

FESTO

Selected products

Your partner for automation technology

First edition



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Selected products















Your partner for automation technology

First edition

Selected products – Your partner for automation technology

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Wide range of industry segments? One competent partner.

FESTO

Festo – Your partner to the food and packaging industry



- From continuous processes and food and splash zones to end-of-line packaging
- Expertise in food safety
- Joint engineering projects
- Creating synergies – everything from a single source
- Clean Design products: corrosion-resistant and easy-to-clean

Festo – Your partner for water technology



- Added value in process automation for plant operators, engineering firms and system integrators
- Optimised process costs
- Reduced complexity
- Increased process reliability
- Individual automation solutions, economical, reliable and sturdy!

Festo – Your partner to the biotech/pharmaceutical industry



- Reduced total cost of ownership, greater productivity, increased flexibility across the entire process chain
- Expertise in all production processes such as:
 - Production of APIs
 - Precision chemistry
 - R&D
 - Highly sterile filling processes

Wide range of industry segments? One competent partner.

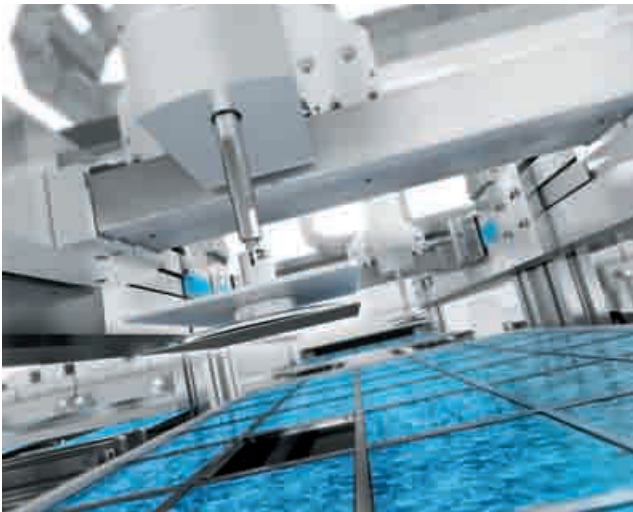
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Festo – Your partner for small parts assembly and electronics



- Know-how along the entire process chain
- From wafer production at the front end to finished chips at the back end
- For quality inspection and assembly of the finished products
- In small parts assembly, electronic or non-electronic

Festo – Your partner to the solar and flat-screen industry



- Along the entire process chain in photovoltaic automation
- For the production of wafers or thin-film cells
- For the production of cells or modules
- For inline or batch production

Festo – Your partner to the automotive industry and its suppliers



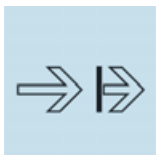
- Along the entire production process
- Understanding the processes – from the press shop through to engine and transmission production
- Developing solutions – joint engineering projects
- Creating synergies – everything from a single source

Reduce risk – think preventatively: Safety@Festo

Machines have to be designed in a way that protects people, animals, property and the environment from harm. The goal is to prevent physical damage of any type. Using safety-oriented pneumatics from Festo gives you the certainty of implementing safety measures in compliance with the EC Machinery Directive. Festo offers many safety solutions for the entire control chain in the area of electrics and pneumatics, for input, logic and output. These can be individual

products, customer-specific solutions, proposals for safety-related circuit diagrams or training courses as required. Festo Didactic offers training and consulting services on standards and directives as well as risk assessments and assessments of technical safety measures.

Pneumatic safety measures



Reducing speed



Reducing pressure and force



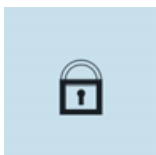
Venting



Reversing a movement

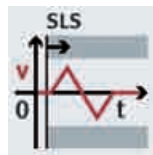


Stopping, holding, blocking

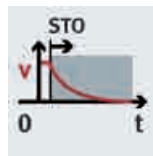


Protection against unexpected start-up

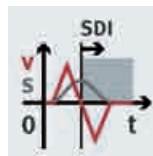
Electrical safety measures



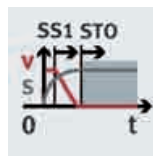
Safely Limited Speed (SLS)



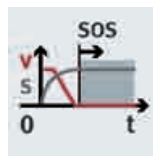
Safe Torque Off (STO)



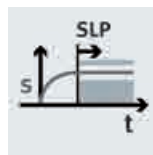
Safe Direction of Movement (SDI)



Safe Stop 1 (SS1)



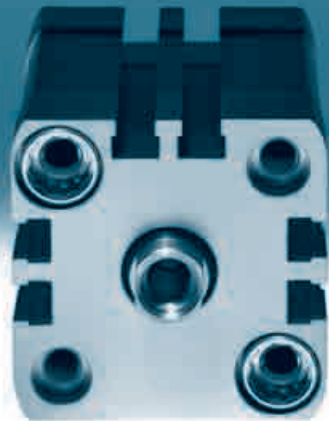
Safe Operating Stop (SOS)



Safe Position SPF (general SLP)

Our safety-oriented automation technology gives you the certainty that the machines in your workplace are as safe as possible.

Simply ask your local contact person or find out more at www.festo.com.



Pneumatic drives

Overview

FESTO

1

Standards-based cylinders

Standard cylinders DSNU

- ISO 6432
- Wide range of variants
- Reacts quickly thanks to minimal break-away force
- Good running performance and long service life

→ 10



Standard cylinders DSBC

- ISO 15552 (ISO 6431 and VDMA 24562)
 - Wide range of variants
- 12



Standard cylinders DSBF-C, Clean Design

- ISO 15552 (ISO 6431 and VDMA 24562)
- Ideal for the food and packaging industry
- Increased corrosion protection
- Easy-to-clean design
- FDA-approved lubrication and sealing on the basic design
- Optional: unlubricated seal with self-adjusting cushioning PPS

→ dsbf-c



Stainless steel cylinders

Standard cylinders CRDSNU

- ISO 6432
- Ideal for the food and packaging industry
- Corrosion-resistant in harsh environmental conditions
- Easy-to-clean design
- FDA-approved lubrication and sealing on the basic design

→ crdsnu



Short-stroke cylinders and compact cylinders

Compact cylinders ADN

- ISO 21287
- Standard cylinder with wide range of variants

→ 15



Short-stroke cylinders ADVC

- For very small installation spaces
- High clamping forces in a compact size

→ 18



Pneumatic drives

Overview

FESTO

1

Rodless cylinders

Linear drives DGC

- High-precision guide
- Quick and easy installation
- Space-saving
- Optimised mounting options

→ 21



Semi-rotary drives

Twin-piston semi-rotary drives

DRQD-B

- Sturdy and precise with high torque resistance
- Modular and functional
- System product for handling and assembly technology

→ 24



Swivel modules DSM-B

- Infinitely adjustable swivel angle
- Wide range of mounting options

→ 27



Drives with guides

Mini slides DGSL

- Guided unit with very precise linearity and parallelism

→ 29



Guided drives DFM

- Sturdy and precise
- With plain-bearing or recirculating ball bearing guide
- High resistance to torques and lateral forces

→ 31



Guided drives DFM-B

- Sturdy and precise
- With plain-bearing or recirculating ball bearing guide
- High resistance to torques and lateral forces
- Precision stroke adjustment in the end positions
- Pneumatic and hydraulic cushioning variants for shorter cycle times

→ 33



Guided drives DGRF, Clean Design

- Ideal for the food and packaging industry
- Increased corrosion protection
- Easy-to-clean design
- FDA-approved lubrication and sealing on the basic design
- Optional: unlubricated seal

→ [dgrf](#)



Rotary indexing tables

Rotary indexing tables DHTG

- Sturdy mechanical system, end-position cushioning and built-in overload protection
- Sensor function and adjustable speed of up to max. 3.3 Hz

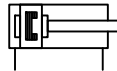
→ 35



Standard cylinders DSNU, to ISO 6432

Double-acting

1



- For very high requirements on running characteristics, service life and load carrying ability
- Universal use thanks to individual variants
- Extensive range of accessories
- Types in accordance with ATEX directive for potentially explosive atmospheres
→ www.festo.com/en/ex

Type codes – Basic design

		DSNU	-		-		-		-	A
Type										
DSNU	Double-acting standard cylinder									
Piston Ø [mm]										
	Stroke [mm]									
8, 10	10, 25, 40, 50, 80, 100									
12	10, 25, 40, 50, 80, 100, 125, 160, 200									
16	25, 40, 50, 80, 100, 125, 160, 200									
20	10, 25, 40, 50, 80, 100, 125, 160, 200, 250, 300, 320									
25	10, 25, 40, 50, 80, 100, 125, 160, 200, 250, 300, 320, 400, 500									
Cushioning										
P	Elastic cushioning rings/pads at both ends									
PPS	Pneumatic cushioning, self-adjusting at both ends									
Position sensing										
A	Via proximity sensor									

Variants

1 ... 500 mm Variable stroke	KP With clamping unit	K3 Female piston rod thread	K6 Shortened male piston rod thread
PPV Pneumatic cushioning, adjustable at both ends	K8 Extended piston rod	K5 Special piston rod thread	S10 Slow speed
Q With protection against rotation	S6 Heat-resistant seals up to max. 120 °C		S11 Low friction
S2 Through piston rod	K2 Extended male piston rod thread		R3 High corrosion protection

Ordering data – Variants

<p>Configurable product</p>	<p>This product and all its variants can be ordered using the configurator</p>	<p>The configurator can be found on the DVD under Products or at → www.festo.com/catalogue/...</p>	<p>Enter the type or configuration part number in the search field.</p>
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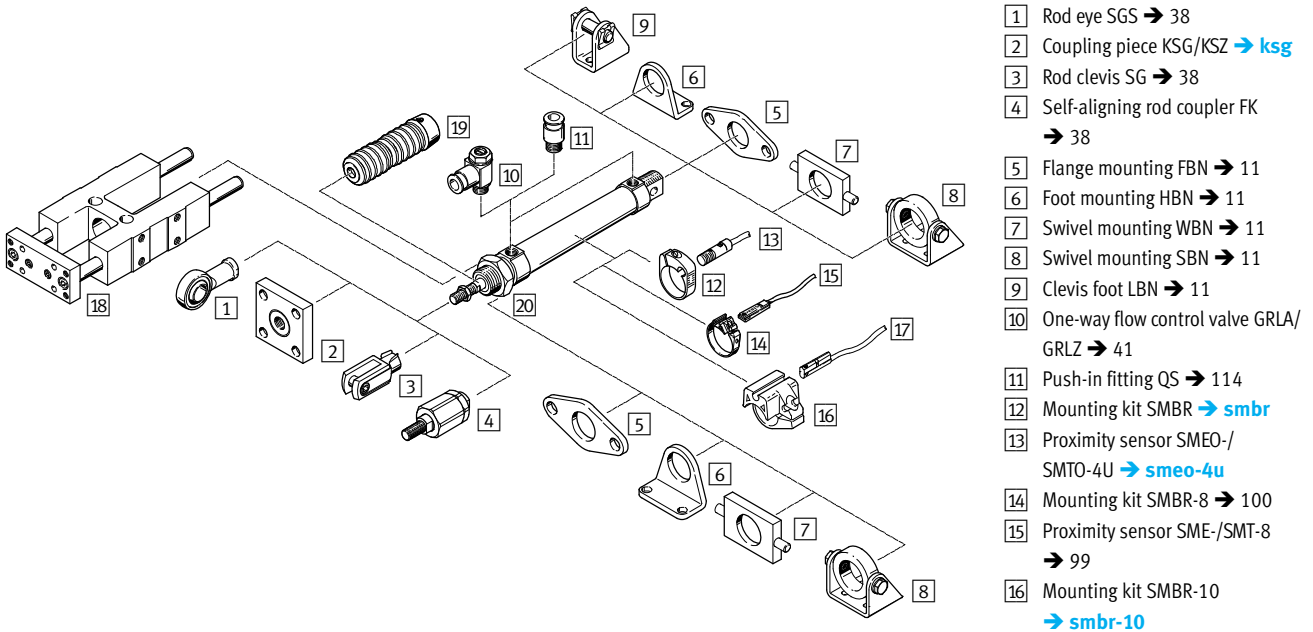
Standard cylinders DSNU, to ISO 6432

Double-acting

Ordering data – Basic design

Stroke [mm]	Piston Ø [mm]					
	8	10	12	16	20	25
	Cushioning – position sensing					
	P – A	P – A	P – A	PPS – A	PPS – A	PPS – A
10	19177	19183	19189			
25	19178	19184	19190	559263	559271	559282
40	19179	19185	19191	559264	559272	559283
50	19180	19186	19192	559265	559273	559284
80	19181	19187	19193	559266	559274	559285
100	19182	19188	19194	559267	559275	559286
125			19195	559268	559276	559287
160			19196	559269	559277	559288
200			19197	559270	559278	559289
250					559279	559290
300					559280	559291
320					559281	559292
400						559293
500						559294

Accessories



- 1 Rod eye SGS → 38
- 2 Coupling piece KSG/KSZ → [ksg](#)
- 3 Rod clevis SG → 38
- 4 Self-aligning rod coupler FK → 38
- 5 Flange mounting FBN → 11
- 6 Foot mounting HBN → 11
- 7 Swivel mounting WBN → 11
- 8 Swivel mounting SBN → 11
- 9 Clevis foot LBN → 11
- 10 One-way flow control valve GRLA/GRLZ → 41
- 11 Push-in fitting QS → 114
- 12 Mounting kit SMBR → [smbr](#)
- 13 Proximity sensor SMEO-/SMT-4U → [smeo-4u](#)
- 14 Mounting kit SMBR-8 → 100
- 15 Proximity sensor SME-/SMT-8 → 99
- 16 Mounting kit SMBR-10 → [smbr-10](#)

- 17 Proximity sensor SME-/SMT-10 → [sme-10](#)
- 18 Guide unit FEN → 39
- 19 Protective bellows kit DADB → [dadb](#)
- 20 Hex nut MSK → [msk](#)

5 Flange mounting FBN		
For Ø	Type	Part No.
8, 10	FBN-8/10	5129
12, 16	FBN-12/16	5130
20, 25	FBN-20/25	5131

6 Foot mounting HBN			
For Ø	Type	Part No.	
8, 10	HBN-8/10x1	5123	
	HBN-8/10x2	5124	
12, 16	HBN-12/16x1	5125	
	HBN-12/16x2	5126	
20, 25	BN-20/25x1	5127	
	HBN-20/25x2	5128	

7 Swivel mounting WBN		
For Ø	Type	Part No.
8, 10	WBN-8/10x1	8608
12, 16	WBN-12/16	8609
20, 25	WBN-20/25	8610

9 Clevis foot LBN		
For Ø	Type	Part No.
8, 10	LBN-8/10	6057
12, 16	LBN-12/16	6058
20, 25	LBN-20/25	6059

8 Swivel mounting SBN		
For Ø	Type	Part No.
20, 25	SBN-20/25	539927

Standard cylinders DSBC, to ISO 15552

Double-acting

1



- Strokes of up to 2,800 mm
- Excellent flexibility thanks to wide range of variants
- Extensive range of accessories makes it possible to install the cylinder virtually anywhere

Type codes – Basic design

		DSBC	-		-		-			A	-	N3
Type												
DSBC	Double-acting standard cylinder											
Protection against rotation												
-	Without protection against rotation											
Running characteristics												
-	Standard											
Piston Ø [mm]												
	Stroke [mm]											
32, 40, 50, 63, 80, 100	25, 40, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500											
Piston rod type												
-	At one end											
Piston rod thread type												
-	Male thread											
Cushioning												
PPS	Pneumatic cushioning, self-adjusting at both ends											
PPV	Pneumatic cushioning, adjustable at both ends											
Position sensing												
A	Via proximity sensor											
Standard												
N3	Based on ISO 15552											

Variants

1 ... 2,800 mm Variable stroke	F	Piston rod with female thread	T1	Temperature range 0 ... 120 °C	A3	For unlubricated operation
Q Square piston rod	P	Elastic cushioning rings/pads at both ends	T3	Temperature range -40 ... +80 °C	...E	Piston rod extension
U Uniformly slow movement	R3	High corrosion protection	T4	Temperature range 0 ... +150 °C	...L	Piston rod thread extension
T Through piston rod						

Ordering data – Variants

Configurable product

This product and all its variants can be ordered using the configurator

The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

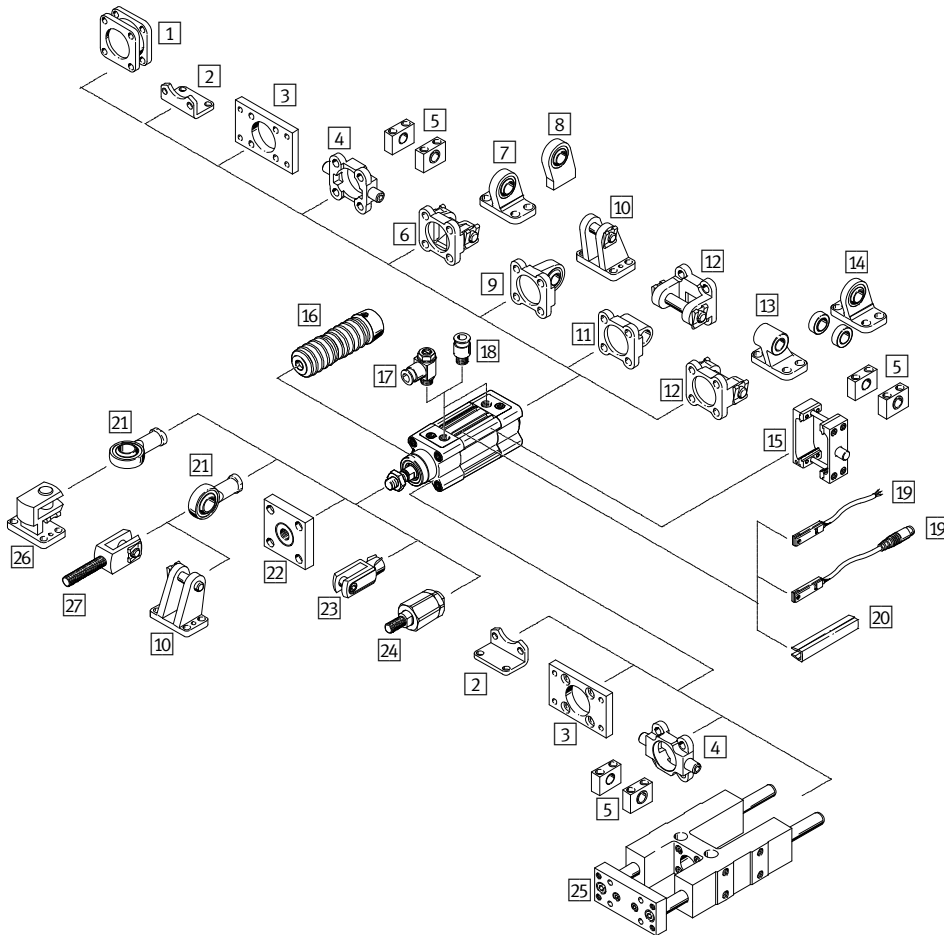
Standard cylinders DSBC, to ISO 15552

Double-acting

Ordering data – Basic design

Stroke [mm]	Piston Ø [mm]											
	32	40	50	63	80	100	32	40	50	63	80	100
	Cushioning – Position sensing						Cushioning Position – sensing					
	PPV – A	PPV – A	PPV – A	PPV – A	PPV – A	PPV – A	PPS – A	PPS – A	PPS – A	PPS – A	PPS – A	PPS – A
25	1376422	1376656	1366948	1383578	1383333	1384804	1376467	1376903	1376301	1383632	1383366	1384890
40	1376423	1376657	1366949	1383579	1383334	1384805	1376468	1376904	1376304	1383633	1383367	1384891
50	1376424	1376658	1366950	1383580	1383335	1384806	1376469	1376905	1376305	1383634	1383368	1384892
80	1376425	1376659	1366951	1383581	1383336	1384807	1376470	1376906	1376306	1383635	1383369	1384893
100	1376426	1376660	1366952	1383582	1383337	1384808	1376471	1376907	1376307	1383636	1383370	1384894
125	1376427	1376661	1366953	1383583	1383338	1384809	1376472	1376908	1376308	1383637	1383371	1384895
160	1376428	1376662	1366954	1383584	1383339	1384810	1376473	1376909	1376309	1383638	1383372	1384896
200	1376429	1376663	1366955	1383585	1383340	1384811	1376474	1376910	1376310	1383639	1383373	1384897
250	1376430	1376664	1366956	1383586	1383341	1384812	1376475	1376911	1376311	1383640	1383374	1384898
320	1376431	1376665	1366957	1383587	1383342	1384813	1376476	1376912	1376312	1383641	1383375	1384899
400	1376432	1376666	1366958	1383588	1383343	1384814	1376477	1376913	1376313	1383642	1383376	1384900
500	1376433	1376667	1366959	1383589	1383344	1384815	1376478	1376914	1376314	1383643	1383377	1384901

Accessories



- 1 Multi-position kit DPNC → 14
- 2 Foot mounting HNC → 14
- 3 Flange mounting FNC → 14
- 4 Trunnion flange ZNCF → 14
- 5 Trunnion support LNZG → 14
- 6 Swivel flange SNC → [snc](#)
- 7 Clevis foot LSNG → [lsng](#)
- 8 Clevis foot LSNSG → [lsnsg](#)
- 9 Swivel flange SNCS → [sncs](#)
- 10 Clevis foot LBG → [lbg](#)
- 11 Swivel flange SNCL → 14
- 12 Swivel flange SNCB → 14
- 13 Clevis foot LNG → [lng](#)
- 14 Clevis foot LSN → [lsn](#)
- 15 Trunnion mounting kit ZNCM → 14
- 16 Protective bellows kit DADB → [dadb](#)
- 17 One-way flow control valve GRLA → 41
- 18 Push-in fitting QS → 114
- 19 Proximity sensor SME-/SMT-8M → 99
- 20 Slot cover ABP-5-S → [abp-5](#)
- 21 Rod eye SGS → 38
- 22 Coupling piece KSG/KSZ → [ksg](#)
- 23 Rod clevis SG → 38
- 24 Self-aligning rod coupler FK → 38
- 25 Guide unit FENG → 39
- 26 Right-angle clevis foot LQG → 14
- 27 Rod clevis SGA → 38

Standard cylinders DSBC, to ISO 15552

Double-acting

1

Accessories

1 Multi-position kit DPNC		
For Ø	Type	Part No.
32	DPNC-32	174418
40	DPNC-40	174419
50	DPNC-50	174420
63	DPNC-63	174421
80	DPNC-80	174422
100	DPNC-100	174423

2 Foot mounting HNC		
For Ø	Type	Part No.
32	HNC-32	174369
40	HNC-40	174370
50	HNC-50	174371
63	HNC-63	174372
80	HNC-80	174373
100	HNC-100	174374

3 Flange mounting FNC		
For Ø	Type	Part No.
32	FNC-32	174376
40	FNC-40	174377
50	FNC-50	174378
63	FNC-63	174379
80	FNC-80	174380
100	FNC-100	174381

4 Trunnion flange ZNCF		
For Ø	Type	Part No.
32	ZNCF-32	174411
40	ZNCF-40	174412
50	ZNCF-50	174413
63	ZNCF-63	174414
80	ZNCF-80	174415
100	ZNCF-100	174416

5 Trunnion support LNZG		
For Ø	Type	Part No.
32	LNZG-32	32959
40	LNZG-40/50	32960
50	LNZG-40/50	32960
63	LNZG-63/80	32961
80	LNZG-63/80	32961
100	LNZG-100/125	32962

11 Swivel flange SNCL			
For Ø	Type	Part No.	
32	SNCL-32	174404	
40	SNCL-40	174405	
50	SNCL-50	174406	
63	SNCL-63	174407	
80	SNCL-80	174408	
100	SNCL-100	174409	

12 Swivel flange SNCB/SNCB-R3 ¹⁾				
For Ø	Type	Part No.	Type	Part No.
32	SNCB-32	174390	SNCB-32-R3	176944
40	SNCB-40	174391	SNCB-40-R3	176945
50	SNCB-50	174392	SNCB-50-R3	176946
63	SNCB-63	174393	SNCB-63-R3	176947
80	SNCB-80	174394	SNCB-80-R3	176948
100	SNCB-100	174395	SNCB-100-R3	176949

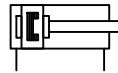
1) SNCB-R3: High corrosion protection

15 Trunnion mounting kit ZNCM		
For Ø	Type	Part No.
32	ZNCM-32	163525
40	ZNCM-40	163526
50	ZNCM-50	163527
63	ZNCM-63	163528
80	ZNCM-80	163529
100	ZNCM-100	163530

26 Right-angle clevis foot LQG		
For Ø	Type	Part No.
32	LQG-32	31768
40	LQG-40	31769
50	LQG-50	31770
63	LQG-63	31771
80	LQG-80	31772
100	LQG-100	31773

Compact cylinders ADN, to ISO 21287

Double-acting



- Compact cylinders with standard dimensions
- Innovative technology for maximum speeds
- Flexible in use thanks to easy-to-configure variants
- Types in accordance with ATEX directive for potentially explosive atmospheres
→ www.festo.com/en/ex

