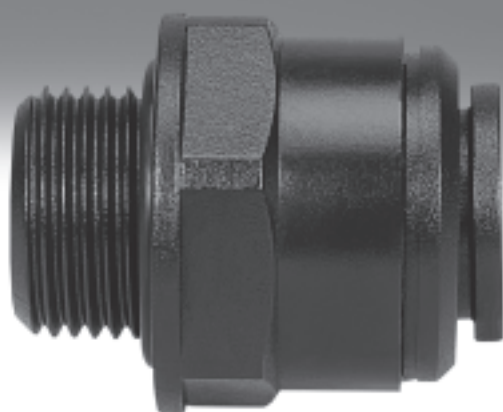


Push-in fittings CQ, for push-fit piping systems

FESTO



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

FESTO

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		

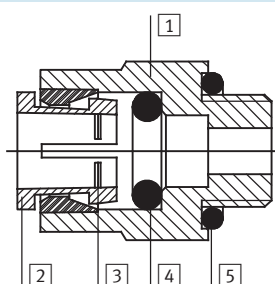
Operating and environmental conditions			
		Size 12/15/18/22	Size 28
Temperature-dependent	[bar]	−0.95 ... +15	−0.95 ... +10
operating pressure	[bar]	−0.95 ... +7 at +70 °C	−0.95 ... +7 at +70 °C
Operating medium	Compressed air according to ISO 8573-1:2010 [7:−:−]		
Note on operating/pilot medium	Lubricated 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 ¹⁾	2		
Food industry approval	As per manufacturer's declaration (exception: push-in fitting CQ-1-28H, distributor QCD-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
2	Releasing ring
3	Tube retaining claw
4	O-ring
5	Connector thread seal
Note on materials	
RoHS-compliant	
Contains PWIS (paint-wetting impairment substances)	

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

Product range overview





FESTO

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		

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

FESTO

Product range overview

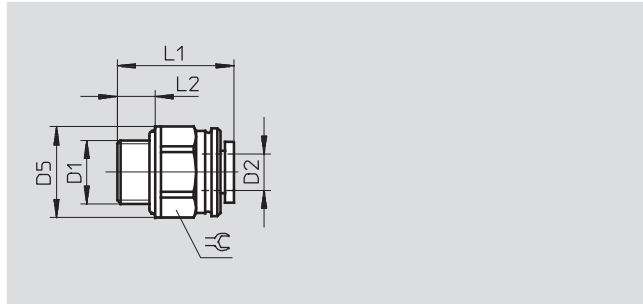
Design	Version	Type	Connection D1		Connection D2			→ Page/ Internet
			G thread	Tube/piping O.D.	Push-in sleeve Ø	Tube/piping O.D.	Push-in sleeve Ø	
Straight design	Distributor							
		CQD	–					10
	Water separator							
		CQA	–	22 28	–	–	–	10
	Retaining ring							
		CQSR	–					11
	Releasing tool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

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

Technical data

FESTO

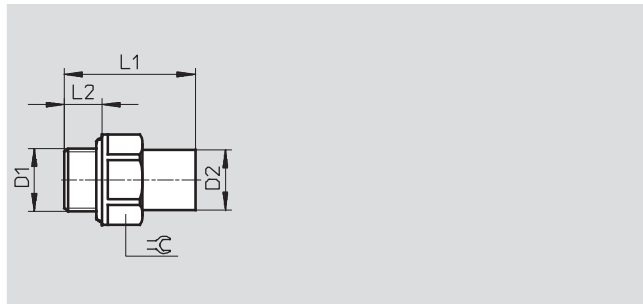
Push-in fitting CQ with sealing ring



Dimensions and ordering data											
Male thread connection	Nominal size	Pipe/tubing O.D.	D5	L1	L2	≡	Max. tightening torque [Nm]	Weight/piece [g]	Part No.	Type	PU*
D1	[mm]	D2									
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	Nominal size	Push-in sleeve Ø	L1	L2	≡	Max. tightening torque	Weight/piece	Part No.	Type	PU*
D1	[mm]	D2				[Nm]	[g]			
G3/8	8.65	12	39.8	9.3	24	3	4	177705	CQ-3/8-12H	1
	9.4	15	43.3	12.5	27	3	10	177707	CQ-3/8-15H	1
G1/2	8.65	12	54.4	11.3	22	3	8	177706	CQ-1/2-12H	1
	10	15	57.9	14.5	27	3	14	177708	CQ-1/2-15H	1
	12.7	18	62.9	14.5	27	3	18	177709	CQ-1/2-18H	1
	12.15	22	64.9	14.5	27	3	18	177710	CQ-1/2-22H	1
G3/4	17	22	69	17	37	4	28	177711	CQ-3/4-22H	1
G1	23	28	80	15	36	–	200	194589	CQ-1-28H	1

