

Push-in fittings CQ, for pipes

FESTO



Key features



General

- Suitable for polyamide piping PQ-PA and aluminium piping 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 piping/tubing is held on the outside. This ensures that the nominal width is not reduced.
- Simple, fast installation:
 - cut to length
 - insert
 - finished
- Tubing/piping can be assembled and disassembled without tools.
- Quick release connection.
- Can be re-used a number of times.
- Sizes 12 ... 22 have a releasing tool CQO for the frequent disassembly of the push-in fittings or installing them in difficult-to-access areas.
- The retaining ring CQSR is available as an accessory and prevents the tubing/pipe connection coming loose unintentionally. The retaining device is integrated for size 28.
- Screw-in thread, cylindrical to ISO 228/1, sealed with mounted O-ring, for size 28 with PVC flat sealing ring.
- No additional thread-sealing material required.
- Lower weight than steel pipe and cast fittings

Datasheet

General technical data	
Design	Push-pull principle
Mounting position	Any (fluid separator CQA-28: vertical)
Type of seal on the screwed trunnion	Sealing ring
Operating and environmental conditions	
	Size 12/15/18/22 Size 28
Operating pressure for full temperature range [bar]	-0.95 ... +7
Temperature-dependent operating pressure [bar]	-0.95 ... +15 -0.95 ... +10
Operating medium	Compressed air to ISO 8573-1:2010 [7:-;-]
Note on the operating/pilot medium	Lubricated operation possible (required in further operation)
Ambient temperature [°C]	-25 ... +70
Corrosion resistance class CRC ¹⁾	2
Food-safe	See supplementary material information ²⁾

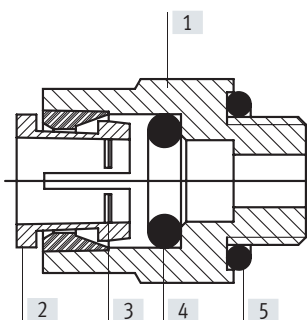
1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with a normal industrial environment.

2) Additional information: www.festo.com/catalogue/... → Support/Downloads.










Materials

Sectional view







CQ		
[1]	Housing	POM (push-in fitting CQ-1-28H/separator CQA-28: brass)
[2]	Releasing ring	POM
[3]	Tube clamping segment	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 paint-wetting impairment substances

Product range overview

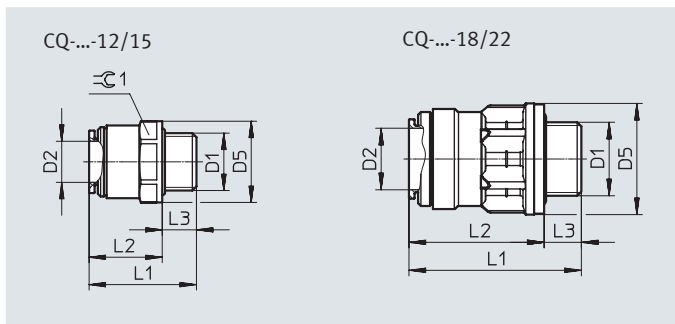
Design	Version	Type	Connection D1			Connection D2		→ Page
			G thread	Tubing O.D.	Push-in sleeve ø	Tubing O.D.	Push-in sleeve ø	
Straight	Push-in fitting – Male thread							
		CQ	G3/8	–	–	12	–	6
			G1/2			12, 15, 18		
			G3/4			22		
	Push-in fitting with push-in sleeve							
		CQ-...H	G3/8	–	–	12, 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 push-in 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	–	–	–	10
				15				
	18							
	22							
	28							
	CQT Reducing	–	18	–	15	–	10	
			22		15			

Product range overview

Design	Version	Type	Connection D1			Connection D2		→ Page
			G thread	Tubing O.D.	Push-in sleeve \varnothing	Tubing O.D.	Push-in sleeve \varnothing	
Straight	Distributor							
		CQD	-					11
	Fluid separator							
		CQA	-	22 28	-	-	-	11
	Retaining ring							
	CQSR	-					12	
Releasing tool								
	CQO	-					13	