Type codes – Basic design

		ADN	-		-		-	I	-	P	-	A
Type												
ADN	Double-acting compact cylinder											
Piston Ø [mm]												
	Stroke [mm]											
12	5, 10, 15, 20, 25, 30, 40											
16	5, 10, 15, 20, 25, 30, 40, 50											
20, 25	5, 10, 15, 20, 25, 30, 40, 50, 60											
32, 40, 50	5, 10, 15, 20, 25, 30, 40, 50, 60, 80											
63, 80, 100	10, 15, 20, 25, 30, 40, 50, 60, 80											
Piston rod thread												
I	Female thread											
Cushioning												
P	Elastic cushioning rings/pads at both ends											
PPS	Pneumatic cushioning, self-adjusting at both ends											
Position sensing												
A	Via proximity sensor											

Variants

1 ... 500 mm Variable stroke	S2 Through piston rod	K5 Special piston rod thread	S11 Low friction
A Male thread	S20 Through, hollow piston rod	K10 Smooth anodised aluminium piston rod	R3 High corrosion protection
Q Square piston rod	K2 Extended male piston rod thread	S6 Heat-resistant seals up to max. 120 °C	R8 Dust protection
K8 Extended piston rod		S10 Slow speed	TL Laser etched rating plate
S1 Reinforced piston rod			TT Low temperature
			KP With clamping unit, attached
			EL... With end-position locking

Ordering data – Variants

<p>Configurable product</p>	<p>This product and all its variants can be ordered using the configurator</p>	<p>The configurator can be found on the DVD under Products or at → www.festo.com/catalogue/...</p>	<p>Enter the type or configuration part number in the search field.</p>
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Compact cylinders ADN, to ISO 21287

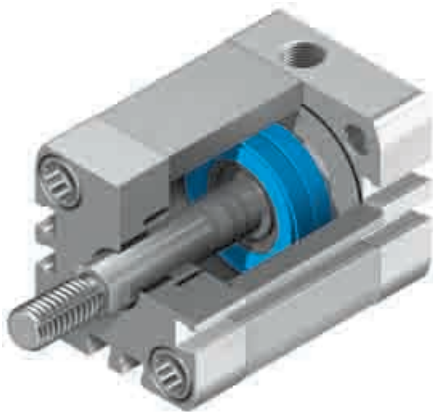
Double-acting

1

Ordering data – Basic design

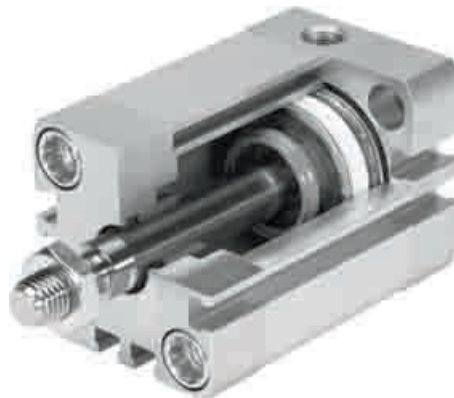
Stroke [mm]	Piston Ø [mm]										
	12	16	20	25	32	40	50	63	80	100	
Piston rod thread – cushioning – position sensing											
	I – P – A	I – P – A	I – P – A	I – P – A	I – P – A	I – P – A	I – P – A	I – P – A	I – P – A	I – P – A	I – P – A
5	536211	536226	536242	536259	536278	536299	536320				
10	536212	536227	536243	536260	536279	536300	536321	536342	536363	536384	
15	536213	536228	536244	536261	536280	536301	536322	536343	536364	536385	
20	536214	536229	536245	536262	536281	536302	536323	536344	536365	536386	
25	536215	536230	536246	536263	536282	536303	536324	536345	536366	536387	
30	536216	536231	536247	536264	536283	536304	536325	536346	536367	536388	
40	536217	536232	536248	536265	536284	536305	536326	536347	536368	536389	
50		536341	536249	536266	536285	536306	536327	536348	536369	536390	
60			536362	536383	536286	536307	536328	536349	536370	536391	
80					536287	536308	536329	536350	536371	536392	
					I – PPS – A	I – PPS – A	I – PPS – A	I – PPS – A	I – PPS – A		
10					572646	572664	572682	572700	572718		
15					572647	572665	572683	572701	572719		
20					572648	572666	572684	572702	572720		
25					572649	572667	572685	572703	572721		
30					572650	572668	572686	572704	572722		
40					572651	572669	572687	572705	572723		
50					572652	572670	572688	572706	572724		
60					572653	572671	572689	572707	572725		
80					572654	572672	572690	572708	572726		

ADN-32-...-A-P-A



Compact cylinder ADN-32-...-A-P-A with male piston rod thread, elastic cushioning rings/pads at both ends and position sensing via proximity sensor

ADN-32-...-A-PPS-A

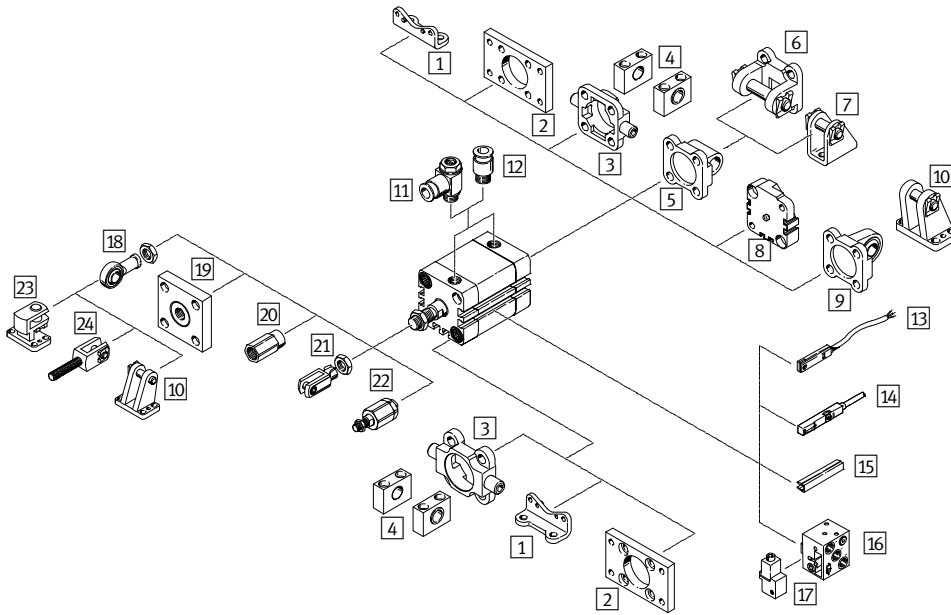


Compact cylinder ADN-32-...-A-PPS-A with male piston rod thread, self-adjusting pneumatic cushioning at both ends and position sensing via proximity sensor

Compact cylinders ADN, to ISO 21287

Double-acting

Accessories



- 1 Foot mounting HNA → 17
- 2 Flange mounting FNC → 14
- 3 Trunnion flange ZNCF → 14
- 4 Trunnion support LNZG → 14
- 5 Swivel flange SNCL → 14
- 6 Swivel flange SNCF → 14
- 7 Clevis foot LBN → 11
- 8 Multi-position kit DPNA → 17
- 9 Swivel flange SNCS → [sncs](#)
- 10 Clevis foot LBG → [lbg](#)
- 11 One-way flow control valve GRLA → 41, GRLZ → [grlz](#)
- 12 Push-in fitting QS → 114
- 13 Proximity sensor SME-/SMT-8 → [sme-8](#) and connecting cable NEBU → 26
- 14 Proximity sensor SME-/SMT-8M → 99, connecting cable NEBU → 26
- 15 Slot cover ABP-5-S → [abp-5](#)

16 Proximity sensor SMPO-8E → [smpo-8e](#)

17 Mounting kit SMB-8E → [smb-8e](#)

18 Rod eye SGS → 38

19 Coupling piece KSG/KSZ → [ksg](#)

20 Adapter AD → [adapter ad](#)

21 Rod clevis SG → 38

22 Self-aligning rod coupler FK → 38

23 Right-angle clevis foot LQG → 14

24 Rod clevis SGA → 17

1 Foot mounting HNA		
For Ø	Type	Part No.
12	HNA-12	537237
16	HNA-16	537238
20	HNA-20	537239
25	HNA-25	537240
32	HNA-32	537241
40	HNA-40	537242
50	HNA-50	537243
63	HNA-63	537244
80	HNA-80	537249
100	HNA-100	537250

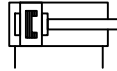
8 Multi-position kit DPNA		
For Ø	Type	Part No.
12	DPNA-12	537263
16	DPNA-16	537264
20	DPNA-20	537265
25	DPNA-25	537266
32	DPNA-32	537267
40	DPNA-40	537268
50	DPNA-50	537269
63	DPNA-63	537270
80	DPNA-80	537271
100	DPNA-100	537272

24 Rod clevis SGA		
For Ø	Type	Part No.
32	SGA-M10x1,25	32954
40		
50	SGA-M12x1,25	10767
63		
80	SGA-M16x1,25	10768
100		

Short-stroke cylinders ADVC

Double-acting

1



- Short-stroke cylinders for short strokes and tight fitting spaces
- Mounting hole pattern to ISO 15552 from Ø 32 mm
- Application-oriented housing and piston rod variants
- Air connections and profile slot for proximity sensors on one side

Type codes – Basic design

		ADVC	-		-		-		-	P	-	
Type												
ADVC	Double-acting short-stroke cylinder											
Piston Ø [mm]												
	Stroke [mm]											
6, 10, 12	5, 10											
16, 20, 25	5, 10, 15, 20, 25											
32, 40	5, 10, 15, 20, 25											
50, 63	10, 15, 20, 25											
Piston rod thread												
A	Male thread											
I	Female thread											
Cushioning												
P	Elastic cushioning rings/pads at both ends											
Position sensing												
-	None											
A	Via proximity sensor											

Variants

Piston rod thread
 - Without thread

Ordering data – Variants

	<p>Configurable product</p>	<p>This product and all its variants can be ordered using the configurator.</p>	<p>The configurator can be found on the DVD under Products or at → www.festo.com/catalogue/..</p>	<p>Enter the type or configuration part number in the search field.</p>
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Short-stroke cylinders ADVC

Double-acting

Ordering data – Basic design

Stroke [mm]	Piston Ø [mm]									
	6	10	12	16	20	25	32	40	50	63
Piston rod thread – cushioning										
	A – P	A – P	A – P	A – P	A – P	A – P	A – P	A – P	A – P	A – P
5	188066	188078	188094	188123	188155	188187	188219	188247		
10	188067	188079	188095	188124	188156	188188	188220	188248	188272	188296
15				188125	188157	188189	188221	188249	188273	188297
20				188126	188158	188190	188222	188250	188274	188298
25				188127	188159	188191	188223	188251	188275	188299
Piston rod thread – cushioning										
	I – P	I – P	I – P	I – P	I – P	I – P	I – P	I – P	I – P	I – P
5			188090	188113	188145	188177	188209	188237		
10			188091	188114	188146	188178	188210	188238	188264	188288
15				188115	188147	188179	188211	188239	188265	188289
20				188116	188148	188180	188212	188240	188266	188290
25				188117	188149	188181	188213	188241	188267	188291
Piston rod thread – cushioning – position sensing										
	A – P – A	A – P – A	A – P – A	A – P – A	A – P – A	A – P – A	A – P – A	A – P – A	A – P – A	A – P – A
5	188064	188076	188092	188118	188150	188182	188214	188242		
10	188065	188077	188093	188119	188151	188183	188215	188243	188268	188292
15				188120	188152	188184	188216	188244	188269	188293
20				188121	188153	188185	188217	188245	188270	188294
25				188122	188154	188186	188218	188246	188271	188295
Piston rod thread – cushioning – position sensing										
	I – P – A	I – P – A	I – P – A	I – P – A	I – P – A	I – P – A	I – P – A	I – P – A	I – P – A	I – P – A
5			188088	188108	188140	188172	188204	188232		
10			188089	188109	188141	188173	188205	188233	188260	188284
15				188110	188142	188174	188206	188234	188261	188285
20				188111	188143	188175	188207	188235	188262	188286
25				188112	188144	188176	188208	188236	188263	188287

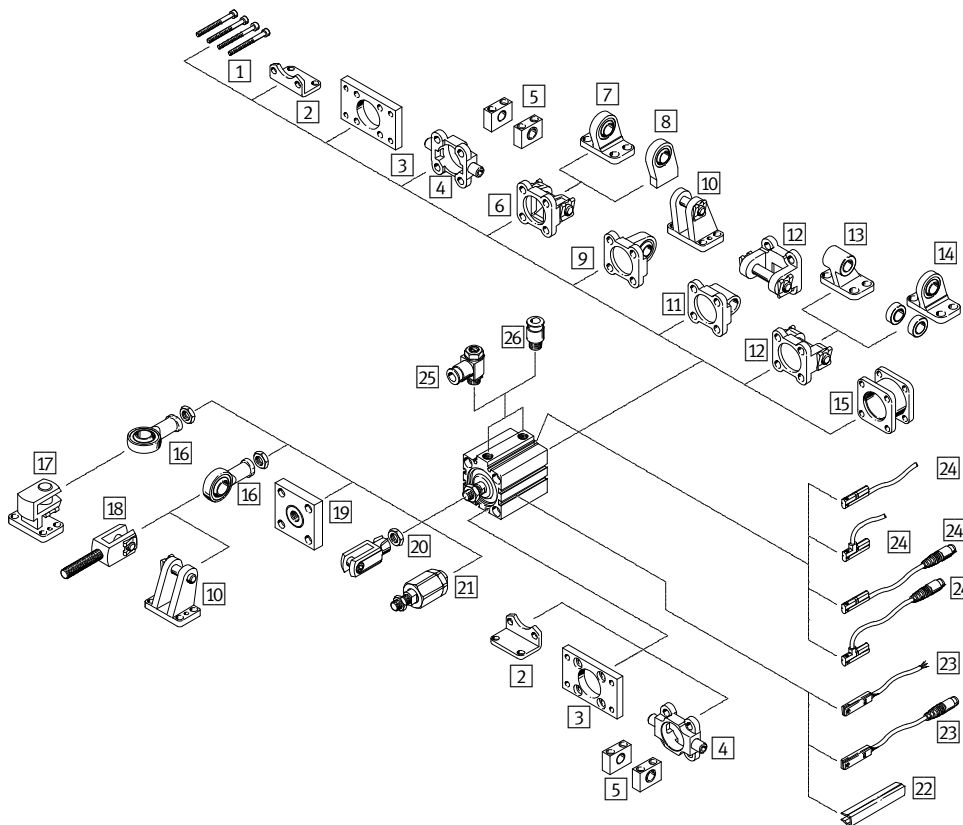
1

Short-stroke cylinders ADVC

Double-acting

Accessories

1



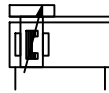
- 1 Mounting screws (not included in the scope of delivery)
- 2 Foot mounting HNC → 14
- 3 Flange mounting FNC → 14
- 4 Trunnion flange ZNCF → 14
- 5 Trunnion support LNZG → 14
- 6 Swivel flange SNC → [snc](#)
- 7 Clevis foot LSNG → [lsng](#)
- 8 Clevis foot LSNSG → [lsnsg](#)
- 9 Swivel flange SNCS → [sncs](#)
- 10 Clevis foot LBG → [lbg](#)
- 11 Swivel flange SNCL → 14
- 12 Swivel flange SNCB → 14
- 13 Clevis foot LNG → [lng](#)
- 14 Clevis foot LSN → [lsn](#)
- 15 Multi-position kit DPNC → 14
- 16 Rod eye SGS → 38
- 17 Right-angle clevis foot LQG → 14
- 18 Rod clevis SGA → 38
- 19 Coupling piece KSG → [ksg](#)
- 20 Rod clevis SG → 38
- 21 Self-aligning rod coupler FK → 38
- 22 Slot cover ABP-5-S → [abp-5](#)
- 23 Proximity sensor SME-/SMT-8M → 99
- 24 Proximity sensor SME-/SMT-10M → 20
- 25 One-way flow control valve GRLA → 41
- 26 Push-in fitting QS → 114

24 Proximity sensor, magnetic reed		
Description	Type	Part No.
Cable, 2.5 m, 3-wire	SME-10M-DS-24V-E-2,5-L-OE	551365
Plug M8x1, 3-pin	SME-10M-DS-24V-E-0,3-L-M8D	551367

24 Proximity sensor, magneto-resistive		
Description	Type	Part No.
Cable, 2.5 m, 3-wire	SMT-10M-PS-24V-E-2,5-L-OE	551373
Plug M8x1, 3-pin	SMT-10M-PS-24V-E-0,3-L-M8D	551375

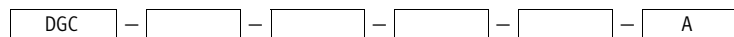
Linear drives DGC

Double-acting



- Compact dimensions
- Quick and sturdy installation and mounting
- High precision and load carrying ability
- Excellent running characteristics and low air consumption
- Precision interfaces
- Many additional features

Type codes – Basic design



Type	
DGC	Linear drive

Piston Ø [mm]			
	Stroke [mm]		
	Guide G	Guide GF	Guide KF
8	1 ... 1,500	–	1 ... 1,300
12	1 ... 2,000	–	1 ... 1,900
18	1 ... 3,000	1 ... 3,000	1 ... 3,000
25, 32, 40	1 ... 8,500	1 ... 8,500	1 ... 8,500
50, 63	1 ... 5,000	1 ... 5,000	1 ... 5,000

Guide	
G	Basic design
GF	Plain-bearing guide
KF	Recirculating ball bearing guide

Cushioning		
P	Elastic cushioning rings/pads at both ends	1
PPV	Pneumatic cushioning, adjustable at both ends	2
YSR	Self-adjusting shock absorbers at both ends	3
YSRW	Self-adjusting, progressive shock absorbers at both ends	3

Position sensing	
A	Via proximity sensor

- 1 Only for DGC-G/DGC-KF with piston Ø 8 and 12 mm.
- 2 Only for DGC-G/DGC-KF with piston Ø 18, 25, 32, 40, 50 and 63 mm.
- 3 With DGC-G: only for piston Ø 8 and 12 mm.

Variants

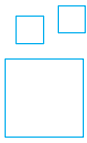
N	NPT thread	C	Lubrication adapter
GP	Protected recirculating ball bearing guide	KL	Additional slide on left
		KR	Additional slide on right

Linear drives DGC

Double-acting

Ordering data – Variants

1



Configurable product

This product and all its variants can be ordered using the configurator:

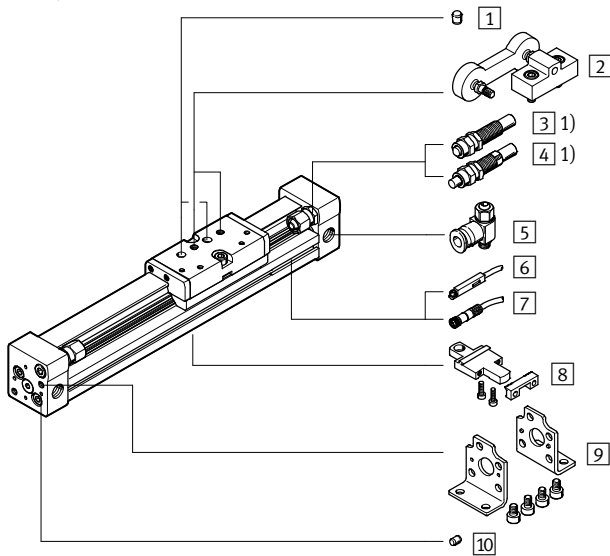
The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Configuration part no.		
∅	Type	Part No.
8	DGC-8-...	530906
12	DGC-12-...	530907
18	DGC-18-...	532446
25	DGC-25-...	532447
32	DGC-32-...	532448
40	DGC-40-...	532449
50	DGC-50-...	532450
63	DGC-63-...	532451

Accessories

DGC-8/-12

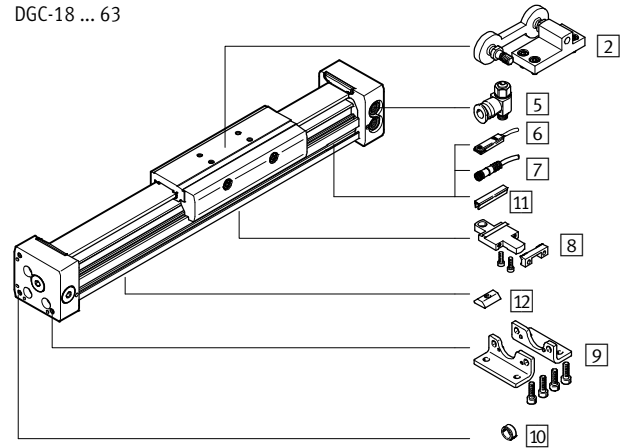


- 1 Centring pin ZBS¹⁾
- 2 Moment compensator FKC → 23
- 3 Shock absorber YSR → [ysr](#)
- 4 Shock absorber YSRW-DGC → 23
- 5 One-way flow control valve GRLA → 41

- 6 Proximity sensor
SME-/SMT-8 → [sme-8](#),
SME-/SMT-10 → [sme-10](#),
SME-/SMT-8M → 99,
SME-/SMT-10M → [sme-10m](#)

1) Included in the scope of delivery of the drive

DGC-18 ... 63



- 7 Connecting cable NEBU → 26
- 8 Profile mounting MUC → 23
- 9 Foot mounting HPC → 23
- 10 Centring pin/sleeve ZBS/ZBH → 23

- 11 Slot cover ABP-S → [abp](#)
- 12 Slot nut HMBN → 23

Linear drives DGC

Double-acting

2 Moment compensator FKC		
For Ø	Type	Part No.
8	FKC-8/12	529350
12	FKC-8/12	529350
18	FKC-18	538714
25	FKC-25	538715
32	FKC-32	538961
40	FKC-40	538962
50	FKC-50/63	545240
63	FKC-50/63	545240

9 Foot mounting HPC		
For Ø	Type	Part No.
8	HPC-8	526385
12	HPC-12	526388
18	HPC-18	533667
25	HPC-25	533668
32	HPC-32	533669
40	HPC-40	533670
50	HPC-50	545236
63	HPC-63	545237

4 Shock absorber YSRW-DGC		
For Ø	Type	Part No.
For DGC-G		
8	YSRW-DGC-8	540344
12	YSRW-DGC-12	540345
For DGC-GF		
18	YSRW-DGC-18-GF	540346
25	YSRW-DGC-25-GF	540348
32	YSRW-DGC-32-GF	540350
40	YSRW-DGC-40-GF	540352
50	YSRW-DGC-40/50-B	1232870
63	YSRW-DGC-63	543069
For DGC-KF		
18	YSRW-DGC-18-KF	540347
25	YSRW-DGC-25-KF	540349
32	YSRW-DGC-32-KF	540351
40	YSRW-DGC-40/50-B	1232870
50	YSRW-DGC-40/50-B	1232870
63	YSRW-DGC-63	543069

10 Centring pin/sleeve ZBS/ZBH¹⁾			
For Ø	Description	Type	Part No.
For DGC-G			
8, 12	For slide	ZBS-5	150928
8, 12	For end cap	ZBS-2	525273
50, 63		ZBH-9	150927
For DGC-GF			
18	For slide	ZBS-5	150928
25 ... 63		ZBH-9	150927
50, 63	For end cap	ZBH-9	150927
For DGC-GF			
8, 12, 18	For slide	ZBS-5	150928
25 ... 63		ZBH-9	150927
8, 12	For end cap	ZBH-2	525273
18		ZBS-5	150928
25 ... 63		ZBH-9	150927

1) Packaging unit 10 pieces.

8 Profile mounting MUC		
For Ø	Type	Part No.
8	MUC-8	526384
12	MUC-12	526387
18	MUC-18	531752
25	MUC-25	531753
32	MUC-32	531754
40	MUC-40	531755
50	MUC-50	531756
63	MUC-63	531757

12 Slot nut HMBN¹⁾		
For Ø	Type	Part No.
25, 32, 40	HMBN-5-1M5	547264
50, 63	HMBN-5-2M5	186566

1) Packaging unit 10 pieces.

