quantity



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

Technical data

## Push-in L-connector CQL

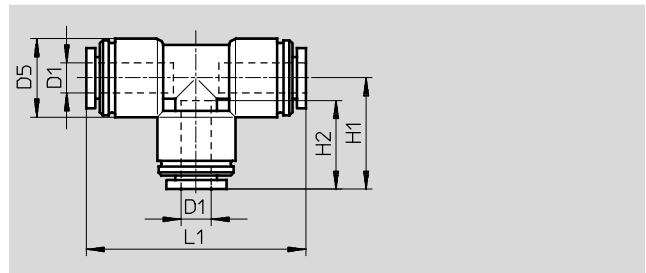


Dimensions and ordering data								
Pipe/tubing O.D. D1	Nominal size [mm]	D5 $\varnothing$ +0.5	H1	H2 $\pm 1$	Weight/piece [g]	Part No.	Type	PU*
12	8.65	23	32.2 $\pm 0.5$	25	16	177691	CQL-12	1
15	12	26.8	37.2 $\pm 0.5$	27.5	20	177692	CQL-15	1
18	16	31.1	44.1 $\pm 0.5$	30.5	32	177693	CQL-18	1
22	19.2	35.5	48.3 $\pm 0.5$	33	46	177694	CQL-22	1
28	24.9	49.2	61.4 $\pm 1$	44	106	194587	CQL-28	1

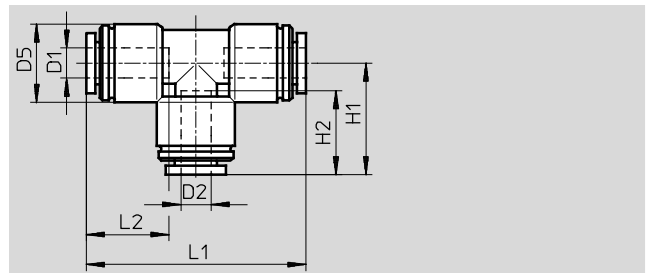
\* Packaging unit quantity

## Push-in T-connector CQT

Outlets: 2  
Supply lines: 1



## Reducing



Dimensions and ordering data											
Pipe/tubing O.D. D1	Nominal size [mm]	Pipe/tubing O.D. D2	D5 $\varnothing$ +0.5	H1	H2 $\pm 1$	L1	L2	Weight/piece [g]	Part No.	Type	PU*
12	8.65	-	23	32.2 $\pm 0.5$	25	64.4 $\pm 0.5$	-	26	177687	CQT-12	1
15	12	-	26.8	37.2 $\pm 0.5$	27.5	74.4 $\pm 0.5$	-	30	177688	CQT-15	1
18	16	-	31.1	44.1 $\pm 0.5$	30.5	88.2 $\pm 0.5$	-	46	177689	CQT-18	1
22	19.2	-	35.5	48.3 $\pm 0.5$	33	96.6 $\pm 0.5$	-	66	177690	CQT-22	1
28	24.9	-	49.2	61.4 $\pm 1$	44	121 $\pm 1$	-	152	194588	CQT-28	1
<b>Reducing</b>											
18	12	15	31.1	37.9	27.5	84.5	30.5	42	177699	CQT-18-15	1
22	12.15	15	35.5	41.6	27.5	89.6	33	56	177700	CQT-22-15	1

\* Packaging unit quantity

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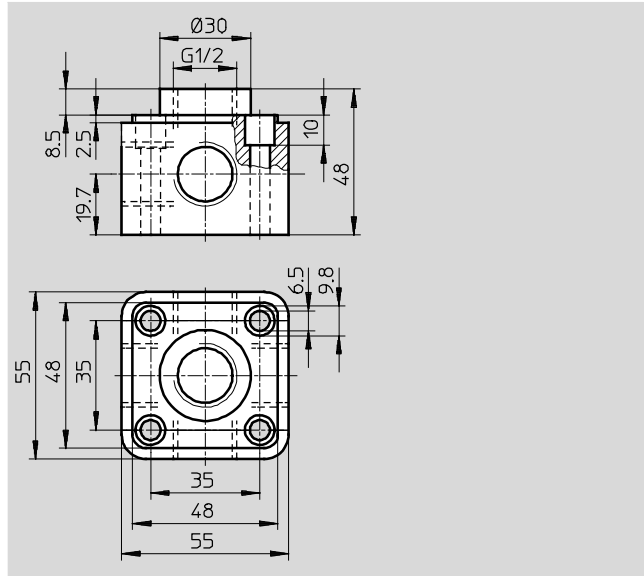
Technical data