Datasheet

Push-in fitting CQ With sealing ring

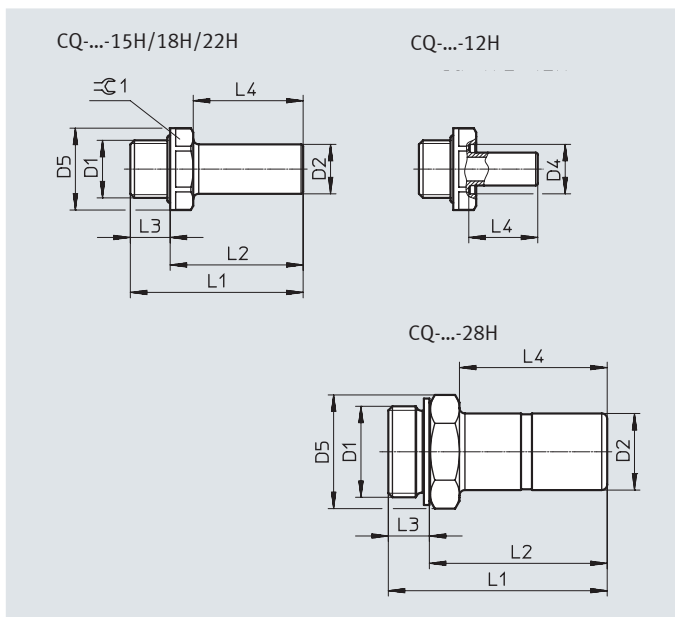


Dimensions and ordering data

Connection for male thread D1	Nominal width [mm]	Pipe and tubing O.D. D2	D5 ∅ ±0.5	L1	L2 ±0.5	L3	$\approx \varnothing 1$	Nominal tightening torque [Nm]	Weight/piece [g]	Part no.	Type	PU*
G3/8	8.65	12	26.4	30.6	21.3	9.3	24	2.5 ±10%	8	177682	CQ-3/8-12	1
G1/2	8.65	12	29.8	34	21.5	12.5	27	2.5 ±10%	12	177683	CQ-1/2-12	1
	12	15	29.7	38	25.5	12.5	27	2.5 ±10%	14	177684	CQ-1/2-15	1
	12.7	18	34	54.8	42.3	12.5	-	2.5 ±10%	24	177685	CQ-1/2-18	1
G3/4	17	22	40	60.7	47.3	13.4	-	3 ±20%	36	177686	CQ-3/4-22	1