Twin-piston semi-rotary drives DRQD-B

Double-acting

1



- Modular structure with a variety of functions
- Sturdy and precise with high torque resistance
- Types in accordance with ATEX directive for potentially explosive atmospheres
→ www.festo.com/en/ex

Type codes – Basic design

Type		Product version		Piston Ø [mm]		Type of cushioning		Position sensing		Pneumatic connection		Output shaft		Intermediate position module	
DRQD	Semi-rotary drive	B	Function-optimised	16, 20, 25, 32	Swivel angle [°]			A	Via proximity sensor	AL	Supply port on left	ZW	Spigot shaft	Z1	1 intermediate position (mid-position)
					90, 180, 360					AR	Supply port on right	FW	Flanged shaft		

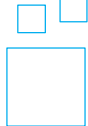
Variants

J20	End-position adjustment, adjustment range +6°/-20°	AS2	Adapter for DHDS-16	SD62	Flanged shaft with energy through-feed, 2 tubes, tubing O.D. 6 mm	E644	Flanged shaft with energy through-feed, 4 tubes, tubing O.D. 6 mm, 4 electrical cables
J60	End-position adjustment, adjustment range +6°/-60°	SD32	Flanged shaft with energy through-feed, 2 tubes, tubing O.D. 3 mm	SD64	Flanged shaft with energy through-feed, 4 tubes, tubing O.D. 6 mm	ZS	Socket head screw
A08	Adapter for HGPM-08/HGWM-08	SD42	Flanged shaft with energy through-feed, 2 tubes, tubing O.D. 4 mm	E422	2 tubes with 4 mm O.D. and 1x 4-pin cable to 2x 3-pin cables	HS	Hollow bolt
A12	Adapter for HGPM-12/HGWM-12	SD48	Flanged shaft with energy through-feed, 8 tubes, tubing O.D. 4 mm	E444	4 tubes with 4 mm O.D. and 2x 4-pin cables to 4x 3-pin cables	B1	Mounting type 1
AS1	Adapter for DHWS/DHRS-10, DHPS-06					B2	Mounting type 2
						B3	Mounting type 3

Twin-piston semi-rotary drives DRQD-B

Double-acting

Ordering data – Variants



Configurable product

This product and all its variants can be ordered using the configurator

The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Configuration part no.		
Ø	Type	Part No.
16	DRQD-B-16-...	563345
20	DRQD-B-20-...	563346
25	DRQD-B-25-...	563347
32	DRQD-B-32-...	563348

Ordering data – Basic design

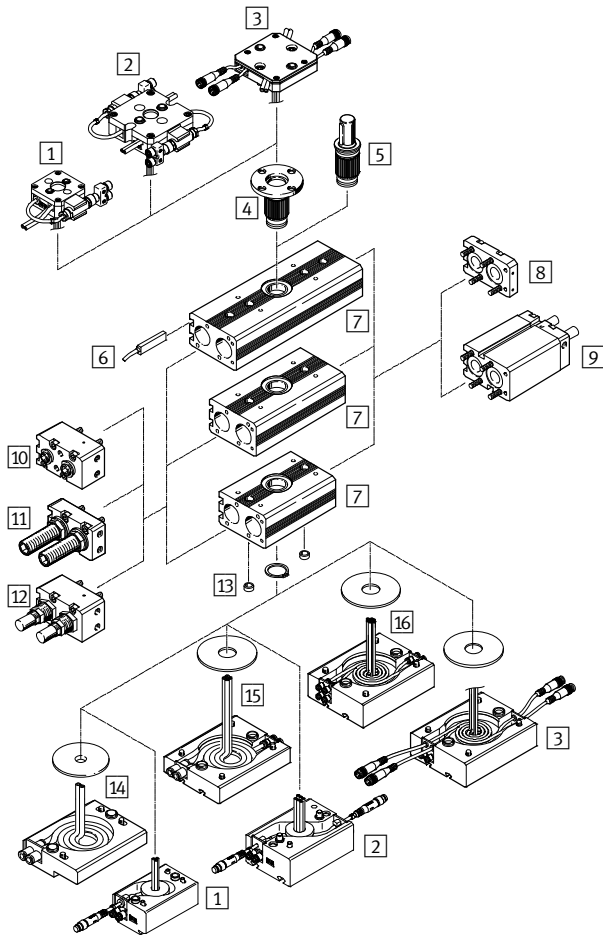
Swivel angle [°]	Piston Ø [mm]							
	16	20	25	32	16	20	25	32
	Type of cushioning-position sensing-pneumatic connection-output shaft							
	PPVJ-A-AL-FW	PPVJ-A-AL-FW	PPVJ-A-AL-FW	PPVJ-A-AL-FW	PPVJ-A-AR-FW	PPVJ-A-AR-FW	PPVJ-A-AR-FW	PPVJ-A-AR-FW
90					563367			
180	563341	563342	563343	563344	563353	563354	563355	563356
	Type of cushioning-position sensing-pneumatic connection-output shaft							
	P1J-A-AL-FW	P1J-A-AL-FW	P1J-A-AL-FW	P1J-A-AL-FW	P1J-A-AR-FW	P1J-A-AR-FW	P1J-A-AR-FW	P1J-A-AR-FW
180	1177954	1177955	1177956	1177957	1177950	1177951	1177952	1177953
	Type of cushioning-position sensing-pneumatic connection-output shaft							
	YSRJ-A-AL-FW	YSRJ-A-AL-FW	YSRJ-A-AL-FW	YSRJ-A-AL-FW	YSRJ-A-AR-FW	YSRJ-A-AR-FW	YSRJ-A-AR-FW	YSRJ-A-AR-FW
180	563337	563338	563339	563340	563349	563350	563351	563352

Twin-piston semi-rotary drives DRQD-B

Double-acting

Accessories

1



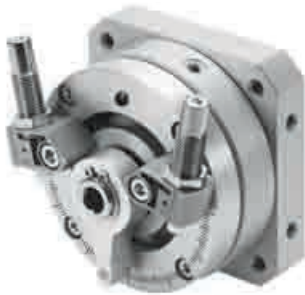
- 1 Flanged shaft with energy through-feed E422 → [drqd](#)
- 2 Flanged shaft with energy through-feed E444 → [drqd](#)
- 3 Flanged shaft with energy through-feed E644 → [drqd](#)
- 4 Flanged shaft FW → [drqd](#)
- 5 Spigot shaft ZW → [drqd](#)
- 6 Proximity sensor SME-8 → 26, SMT-/SME-8M → 99 SMT-8 → [smt-8](#) NEBU → 26
- 7 Centre section for 90°, 180° or 360° swivel angle
- 8 End cap with integrated distributor function for compressed air AL, AR → [drqd](#)
- 9 Intermediate position module Z1 → [drqd](#)
- 10 Connection cap PPVJ → [drqd](#)
- 11 Connection cap P1J → [drqd](#)
- 12 Connection cap YSRJ → [drqd](#)
- 13 Centring sleeve ZBH → [zbh](#)
- 14 Flanged shaft with energy through-feed SD32, SD42, SD62 → [drqd](#)
- 15 Flanged shaft with energy through-feed SD64 → [drqd](#)
- 16 Flanged shaft with energy through-feed SD48 → [drqd](#)

6 Proximity sensor SME, for T-slot, magnetic reed						
Type	Design	Switching output, switching element function	Electrical connection, cable length	Switching status display	Rated operating voltage	Part No.
SME-8-O-K-LED-24	For T-slot, insertable in the slot lengthwise	N/C contact, 3-wire	Cable, 7.5 m	Yellow LED	24 V DC	160251

6 Connecting cable NEBU					
Type	Electrical connection		Cable length	Part No.	
	Left	Right			
NEBU-M8G3-K-2,5-LE3	Socket M8x1, straight, 3-pin	Cable, open end, 3-wire	2.5 m	541333	
NEBU-M8G3-K-5-LE3	Socket M8x1, straight, 3-pin	Cable, open end, 3-wire	5 m	541334	
NEBU-M8W3-K-2,5-LE3	Socket M8x1, angled, 3-pin	Cable, open end, 3-wire	2.5 m	541338	
NEBU-M8W3-K-5-LE3	Socket M8x1, angled, 3-pin	Cable, open end, 3-wire	5 m	541341	
NEBU-M12G5-K-2,5-LE3	Socket M12x1, straight, 5-pin	Cable, open end, 3-wire	2.5 m	541363	
NEBU-M12G5-K-5-LE3	Socket M12x1, straight, 5-pin	Cable, open end, 3-wire	5 m	541364	
NEBU-M12W5-K-2,5-LE3	Socket M12x1, angled, 5-pin	Cable, open end, 3-wire	2.5 m	541367	
NEBU-M12W5-K-5-LE3	Socket M12x1, angled, 5-pin	Cable, open end, 3-wire	5 m	541370	

Swivel modules DSM-B

Double-acting



- Swivel modules with minimum space requirement
- Swivel modules with tandem rotary vanes
- Simple basic and precision adjustment of the swivel angle
- High-performance cushioning
- Compact, low-cost sensing



Type codes – Basic design

		DSM	-		-	270	-		-		-	A	-	B
Type														
DSM	Swivel module													
Size														
		Max. swivel angle [°], adjustable												
12, 16, 25, 32, 40, 63	270													
Cushioning														
-	Without cushioning components													
P	Elastic cushioning components at both ends													
CC	Self-adjusting shock absorbers at both ends													
Shaft														
-	Spigot shaft													
FW	Flanged shaft													
Position sensing														
A	Via proximity sensor													
Variant														
B	B series													

Variants

T Tandem rotary vanes

P1 Adjustable elastic cushioning components at both ends, with fixed stop

HD Heavy-duty bearing

Ordering data – Variants

Configurable product

This product and all its variants can be ordered using the configurator

The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Ordering data – Basic design

Cushioning – shaft	Swivel angle	Size					
		12	16	25	32	40	63
Without cushioning components – spigot shaft	270°	547591	547592	547593	547594	547595	552083
Without cushioning components – FW	270°	547596	547597	547598	547599	547600	552084
P – spigot shaft	270°	547570	547574	547578	547582	547586	552079
P – FW	270°	547571	547575	547579	547583	547587	552080
CC – spigot shaft	246° ¹⁾	547572	547576	547580	547584	547588	552081
CC – FW	246° ¹⁾	547573	547577	547581	547585	547589	552082

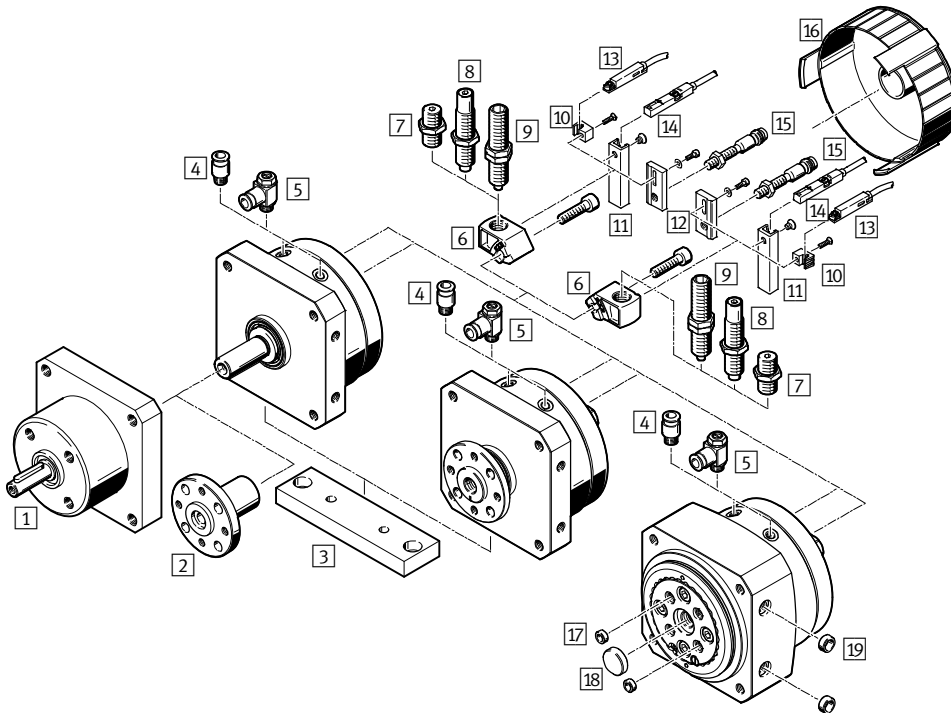
1) With sizes 40 and 63: swivel angle 240°

Swivel modules DSM-B

Double-acting

Accessories

1



- 1 Freewheel unit FLSM → [flsm](#)
- 2 Push-on flange FWSR → [fwsr](#)
- 3 Mounting plate HSM → [hsm](#)
- 4 Push-in fitting QS → 114
- 5 One-way flow control valve GRLA → 41
- 6 Cushioning mount DSM-...-B → [dsm-12-b](#)
- 7 Cushioning kit DSM-...-P-B (P cushioning) → [dsm-12-p-b](#)
- 8 Shock absorber DYSC (CC cushioning) → [dysc](#)
- 9 Shock absorber DYEF (P1 cushioning) → [dyef](#)
- 10 Sensor bracket SL-DSM-B → 28
- 11 Sensor bracket SL-DSM-63-B → 28
- 12 Sensor bracket SL-DSM-S → 28
- 13 Proximity sensor SME-10 → 28
SME-/SMT-10M → 28
- 14 Proximity sensor SME-/SMT-8 → 28
- 15 Inductive proximity sensor SIEN → 28
- 16 Cover cap AKM → 28
- 17 Centring sleeve ZBH for centring attachments on the rotating plate → [zbh](#)
- 18 Centring sleeve/disc ZBH/SLZZ → [zbh, slzz](#)
- 19 Centring sleeve ZBH for centring the drive → [zbh](#)

15 Inductive proximity sensor SIEN → 28

17 Centring sleeve ZBH for centring attachments on the rotating plate → [zbh](#)

18 Centring sleeve/disc ZBH/SLZZ → [zbh, slzz](#)

19 Centring sleeve ZBH for centring the drive → [zbh](#)

16 Cover cap AKM → 28

10 / 11 / 12 Sensor bracket		
For size	Type	Part No.
12, 16, 25, 32, 40	SL-DSM-B ¹⁾	550661
63	SL-DSM-63-B ²⁾	552088
12, 16, 25, 32, 40	SL-DSM-S-M5-B ³⁾	1130882
12, 16, 25, 32, 40	SL-DSM-S-M8-B ⁴⁾	1132360

- 1) For proximity sensors SME-/SMT-10.
- 2) For proximity sensors SME-/SMT-8.
- 3) For inductive proximity sensors SIEN-M5.
- 4) For inductive proximity sensors SIEN-M8.

13 Proximity sensor SME-10, magnetic reed		
Description	Type	Part No.
Cable, 2.5 m, 3-wire	SME-10-KL-LED-24	173210
Plug M8x1, 3-pin	SME-10-SL-LED-24	173212

13 Proximity sensor SME-/SMT-10M		
Description	Type	Part No.
Magnetic reed		
Cable, 2.5 m, 3-wire	SME-10M-DS-24V-E-2,5-L-OE	551365
Plug M8x1, 3-pin	SME-10M-DS-24V-E-0,3-L-M8D	551367
Magneto-resistive		
Cable, 2.5 m, 3-wire	SMT-10M-PS-24V-E-2,5-L-OE	551373
Plug M8x1, 3-pin	SMT-10M-PS-24V-E-0,3-L-M8D	551375

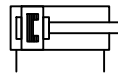
14 Proximity sensor SME-/SMT-8		
Description	Type	Part No.
Magnetic reed		
Cable, 2.5 m, 3-wire	SME-8-K-LED-24	150855
Plug M8x1, 3-pin	SME-8-S-LED-24	150857
Magneto-resistive		
Cable, 2.5 m, 3-wire	SMT-8-PS-K-LED-24-B	175436
Plug M8x1, 3-pin	SMT-8-PS-S-LED-24-B	175484

15 Inductive proximity sensor SIEN		
Description	Type	Part No.
N/O contact, M5, PNP, cable, 2.5 m	SIEN-M5B-PS-K-L	150370
N/O contact, M5, PNP, plug	SIEN-M5B-PS-S-L	150371
N/O contact, M8, PNP, cable, 2.5 m	SIEN-M8B-PS-K-L	150386
N/O contact, M8, PNP, plug	SIEN-M8B-PS-S-L	150387

16 Cover cap AKM		
For size	Type	Part No.
12	AKM-12	549194
16	AKM-16	549195
25	AKM-25	549196
32	AKM-32	549197
40	AKM-40	549198

Mini slides DGSL

Double-acting



- High load carrying ability and positioning accuracy
- Maximum flexibility thanks to eight sizes
- Guided unit with very precise linearity and parallelism
- Simple basic setting plus precision final adjustment of the end positions

Type codes – Basic design

		DGSL	-		-		-		A
Type		DGSL							
	Mini slide								
Size									
	Stroke [mm]								
4	10, 20, 30								
6	10, 20, 30, 40, 50								
8	10, 20, 30, 40, 50, 80								
10	10, 20, 30, 40, 50, 80, 100								
12, 16	10, 20, 30, 40, 50, 80, 100, 150								
20, 25	10, 20, 30, 40, 50, 80, 100, 150, 200								
Cushioning									
P	Elastic cushioning, without metal end stop, at both ends								
Y3	Progressive shock absorbers, at both ends								
Position sensing									
A	Via proximity sensor								

Variants

- | | | | |
|-------------------------|--|--|--|
| N NPT thread | P1 Elastic cushioning, with metal end stop, at both ends | Y3 Progressive shock absorbers, at both ends | E Elastic cushioning, without metal end stop, at both ends, short design |
| C Clamping unit | | | |
| E3 End-position locking | | | |

Ordering data – Variants

	<p>Configurable product</p>	<p>This product and all its variants can be ordered using the configurator</p>	<p>The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...</p>	<p>Enter the type or configuration part number in the search field.</p>
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Mini slides DGSL

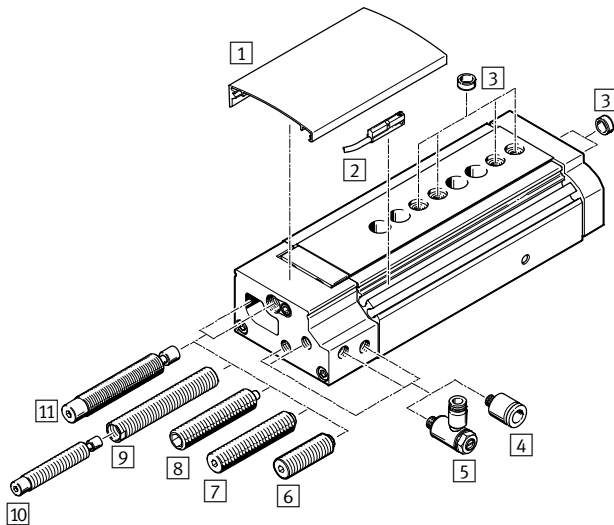
Double-acting

1

Ordering data – Basic design

Stroke [mm]	Size									Cushioning		
	4	6	8	10	12	16	20	25	16	20	25	
	Cushioning									Cushioning		
	P	P	P	P	P	P	P	P	Y3	Y3	Y3	
10	543910	543916	543926	543942	543961	543983	544005	544030				
20	543911	543917	543927	543943	543962	543984	544006	544031				
30	543912	543918	543928	543944	543963	543985	544007	544032				
40		543919	543929	543945	543964				544000	544024	544049	
50		543920	543930	543946	543965				544001	544025	544050	
80			543931	543947	543966				544002	544026	544051	
100				543948	543967				544003	544027	544052	
150									544004	544028	544053	
200											544054	

Accessories

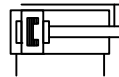


- 1 Cover DADS → [dads](#)
- 2 Proximity sensor SME-/SMT-10M → [sme-10](#)
- 3 Centring sleeve ZBH → 30
- 4 Push-in fitting QSM → 118
- 5 One-way flow control valve GRLA → 41
- 6 Cushioning E → [dgsl](#)
- 7 Cushioning P → 29
- 8 Cushioning with stop P1 → [dgsl](#)
- 9 Reducing sleeve DAYH → [dayh](#)
- 10 Shock absorber DYSW → [dysw](#)
- 11 Cushioning with shock absorber Y3 → 29

3 Centring sleeve ZBH		
For	Type	Part No.
4, 6	ZBH-5	189652
8, 10, 12, 16	ZBH-7	186717
20, 25	ZBH-9	150927

Guided drives DFM

Double-acting



- Sturdy and precise
- With plain-bearing guide
- High resistance to torques and lateral forces
- Wide range of applications

1

Type codes – Basic design

		DFM	-		-		-	P	-	A	-	GF
Type												
DFM	Guided drive											
Piston Ø [mm]												
	Stroke [mm]											
12, 16	10, 20, 25, 30, 40, 50, 80, 100											
20, 25	20, 25, 30, 40, 50, 80, 100											
32	20, 25, 30, 40, 50, 80, 100, 125, 160, 200											
40, 50, 63, 80, 100	25, 50, 80, 100, 125, 160, 200											
Cushioning												
P	Elastic cushioning rings/pads at both ends											
Position sensing												
A	Via proximity sensor											
Guide												
GF	Plain-bearing guide											

Variants

KF Recirculating ball bearing guide 10 ... 200 mm Variable stroke

Ordering data – Variants

	<p>Configurable product</p>	<p>This product and all its variants can be ordered using the configurator</p>	<p>The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...</p>	<p>Enter the type or configuration part number in the search field.</p>
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Guided drives DFM

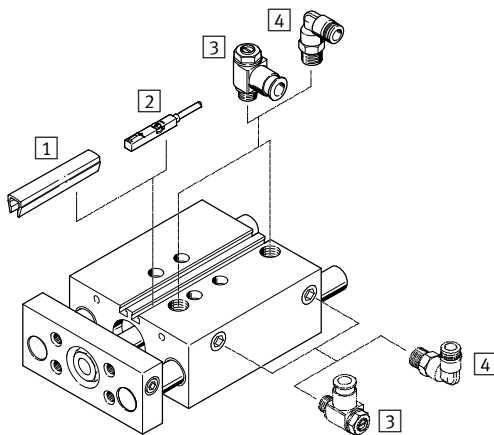
Double-acting

1

Ordering data – Basic design

Stroke [mm]	Piston Ø [mm]									
	12	16	20	25	32	40	50	63	80	100
	Cushioning – position sensing – guide									
	P – A – GF	P – A – GF	P – A – GF	P – A – GF	P – A – GF	P – A – GF	P – A – GF	P – A – GF	P – A – GF	P – A – GF
10	170824	170832								
20	170825	170833	170840	170847	170854					
25	170826	170834	170841	170848	170855	170864	170871	170878	170885	170892
30	170827	170835	170842	170849	170856					
40	170828	170836	170843	170850	170857					
50	170829	170837	170844	170851	170858	170865	170872	170879	170886	170893
80	170830	170838	170845	170852	170859	170866	170873	170880	170887	170894
100	170831	170839	170846	170853	170860	170867	170874	170881	170888	170895
125					170861	170868	170875	170882	170889	170896
160					170862	170869	170876	170883	170890	170897
200					170863	170870	170877	170884	170891	170898

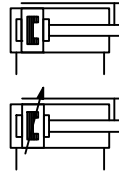
Accessories



- 1 Slot cover ABP-5-S → [abp-5-s](#)
- 2 Proximity sensor SME-/SMT-8M
→ 99, SME-/SMT-8 → [sme-8](#)
- 3 One-way flow control valve GRLA
→ 41
- 4 Push-in fitting QS → 114

Guided drives DFM-B

Double-acting



- Sturdy and precise
- With plain-bearing or recirculating ball bearing guide
- High resistance to torques and lateral forces
- Precision stroke adjustment in the end positions
- Pneumatic and hydraulic cushioning variants for shorter cycle times
- Types in accordance with ATEX directive for potentially explosive atmospheres
→ www.festo.com/en/ex

Type codes

		DFM		-		-		-	B	-		-	A	-		-	
Type																	
DFM	Guided drive																
Piston Ø [mm]																	
	Stroke [mm]																
12, 16	10, 20, 25, 30, 40, 50, 80, 100, 125, 160, 200	10 ... 200	1														
20, 25, 32	20, 25, 30, 40, 50, 80, 100, 125, 160, 200, 250, 320, 400	20 ... 400	1														
40, 50, 63	25, 50, 80, 100, 125, 160, 200, 250, 320, 400	25 ... 400	1														
Generation																	
B	B series																
Cushioning																	
P	Elastic cushioning rings/pads at both ends																
PPV	Pneumatic cushioning, adjustable at both ends	2															
YSRW	Self-adjusting, progressive shock absorbers	3															
Position sensing																	
A	Via proximity sensor																
Guide																	
GF	Plain-bearing guide	4															
KF	Recirculating ball bearing guide																
Variant																	
S6	Heat-resistant seals up to max. 120 °C	5															
Precision adjustment																	
AJ	Advanced end position																
EJ	Retracted end position	3															

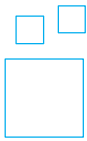
- 1 Not with cushioning YSRW, precision adjustment AJ.
- 2 Not with piston Ø 12 mm, precision adjustment AJ, EJ.
- 3 Not with piston Ø 12 and 16 mm, precision adjustment AJ, EJ.
- 4 Not with cushioning YSRW.
- 5 Not with recirculating ball bearing guide KF, precision adjustment AJ, EJ.