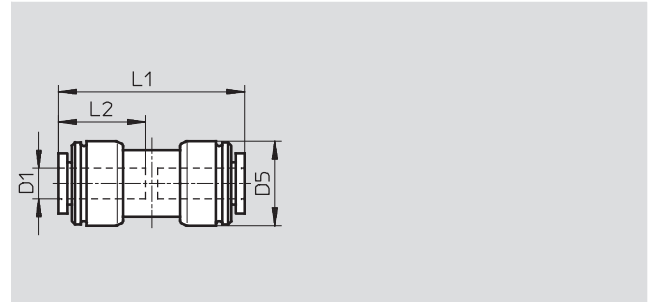
* Packaging unit quantity

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

FESTO

Technical data

Push-in connector CQ

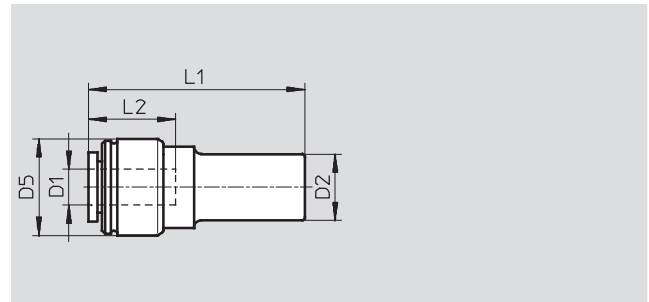


Dimensions and ordering data								
Pipe/tubing O.D.	Nominal size	D5 Ø	L1	L2	Weight/piece	Part No.	Type	PU*
D1	[mm]	±0.5		±1	[g]			
12	8.65	23	54.4 ±0.5	25	16	177695	CQ-12	1
15	12	26.8	57.8 ±0.5	27.5	18	177696	CQ-15	1
18	16	31.1	64.1 ±0.5	30.5	26	177697	CQ-18	1
22	19.2	35.5	69.6 ±0.5	33	36	177698	CQ-22	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 O.D.	Nominal size	Push-in sleeve Ø	D5 Ø	L1	L2	Weight/piece	Part No.	Type
D1	[mm]	D2	±0.5		±1	[g]		PU*
12	9.15	15	27.5	60.2 ±0.5	25	12	177701	CQ-15H-12
15	12.15	18	26.8	70.5 ±0.5	27.5	16	177702	CQ-18H-15
15	12.15	22	26.8	71.5 ±0.5	27.5	16	177703	CQ-22H-15
18	17.3	22	31.1	70.7 ±0.5	30.5	22	177704	CQ-22H-18
22	19.2	28	35.5	81.8 ±1	33	34	196231	CQ-28H-22

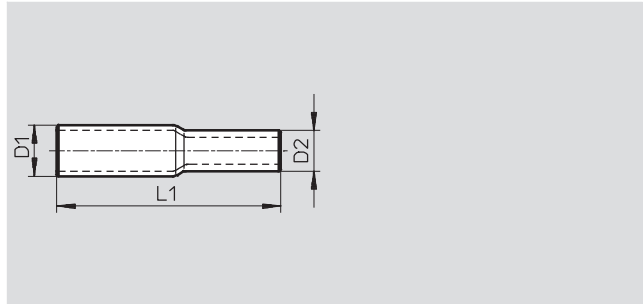
* Packaging unit quantity

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

FESTO

Technical data

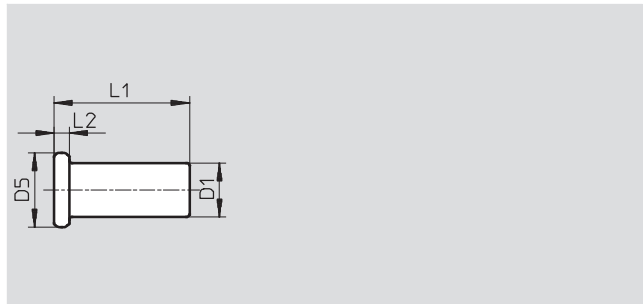
Push-in sleeve CQH-...-QS
for connecting CQ to QS