* Packaging unit

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



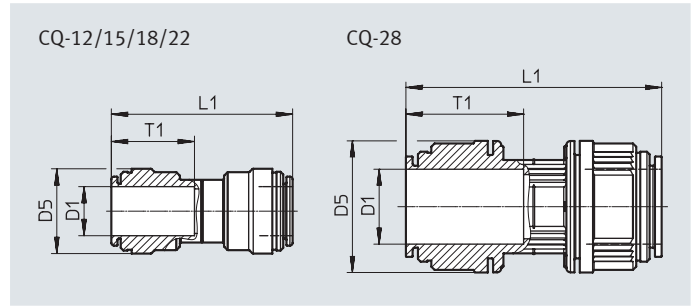
Dimensions and ordering data

Connection for male thread D1	Nominal width [mm]	Push-in sleeve ∅ D2	D4 ∅	D5 ∅ ±0.5	L1	L2 ±0.5	L3	L4	$\approx \varnothing 1$	Nominal tightening torque [Nm]	Weight/piece [g]	Part no.	Type	PU*
G3/8	8.65	12	18	26.4	39.8	30.5	9.3	25.1	24	2.5 ±10%	4	177705	CQ-3/8-12H	1
	9.4	15	-	24	54.4	43.1	11.3	35	22	2.5 ±10%	10	177707	CQ-3/8-15H	1
G1/2	8.65	12	18	29.8	43.3	30.8	12.5	25.1	27	2.5 ±10%	8	177706	CQ-1/2-12H	1
	10	15	-	29.8	57.9	43.4	14.5	35	27	2.5 ±10%	14	177708	CQ-1/2-15H	1
	12.7	18	-	29.8	62.9	48.4	14.5	40	27	2.5 ±10%	18	177709	CQ-1/2-18H	1
	12.15	22	-	29.8	64.9	50.4	14.5	42	27	2.5 ±10%	18	177710	CQ-1/2-22H	1
G3/4	17	22	-	40	69	52	17	42	37	3 ±20%	28	177711	CQ-3/4-22H	1
G1	23	28	-	41.6	80	65	15	54	36	62.5 ±20%	200	194589	CQ-1-28H	1

* Packaging unit

Datasheet

Push-in connector CQ

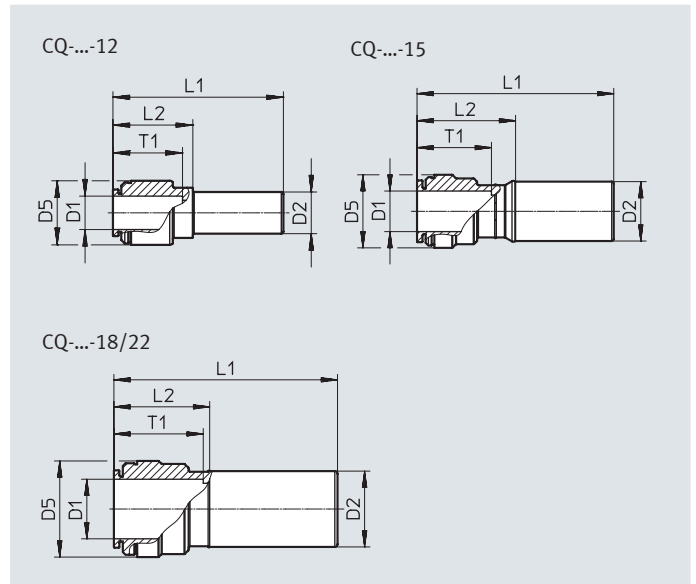


Dimensions and ordering data		D5	L1	T1	Weight/piece	Part no.	Type	PU*
Pipe and tubing O.D.	Nominal size	∅			[g]			
D1	[mm]	±0.5		±1				
12	8.65	23	54.4 ±0.5	25	16	177695	CQ-12	1
15	12	26.8	57.8 ±0.5	27.5	18	177696	CQ-15	1
18	16	31.1	64.1 ±0.5	30.5	26	177697	CQ-18	1
22	19.2	35.5	69.1 ±0.5	33	36	177698	CQ-22	1
28	24.9	49.5	91 ±1	44	90	194586	CQ-28	1

* Packaging unit

Push-in connector CQ-...H

With push-in sleeve



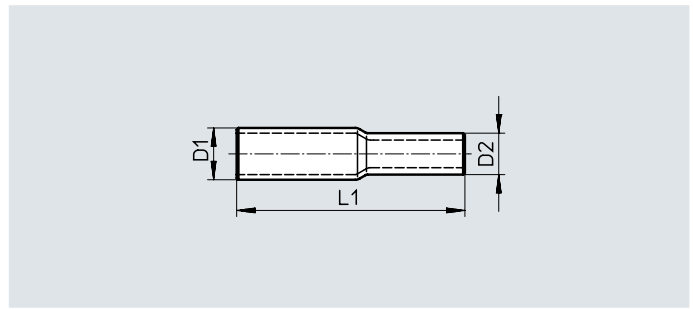
Dimensions and ordering data			D5	L1	L2	T1	Weight/piece	Part no.	Type	PU*
Pipe and tubing O.D.	Nominal width	Push-in sleeve ∅	∅				[g]			
D1	[mm]	D2	±0.5			±1				
12	9.15	15	23.1	60.2 ±0.5	27.7	25	12	177701	CQ-15H-12	1
15	12.15	18	26.8	70.5 ±0.5	34.4	27.5	16	177702	CQ-18H-15	1
15	12.15	22	26.8	71.5 ±0.5	35	27.5	16	177703	CQ-22H-15	1
18	17.3	22	31.1	70.7 ±0.5	34.6	30.5	22	177704	CQ-22H-18	1
22	19.2	28	35.5	81.8 ±1	34.6	33	34	196231	CQ-28H-22	1