Guided drives DFM-B

Double-acting

1

Ordering data – Variants



Configurable product

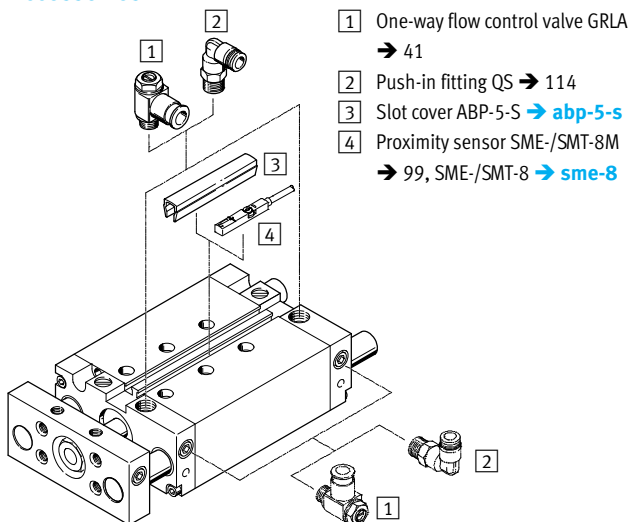
This product and all its variants can be ordered using the configurator:

The configurator can be found on the DVD under Products or at
 → www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Configuration part no.		
∅	Type	Part No.
12	DFM-12-...-B	529119
16	DFM-16-...-B	529120
20	DFM-20-...-B	532316
25	DFM-25-...-B	532317
32	DFM-32-...-B	532318
40	DFM-40-...-B	532319
50	DFM-50-...-B	534769
63	DFM-63-...-B	534770

Accessories



Rotary indexing tables DHTG

Double-acting



- Flexible areas of application thanks to clockwise/anti-clockwise rotation or reciprocating motion
- Sturdy mechanical system with overload protection
- Stationary middle section with through-hole for fast installation of cables and tubing

1

Type codes – Basic design

		DHTG	-		-		-	A
Type		DHTG	Rotary indexing table					
Size								
	Indexing stations							
65, 90	2, 3, 4, 6, 8, 12, 24							
140, 220	3, 4, 6, 8, 12, 24							
Position sensing								
A	Via proximity sensor							

Ordering data – Variants

	<p>Configurable product</p>	<p>This product and all its variants can be ordered using the configurator.</p>	<p>The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...</p>	<p>Enter the type or configuration part number in the search field.</p>
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Ordering data – Basic design

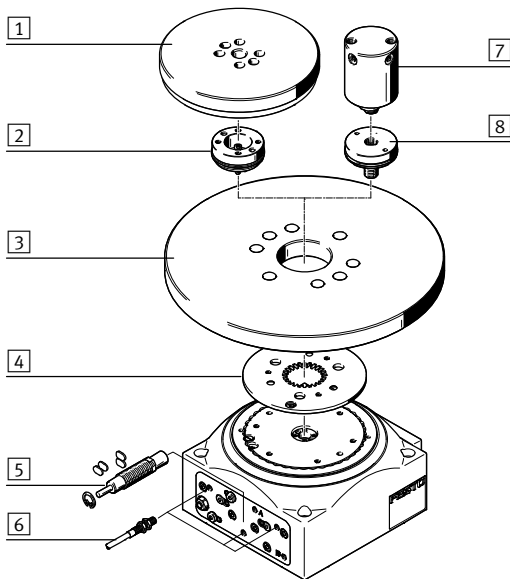
Indexing stations	Size			
	65	90	140	220
2	548076	548082		
3	555448	555449	555450	555451
4	548077	548083	548088	548093
6	548078	548084	548089	548094
8	548079	548085	548090	548095
12	548080	548086	548091	548096
24	548081	548087	548092	548097

Rotary indexing tables DHTG

Double-acting

Accessories

1



- 1) Unmachined plate, fixed DADG-UPF¹⁾
- 2) Adapter kit DADG-AK → 36
- 3) Unmachined plate, rotating DADG-UPT¹⁾
- 4) Indexing conversion kit DADM-CK → [dadm-ck](#)
- 5) Reciprocating motion kit DADM-TK → 36
- 6) Inductive proximity sensor SIEN → 36
- 7) Rotary distributor GF → 36
- 8) Adapter kit DADG-AK-...-...G... → [dadg-ak](#)

1) You can order unmachined plates with a standard hole pattern or individual interface via your local Festo contact.

2) Adapter kit DADG-AK

For size	Type	Part No.
65	DADG-AK-65	555424
90	DADG-AK-90	555425
140	DADG-AK-140	555426
220	DADG-AK-220	555427

5) Reciprocating motion kit DADM-TK

For size	Type	Part No.
65	DADM-TK-65	548120
90	DADM-TK-90	548121
140	DADM-TK-140	563304
220	DADM-TK-220	563305

6) Inductive proximity sensor SIEN

Description	Type	Part No.
N/O contact, M5, PNP, plug	SIEN-M5B-PS-S-L	150371
N/C contact, M5, PNP, plug	SIEN-M5B-PO-S-L	150375
N/O contact, M8, PNP, cable, 2.5 m	SIEN-M8B-PS-K-L	150386
N/O contact, M8, PNP, plug	SIEN-M8B-PS-S-L	150387
N/C contact, M8, PNP, cable, 2.5 m	SIEN-M8B-PO-K-L	150390
N/C contact, M8, PNP, plug	SIEN-M8B-PO-S-L	150391

7) Rotary distributor GF

For size	Type	Part No.
Single		
65, 90	GF-1/8-M5	539290
140	GF-1/4-1/8	539291
220	GF-1/2-1/4	539292
Multiple		
220	GF-1/8-2	539287

Accessories for pneumatic drives

Overview

Mounting attachments for drives

Piston rod attachments

- Rod clevises SG
- Rod eyes SGS
- Self-aligning rod couplers FK
- Rod clevis SGA

→ 38



Linear guides

Guide units FEN/FENG, for standard cylinders

- For standard cylinders
- Protection against rotation at high torque loads

→ 39



Flow control and non-return valves

One-way flow control valves GRLA and non-return valves HGL

- GRLA-QS-D: with slotted head screw
- GRLA-QS-RS-D: with knurled screw
- GRLSA: rotary knob with scale, internal hex
- HGL: controlled, piloted non-return function

→ 41



Piston rod attachments

2



- Coordinated with Festo's cylinder
- Versatile combinations
- Sturdy and functional

- 1 Rod clevis SG: permits a swivelling movement of the cylinder in one plane
- 2 Rod eye SGS: with spherical bearing
- 3 Self-aligning rod coupler FK: for compensating radial and angular deviations
- 4 Rod clevis SGA: in combination with rod eye SGS for spherical mounting of cylinders

Type codes

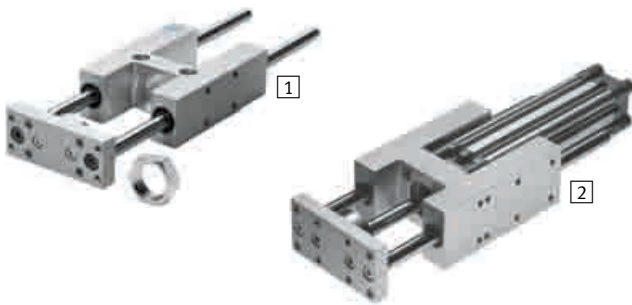
Type	
SG	Rod clevis
SGS	Rod eye
FK	Self-aligning rod coupler
SGA	Rod clevis

Piston rod thread	
M4	Male thread
M6	
M8	
M10x1.25	
M12x1.25	
M16x1.5	
M20x1.5	
M27x2	

Ordering data

For cylinder	Piston Ø [mm]	Piston rod thread	Type			
			SG	SGS	FK	SGA
DSNU	8	M4	6532	9253	6528	
DSNU	10	M4	6532	9253	6528	
DSNU	12	M6	3110	9254	2061	
DSNU	16	M6	3110	9254	2061	
DSNU	20	M8	3111	9255	2062	
DSNU	25	M10x1.25	6144	9261	6140	32954
DSBC/DNCE	32	M10x1.25	6144	9261	6140	32954
DSBC/DNCE	40	M12x1.25	6145	9262	6141	10767
DSBC	50	M16x1.5	6146	9263	6142	10768
DSBC/DNCE	63	M16x1.5	6146	9263	6142	10768
DSBC	80	M20x1.5	6147	9264	6143	10769
DSBC	100	M20x1.5	6147	9264	6143	10769

Guide units FEN/FENG, for standard cylinders



- High guide precision
- Protection against rotation at high torque loads
- Plain-bearing or recirculating ball bearing guide

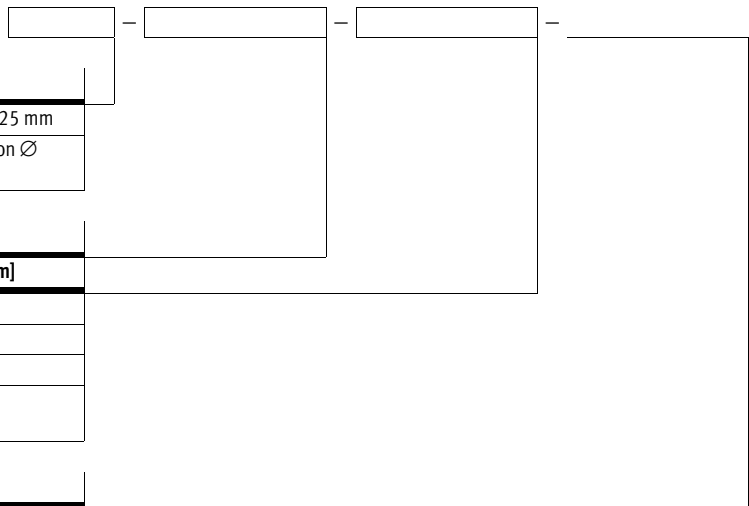
- 1 FEN-KF with recirculating ball bearing guide
- 2 FENG with standard cylinder DSBC

Type codes

Type	
FEN	Guide unit for variable strokes for piston \varnothing 8 ... 25 mm
FENG	Guide unit for fixed and variable strokes for piston \varnothing 32 ... 100 mm

For piston \varnothing [mm]		
	Fixed stroke [mm]	Variable stroke [mm]
8, 10		1 ... 100
12, 16		1 ... 200
20, 25		2 ... 250
32, 40, 50, 63, 80, 100	50, 100, 160, 200, 250, 320, 400, 500	10 ... 500

Guide	
-	Plain-bearing guide
KF	Recirculating ball bearing guide



Guide units FEN/FENG, for standard cylinders

Ordering data

For standard cylinder DSNU					
For piston Ø [mm]	Variable stroke [mm]	With plain-bearing guide		With recirculating ball bearing guide	
		Part No.	Type	Part No.	Type
8, 10	1 ... 100	35196	FEN-8/10-...	35197	FEN-8/10-...-KF
12, 16	1 ... 200	19168	FEN-12/16-...	33481	FEN-12/16-...-KF
20	2 ... 250	19169	FEN-20-...	33482	FEN-20-...-KF
25	2 ... 250	19170	FEN-25-...	33483	FEN-25-...-KF

For standard cylinder DSBC					
For piston Ø [mm]	Variable stroke [mm]	With plain-bearing guide		With recirculating ball bearing guide	
		Part No.	Type	Part No.	Type
32	10 ... 500	34481	FENG-32-...	34487	FENG-32-...-KF
40		34482	FENG-40-...	34488	FENG-40-...-KF
50		34483	FENG-50-...	34489	FENG-50-...-KF
63		34484	FENG-63-...	34490	FENG-63-...-KF
80		34485	FENG-80-...	34491	FENG-80-...-KF
100		34486	FENG-100-...	34492	FENG-100-...-KF

For standard cylinder DSBC									
For piston Ø [mm]	With recirculating ball bearing guide								
	Part No.	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type
	Fixed stroke								
	50 mm			100 mm		160 mm		200 mm	
32	34493	FENG-32-50-KF	34494	FENG-32-100-KF	34495	FENG-32-160-KF	34496	FENG-32-200-KF	
40	34499	FENG-40-50-KF	34500	FENG-40-100-KF	34501	FENG-40-160-KF	34502	FENG-40-200-KF	
50	34506	FENG-50-50-KF	34507	FENG-50-100-KF	34508	FENG-50-160-KF	34509	FENG-50-200-KF	
63	34513	FENG-63-50-KF	34514	FENG-63-100-KF	34515	FENG-63-160-KF	34516	FENG-63-200-KF	
80	34521	FENG-80-50-KF	34522	FENG-80-100-KF	34523	FENG-80-160-KF	34524	FENG-80-200-KF	
100	34529	FENG-100-50-KF	34530	FENG-100-100-KF	34531	FENG-100-160-KF	34532	FENG-100-200-KF	
	Fixed stroke								
	250 mm			320 mm		400 mm		500 mm	
32	150289	FENG-32-250-KF	34497	FENG-32-320-KF	150290	FENG-32-400-KF	34498	FENG-32-500-KF	
40	34503	FENG-40-250-KF	34504	FENG-40-320-KF	150291	FENG-40-400-KF	34505	FENG-40-500-KF	
50	34510	FENG-50-250-KF	34511	FENG-50-320-KF	150292	FENG-50-400-KF	34512	FENG-50-500-KF	
63	34517	FENG-63-250-KF	34518	FENG-63-320-KF	34519	FENG-63-400-KF	34520	FENG-63-500-KF	
80	34525	FENG-80-250-KF	34526	FENG-80-320-KF	34527	FENG-80-400-KF	34528	FENG-80-500-KF	
100	34533	FENG-100-250-KF	34534	FENG-100-320-KF	34535	FENG-100-400-KF	34536	FENG-100-500-KF	

One-way flow control valves GRLA and non-return valves HGL



Sturdy metal design, can be swivelled 360° around the screw-in axis after mounting:

- 1 GRLA-QS-D: with slotted head screw
- 2 GRLA-QS-RS-D: with knurled screw
- 3 GRLSA: rotary knob with scale, internal hex

4 HGL: controlled, piloted non-return function

Type codes

							D
Type							
Exhaust air one-way flow control function							
GRLA	One-way flow control valve, elbow outlet						
GRLSA	One-way flow control valve, elbow outlet with rotary knob						
Pneumatic connection 2							
M5, 1/8, 1/4, 3/8, 1/2	Male thread						
Pneumatic connection 1							
Connection type							
QS	Push-in connector QS						
Tubing O.D.							
3, 4, 6, 8, 10, 12	Tubing O.D. with push-in connector QS						
Adjusting element							
-	Slotted head screw						
RS	Knurled screw						
Generation							
D	D series						

Ordering data

GRLA: with slotted head screw	
Type	Part No.
GRLA-M5-QS-3-D	193137
GRLA-M5-QS-4-D	193138
GRLA-M5-QS-6-D	193139
GRLA-1/8-QS-3-D	193142
GRLA-1/8-QS-4-D	193143
GRLA-1/8-QS-6-D	193144
GRLA-1/8-QS-8-D	193145
GRLA-1/4-QS-6-D	193146
GRLA-1/4-QS-8-D	193147
GRLA-1/4-QS-10-D	193148
GRLA-3/8-QS-6-D	193149
GRLA-3/8-QS-8-D	193150
GRLA-3/8-QS-10-D	193151
GRLA-1/2-QS-12-D	193152

GRLA-RS: with knurled screw	
Type	Part No.
GRLA-M5-QS-3-RS-D	197576
GRLA-M5-QS-4-RS-D	197577
GRLA-M5-QS-6-RS-D	197578
GRLA-1/8-QS-3-RS-D	197579
GRLA-1/8-QS-4-RS-D	197580
GRLA-1/8-QS-6-RS-D	197581
GRLA-1/8-QS-8-RS-D	534337
GRLA-1/4-QS-6-RS-D	534338
GRLA-1/4-QS-8-RS-D	534339
GRLA-1/4-QS-10-RS-D	534340
GRLA-3/8-QS-6-RS-D	534341
GRLA-3/8-QS-8-RS-D	534342
GRLA-3/8-QS-10-RS-D	534343
GRLA-3/8-QS-12-RS-D	534344

GRLSA-D: with rotary knob and slotted head screw	
Type	Part No.
GRLSA-1/8-QS-6	540661
GRLSA-1/8-QS-8	540662

One-way flow control valves GRLA and non-return valves HGL

Type codes

2

		HGL	-		-		-	
Type								
Piloted non-return function								
HGL	Non-return valve, piloted							
Pneumatic connection 2								
M5	Male thread M5							
1/8	Male thread G $\frac{1}{8}$							
1/4	Male thread G $\frac{1}{4}$							
3/8	Male thread G $\frac{3}{8}$							
1/2	Male thread G $\frac{1}{2}$							
Pneumatic connection 1								
QS-4	Push-in connector for tubing O.D. 4 mm							
QS-6	Push-in connector for tubing O.D. 6 mm							
QS-8	Push-in connector for tubing O.D. 8 mm							
QS-10	Push-in connector for tubing O.D. 10 mm							
QS-12	Push-in connector for tubing O.D. 12 mm							
-	Connection size as for connection 2, female thread							
1/8	Female thread G $\frac{1}{8}$							
Generation								
B	B series							

Ordering data

HGL with push-in connector QS	
Type	Part No.
HGL-M5-QS-4	530038
HGL-1/8-QS-6	530039
HGL-1/8-QS-6	530040
HGL-1/4-QS-8	530041
HGL-1/4-QS-10	530042
HGL-3/8-QS-8	530043
HGL-3/8-QS-10	530044
HGL-3/8-QS-12	530045

HGL with female thread	
Type	Part No.
HGL-M5-B	530029
HGL-1/8-B	530030
HGL-1/8-1/8-B	543253
HGL-1/4-B	530031
HGL-3/8-B	530032
HGL-1/2-B	530033



Electromechanical drives

Overview

FESTO

Linear drives

Electric cylinders DNCE, with spindle drive

- Ball screw for high dynamic response
 - Self-retarding lead screw
 - Parallel or axial motor attachment
- 45



Electric cylinder EPCO, with spindle drive

- Motor attachment variants: top, bottom, left, right
 - Suitable for simple applications in factory automation
 - Extensive mounting accessories for various installation situations
- 49



Toothed belt axis EGC-TB-KF, with recirculating ball bearing guide

- High speeds and feed forces
 - Recirculating ball bearing guide and rigid profile
 - High loads and torques
 - Flexible motor attachment
- 52



Spindle axis EGC-BS-KF, with recirculating ball bearing guide

- Precise, high feed forces
 - Recirculating ball bearing guide and rigid profile
 - High loads and torques
 - Flexible motor attachment
- 55



Toothed belt axis ELGR

- Ready-to-install unit for quick and easy design
 - Highly reliable
 - Motor can be mounted on any one of 4 sides
- 58



Mini slide EGSL, electric

- High precision, load carrying ability and dynamic response in a compact space
 - Optional homing to the fixed stop or reference switch
 - Ideal for vertical applications
- [egsl](#)

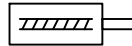


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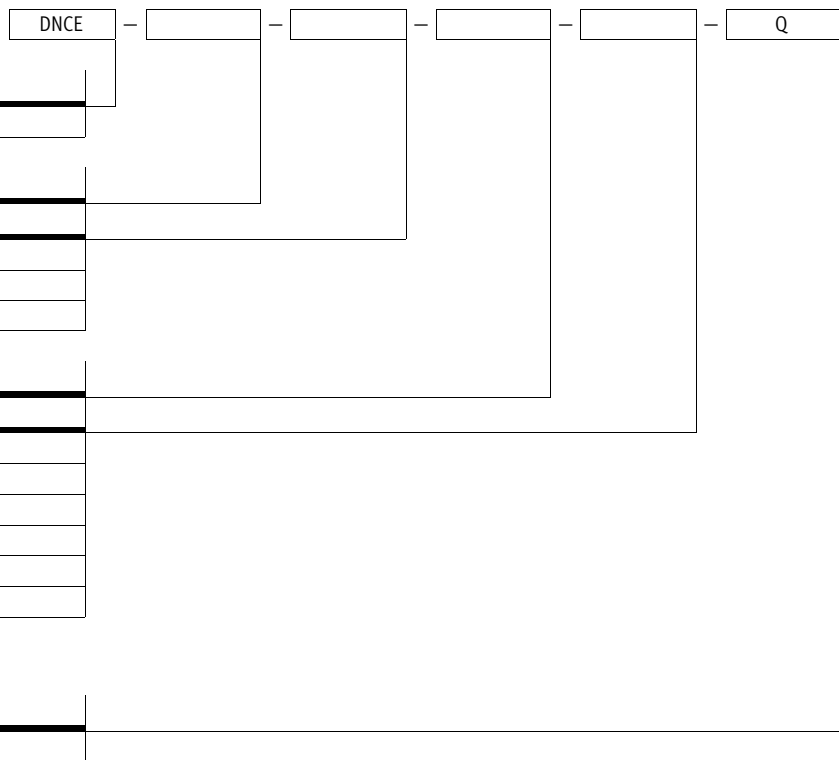
Electric cylinders DNCE, with spindle drive



- Electromechanical linear axis with piston rod
- Linear drive with lead screw or ball screw
- Axial or parallel (U-shaped) motor mounting
- Compatible with extensive range of accessories for standard cylinder DSBC



Type codes – Basic design



Type	
DNCE	Electromechanical linear axis

Size	
	Stroke [mm]
32	100, 200, 300, 400
40	100, 200, 300, 400, 600
63	100, 200, 300, 400, 600, 800

Drive function	
	Spindle pitch [mm]
LS ¹⁾	"1.5"P
	"2.5"P
	"4"P
BS ²⁾	"3"P, "10"P
	"5"P, "12.7"P
	"10"P, "20"P

1) LS = Lead screw
2) BS = Ball screw

Protection against rotation	
Q	Square piston rod

Variants

K3 Female piston rod thread K8 Extended piston rod

Ordering data – Variants

Configurable product

This product and all its variants can be ordered using the configurator

The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Electric cylinders DNCE, with spindle drive**Ordering data – Basic design**

Stroke [mm]	DNCE-32					
	Lead screw spindle with spindle pitch 1.5 mm		Ball screw spindle with spindle pitch 3 mm		Ball screw spindle with spindle pitch 10 mm	
	Type	Part No.	Type	Part No.	Type	Part No.
100	DNCE-32-100-LS-”1,5”P-Q	543111	DNCE-32-100-BS-”3”P-Q	543115	DNCE-32-100-BS-”10”P-Q	543119
200	DNCE-32-200-LS-”1,5”P-Q	543112	DNCE-32-200-BS-”3”P-Q	543116	DNCE-32-200-BS-”10”P-Q	543120
300	DNCE-32-300-LS-”1,5”P-Q	543113	DNCE-32-300-BS-”3”P-Q	543117	DNCE-32-300-BS-”10”P-Q	543121
400	DNCE-32-400-LS-”1,5”P-Q	543114	DNCE-32-400-BS-”3”P-Q	543118	DNCE-32-400-BS-”10”P-Q	543122

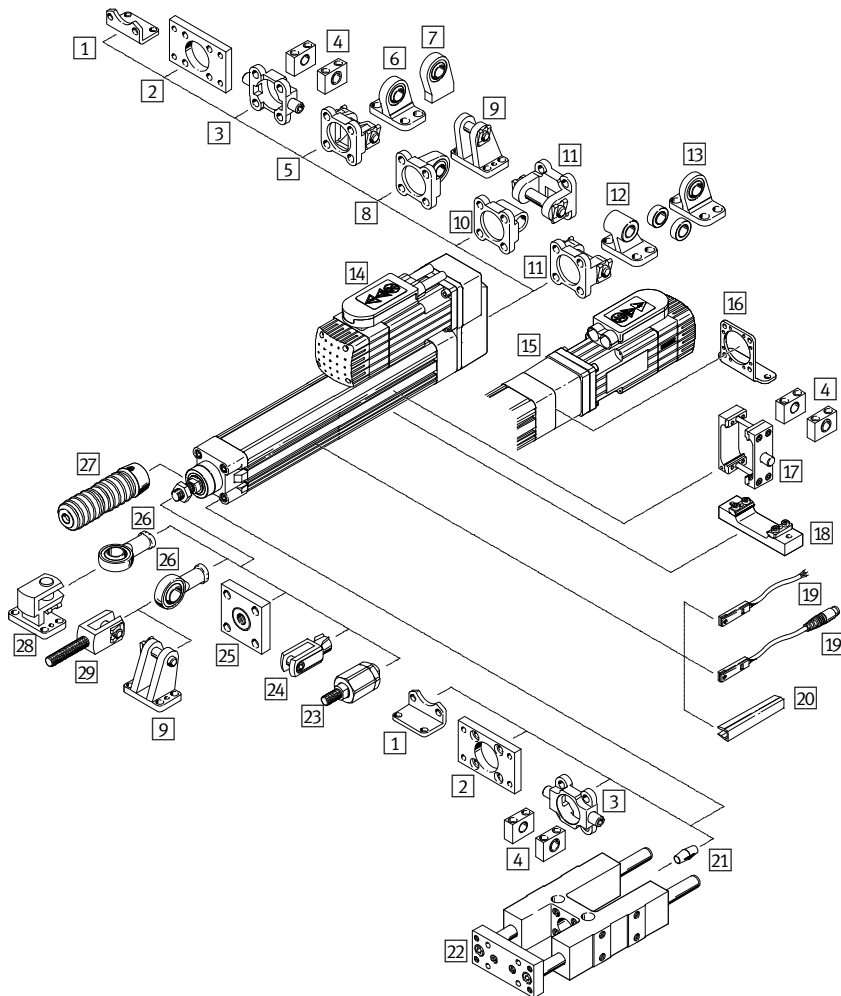
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Stroke [mm]	DNCE-40					
	Lead screw spindle with spindle pitch 2.5 mm		Ball screw spindle with spindle pitch 5 mm		Ball screw spindle with spindle pitch 12.7 mm	
	Type	Part No.	Type	Part No.	Type	Part No.
100	DNCE-40-100-LS-”2,5”P-Q	543123	DNCE-40-100-BS-”5”P-Q	543127	DNCE-40-100-BS-”12,7”P-Q	543131
200	DNCE-40-200-LS-”2,5”P-Q	543124	DNCE-40-200-BS-”5”P-Q	543128	DNCE-40-200-BS-”12,7”P-Q	543132
300	DNCE-40-300-LS-”2,5”P-Q	555465	DNCE-40-300-BS-”5”P-Q	555466	DNCE-40-300-BS-”12,7”P-Q	555467
400	DNCE-40-400-LS-”2,5”P-Q	543125	DNCE-40-400-BS-”5”P-Q	543129	DNCE-40-400-BS-”12,7”P-Q	543133
600	DNCE-40-600-LS-”2,5”P-Q	543126	DNCE-40-600-BS-”5”P-Q	543130	DNCE-40-600-BS-”12,7”P-Q	543134