Dimensions and ordering data							
Push-in sleeve Ø D1	Nominal size [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 quantity

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

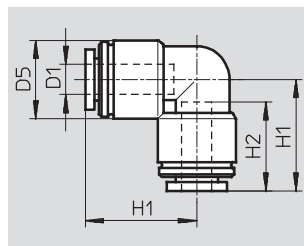
* Packaging unit quantity

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

FESTO

Technical data

Push-in L-connector CQL



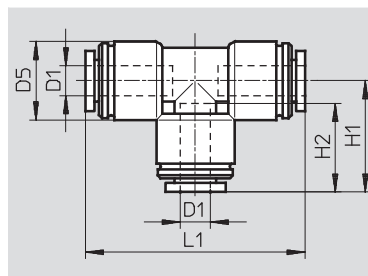
Dimensions and ordering data								
Pipe/tubing O.D.	Nominal size	D5 Ø	H1	H2	Weight/piece [g]	Part No.	Type	PU*
D1	[mm]	±0.5		±1				
12	8.65	23	32.2 ±0.5	25	16	177691	CQL-12	1
15	12	26.8	37.2 ±0.5	27.5	20	177692	CQL-15	1
18	16	31.1	44.1 ±0.5	30.5	32	177693	CQL-18	1
22	19.2	35.5	48.3 ±0.5	33	46	177694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

* Packaging unit quantity

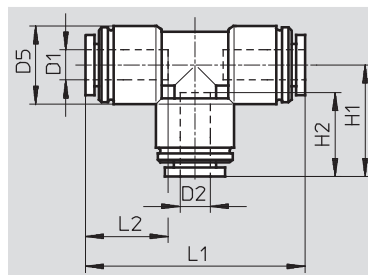
Push-in T-connector CQT

Outlets: 2

Supply lines: 1



Reducing



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

* Packaging unit quantity

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

FESTO

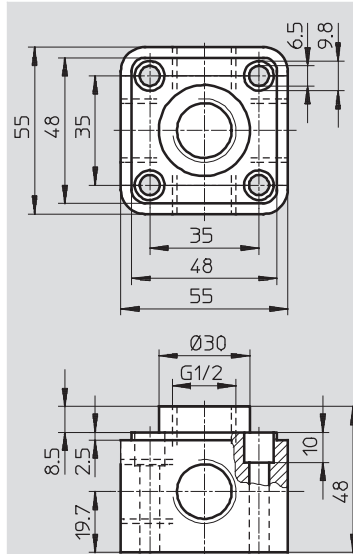
Technical data

Distributor CQD

with 3 blanking plugs

Outlets: 4

Supply lines: 1

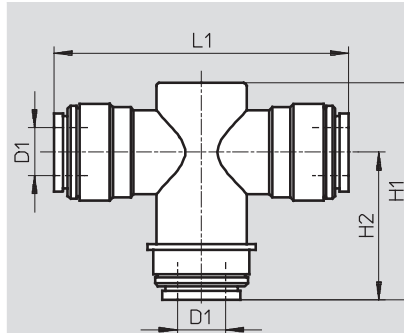


Dimensions and ordering data					
Female thread connection	Nominal size	Weight/piece	Part No.	Type	PU*
D1	[mm]	[g]			
G1/2	18.6	181	177717	CQD-12/15/18/22	1

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

* Packaging unit quantity

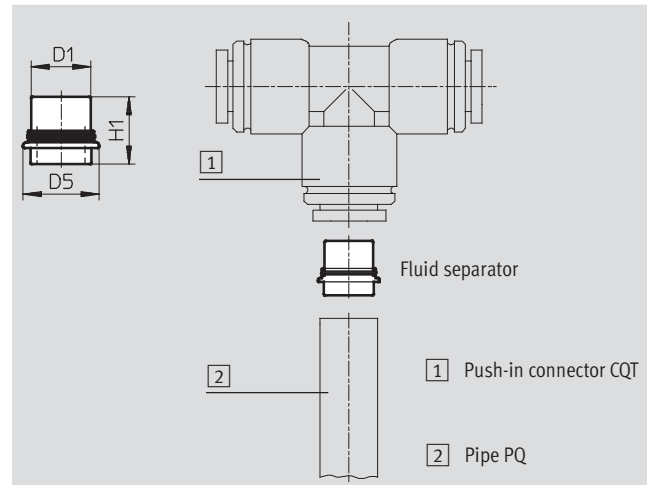
Push-in fittings CQ, for push-fit piping systems