* Packaging unit

Datasheet

Push-in sleeve CQH- ...-QS

For connecting CQ to QS

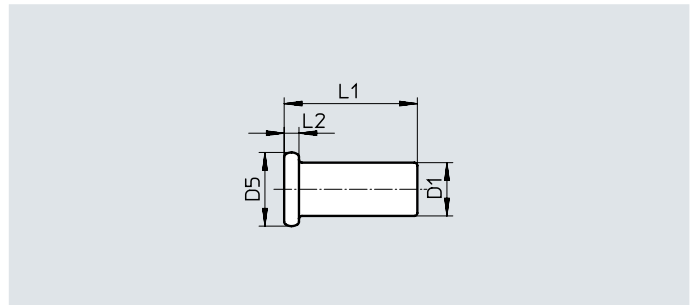


Dimensions and ordering data

Push-in sleeve ø D1	Nominal width [mm]	Push-in sleeve ø 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

Blanking plug CQC- ...H



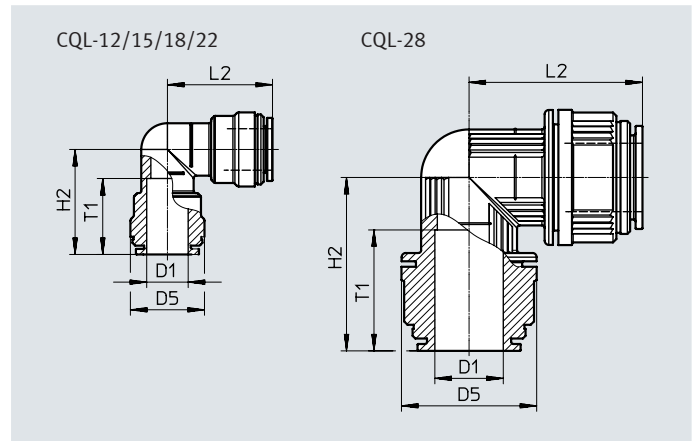
Dimensions and ordering data

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

* Packaging unit

Datasheet

Push-in L-connector CQL



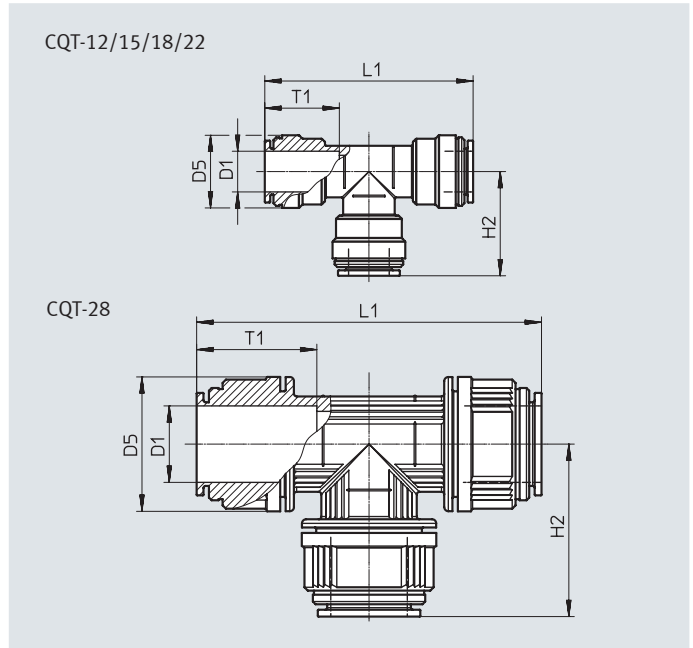
Dimensions and ordering data										
Pipe and tubing O.D.	Nominal size	D5 ∅	H2	L2	T1	Weight/ piece [g]	Part no.	Type	PU*	
D1	[mm]				±1					
12	8.65	23.1	32.2 ±0.5	32.2 ±0.5	25	16	177691	CQL-12	1	
15	12	26.8	37.2 ±0.5	37.2 ±0.5	27.5	20	177692	CQL-15	1	
18	16	31.1	44.1 ±0.5	44.1 ±0.5	30.5	32	177693	CQL-18	1	
22	19.2	35.5	48.3 ±0.5	48.3 ±0.5	33	46	177694	CQL-22	1	
28	24.9	49.2	61.4 ±1	61.4 ±1	44	106	194587	CQL-28	1	