Stroke [mm]	DNCE-63					
	Lead screw spindle with spindle pitch 4 mm		Ball screw spindle with spindle pitch 10 mm		Ball screw spindle with spindle pitch 20 mm	
	Type	Part No.	Type	Part No.	Type	Part No.
100	DNCE-63-100-LS-”4”P-Q	555468	DNCE-63-100-BS-”10”P-Q	555470	DNCE-63-100-BS-”20”P-Q	555472
200	DNCE-63-200-LS-”4”P-Q	543135	DNCE-63-200-BS-”10”P-Q	543139	DNCE-63-200-BS-”20”P-Q	543143
300	DNCE-63-300-LS-”4”P-Q	555469	DNCE-63-300-BS-”10”P-Q	555471	DNCE-63-300-BS-”20”P-Q	555473
400	DNCE-63-400-LS-”4”P-Q	543136	DNCE-63-400-BS-”10”P-Q	543140	DNCE-63-400-BS-”20”P-Q	543144
600	DNCE-63-600-LS-”4”P-Q	543137	DNCE-63-600-BS-”10”P-Q	543141	DNCE-63-600-BS-”20”P-Q	543145
800	DNCE-63-800-LS-”4”P-Q	543138	DNCE-63-800-BS-”10”P-Q	543142	DNCE-63-800-BS-”20”P-Q	543146

Electric cylinders DNCE, with spindle drive

Accessories



- 1 Foot mounting HNC → 14
- 2 Flange mounting FNC 14
- 3 Trunnion flange ZNCF → 14
- 4 Trunnion support LNZG → 14
- 5 Swivel flange SNC 47
- 6 Clevis foot LSNG → 47
- 7 Clevis foot LSNSG → 47
- 8 Swivel flange SNCS → 47
- 9 Clevis foot LBG → 47
- 10 Swivel flange SNCL → 14
- 11 Swivel flange SNCB → 47
- 12 Clevis foot LNG → 47
- 13 Clevis foot LSN → 47
- 14 Parallel kit EAMM-U/EAMM-U-S1 → 48
- 15 Axial kit EAMM-A/EAMM-A-S1 → 48
- 16 Foot mounting HNCE → 48
- 17 Trunnion mounting kit ZNCM → 14
- 18 Profile mounting EAHF → 48
- 19 Proximity sensor SME-/SMT-8/SME-8M → 48, connecting cable NEBU → [nebu](#)
- 20 Slot cover ABP-5-S → [abp-5-s](#)
- 21 Compensating component EADC → [eadc](#)
- 22 Guide unit FENG → 39
- 23 Self-aligning rod coupler FK → 38
- 24 Rod clevis SG → 38
- 25 Coupling piece KSZ → 48
- 26 Rod eye SGS → 38
- 27 Protective bellows kit EADB → [eadb](#)
- 28 Right-angle clevis foot LQG → 14
- 29 Rod clevis SGA → 38

3

5 Swivel flange SNC		
For size	Type	Part No.
32	SNC-32	174383
40	SNC-40	174384
63	SNC-63	174386

9 Clevis foot LBG		
For size	Type	Part No.
32	LBG-32	31761
40	LBG-40	31762
63	LBG-63	31764

6 Clevis foot LSNG		
For size	Type	Part No.
32	LSNG-32	31740
40	LSNG-40	31741
63	LSNG-63	31743

11 Swivel flange SNCB		
For size	Type	Part No.
32	SNCB-32	174390
40	SNCB-40	174391
63	SNCB-63	174393

7 Clevis foot LSNSG		
For size	Type	Part No.
32	LSNSG-32	31747
40	LSNSG-40	31748
63	LSNSG-63	31750

12 Clevis foot LNG		
For size	Type	Part No.
32	LNG-32	33890
40	LNG-40	33891
63	LNG-63	33893

8 Swivel flange SNCS		
For size	Type	Part No.
32	SNCS-32	174397
40	SNCS-40	174398
63	SNCS-63	174400

13 Clevis foot LSN		
For size	Type	Part No.
32	LSN-32	5561
40	LSN-40	5562
63	LSN-63	5564

Electric cylinders DNCE, with spindle drive

Accessories

14 Parallel kit EAMM-U		
For size	Type	Part No.
32 ¹⁾	EAMM-U-50-D32-40A-78	1201591
32 ¹⁾	EAMM-U-60-D32-55A-91	1210126
32 ²⁾	EAMM-U-50-D32-42A-78	1201607
32 ²⁾	EAMM-U-60-D32-57A-91	1210419
40 ¹⁾	EAMM-U-60-D40-55A-91	1210438
40 ¹⁾	EAMM-U-86-D40-70A-102	1212826
40 ²⁾	EAMM-U-60-D40-57A-91	1210442
40 ²⁾	EAMM-U-86-D40-87A-102	1215802
63 ¹⁾	EAMM-U-86-D60-70A-102	1212477
63 ¹⁾	EAMM-U-110-D60-100A-120	1202436
63 ²⁾	EAMM-U-86-D60-87A-102	1215784

- 1) With servo motor EMMS-AS
- 2) With stepper motor EMMS-ST

14 Parallel kit EAMM-U-S1 with protection class IP65		
For size	Type	Part No.
32 ¹⁾	EAMM-U-50-D32-40A-78-S1	1202302
32 ¹⁾	EAMM-U-60-D32-55A-91-S1	1210450
32 ²⁾	EAMM-U-50-D32-42A-78-S1	1202312
32 ²⁾	EAMM-U-60-D32-57A-91-S1	1210453
40 ¹⁾	EAMM-U-60-D40-55A-91-S1	1210458
40 ¹⁾	EAMM-U-86-D40-70A-102-S1	1212854
40 ²⁾	EAMM-U-60-D40-57A-91-S1	1210462
40 ²⁾	EAMM-U-86-D40-87A-102-S1	1215814
63 ¹⁾	EAMM-U-86-D60-70A-102-S1	1212835
63 ¹⁾	EAMM-U-110-D60-100A-120-S1	1203112
63 ²⁾	EAMM-U-86-D60-87A-102-S1	1215810

- 1) With servo motor EMMS-AS
- 2) With stepper motor EMMS-ST

15 Axial kit EAMM-A		
For size	Type	Part No.
32 ¹⁾	EAMM-A-D32-40A	543147
32 ¹⁾	EAMM-A-D32-55A	550979
32 ²⁾	EAMM-A-D32-42A	543148
32 ²⁾	EAMM-A-D32-57A	550980
32 ³⁾	EAMM-A-D32-32B	543149
40 ¹⁾	EAMM-A-D40-55A	543153
40 ¹⁾	EAMM-A-D40-70A	550981
40 ²⁾	EAMM-A-D40-57A	543154
40 ²⁾	EAMM-A-D40-87A	550982
40 ³⁾	EAMM-A-D40-42B	543155
40 ³⁾	EAMM-A-D40-42C	543156
63 ¹⁾	EAMM-A-D60-70A	543161
63 ¹⁾	EAMM-A-D60-100A	550983
63 ²⁾	EAMM-A-D60-87A	543162
63 ³⁾	EAMM-A-D60-52B	543163
63 ³⁾	EAMM-A-D60-52C	543164

- 1) With servo motor EMMS-AS
- 2) With stepper motor EMMS-ST
- 3) With motor unit MTR-DCI

15 Axial kit EAMM-A-S1 with protection class IP65		
For size	Type	Part No.
32 ¹⁾	EAMM-A-D32A-40A-S1	1322178
32 ¹⁾	EAMM-A-D32A-55A-S1	1322180
32 ²⁾	EAMM-A-D32A-42A-S1	1322179
32 ²⁾	EAMM-A-D32A-57A-S1	1322181
40 ¹⁾	EAMM-A-D40A-55A-S1	1322182
40 ¹⁾	EAMM-A-D40A-70A-S1	1322185
40 ²⁾	EAMM-A-D40A-57A-S1	1322183
40 ²⁾	EAMM-A-D40A-87A-S1	1322186
63 ¹⁾	EAMM-A-D60A-70A-S1	1322187
63 ¹⁾	EAMM-A-D60A-100A-S1	1322190
63 ²⁾	EAMM-A-D60A-87A-S	1322188

- 1) With servo motor EMMS-AS
- 2) With stepper motor EMMS-ST

16 Foot mounting HNCE, for axial motor attachment		
For size	Type	Part No.
32	HNCE-32-AX	547949
40	HNCE-40-AX	547950
63	HNCE-63-AX	547951

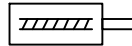
18 Profile mounting EAHF		
For size	Type	Part No.
32	EAHF-V1-32-P	1098473
40	EAHF-V1-40-P	1098478
63	EAHF-V1-63-P	1098481

19 Proximity sensor SME-/SMT-8, insertable in the slot lengthwise		
Description	Type	Part No.
Magnetic reed		
Cable, 2.5 m, 3-wire	SME-8-K-LED-24	150855
Magneto-resistive		
Cable, 2.5 m, 3-wire	SMT-8-PS-K-LED-24-B	175436
Plug M8x1, 3-pin	SMT-8-PS-S-LED-24-B	175484

19 Proximity sensor SME-8M, insertable in the slot from above		
Description	Type	Part No.
Magnetic reed		
Cable, 2.5 m, 3-wire	SME-8M-DS-24V-K-2,5-OE	543862
Cable, 5 m, 3-wire	SME-8M-DS-24V-K-5,0-OE	543863

25 Coupling piece KSZ		
For size	Type	Part No.
32	KSZ-M10x1,25	36125
40	KSZ-M12x1,25	36126
63	KSZ-M16x1,5	36127

Electric cylinders EPCO, with spindle drive



- Mechanical linear drive with piston rod and permanently attached stepper motor
- With ball screw
- Compact dimensions
- Extensive mounting accessories for various installation situations
- Suitable for simple applications in factory automation that in the past were mostly carried out using pneumatic solutions
- The electric cylinder EPCO and controller CMMO form one unit

Type codes – Basic design

		EPCO	-		-		-		-	ST	-	E
Type												
EPCO	Electric cylinder											
Size												
	Stroke [mm]											
16	50, 100, 150, 200											
25	50, 100, 150, 200, 300											
40	50, 100, 150, 200, 300											
Spindle pitch												
3P	3 mm											
5P	5 mm											
8P	8 mm											
10P	10 mm											
12.7P	12.7 mm											
Piston rod thread type												
	Male thread											
Piston rod extension												
	None											
Position sensing												
	None											
Motor type												
ST	Stepper motor											
Measuring unit												
E	Encoder											
Brake												
	None											
Cable outlet direction												
	Standard											

Variants

1 ... 400 mm Variable stroke
 F Female piston rod thread

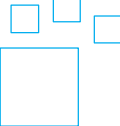
...E Piston rod extension
 1 ... 200 mm
 A Position sensing

B Brake
 D Cable outlet direction under-
 neath

L Cable outlet direction left
 R Cable outlet direction right

Electric cylinders EPCO, with spindle drive

Ordering data – Variants



Configurable product

This product and all its variants can be ordered using the configurator:

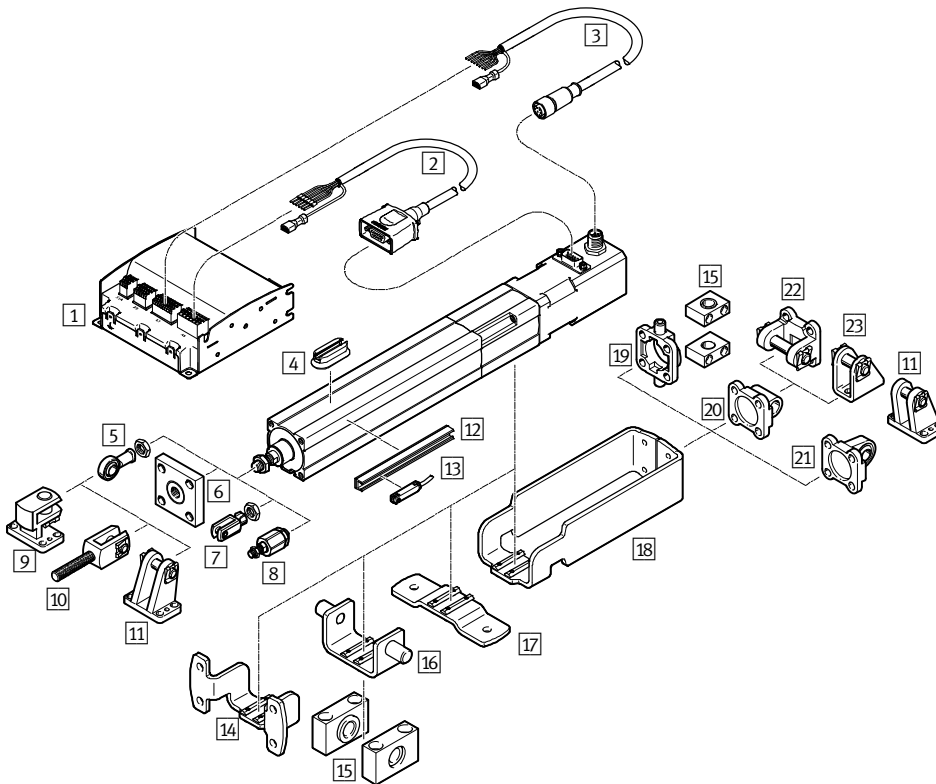
The configurator can be found on the DVD under Products or at
www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Ordering data – Basic design

Spindle pitch [mm]	Stroke [mm]				
	50	100	150	200	300
Size 16					
3P	1476415	1476417	1476419	1476421	
8P	1476522	1476524	1476526	1476528	
Size 25					
3P	1470698	1470700	1470702	1470704	1470706
10P	1470769	1470771	1470773	1470775	1470777
Size 40					
5P	1472501	1472503	1472505	1472507	1472509
12.7P	1472617	1472619	1472621	1472623	1472625

Accessories



- 1 Controller CMMO → [cmmo](#)
- 2 Motor cable NEBM → [nebm](#)
- 3 Encoder cable NEBM → [nebm](#)
- 4 Mounting kit CRSMB → [crsmb](#)
- 5 Rod eye SGS → 50
- 6 Coupling piece KSG → [ksg](#)
- 7 Rod clevis SG → 50
- 8 Self-aligning rod coupler FK → 50
- 9 Right-angle clevis foot LQG → 50
- 10 Rod clevis SGA → 51
- 11 Clevis foot LBG → 51
- 12 Sensor rail SAMH → [samh](#)
- 13 Proximity sensor SME-/SMT-8 → [sme-8](#), SME-8M → 99
- 14 Flange mounting EAHH → 51
- 15 Trunnion support LNZG → 51
- 16 Swivel mounting EAHS → 51
- 17 Foot mounting EAHF → 51
- 18 Adapter kit EAHA → 51
- 19 Trunnion flange ZNCF → 51
- 20 Swivel flange SNCL → 51
- 21 Swivel flange SNCS → 51
- 22 Swivel flange SNCB → 51
- 23 Clevis foot LBN → 51

5 Rod eye SGS		
For	Type	Part No.
16	SGS-M6	9254
25	SGS-M8	9255
40	SGS-M10x1,25	9261

7 Rod eye SG		
For	Type	Part No.
16	SG-M6	3110
25	SG-M8	3111
40	SG-M10x1,25	6144

8 Self-aligning rod coupler FK		
For	Type	Part No.
16	FK-M6	2061
25	FK-M8	2062
40	FK-M10x1,25	6140

9 Right-angle clevis foot LQG		
For	Type	Part No.
40	LQG-40	31769

Electric cylinders EPCO, with spindle drive

Accessories

10 Rod clevis SGA		
For	Type	Part No.
40	SGA-M10x1,25	32954

11 Clevis foot LBG		
For	Type	Part No.
40	LBG-40	31762

14 Flange mounting EAHH		
For	Type	Part No.
16	EAHH-P1-16	1434906
25	EAHH-P1-25	1434907
40	EAHH-P1-40	1434908

15 Trunnion support LNZG		
For	Type	Part No.
16	LNZG-16	1434912
25	LNZG-32	32959
40	LNZG-40/50	32960

16 Swivel mounting EAHS		
For	Type	Part No.
16	EAHS-P1-16	1434909
25	EAHS-P1-25	1434910
40	EAHS-P1-40	1434911

17 Foot mounting EAHF		
For	Type	Part No.
16	EAHF-P1-16	1434903
25	EAHF-P1-25	1434904
40	EAHF-P1-40	1434905

18 Adapter kit EAHA		
For	Type	Part No.
16	EAHA-P1-16	1434900
25	EAHA-P1-25	1434901
40	EAHA-P1-40	1434902

19 Trunnion flange ZNCF		
For	Type	Part No.
40	ZNCF-40	174412

20 Swivel flange SNCL		
For	Type	Part No.
16	SNCL-16	537791
25	SNCL-25	537793
40	SNCL-40	174405

21 Swivel flange SNCS		
For	Type	Part No.
40	SNCS-40	174398

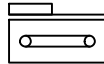
22 Swivel flange SNCB		
For	Type	Part No.
40	SNCB-40	174391

23 Clevis foot LBN		
For	Type	Part No.
16	LBN-12/16	6058
25	LBN-20/25	6059
40	LBN-40	195861

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide



- High speeds and feed forces
- Recirculating ball bearing guide and rigid profile
- High loads and torques
- Free choice of motor assembly



3

Type codes

		EGC	-		-		-	TB	-	KF	-		-	
Type														
EGC	Electromechanical linear axis													
Size														
	Stroke [mm]													
50	50 ... 1,900													
70	50 ... 5,000													
80	50 ... 8,500													
120	50 ... 8,500													
185	50 ... 8,500													
Drive function														
TB	Toothed belt drive													
Guide														
KF	Recirculating ball bearing guide													
Stroke reserve														
...H	0 ... 999 (0 = no stroke reserve)												1	
Slide														
GK	Standard slide													
GV	Extended slide													
GP	Standard slide, protected													
GQ	Extended slide, protected													

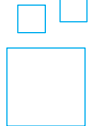
1 The sum of the stroke length and 2x stroke reserve must not exceed the maximum working stroke.

Variants

KL Additional slide on left KR Additional slide on right C Lubrication adapter

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Ordering data – Variants



Configurable product

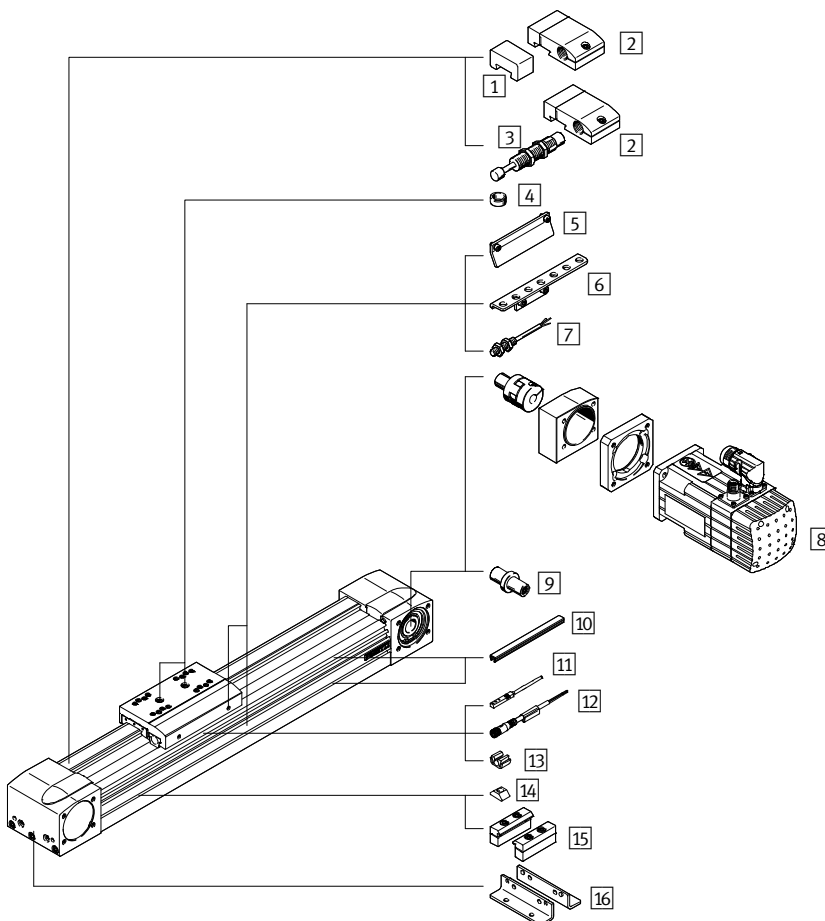
This product and all its variants can be ordered using the configurator

The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Configuration part no.		
Size	Type	Part No.
50	EGC-50-TB-KF-0H-GK	556812
70	EGC-70-TB-KF-0H	556813
80	EGC-80-TB-KF-0H	556814
120	EGC-120-TB-KF-0H	556815
185	EGC-185-TB-KF-0H	556817

Accessories



- 1 Emergency buffer NPE → [npe](#)
- 2 Shock absorber retainer KYE → [kye](#)
- 3 Shock absorber YSRW → [ysrw](#)
- 4 Centring pin/sleeve ZBS/ZBH → 54
- 5 Switch lug SF-EGC → 54
- 6 Sensor bracket HWS-EGC → [hws-egc](#)
- 7 Inductive proximity sensor SIEN → [sien](#)
- 8 Axial kit EAMM-A → 54/motor EMMS → [emms](#)
- 9 Drive shaft EAMB → [eamb](#)
- 10 Slot cover ABP/ABP-S → [abp](#)
- 11 Inductive proximity sensor SIES → 54
- 12 Connecting cable NEBU → [nebu](#)
- 13 Clip SMBK → [smbk](#)
- 14 Slot nut NST → 54
- 15 Profile mounting MUE → 54
- 16 Foot mounting HPE → 54

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Accessories

4 Centring pin/sleeve ZBS/ZBH		
For size	Type	Part No.
50, 70	ZBS-5 ¹⁾²⁾	150928
80, 120, 185	ZBH-9 ¹⁾²⁾	150927

1) Packaging unit 10 pieces.

2) 2 centring pins/sleeves included in the scope of delivery of the axis.

5 Switch lug SF-EGC		
For size	Type	Part No.
50	SF-EGC-1-50	558046
70	SF-EGC-1-70	558047
80	SF-EGC-1-80	558048
120	SF-EGC-1-120	558049
185	SF-EGC-1-185	558051

3) For sensing via proximity sensor SIES-8M.

8 Axial kit EAMM-A		
For size	Type	Part No.
50 ⁴⁾	EAMM-A-L27-55A	557975
50 ⁵⁾	EAMM-A-L27-57A	560678
70 ⁴⁾	EAMM-A-L38-70A	557979
70 ⁵⁾	EAMM-A-L38-87A	560680
80 ⁴⁾	EAMM-A-L48-70A	557982
80 ⁴⁾	EAMM-A-L48-100A	557984
80 ⁵⁾	EAMM-A-L48-87A	560683
120 ⁴⁾	EAMM-A-L62-100A	557988
120 ⁴⁾	EAMM-A-L62-140A	557990
185 ⁴⁾	EAMM-A-L95-140A	557994

4) With servo motor EMMS-AS.

5) With stepper motor EMMS-ST.

11 Inductive proximity sensor SIES		
Description	Type	Part No.
N/O contact		
PNP, cable	SIES-8M-PS-24V-K-7,5-OE	551386
PNP, plug	SIES-8M-PS-24V-K-0,3-M8D	551387
NPN, cable	SIES-8M-NS-24V-K-7,5-OE	551396
NPN, plug	SIES-8M-NS-24V-K-0,3-M8D	551397
N/C contact		
PNP, cable	SIES-8M-PO-24V-K-7,5-OE	551391
PNP, plug	SIES-8M-PO-24V-K-0,3-M8D	551392
NPN, cable	SIES-8M-NO-24V-K-7,5-OE	551401
NPN, plug	SIES-8M-NO-24V-K-0,3-M8D	551402

14 Slot nut NST		
For size	Type	Part No.
50	NST-3-M3	558045
70, 80	NST-5-M5	150914
120, 185	NST-8-M6	150915

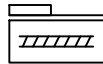
15 Profile mounting MUE		
For size	Type	Part No.
50	MUE-50	558042
70, 80	MUE-70/80	558043
120, 185	MUE-120/185	558044

16 Foot mounting HPE		
For size	Type	Part No.
50	HPE-50	558320
70	HPE-70	558321
80	HPE-80	558322
120	HPE-120	558323
185	HPE-185	558325

Spindle axes EGC-BS-KF, with recirculating ball bearing guide



- High speeds and feed forces
- Recirculating ball bearing guide and rigid profile
- High loads and torques



Type codes

		EGC	-		-		-	BS	-		-	KF	-		-	
Type																
EGC	Electromechanical linear axis															
Size																
	Stroke [mm]															
70	100; 200; 300; 400; 500; 600; 700; 800; 1,000	50 ... 1,000														
80	100; 200; 300; 500; 600; 800; 1,000; 1,400; 1,500; 1,800; 2,000	50 ... 2,000														
120	200; 300; 500; 600; 800; 1,000; 1,400; 1,500; 2,000; 2,500	50 ... 2,500														
185	300; 500; 600; 1,000; 1,500; 2,000; 2,500; 3,000	50 ... 3,000														
Drive function																
BS	Ball screw															
Spindle pitch																
10P	10 mm/rev															1
20P	20 mm/rev															2
25P	25 mm/rev															3
40P	40 mm/rev															4
Guide																
KF	Recirculating ball bearing guide															
Stroke reserve																
...H	0 ... 999 (0 = no stroke reserve)															5
Motor attachment position																
ML	Left															
MR	Right															
Slide																
GK	Standard slide															
GV	Extended slide															
GP	Standard slide, protected															
GQ	Extended slide, protected															

1 Only with size 70, 80, 120.

2 Only with size 80.

3 Only with size 120.

4 Only with size 185.

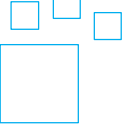
5 The sum of the stroke length and 2x stroke reserve must not exceed the maximum working stroke.