FESTO

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 Ø	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

Product Range and Company Overview

A Complete Suite of Automation Services

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



Custom Automation Components
Complete custom engineered solutions



Custom Control Cabinets
Comprehensive engineering support
and on-site services



Complete Systems
Shipment, stocking and storage services

The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



Electromechanical
Electromechanical actuators, motors,
controllers & drives



Pneumatics
Pneumatic linear and rotary actuators,
valves, and air supply



PLCs and I/O Devices
PLC's, operator interfaces, sensors
and I/O devices

Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



© Copyright 2008, Festo Corporation. While every effort is made to ensure that all dimensions and specifications are correct, Festo cannot guarantee that publications are completely free of any error, in particular typing or printing errors. Accordingly, Festo cannot be held responsible for the same. For Liability and Warranty conditions, refer to our "Terms and Conditions of Sale", available from your local Festo office. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of Festo. All technical data subject to change according to technical update.



Printed on recycled paper at New Horizon Graphic, Inc., FSC certified as an environmentally friendly printing plant.

Festo North America

Festo Regional Contact Center

5300 Explorer Drive
Mississauga, Ontario L4W 5G4
Canada

USA Customers:

For ordering assistance,

Call: 1.800.99.FESTO (1.800.993.3786)

Fax: 1.800.96.FESTO (1.800.963.3786)

Email: customer.service@us.festo.com

For technical support,

Call: 1.866.GO.FESTO (1.866.463.3786)

Fax: 1.800.96.FESTO (1.800.963.3786)

Email: product.support@us.festo.com

Canadian Customers:

Call: 1.877.GO.FESTO (1.877.463.3786)

Fax: 1.877.FX.FESTO (1.877.393.3786)

Email: festo.canada@ca.festo.com

USA Headquarters

Festo Corporation
395 Moreland Road
P.O. Box 18023
Hauppauge, NY 11788, USA
www.festo.com/us

USA Sales Offices

Appleton

North 922 Tower View Drive, Suite N
Greenville, WI 54942, USA

Boston

120 Presidential Way, Suite 330
Woburn, MA 01801, USA

Chicago

1441 East Business Center Drive
Mt. Prospect, IL 60056, USA

Dallas

1825 Lakeway Drive, Suite 600
Lewisville, TX 75057, USA

Detroit – Automotive Engineering Center

2601 Cambridge Court, Suite 320
Auburn Hills, MI 48326, USA

New York

395 Moreland Road
Hauppauge, NY 11788, USA

Silicon Valley

4935 Southfront Road, Suite F
Livermore, CA 94550, USA

United States



USA Headquarters, East: Festo Corp., 395 Moreland Road, Hauppauge, NY 11788

Phone: 1.631.435.0800; Fax: 1.631.435.8026;

Email: info@festo-usa.com

www.festo.com/us

Canada



Headquarters: Festo Inc., 5300 Explorer Drive, Mississauga, Ontario L4W 5G4

Phone: 1.905.624.9000; Fax: 1.905.624.9001;

Email: festo.canada@ca.festo.com

www.festo.ca

Mexico



Headquarters: Festo Pneumatic, S.A., Av. Ceylán 3, Col. Tequesquahuac,
54020 Tlalneapantla, Edo. de México

Phone: 011 52 [55] 53 21 66 00; Fax: 011 52 [55] 53 21 66 65;

Email: festo.mexico@mx.festo.com

www.festo.com/mx

Central USA

Festo Corporation
1441 East Business
Center Drive
Mt. Prospect, IL 60056, USA
Phone: 1.847.759.2600
Fax: 1.847.768.9480



Western USA

Festo Corporation
4935 Southfront Road,
Suite F
Livermore, CA 94550, USA
Phone: 1.925.371.1099
Fax: 1.925.245.1286



Festo Worldwide

Argentina Australia Austria Belarus Belgium Brazil Bulgaria Canada Chile China Colombia Croatia Czech Republic Denmark
Estonia Finland France Germany Great Britain Greece Hong Kong Hungary India Indonesia Iran Ireland Israel Italy Japan Latvia
Lithuania Malaysia Mexico Netherlands New Zealand Norway Peru Philippines Poland Romania Russia Serbia Singapore
Slovakia Slovenia South Africa South Korea Spain Sweden Switzerland Taiwan Thailand Turkey Ukraine United States Venezuela

www.festo.com