* Packaging unit

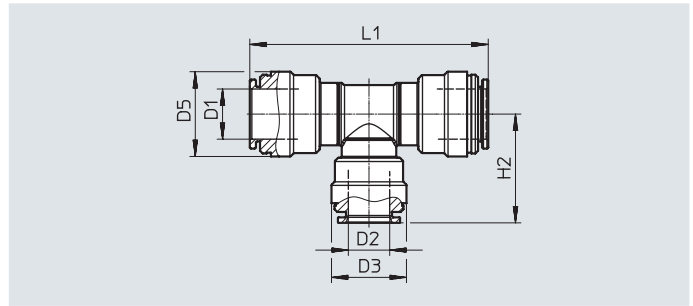
Datasheet

Push-in T-connector CQT

Outlets: 2
Supply lines: 1



Reducing



Dimensions and ordering data

Pipe and tubing O.D. D1	Nominal width [mm]	Pipe and tubing O.D. D2	D3 ∅	D5 ∅	H2	L1	T1 ±1	Weight/piece [g]	Part no.	Type	PU*
12	8.65	–	–	23	32.2 ±0.5	64.4 ±0.5	25	26	177687	CQT-12	1
15	12	–	–	26.8	37.2 ±0.5	74.4 ±0.5	27.5	30	177688	CQT-15	1
18	16	–	–	31.1	44.1 ±0.5	88.2 ±0.5	30.5	46	177689	CQT-18	1
22	19.2	–	–	35.5	48.3 ±0.5	96.6 ±0.5	33	66	177690	CQT-22	1
28	24.9	–	–	49.2	61.4 ±1	121 ±1	44	152	194588	CQT-28	1
Reducing											
18	12	15	27.5	31.1	37.9 ±0.5	84.5 ±0.5	–	42	177699	CQT-18-15	1
22	12.15	15	28.5	35.6	41.6 ±0.5	89.6 ±0.5	–	56	177700	CQT-22-15	1