Spindle axes EGC-BS-KF, with recirculating ball bearing guide

Variants

ML	Motor on left	KL	Additional slide on left	C	Lubrication adapter
MR	Motor on right	KR	Additional slide on right		

Ordering data – Variants



Configurable product

This product and all its variants can be ordered using the configurator

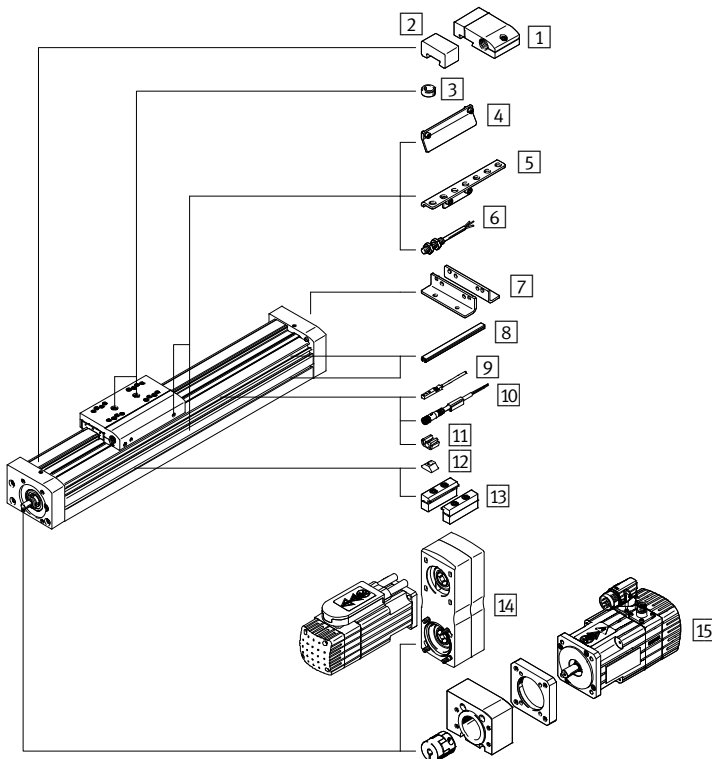
The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

3

Configuration part no.		
Size	Type	Part No.
70	EGC-70-BS-10P-KF-0H	556807
80	EGC-80-BS-KF-0H	556808
120	EGC-120-BS-KF-0H	556809
185	EGC-185-BS-40P-KF-0H	556811

Accessories



- 1 Emergency buffer NPE → [npe](#)
- 2 Shock absorber retainer KYE → [kye](#)
- 3 Centring pin/sleeve ZBS/ZBH → 56
- 4 Switch lug SF-EGC → 56
- 5 Sensor bracket HWS-EGC → [hws-egc](#)
- 6 Inductive proximity sensor SIEN → [sien](#)
- 7 Foot mounting HPE → 57
- 8 Slot cover ABP/ABP-S → [abp](#)
- 9 Inductive proximity sensor SIES → 57
- 10 Connecting cable NEBU → [nebu](#)
- 11 Clip SMBK → [smbk](#)
- 12 Slot nut NST → 57
- 13 Profile mounting MUE → 57
- 14 Parallel kit EAMM-U → 57/motor EMMS → [emms](#)
- 15 Axial kit EAMM-A → 57/motor EMMS → [emms](#)

3 Centring pin/sleeve ZBS/ZBH		
For size	Type	Part No.
70	ZBS-5 ¹⁾²⁾	150928
80, 120, 185	ZBH-9 ¹⁾²⁾	150927

1) Packaging unit 10 pieces.
2) 2 centring pins/sleeves included in the scope of delivery of the axis.

4 Switch lug SF-EGC ³⁾		
For size	Type	Part No.
70	SF-EGC-1-70	558047
80	SF-EGC-1-80	558048
120	SF-EGC-1-120	558049
185	SF-EGC-1-185	558051

3) For sensing via proximity sensor SIES-8M.

Spindle axes EGC-BS-KF, with recirculating ball bearing guide**Accessories**

7 Foot mounting HPE		
For size	Type	Part No.
70	HPE-70	558321
80	HPE-80	558322
120	HPE-120	558323
185	HPE-185	558325

9 Inductive proximity sensor SIES		
Description	Type	Part No.
N/O contact		
PNP, cable	SIES-8M-PS-24V-K-7,5-OE	551386
PNP, plug	SIES-8M-PS-24V-K-0,3-M8D	551387
NPN, cable	SIES-8M-NS-24V-K-7,5-OE	551396
NPN, plug	SIES-8M-NS-24V-K-0,3-M8D	551397
N/C contact		
PNP, cable	SIES-8M-PO-24V-K-7,5-OE	551391
PNP, plug	SIES-8M-PO-24V-K-0,3-M8D	551392
NPN, cable	SIES-8M-NO-24V-K-7,5-OE	551401
NPN, plug	SIES-8M-NO-24V-K-0,3-M8D	551402

12 Slot nut NST		
For size	Type	Part No.
70, 80	NST-5-M5	150914
120, 185	NST-8-M6	150915

13 Profile mounting MUE		
For size	Type	Part No.
70, 80	MUE-70/80	558043
120, 185	MUE-120/185	558044

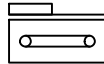
14 Parallel kit EAMM-U		
For Ø	Type	Part No.
70 ⁴⁾	EAMM-U-50-S38-40A-78	1217708
70 ⁴⁾	EAMM-U-60-S38-55A-91	1218538
70 ⁵⁾	EAMM-U-50-S38-42A-78	1217945
70 ⁵⁾	EAMM-U-60-S38-57A-91	1218568
80 ⁴⁾	EAMM-U-60-S48-55A-91	1219370
80 ⁴⁾	EAMM-U-86-S48-70A-102	1217689
80 ⁵⁾	EAMM-U-60-S48-57A-91	1219379
80 ⁵⁾	EAMM-U-86-S48-87A-177	1217604
120 ⁴⁾	EAMM-U-86-S62-70A-177	1217543
120 ⁴⁾	EAMM-U-110-S62-100A-207	1217381
120 ⁴⁾	EAMM-U-145-S62-140A-288	1219440
120 ⁵⁾	EAMM-U-86-S62-87A-177	1217373
185 ⁴⁾	EAMM-U-110-S95-100A-207	1220656
185 ⁴⁾	EAMM-U-145-S95-140A-288	1220582

- 4) With servo motor EMMS-AS
5) With stepper motor EMMS-ST

15 Axial kit EAMM-A		
For size	Type	Part No.
70 ⁴⁾	EAMM-A-S38-40A	558162
70 ⁴⁾	EAMM-A-S38-55A	558163
70 ⁵⁾	EAMM-A-S38-42A	560685
70 ⁵⁾	EAMM-A-S38-57A	560686
80 ⁴⁾	EAMM-A-S48-55A	558164
80 ⁴⁾	EAMM-A-S48-70A	558165
80 ⁵⁾	EAMM-A-S48-57A	560687
80 ⁵⁾	EAMM-A-S48-87A	560688
120 ⁴⁾	EAMM-A-S62-70A	558166
120 ⁴⁾	EAMM-A-S62-100A	558167
120 ⁴⁾	EAMM-A-S62-140A	558168
120 ⁵⁾	EAMM-A-S62-87A	560689
185 ⁴⁾	EAMM-A-S95-100A	558169
185 ⁴⁾	EAMM-A-S95-140A	558170

- 4) With servo motor EMMS-AS
5) With stepper motor EMMS-ST

Toothed belt axes ELGR



- Ready-to-install unit for quick and easy design
- Motor can be mounted on any of four sides – for every installation situation
- Highly reliable
- Kit for easy and space-saving position sensing

3

Type codes

Type		ELGR	–	TB	–		–		–		–	
ELGR	Linear axis											
Drive function												
TB	Toothed belt											
Guide												
–	Recirculating ball bearing guide											
GF	Plain-bearing guide											
Size												
	Stroke [mm]											
35	50 ... 800											
45	50 ... 1,000											
55	50 ... 1,500											
Stroke reserve												
...H	0 ... 999 (0 = no stroke reserve)	1										

1 The sum of the nominal stroke and 2x stroke reserve must be at least 50 mm and must not exceed the maximum stroke length.

Variants


L Slide, long

ZR 1 slide on right

ZL 1 slide on left

ZB 1 slide on right, 1 slide on left

Ordering data – Variants



Configurable product

This product and all its variants can be ordered using the configurator

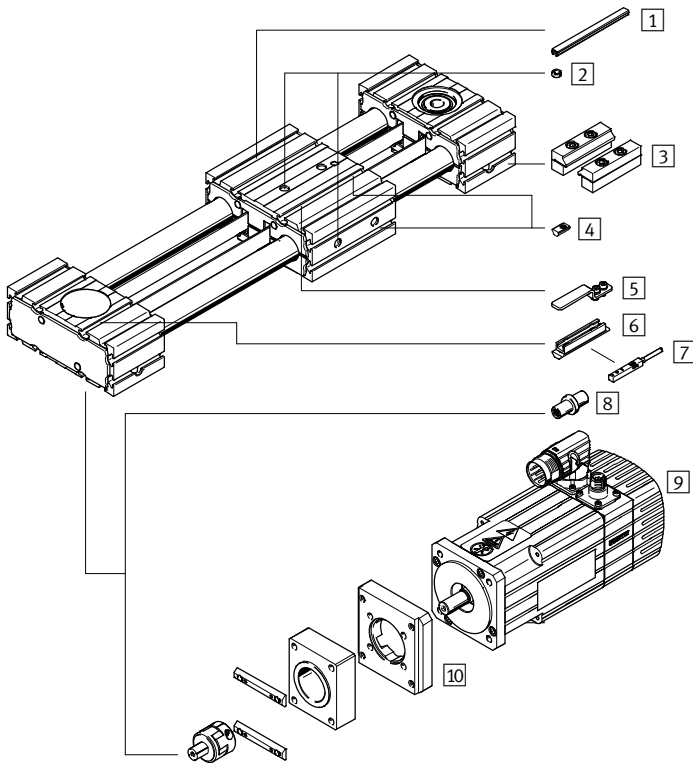
The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Configuration part no.		
Size	Type	Part No.
35	ELGR-TB-35-0H	560505
45	ELGR-TB-45-0H	560506
55	ELGR-TB-55-0H	560507

Toothed belt axes ELGR

Accessories



- 1 Slot cover ABP-5 → 59
- 2 Centring sleeve ZBH-7 → 59
- 3 Profile mounting MUE → 59
- 4 Slot nut NST → 59
- 5 Switch lug EAPM-SLS → 59
- 6 Sensor bracket EAPM-SHS → 59
- 7 Inductive proximity sensor SIES → 59
- 8 Drive shaft EAMB → [eamb](#)
- 9 Motor EMMS → [emms](#)
- 10 Axial kit EAMM-A → 59

3

1 Slot cover ABP-5		
For size	Type	Part No.
45, 55	ABP-5	151681

2 Centring sleeve ZBH-7		
For size	Type	Part No.
35, 45, 55	ZBH-7 ¹⁾²⁾	186717

- 1) Packaging unit 10 pieces.
- 2) 2 centring pins/sleeves included in the scope of delivery of the axis.

3 Profile mounting MUE		
For size	Type	Part No.
35	MUE-50	558042
45, 55	MUE-45	562238

4 Slot nut NST		
For size	Type	Part No.
35	NST-3-M3	558045
45, 55	NST-5-M5	150914

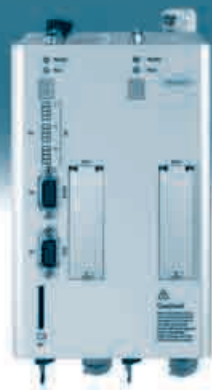
5 Switch lug EAPM-SLS		
For size	Type	Part No.
35, 45, 55	EAPM-L4-SLS	567538

6 Sensor bracket EAPM-SHS		
For size	Type	Part No.
35, 45, 55	EAPM-L4-SHS	567537

7 Inductive proximity sensor SIES		
Description	Type	Part No.
N/O contact		
PNP, cable	SIES-8M-PS-24V-K-7,5-OE	551386
PNP, plug	SIES-8M-PS-24V-K-0,3-M8D	551387
NPN, cable	SIES-8M-NS-24V-K-7,5-OE	551396
NPN, plug	SIES-8M-NS-24V-K-0,3-M8D	551397
N/C contact		
PNP, cable	SIES-8M-PO-24V-K-7,5-OE	551391
PNP, plug	SIES-8M-PO-24V-K-0,3-M8D	551392
NPN, cable	SIES-8M-NO-24V-K-7,5-OE	551401
NPN, plug	SIES-8M-NO-24V-K-0,3-M8D	551402

10 Axial kit EAMM-A		
For size	Type	Part No.
35 ¹⁾	EAMM-A-R27-55A	1133400
35 ²⁾	EAMM-A-R27-57A	1133403
45 ¹⁾	EAMM-A-R38-70A	1133401
45 ²⁾	EAMM-A-R38-87A	1133404
55 ¹⁾	EAMM-A-R48-100A	1133402
55 ²⁾	EAMM-A-R48-87A	1133405

- 1) With servo motor EMMS-AS
- 2) With stepper motor EMMS-ST



Motors and controllers

Overview

FESTO

Servo motors

Servo motor EMMS-AS

- Compatible with motor controller CMMS-AS, CMMD-AS, CMMP-AS
- Digital absolute displacement encoder with single turn (standard), multi-turn (optional)
- Compatible gear unit
- Protection class IP54

→ [emms-as](#)



Motor unit MTR-DCI, intelligent servo motor

- Integrated position controller, power electronics and gear unit
- Closed-loop operation
- Direct operation via keypad and display
- I/O or fieldbus interfaces

→ [mtr-dci](#)



Stepper motors

Stepper motor EMMS-ST

- Compatible with motor controller CMMS-ST
- Optional encoder for full positioning functionality
- Compatible gear unit
- Protection class IP54

→ [emms-st](#)



Controllers

Controllers for servo motors

Motor controller CMMS-AS

- Digital absolute shaft encoder in single-turn and multi-turn versions
- Can be operated as a closed-loop torque, speed or position controller
- Position controller, integrated brake chopper
- I/O, CANopen, Profibus DP or DeviceNet interfaces

→ [cmms-as](#)



Motor controller CMMD-AS

- Consists of two identically constructed motor controllers CMMS-AS in one housing
- Time-optimised (trapezoidal) or jerk-free (S-shaped) positioning
- Integrated safety functions

→ [cmmd-as](#)



Motor controller CMMP-AS

- Closed-loop operation with speed, position, current and torque control
- Analogue, I/O or fieldbus, Ethernet interfaces
- Integrated SD card slot
- Compatible with motor EMMS-AS

→ [cmmp-as](#)



Motor controller SFC-DC

- Position controller for mini slide SLTE
- With or without control panel
- Protection class IP54
- I/O or fieldbus interfaces

→ [sfc-dc](#)



Motor controller SFC-LACI

- For controlling electric cylinder DNCE-LAS and guided drive DFME-LAS
- Open-loop and closed-loop position controller
- Protection class IP54

→ [sfc-laci](#)



End-position controller CMFL

- For force-controlled positioning of short-stroke cylinder ADNE-LAS
- High dynamic response

→ [cmfl](#)



Motors and controllers

Overview

Controllers

Controllers for stepper motors

Motor controller CMMO-ST

- Various interfaces
- Web-based functions for easy start-up and diagnostics
- 31 control positions for freely adjustable travel profiles
- Electric cylinder EPCO and controller CMMO form one unit

→ [cmmo-st](#)



Motor controller CMMS-ST

- Open-loop operation, closed-loop operation with encoder optional
- Analogue, I/O or fieldbus interfaces
- Integrated SD card slot
- Compatible with motor EMMS-ST

→ [cmms-st](#)



Motor controller SEC-ST

- Compact unit, ready for installation
- Selectable current reduction
- Pre-assembled, electrical connection accessories

→ [sec-st](#)





Grippers

Overview

FESTO

Mechanical grippers

Parallel gripper DHPS

- Sturdy and precise T-slot guidance of the gripper jaws
- High gripping force and compact size
- Max. repetition accuracy
- Wide range of options for mounting on drives

→ dhps



Three-point gripper DHDS

- Sturdy and precise T-slot guidance of the gripper jaws
- High gripping force and compact size
- Max. repetition accuracy
- Wide range of options for mounting on drives

→ dhds



Angle gripper DHWS

- Improved gripper jaw guide
- Link guided movement
- Internal fixed flow control
- Max. repetition accuracy
- Wide range of options for mounting on drives

→ dhws



Radial gripper DHRS

- Lateral gripper jaw support for high torque loads
- Self-centring
- Gripper jaw centring options
- Max. repetition accuracy
- Opening angle 180°

→ dhrs





6

Vacuum technology

Overview

FESTO

Vacuum generators

Vacuum generator OVEM

- With vacuum switch with LCD display
- Adjustable ejector pulse
- Rapid vacuum build-up
- Fast and precise setting down
- Designs: high vacuum, high suction volume
- Electropneumatic

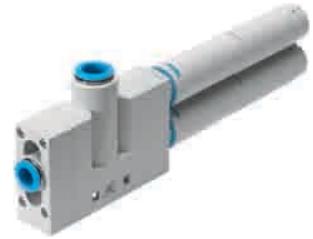
→ 69



Vacuum generator VN

- High vacuum levels of up to 93%
- 6 nominal sizes
- Designs: high vacuum, high suction volume
- Pneumatic

→ 71



Vacuum generator VAD

- High vacuum levels of up to 80%
- Without ejector pulse
- Sturdy and resistant
- Pneumatic

→ vad



Vacuum generator VAK

- High vacuum levels of up to 80%
- With ejector pulse
- Pneumatic

→ vak



Vacuum grippers

Suction gripper ESG

- Delivered fully assembled – according to your requirements
- Over 2,000 variants

→ 73



Suction cup holder ESH

- 6 holder sizes
- 8 holder types
- 3 different tube coupling types
- With or without height compensator

→ 74



Suction cup with connection attachments ESS

- 6 suction cup types in various sizes
- Round or oval shape
- Various plastic designs and mounting threads

→ 74



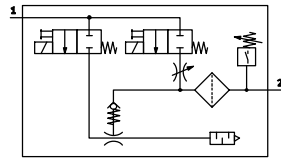
Suction cup VAS, bellows suction cup VASB

- Bellows suction cup can be adapted to uneven, inclined surfaces
- Round shape
- For various temperature ranges and workpiece surfaces

→ 76



Vacuum generators OVEM



- Integrated monitoring of process parameters
- Space-saving with a wide range of configuration options
- Integrated non-return valve to prevent pressure drop
- 4 performance classes
- Integrated solenoid valves to control the compressed air supply and the ejector pulse
- Easy to use and maintain
- Simple installation via QS fittings and M12 plugs
- Protection class IP65

Type codes – Basic design

OVEM - [] - H - B - [] - [] - N - 1P

Type					
OVEM	Vacuum generator				
Nominal size of laval nozzle [mm]					
05	0.45				
07	0.7				
10	0.95				
14	0.14				
Ejector characteristic					
H	High vacuum				
Housing size/width					
B	Grid dimension 20 mm				
Pneumatic connections					
Supply port (P)		Vacuum port (V)		Exhaust port (R)	
QO	QS push-in fitting	QS push-in fitting	Silencer, open		
GO	Female thread	Female thread	Silencer, open		
Normal position of the vacuum generator					
CE	NC, normally closed (no vacuum generation) with ejector pulse				
Electrical connection					
N	Plug M12 (5-pin)				
Vacuum switch, electrical switching output					
1P	Switching output 1x PNP				

6

Variants

- | | | | |
|---|---|--|-------------------------------------|
| H High vacuum | PL Prepared for common supply manifold, V-R with QS fitting | OE NO, normally open (vacuum generation) with ejector pulse | 1N Switching output 1x NPN |
| L High suction rate | PO Prepared for common supply manifold, V with QS fitting, R with open silencer | CN NC, normally closed (no vacuum generation) | 2P Switching output 2x PNP |
| QO P-V with QS fitting, R with open silencer | ON NO, normally open (vacuum generation) | CE NC, normally closed (no vacuum generation) with ejector pulse | 2N Switching output 2x NPN |
| QS P-V-R with QS fitting | | 1P Switching output 1x PNP | PU Switching output 1x PNP + U |
| GN P-V-R with female thread | | | PI Switching output 1x PNP + I |
| GO P-V with female thread, R with open silencer | | | NU Switching output 1x NPN + U |
| | | | NI Switching output 1x NPN + I |
| | | | H Alternative vacuum display inchHG |

Ordering data – Variants

Configurable product

This product and all its variants can be ordered using the configurator:

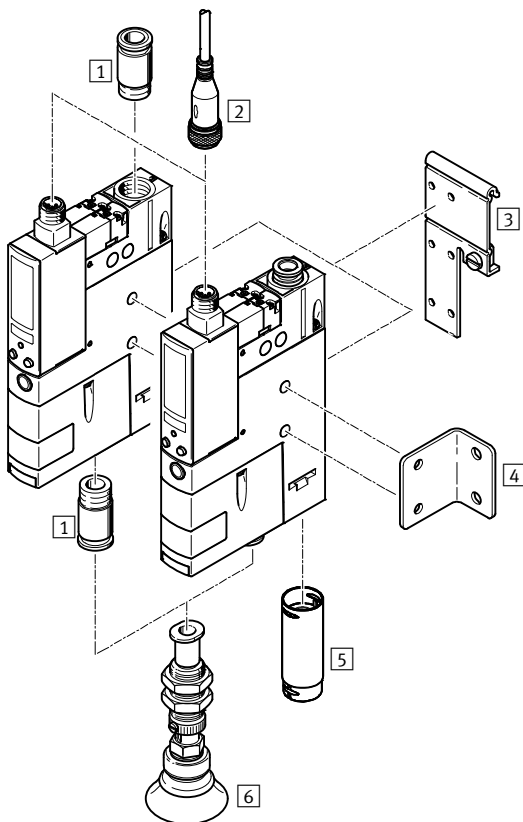
The configurator can be found on the DVD under Products or at
www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Ordering data – Basic design

Nominal size of laval nozzle [mm]	Pneumatic connections			
	Type	Part No.	Type	Part No.
	P, V with QS fitting, R with open silencer		P, V with female thread, R with open silencer	
0.45	OVEM-05-H-B-QO-CE-N-1P	540021	OVEM-05-H-B-GO-CE-N-1P	540025
0.7	OVEM-07-H-B-QO-CE-N-1P	540022	OVEM-07-H-B-GO-CE-N-1P	540026
0.95	OVEM-10-H-B-QO-CE-N-1P	540023	OVEM-10-H-B-GO-CE-N-1P	540027
1.4	OVEM-14-H-B-QO-CE-N-1P	540024	OVEM-14-H-B-GO-CE-N-1P	540028

Accessories



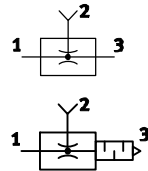
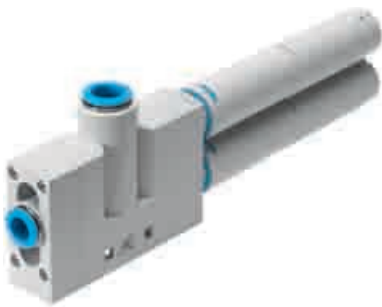
- 1 Push-in fitting QS → 114
- 2 Connecting cable NEBU-M12G5 → 70
- 3 H-rail mounting OABM-H → [oabm-h](#)
- 4 Mounting bracket HRM-1 → [hrm-1](#)
- 5 Silencer extension UOMS-1/4 → 70
- 6 Suction gripper ESG → [esg](#)

6

Description	Cable length	Type	Part No.
M12x1, 5-pin	2.5 m	NEBU-M12G5-K-2.5-LE5	541330
	5 m	NEBU-M12G5-K-5-LE5	541330

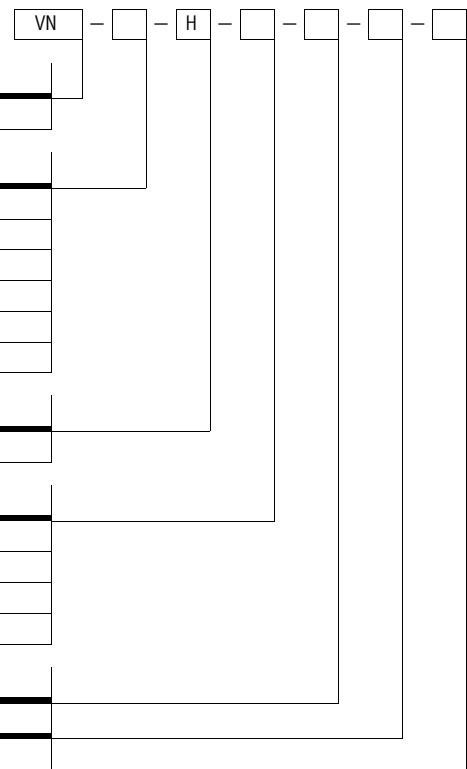
Description	Type	Part No.
For vacuum generators OVEM-07/10/14	UOMS-1/4	538436