## Distributor CQD

with 3 blanking plugs

Outlets: 4

Supply lines: 1

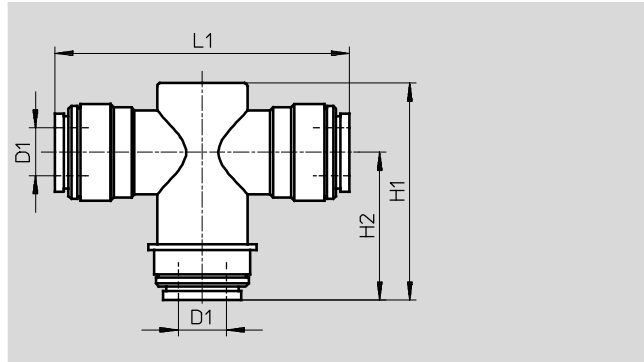


Dimensions and ordering data		Weight/piece	Part No.	Type	PU*
Female thread connection	Nominal size				
D1	[mm]	[g]			
G1/2	18.6	181	177717	CQD-12/15/18/22	1

\* Packaging unit quantity

## Fluid separator CQA

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



Dimensions and ordering data		H1	H2	L1	Weight/piece	Part No.	Type	PU*
Pipe/tubing O.D.	Nominal size							
D1	[mm]				[g]			
22	12	71.8	48.3	97.8	76	177716	CQA-22	1

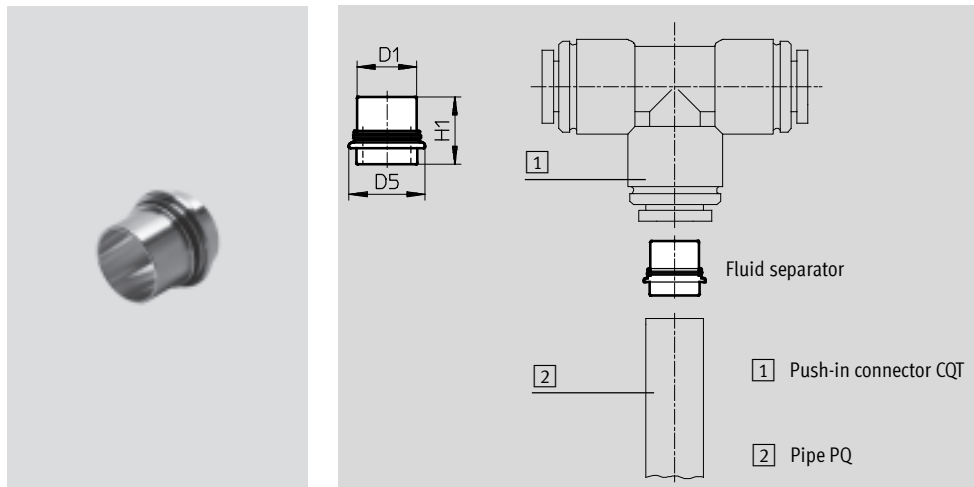
\* Packaging unit quantity

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

Technical data

## Fluid separator CQA

A water separator can be created by inserting a fluid separator CQA-28 into a push-in connector CQT. The fluid separator consists of a brass insert with an O-ring. The short section of the brass insert is pushed into the polyamide or aluminium pipe. This combination is then joined to the push-in connector CQT.



Dimensions and ordering data							
Push-in sleeve $\varnothing$	Nominal size	D5	H1	Weight/piece	Part No.	Type	PU*
D1	[mm]			[g]			
22	20	28	24.8	18	196984	CQA-28	1

\* Packaging unit quantity

## Retaining ring CQSR

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



Dimensions and ordering data				
Tubing O.D.	Weight/piece	Part No.	Type	PU*
D1	[g]			
12	1	175727	CQSR-12	10
15	0.5	175728	CQSR-15	10
18	0.5	175729	CQSR-18	10
22	0.4	175730	CQSR-22	10

\* Packaging unit quantity

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

Technical data

FESTO

Releasing tool CQ0



Dimensions and ordering data				
Tubing O.D. D1	Weight/piece [g]	Part No.	Type	PU*
15	2	175725	CQ0-15	1
22	4	175726	CQ0-22	1

\* Packaging unit quantity