* Packaging unit

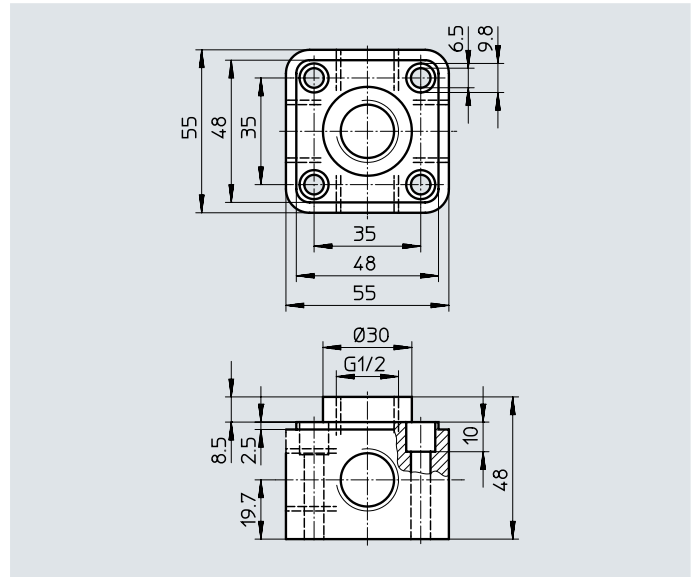
Datasheet

Distributor CQD

With 3 blanking plugs

Outlets: 4

Supply lines: 1



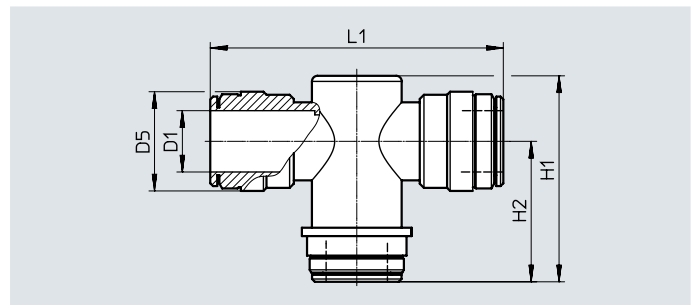
Dimensions and ordering data

Connection for female thread	Nominal size	Nominal tightening torque	Weight/piece	Part no.	Type	PU*
D1	[mm]	[Nm]	[g]			
G1/2	18.6	2.5 ±10%	181	177717	CQD-1 2/15/1 8/22	1

* Packaging unit

Fluid separator CQA

The fluid separator is designed for air flows of up to 300 l/min. Any condensate remains in the ring line and does not pass into the branch line that is routed vertically downward.



Dimensions and ordering data

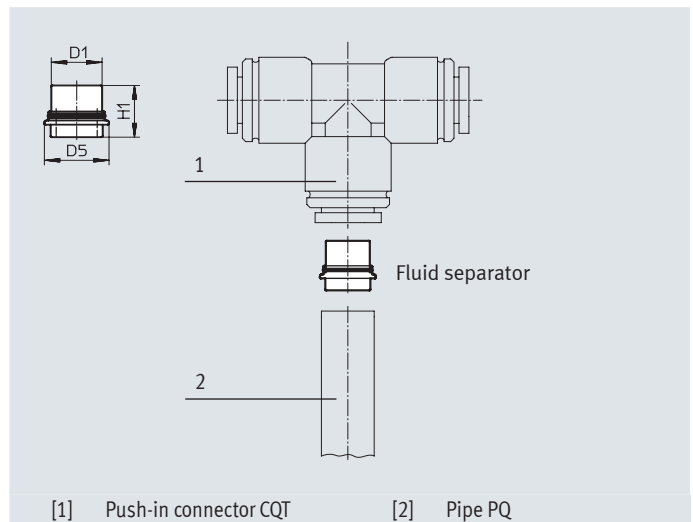
Pipe and tubing O.D.	Nominal size	D5 ø	H1	H2	L1	Weight/piece	Part no.	Type	PU*
D1	[mm]		±0.5	±0.5	±0.5	[g]			
22	12	35.6	71.8	48.3	97.8	76	177716	CQA-22	1

* Packaging unit

Datasheet

Fluid separator CQA

The fluid separator CQA-28 is combined with the push-in connector CQT to form a water separator. The fluid separator comprises a brass insert with an O-ring. The short part of the brass insert is pushed into the polyamide or aluminium pipe. This combination is then assembled with the push-in connector CQT to form a unit.



[1] Push-in connector CQT

[2] Pipe PQ

Dimensions and ordering data

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

* Packaging unit

Retaining ring CQSR

The retaining ring prevents the tubing/pipe connection coming loose unintentionally



Dimensions and ordering data

Tubing O.D. D1	Weight/piece [g]	Part no.	Type	PU*
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

Datasheet

Releasing tool CQO



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

* Packaging unit

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