Vacuum generators VN



- High vacuum levels of up to 93%
- Easy connection of holders and suction cups
- Lightweight and compact design thanks to plastic housing
- No wearing parts, long service life
- Vacuum monitoring via vacuum switch
- Low environmental impact due to silencers

Type codes – Basic design



Type	
VN	Vacuum generator
Nominal size of laval nozzle [mm]	
05	0.45
07	0.7
10	0.95
14	1.4
20	2.0
30	3.0
Ejector characteristic	
H	High vacuum/standard
Housing type	
T2	T-shape, grid dimension 10 mm (nominal size of laval nozzle 05 or 07 only)
T3	T-shape, grid dimension 14 mm (nominal size of laval nozzle 05, 07 or 10 only)
T4	T-shape, grid dimension 18 mm (nominal size of laval nozzle 10 or 14 only)
T6	T-shape, grid dimension 24 mm (nominal size of laval nozzle 20 or 30 only)
Supply port (P)	
	Vacuum port (V)
	Exhaust port (R)
Housing type T2, grid dimension 10 mm	
PQ1	Push-in connector QS4
VQ1	Push-in connector QS4
RQ1	Push-in connector QS4
Housing type T3, grid dimension 14 mm	
PQ2	Push-in connector QS6
VQ2	Push-in connector QS6
RO1	Silencer, open
Housing type T4, grid dimension 18 mm	
PQ2	Push-in connector QS6
VQ3	Push-in connector QS8
RO2	Silencer, open
Housing type T6, grid dimension 24 mm	
PQ4	Push-in connector QS10
VQ5	Push-in connector QS12
RO2	Silencer, open

Variants

Ejector characteristic:	Housing type:	Connection options:
L High suction rate/standard	I2 Straight type, grid dimension 10 mm	– Female thread
M High vacuum/inline	I3 Straight type, grid dimension 13 mm	– Male thread
N High suction rate/inline		– Push-in sleeve

Ordering data – Variants

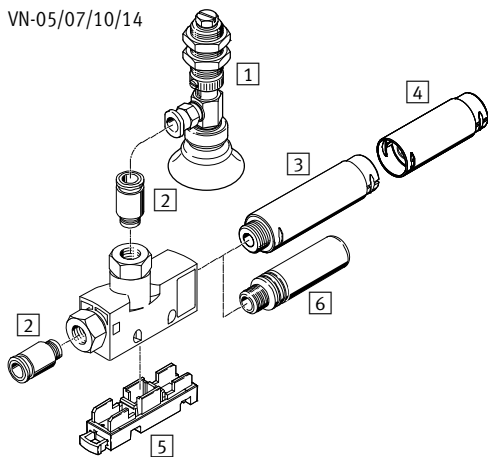
<p>Configurable product</p>	<p>This product and all its variants can be ordered using the configurator:</p>	<p>The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...</p>	<p>Enter the type or configuration part number in the search field.</p>
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Ordering data – Basic design

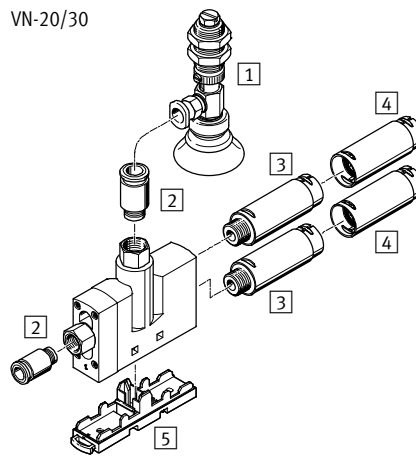
Nominal size of laval nozzle [mm]	Housing type	Vacuum port (V)	Type	Part No.
0.45	T2, grid dimension 10 mm	QS4	VN-05-H-T2-PQ1-VQ1-RQ1	526100
0.7	T2, grid dimension 10 mm	QS4	VN-07-H-T2-PQ1-VQ1-RQ1	526101
0.95	T3, grid dimension 14 mm	QS6	VN-10-H-T3-PQ2-VQ2-R01	193490
1.4	T4, grid dimension 18 mm	QS8	VN-14-H-T4-PQ2-VQ3-R02	547707
2.0	T6, grid dimension 24 mm	QS12	VN-20-H-T6-PQ4-VQ5-R02	193495
3.0	T6, grid dimension 24 mm	QS12	VN-30-H-T6-PQ4-VQ5-R02	193497

Accessories

VN-05/07/10/14



VN-20/30



- 1 Suction gripper ESG (complete solution) → 73
Suction cup holder ESH with suction cup with connection attachments ESS (individual components) → 75
- 2 Push-in fitting QS → 114
- 3 Silencer UOM → 72
- 4 Silencer extension UOMS → 72
- 5 Mounting plate VN-T → 72
- 6 Silencer UO → 130

6

Accessories

3 Silencer UOM		
Pneumatic connection	Type	Part No.
G1/4	UOM-1/4	538432
G3/8	UOM-3/8	538433

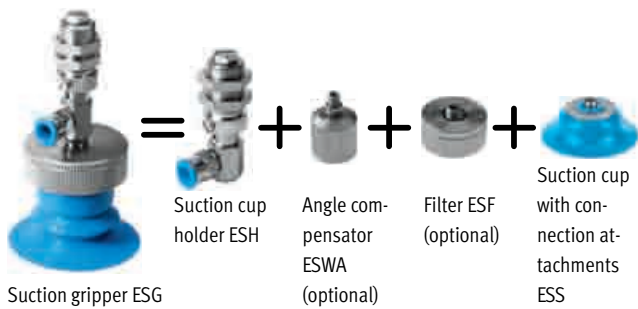
4 Silencer extension UOMS		
For silencer	Type	Part No.
UOM-1/4	UOMS-1/4	538436
UOM-3/8	UOMS-3/8	538437

5 Mounting plate VN-T		
For housing type	Type	Part No.
T2	VN-T2-BP-NRH	196951
T3	VN-T3-BP-NRH	193641
T4	VN-T4-BP-NRH	195279
T6	VN-T6-BP-NRH ¹⁾	196956

1) Horizontal wall mounting not permissible.

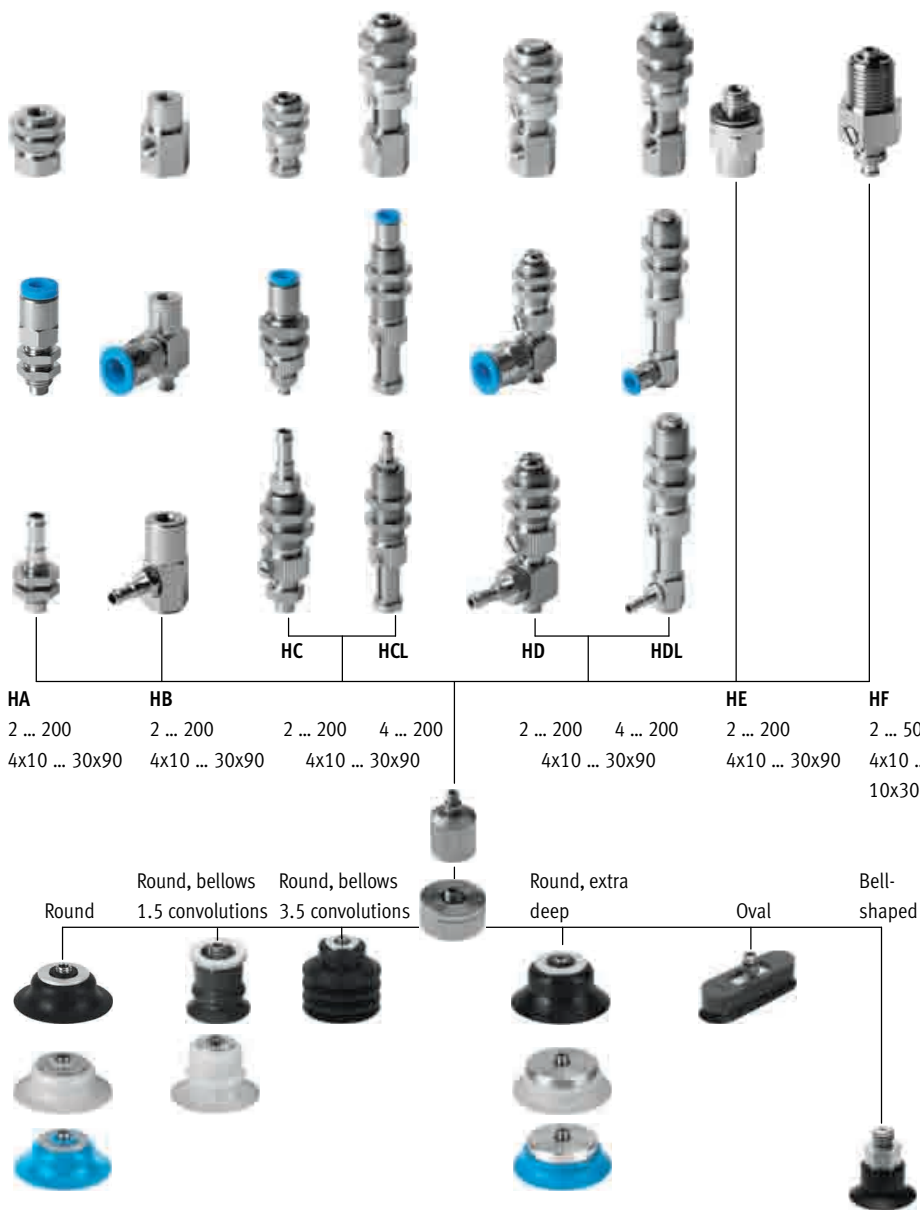
Suction grippers ESG

Overview



- Any combination of suction cup holder ESH and suction cup with connection attachments ESS is possible in the same holder size
- 15 different suction cup diameters from 2 ... 200 mm
- 6 different suction cup materials
- 6 different suction cup shapes
- 14 different suction cup holders ESH
- Suitable for a wide variety of temperature ranges and workpiece surfaces

Variants



Suction cup holder ESH

→ 74

Threaded connection G for suction cup diameter 60 ... 200 mm for suction cup size 15x45 ... 30x90 mm

Push-in connector QS for suction cup diameter 2 ... 50 mm for suction cup size 4x10 ... 10x30 mm

Barbed fitting connection PK for suction cup diameter 2 ... 50 mm for suction cup size 4x10 ... 10x30 mm

Holder types for suction cup diameter [mm] for suction cup size [mm]

Angle compensator ESWA → eswa

Filter ESF → esf

Suction cup with connection attachments ESS → 74

- Nitrile rubber (NBR)
- Silicone (SI)
- Polyurethane (PU)
- Vulkollan® (GT/BT)

Ordering data – Variants

	<p>Configurable product</p>	<p>This product and all its variants can be ordered using the configurator</p>	<p>The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...</p>	<p>Enter the type or configuration part number in the search field.</p>
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Suction cup holders ESH and suction cups with connection attachments ESS



Suction cup holder ESH Suction cup with connection attachments ESS

Suction cup holder ESH

- 6 holder sizes
- 8 holder types
- 3 different tube coupling types
- With and without height compensator
- Easy connection of the associated suction cups and vacuum generators

Suction cup with connection attachments ESS

- For accurate and gentle transportation of workpieces
- Lightweight and sturdy
- 6 suction cup types in various sizes
- Application-specific: comes in 6 different materials
- Long service life

Type codes – Suction cup holder ESH

		ESH	-	HA	-		-	QS
Type								
ESH	Suction cup holder							
Holder type								
HA	Male thread, 2 nuts, vacuum port on top							
Classification of suction cup holders								
1	Holder size 1							
2	Holder size 2							
3	Holder size 3							
4	Holder size 4							
Vacuum port								
QS	Push-in connector							

6

Variants – Suction cup holder ESH

- | | | | |
|---------------------------------------|--|-----------------|------------------------------|
| HB Female thread, vacuum port on side | HC Male thread, 2 nuts, vacuum port on top, height compensator | 5 Holder size 5 | G Threaded connection |
| | | 6 Holder size 6 | PK Barbed fitting connection |

Type codes – Suction cup with connection attachments ESS

		ESS	-		-	S	-	N
Type								
ESS	Suction cup							
Suction cup Ø [mm]								
2, 4, 6, 8, 10, 15, 20, 30, 40, 50, 60, 80, 100, 150, 200								
Suction cup type								
S	Round, standard							
Materials								
N	Nitrile rubber							

Variants – Suction cup with connection attachments ESS

- | | | | |
|------------------------------------|---------------|-------------------------------|----------------|
| E Extra deep | O Oval | F Fluoro elastomer | U Polyurethane |
| B Bellows, round, 1.5 convolutions | G Bell-shaped | NA Nitrile rubber, antistatic | T Vulkollan® |
| C Bellows, round, 3.5 convolutions | | S Silicone | |

Suction cup holders ESH and suction cups with connection attachments ESS

Ordering data – Suction cup holders ESH and suction cups with connection attachments ESS

Suction cup holder ESH				Suction cup with connection attachments ESS			
With male thread, 2 nuts, vacuum port on top				Round, standard			
Vacuum port V	Holder size	Type	Part No.	Suction cup Ø [mm]	Mounting thread	Type	Part No.
QS4	1	ESH-HA-1-QS	189193	2	∅ 3 ¹⁾	ESS-2-SN	189264
				4		ESS-4-SN	189269
	2	ESH-HA-2-QS	189195	6	∅ 3 ¹⁾	ESS-6-SN	189274
				8		ESS-8-SN	189279
QS6	3	ESH-HA-3-QS	189197	10	M4x0.7	ESS-10-SN	189284
				15		ESS-15-SN	189289
	4	ESH-HA-4-QS	189199	20	M6x1	ESS-20-SN	189294
				30		ESS-30-SN	189299
				40		ESS-40-SN	189304
				50	ESS-50-SN	189309	
				60	M10x1.5	ESS-60-SN	189314
				80		ESS-80-SN	189318
100	ESS-100-SN	189322					
150	M20x2	ESS-150-SN	189326				
		200	ESS-200-SN	189330			

1) Is plugged onto or into the suction cup

Suction cups VAS, bellows suction cups VASB



- Suction retention of workpieces with smooth, impervious surfaces
- Silicone suction cups are approved in food production
- Bellows suction cups can adapt to suit uneven, curved and inclined surfaces
- Excellent thermal resistance

Type codes – Basic design

		VAS					
Type							
VAS	Suction cup						
VASB	Suction cup, bellows						
Suction cup Ø [mm]							
		Vacuum port					
15	15	1/8	Thread G1/8				
30	30	1/8	Thread G1/8				
40	40	1/4	Thread G1/4				
55	55	1/4	Thread G1/4				
75	75	1/4	Thread G1/4				
Materials							
NBR	Nitrile rubber						
PUR	Polyurethane						
Generation							
–	A series						
B	B series						

Variants

Other suction cup diameters:
1 mm, 2 mm, 5 mm, 8 mm, 10 mm,
100 mm, 125 mm

Ordering data – Variants

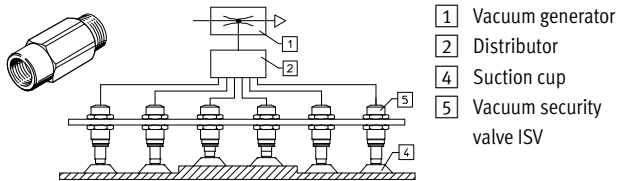
	<p>Configurable product</p>	<p>This product and all its variants can be ordered using the configurator</p>	<p>The configurator can be found on the DVD under Products or at → www.festo.com/catalogue/...</p>	<p>Enter the type or configuration part number in the search field.</p>
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Suction cups VAS, bellows suction cups VASB

Ordering data – Basic design

Suction cup Ø [mm]	Suction cup VAS				Bellows suction cup VASB			
	Material NBR	Part No.	Material PUR	Part No.	Material NBR	Part No.	Material PUR	Part No.
15	VAS-15-1/8-NBR	36142	VAS-15-1/8-PUR-B	1396087	VASB-15-1/8-NBR	35411	VASB-15-1/8-PUR-B	1395671
30	VAS-30-1/8-NBR	34587	VAS-30-1/8-PUR-B	1396090	VASB-30-1/8-NBR	35412	VASB-30-1/8-PUR-B	1395690
40	VAS-40-1/4-NBR	36143	VAS-40-1/4-PUR-B	1396092	VASB-40-1/4-NBR	35413	VASB-40-1/4-PUR-B	1395691
55	VAS-55-1/4-NBR	36144	VAS-55-1/4-PUR-B	1396095	VASB-55-1/4-NBR	35414	VASB-55-1/4-PUR-B	1396063
75	VAS-75-1/4-NBR	36145	VAS-75-1/4-PUR-B	1396096	VASB-75-1/4-NBR	35415	VASB-75-1/4-PUR-B	1396064

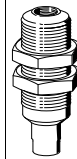
Accessories



- 1 Vacuum generator
- 2 Distributor
- 4 Suction cup
- 5 Vacuum security valve ISV

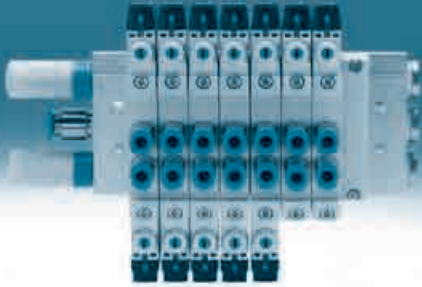
5 Vacuum security valve ISV

For vacuum port	Type	Part No.
Thread G1/8	ISV-1/8	33969
Thread G1/4	ISV-1/4	33970



Height compensator VAL

For vacuum port	Type	Part No.
Thread G1/8	VAL-1/8-10	151210
Thread G1/4	VAL-1/4-20	151211



Valves

Overview

FESTO

Standards-based directional control valves

Solenoid valve VSVA

(2x3/2, 5/2, 5/3)

- ISO 15407-1
- Width of standard valves 18/26 mm, flow rate up to 1,100 l/min

→ 81



Standard valves ISO 5599-1

- Connection G $\frac{1}{4}$, ISO1; G $\frac{3}{8}$, ISO2; G $\frac{1}{2}$, ISO3; G $\frac{3}{4}$, ISO4
- Flow rate 1,200 ... 6,000 l/min
- Voltage 12, 24, 42, 48 V DC; 24, 48, 110, 230 V AC

→ iso 5599-1



Universal directional control valves

Solenoid valve VUVG

- Width 10/14 mm, flow rate up to 780 l/min
- Manifolds with pressure zones

→ 84



Solenoid valve CPE, Compact Performance

(3/2, 5/2, 5/3)

- Width 10/14/18/24 mm, flow rate up to 3,200 l/min
- Minimal flow resistance

→ 89



Proportional valves

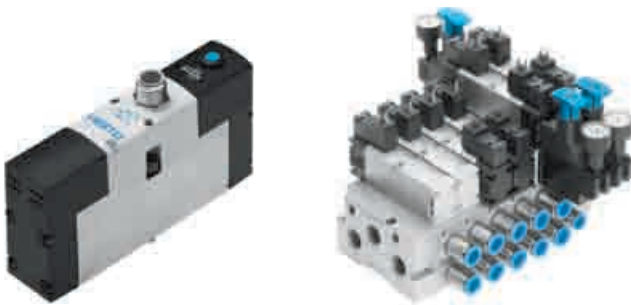
Proportional pressure regulator VPPE

- With pilot control via 2/2-way valves (switching valves)
- Pressure regulation ranges 0.15 ... 6 bar

→ 93



Solenoid valves VSVA, to ISO 1547-1



- Width of standard valves 18/26 mm, flow rate up to 1,100 l/min
- Manifold assembly with mixed sizes possible
- Electrical connection via round or square plug socket
- Complete and standardised valve range
- Wide range of vertical stacking modules: pressure regulator plate, flow control plate, vertical pressure shut-off plate, etc.

Type codes – Basic design

		VSVA	-	B	-		-		H	-		-			
Type															
VSVA	Solenoid valve to ISO 15407-1														
Design															
B	Sub-base valve														
Valve function															
T32C	2x 3/2-way valve, single solenoid, normally closed														
T32U	2x 3/2-way valve, single solenoid, normally open														
T32H	2x 3/2-way valve, single solenoid, 1x normally closed, 1x open														
M52	5/2-way valve, single solenoid														
B52	5/2-way valve, double solenoid														
D52	5/2-way valve, double solenoid, with dominant signal at 14														
P53C	5/3-way valve, mid-position closed														
P53E	5/3-way valve, mid-position exhausted														
P53U	5/3-way valve, mid-position open														
Reset method for single solenoid directional control valves															
-	Double solenoid and 5/3-way valve														
A	Pneumatic spring														
M	Mechanical spring														
Pilot air supply															
-	Internal														
Manual override															
H	Non-detenting														
Pneumatic connection															
A1	Port pattern to ISO size 26 mm (01)														
A2	Port pattern to ISO size 18 mm (02)														
Operating voltage															
1	24 V DC														
Electrical connection															
C1	Type C to EN 175301-803														
R2	Central plug M8x1														
R5	Central plug M12x1														
Display															
L	LED display														

Solenoid valves VSVA, to ISO 1547-1

Variants

Z External pilot air supply

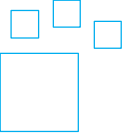
Operating voltages:

- 24/110/230 V AC
- 12 V DC

Electrical connection:

- Individual plug M12

Ordering data – Variants

 <p>Configurable product</p>	<p>This product and all its variants can be ordered using the configurator</p>	<p>The configurator can be found on the DVD under Products or at → www.festo.com/catalogue/...</p>	<p>Enter the type or configuration part number in the search field.</p>
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Ordering data – Basic design

Electrical connection: central plug, round design, M8x1 (R2)/M12x1 (R5)					
Valve function	Pneumatic connection A1		Pneumatic connection A2		
	Port pattern to ISO size 26 mm (01)		Port pattern to ISO size 18 mm (02)		
	Type	Part No.	Type	Part No.	
2x3/2-way, single solenoid	Normally closed: T32C				
		VSVA-B-T32C-AH-A1-1R2L	534532	VSVA-B-T32C-AH-A2-1R2L	534771
		VSVA-B-T32C-AH-A1-1R5L	534552	VSVA-B-T32C-AH-A2-1R5L	546764
	Normally open: T32U				
		VSVA-B-T32U-AH-A1-1R2L	534533	VSVA-B-T32U-AH-A2-1R2L	534772
		VSVA-B-T32U-AH-A1-1R5L	534553	VSVA-B-T32U-AH-A2-1R5L	546765
	1x normally closed, 1x normally open: T32H				
		VSVA-B-T32H-AH-A1-1R2L	534534	VSVA-B-T32H-AH-A2-1R2L	534773
		VSVA-B-T32H-AH-A1-1R5L	534554	VSVA-B-T32H-AH-A2-1R5L	546766
5/2-way, single solenoid	M52				
		VSVA-B-M52-AH-A1-1R2L	534535	VSVA-B-M52-AH-A2-1R2L	534774
		VSVA-B-M52-AH-A1-1R5L	534555	VSVA-B-M52-AH-A2-1R5L	546767
		VSVA-B-M52-MH-A1-1R2L	534536	VSVA-B-M52-MH-A2-1R2L	534775
		VSVA-B-M52-MH-A1-1R5L	534556	VSVA-B-M52-MH-A2-1R5L	546768
5/2-way, double solenoid	B52				
		VSVA-B-B52-H-A1-1R2L	534537	VSVA-B-B52-H-A2-1R2L	534776
		VSVA-B-B52-H-A1-1R5L	534557	VSVA-B-B52-H-A2-1R5L	546769
	With dominant signal at 14: D52				
		VSVA-B-D52-H-A1-1R2L	534538	VSVA-B-D52-H-A2-1R2L	534777
		VSVA-B-D52-H-A1-1R5L	534558	VSVA-B-D52-H-A2-1R5L	546770
5/3-way	Mid-position closed: P53C				
		VSVA-B-P53C-H-A1-1R2L	534539	VSVA-B-P53C-H-A2-1R2L	534778
		VSVA-B-P53C-H-A1-1R5L	534559	VSVA-B-P53C-H-A2-1R5L	546771
	Mid-position exhausted: P53E				
		VSVA-B-P53E-H-A1-1R2L	534540	VSVA-B-P53E-H-A2-1R2L	534779
		VSVA-B-P53E-H-A1-1R5L	534560	VSVA-B-P53E-H-A2-1R5L	546772
	Mid-position open: P53U				
		VSVA-B-P53U-H-A1-1R2L	534541	VSVA-B-P53U-H-A2-1R2L	534780
		VSVA-B-P53U-H-A1-1R5L	534561	VSVA-B-P53U-H-A2-1R5L	546773

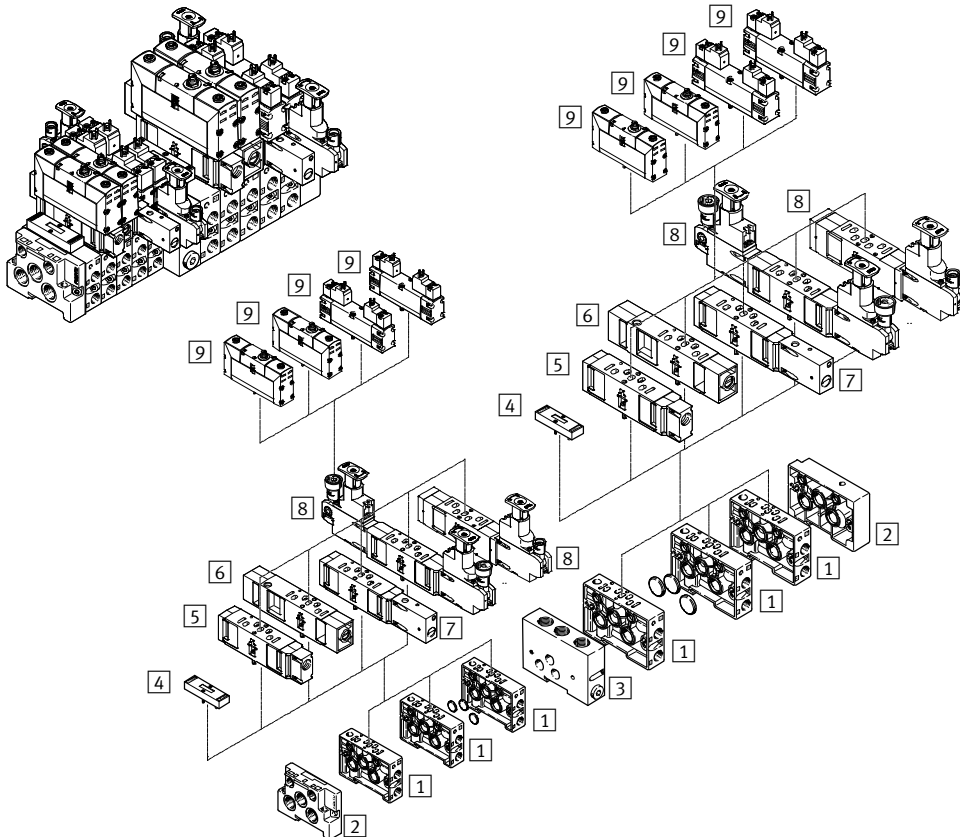
Solenoid valves VSVA, to ISO 1547-1

Ordering data – Basic design

Electrical connection: plug, square design to EN 175301-803, type C (C1)

Valve function	Pneumatic connection A1 Port pattern to ISO size 26 mm (01)		Pneumatic connection A2 Port pattern to ISO size 18 mm (02)	
	Type	Part No.	Type	Part No.
5/2-way, single solenoid	M52			
	VSVA-B-M52-AH-A1-1C1	546700	VSVA-B-M52-AH-A2-1C1	546701
	VSVA-B-M52-MH-A1-1C1	546702	VSVA-B-M52-MH-A2-1C1	546703
5/2-way, double solenoid	B52			
	VSVA-B-B52-H-A1-1C1	546696	VSVA-B-B52-H-A2-1C1	546697
	With dominant signal at 14: D52			
	VSVA-B-D52-H-A1-1C1	546698	VSVA-B-D52-H-A2-1C1	546699
5/3-way	Mid-position closed: P53C			
	VSVA-B-P53C-H-A1-1C1	546708	VSVA-B-P53C-H-A2-1C1	546709
	Mid-position exhausted: P53E			
	VSVA-B-P53E-H-A1-1C1	546706	VSVA-B-P53E-H-A2-1C1	546707
	Mid-position open: P53U			
VSVA-B-P53U-H-A1-1C1	546704	VSVA-B-P53U-H-A2-1C1	546705	

Accessories



- 1 Manifold sub-base NAW with lateral ports 2 and 4 → 83
- 2 End plate kit NEV for sealing the manifold sub-bases → 83
- 3 Intermediate plate NZV for connecting width 18 mm with width 26 mm → [nzv](#)
- 4 Blanking plate NDV for vacant or spare positions → [ndv](#)
- 5 Vertical supply plate VABF...P1-A3 for intermediate air supply → [vabf](#)
- 6 Flow control plate VABF...F1-B1 for flow control in ducts 3 and 5 → [vabf](#)
- 7 Vertical pressure shut-off plate VABF...L1-D1 with switch for manual shut-off of duct 1 → [vabf](#)
- 8 Pressure regulator plate VABF...R...-C2 → [vabf](#)
- 9 Solenoid valve VSVA → 81

Individual sub-base NAS → 83

1 Manifold sub-base NAW with lateral ports 2 and 4		
For ISO size	Type	Part No.
26 mm	NAW-1/4-01-VDMA	161102
18 mm	NAW-1/8-02-VDMA	161110

Individual sub-base NAS		
For ISO size	Type	Part No.
26 mm	NAS-1/4-01-VDMA	161109
18 mm	NAS-1/8-02-VDMA	161115

2 End plate kit NEV		
For ISO size	Type	Part No.
26 mm	NEV-01-VDMA	161104
18 mm	NEV-02-VDMA	161112

Solenoid valves VUVG

Designed for safe and easy handling

The VUVG has been a huge success since it was introduced. This is due in no small part to its first-class pneumatic performance as well as numerous other technical refinements.

Integrated LED for 360° view – convenient for a fast status overview as well as reduced downtimes.



Guide: detent for correct assembly of the valve.



Captive seal integrated in the valve.

Standard: the non-detenting/detenting manual override for easy commissioning.



Click! Simply clip in and you're ready to go. E-box with patented contact system.



Captive screws. Strong and sturdy – with high torque for secure mounting.

Inch connections easily realised with hybrid fittings.



Multiple pressure zones can be quickly and easily realised with separators.

Optimum use of space: with a wide range of connection options and different functions.



Highly flexible: individual valves can be assembled one after the other without separate manifold rail or brackets thanks to the lateral holes.



No additional elements are required to turn the individual valve into a valve manifold.

Solenoid valves VUVG



In-line valve VUVG-L10 with seal VABD-L1-10X



Sub-base valve VUVG-B10

- Universal valve
- Basic valve and E-box combinations
- Width 10 mm and 14 mm
- Internal pilot air supply with VUVG-L
- Can be mounted as individual valve or sub-base valve on sturdy aluminium manifold rail
- Operating voltage 12 and 24 V DC

Type codes – Basic design

		VUVG						1P3
Type								
VUVG	Solenoid valve							
Valve design								
L	In-line valve/individual valve							
B	Sub-base valve							
Width								
10	10 mm							
14	14 mm							
Valve function								
T32C	2x3/2-way valve, normally closed							
T32U	2x3/2-way valve, normally open							
M52	5/2-way valve, single solenoid							
B52	5/2-way valve, double solenoid							
P53C	5/3-way valve, mid-position closed							
P53E	5/3-way valve, mid-position exhausted							
Reset method/pilot air supply/manual override								
AT	Pneumatic spring/internal/non-detenting, detenting							
RT	Pneumatic-mechanical spring/internal/non-detenting, detenting							
ZT	Without/external/non-detenting, detenting							
T	Without/internal/non-detenting, detenting							
AZT	Pneumatic spring/external/non-detenting, detenting							
RZT	Pneumatic-mechanical spring/external/non-detenting, detenting							
Pneumatic connection								
M5	Thread M5							
M7	Thread M7							
G18	Thread G1/8							
F	In the manifold rail							
Operating voltage/E-box								
1P3	24 V DC/without E-box							

Variants

Design:

VUVG-S In-line valve for manifold assembly

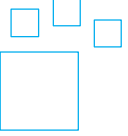
Valve functions:

T32H 2x3/2-way valve, 1x normally closed, 1x normally open

P53U 5/3-way valve, mid-position pressurised

Solenoid valves VUVG

Ordering data – Variants



Configurable product

This product and all its variants can be ordered using the configurator:

The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

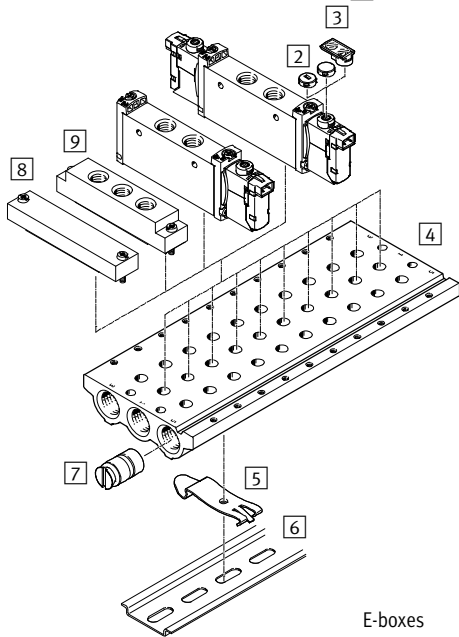
Ordering data – Basic design

Width [mm]	Type	Part No.	Type	Part No.	Type	Part No.
	T32C: 2x3/2-way, normally closed		T32U: 2x3/2-way, normally open		M52: 5/2-way, single solenoid	
In-line valve/individual valve						
10	VUVG-L10-T32C-AT-M5-1P3	566454	VUVG-L10-T32U-AT-M5-1P3	566455	VUVG-L10-M52-RT-M5-1P3	566457
10	VUVG-L10-T32C-AT-M7-1P3	566471	VUVG-L10-T32U-AT-M7-1P3	566472	VUVG-L10-M52-RT-M7-1P3	566474
14	VUVG-L14-T32C-AT-G18-1P3	566496	VUVG-L14-T32U-AT-G18-1P3	566497	VUVG-L14-M52-AT-G18-1P3	566499
Sub-base valve						
10	VUVG-B10-T32C-AZT-F-1P3	566487	VUVG-B10-T32U-AZT-F-1P3	566488	VUVG-B10-M52-RZT-F-1P3	566490
14	VUVG-B14-T32C-AZT-F-1P3	566513	VUVG-B14-T32U-AZT-F-1P3	566514	VUVG-B14-M52-AZT-F-1P3	566516
	B52: 5/2-way, double solenoid		P53C: 5/3-way, mid-position closed		P53E: 5/3-way, mid-position exhausted	
In-line valve/individual valve						
10	VUVG-L10-B52-T-M5-1P3	566458	VUVG-L10-P53C-T-M5-1P3	566459	VUVG-L10-P53E-T-M5-1P3	566460
10	VUVG-L10-B52-T-M7-1P3	566475	VUVG-L10-P53C-T-M7-1P3	566476	VUVG-L10-P53E-T-M7-1P3	566477
14	VUVG-L14-B52-T-G18-1P3	566500	VUVG-L14-P53C-T-G18-1P3	566501	VUVG-L14-P53E-T-G18-1P3	566502
Sub-base valve						
10	VUVG-B10-B52-ZT-F-1P3	566491	VUVG-B10-P53C-ZT-F-1P3	566492	VUVG-B10-P53E-ZT-F-1P3	566493
14	VUVG-B14-B52-ZT-F-1P3	566517	VUVG-B14-P53C-ZT-F-1P3	566518	VUVG-B14-P53E-ZT-F-1P3	566519

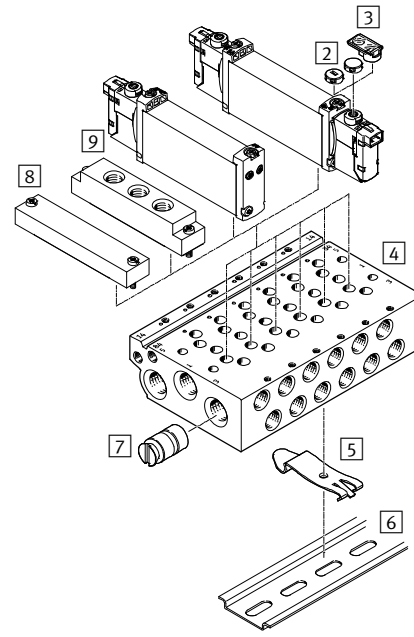
Solenoid valves VUVG

Accessories

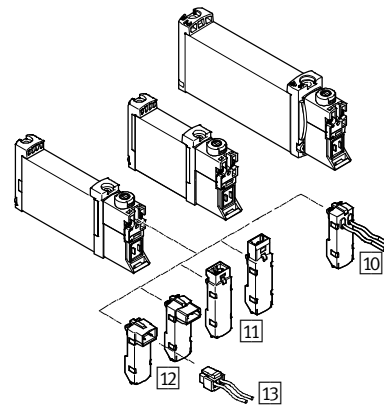
In-line valve VUVG-L with seal VABD-L1-10X **1**



Sub-base valve VUVG-B



E-boxes



- 1** Seal VABD-L1-10X for in-line valve
- 2** Cover VMPA-HBT-B for manual override, non-detenting → 88
- 3** Inscription label holder ASLR-D for labelling the valves, cover for mounting screw and manual override → 88
- 4** Manifold rail VABM for 2 to 10 valve positions → 88
- 5** H-rail mounting VAME-T-M4 for fitting the valve manifold on an H-rail → 88
- 6** H-rail NRH-35-2000 for mounting → nrh-35
- 7** Separator VABD-B for creating pressure zones → 88
- 8** Blanking plate VABB for covering an unused valve position → 88
- 9** Supply plate VABF → 88

E-boxes VAVE → 88

- 10** with flying leads → 88
- 11** with vertical plug → 88
- 12** with horizontal plug → 88
- 13** Plug socket with cable NEBV, open end → 88

Solenoid valves VUVG

Accessories

1 Seal VABD-L1-10X			
Size	Pneumatic connection	Type	Part No.
10	M5	VABD-L1-10X-S-M5	566672
10	M7	VABD-L1-10X-S-M7	566673
14	G $\frac{1}{8}$	VABD-L1-14X-S-G18	566675

2/3/5 Cover VMPA/inscription label ASLR/H-rail mounting VAME		
Size	Type	Part No.
10, 14	VMPA-HBT-B (10 pieces)	540897
10, 14	ASLR-D-L1 (10 pieces)	570818
10, 14	VAME-T-M4 (2 pieces)	569998

4 Manifold rail VABM				
Size	Connection ¹⁾	Valve positions	Type	Part No.
For individual valve VUVG-L with seal VABD-L1-10X 1				
10	M5/M7	2	VABM-L1-10S-G18-2	566558
		3	VABM-L1-10S-G18-3	566559
		4	VABM-L1-10S-G18-4	566560
		6	VABM-L1-10S-G18-6	566562
		8	VABM-L1-10S-G18-8	566564
14	G $\frac{1}{4}$	2	VABM-L1-14S-G14-2	566618
		3	VABM-L1-14S-G14-3	566619
		4	VABM-L1-14S-G14-4	566620
		6	VABM-L1-14S-G14-6	566622
		8	VABM-L1-14S-G14-8	566624
10	M5	2	VABM-L1-10W-G18-2	566582
		3	VABM-L1-10W-G18-3	566583
		4	VABM-L1-10W-G18-4	566584
		6	VABM-L1-10W-G18-6	566586
		8	VABM-L1-10W-G18-8	566588
	M7	2	VABM-L1-10HW-G18-2	566606
		3	VABM-L1-10HW-G18-3	566607
		4	VABM-L1-10HW-G18-4	566608
		6	VABM-L1-10HW-G18-6	566610
		8	VABM-L1-10HW-G18-8	566612
14	G $\frac{1}{8}$	2	VABM-L1-14W-G18-2	566642
		3	VABM-L1-14W-G18-3	566643
		4	VABM-L1-14W-G18-4	566644
		6	VABM-L1-14W-G18-6	566646
		8	VABM-L1-14W-G18-8	566648
10	M5	2	VABM-L1-10W-G18-2	566582
		3	VABM-L1-10W-G18-3	566583
		4	VABM-L1-10W-G18-4	566584
		6	VABM-L1-10W-G18-6	566586
		8	VABM-L1-10W-G18-8	566588
14	G $\frac{1}{8}$	2	VABM-L1-14W-G18-2	566642
		3	VABM-L1-14W-G18-3	566643
		4	VABM-L1-14W-G18-4	566644
		6	VABM-L1-14W-G18-6	566646
		8	VABM-L1-14W-G18-8	566648

1) VABM-L1-...S: supply ports 1, 3, 5
VABM-L1-...W, VABM-L1-...HW: working lines 2, 4

7 Separator VABD-B		
Size	Type	Part No.
For individual valve VUVG-L		
10	VABD-8-B	569995
14	VABD-10-B	569996
For sub-base valve VUVG-B		
10	VABD-6-B	569994
14	VABD-10-B	569996

8 Cover plate VABB		
Size	Type	Part No.
For individual valve VUVG-L		
10	VABB-L1-10-S	566462
14	VABB-L1-14	569989
For sub-base valve VUVG-B		
10	VABB-L1-10-W	566495
14	VABB-L1-14	569989

9 Supply plate VABF			
Size	Connection	Type	Part No.
For individual valve VUVG-L			
10	M5	VABF-L1-10-P3A4-M5	569991
10	M7	VABF-L1-10-P3A4-M7	569992
14	G $\frac{1}{8}$	VABF-L1-14-P3A4-G18	569993
For sub-base valve VUVG-B			
10		VABF-L1-10-P3A4-M5	569991
14		VABF-L1-14-P3A4-G18	569993

10/11/12 E-boxes VAVE		
Description	Type	Part No.
10 With flying leads, LED, protective circuit		
0.5 m, 24 and 12 V DC	VAVE-L1-1VL1-LP	566722
1 m	VAVE-L1-1VL2-LP	566723
2.5 m	VAVE-L1-1VL3-LP	566724
11 Vertical plug, LED, protective circuit		
24 and 12 V DC	VAVE-L1-1VH3-LP	566715
12 Horizontal plug, LED, protective circuit		
24 and 12 V DC	VAVE-L1-1VH2-LP	566714

13 Plug socket with cable NEBV			
Description	Cable length	Type	Part No.
Straight socket, 2-pin			
Flying leads, open end	0.5 m	NEBV-H1G2-KN-0.5-LE	566654
	1 m	NEBV-H1G2-KN-1-LE2	566655
	2.5 m	NEBV-H1G2-KN-2.5-LE	566656
Individual cable, 0.5 m, open end, 2-pin	0.5 m	NEBV-H1G2-P-0.5-LE2	566658
	1 m	NEBV-H1G2-P-1-LE2	566659
	2.5 m	NEBV-H1G2-P-2.5-LE2	566660

Solenoid valves CPE, Compact Performance



- Width 10/14/18/24 mm, flow rate up to 3,200 l/min
- Minimal flow resistance
- Minimal power consumption
- Small and powerful
- Short switching and response times
- Assembly as individual valves or as a valve manifold on a stable aluminium manifold rail

Type codes – Basic design

		CPE		-		-		-		-		-	
Type													
CPE	Solenoid valve, Compact Performance												
Width													
10	10 mm												
14	14 mm												
18	18 mm												
24	24 mm												
Operating voltage													
M1BH	24 V DC for CPE10 and CPE14												
M1H	24 V DC for CPE18 and CPE24												
M2H	110 V AC for CPE18 and CPE24												
M3H	230 V AC for CPE18 and CPE24												
Valve function													
3GL	3/2-way, closed, single solenoid, pneumatic reset												
3OL	3/2-way, open, single solenoid, pneumatic reset												
5L	5/2-way, single solenoid, pneumatic spring reset												
5J	5/2-way, double solenoid												
5/3E	5/3-way, mid-position exhausted												
5/3G	5/3-way, mid-position closed												
Pilot air supply													
	Internal												
S	External												
Pneumatic connection													
M7	M7 for CPE10												
1/8	G $\frac{1}{8}$ for CPE14												
1/4	G $\frac{1}{4}$ for CPE18												
3/8	G $\frac{3}{8}$ for CPE24												
Generation													
B	B series for CPE10 5/3-way valve												

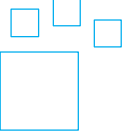
7

Variants

Valve function: 5/3B 5/3-way, mid-position pressurised
 Connecting thread: QS QS fitting

Solenoid valves CPE, Compact Performance

Ordering data – Variants



Configurable product

This product and all its variants can be ordered using the configurator:

The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Ordering data – Basic design

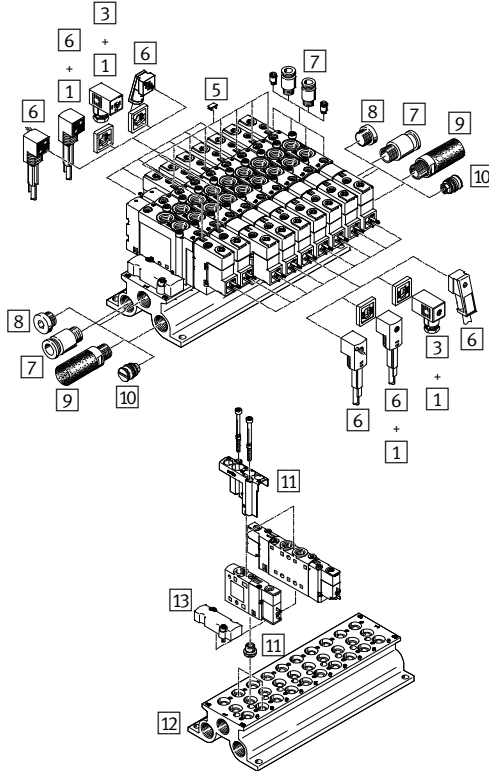
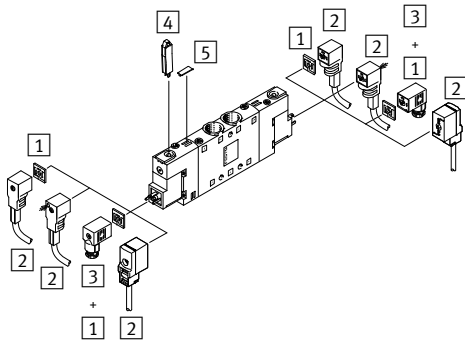
Valve function	3/2-way		5/3-way		Part No.	
Width 10 mm, 24 V DC						
CPE10-M1BH-3GL-M7	196915	CPE10-M1BH-5/3G-M7-B	533141	CPE10-M1BH-5J-M7		196925
CPE10-M1BH-3GLS-M7	196916	CPE10-M1BH-5/3GS-M7-B	533142	CPE10-M1BH-5JS-M7		196926
CPE10-M1BH-3OLS-M7	196918	CPE10-M1BH-5/3E-M7-B	533143	CPE10-M1BH-5L-M7		196927
		CPE10-M1BH-5/3ES-M7	533144	CPE10-M1BH-5LS-M7		196928
Width 14 mm, 24 V DC						
CPE14-M1BH-3GL-1/8	196929	CPE14-M1BH-5/3G-1/8	196937	CPE14-M1BH-5J-1/8		196939
CPE14-M1BH-3GLS-1/8	196930	CPE14-M1BH-5/3GS-1/8	196938	CPE14-M1BH-5JS-1/8		196940
CPE14-M1BH-3OL-1/8	196931	CPE14-M1BH-5/3E-1/8	196935	CPE14-M1BH-5L-1/8		196941
		CPE14-M1BH-5/3ES-1/8	196936	CPE14-M1BH-5LS-1/8		196942
Width 18 mm, 24 V DC						
CPE18-M1H-3GL-1/4	163141	CPE18-M1H-5/3G-1/4	170247	CPE18-M1H-5J-1/4		163143
CPE18-M1H-3GLS-1/4	163145	CPE18-M1H-5/3GS-1/4	170248	CPE18-M1H-5JS-1/4		163147
CPE18-M1H-3OL-1/4	163140	CPE18-M1H-5/3E-1/4	170249	CPE18-M1H-5L-1/4		163142
CPE18-M1H-3OLS-1/4	163144	CPE18-M1H-5/3ES-1/4	170250	CPE18-M1H-5LS-1/4		163146
Width 18 mm, 110 V AC						
CPE18-M2H-3GL-1/4	163761	CPE18-M2H-5/3G-1/4	170283	CPE18-M2H-5J-1/4		163763
CPE18-M2H-3GLS-1/4	163765	CPE18-M2H-5/3GS-1/4	170284	CPE18-M2H-5JS-1/4		163767
CPE18-M2H-3OL-1/4	163760	CPE18-M2H-5/3E-1/4	170285	CPE18-M2H-5L-1/4		163762
CPE18-M2H-3OLS-1/4	163764	CPE18-M2H-5/3ES-1/4	170286	CPE18-M2H-5LS-1/4		163766
Width 18 mm, 230 V AC						
CPE18-M3H-3GL-1/4	163785	CPE18-M3H-5/3G-1/4	170319	CPE18-M3H-5J-1/4		163787
CPE18-M3H-3GLS-1/4	163789	CPE18-M3H-5/3GS-1/4	170320	CPE18-M3H-5JS-1/4		163791
CPE18-M3H-3OL-1/4	163784	CPE18-M3H-5/3E-1/4	170321	CPE18-M3H-5L-1/4		163786
CPE18-M3H-3OLS-1/4	163788	CPE18-M3H-5/3ES-1/4	170322	CPE18-M3H-5LS-1/4		163790
Width 24 mm, 24 V DC						
CPE24-M1H-3GL-3/8	163165	CPE24-M1H-5/3G-3/8	170265	CPE24-M1H-5J-3/8		163167
CPE24-M1H-3GLS-3/8	163169	CPE24-M1H-5/3GS-3/8	170266	CPE24-M1H-5JS-3/8		163171
CPE24-M1H-3OL-3/8	163164			CPE24-M1H-5L-3/8		163166
CPE24-M1H-3OLS-3/8	163168			CPE24-M1H-5LS-3/8		163170
Width 24 mm, 110 V AC						
CPE24-M2H-3GL-3/8	163809	CPE24-M2H-5/3G-3/8	170301	CPE24-M2H-5J-3/8		163811
CPE24-M2H-3GLS-3/8	163813	CPE24-M2H-5/3GS-3/8	170302	CPE24-M2H-5JS-3/8		163815
CPE24-M2H-3OL-3/8	163808			CPE24-M2H-5L-3/8		163810
CPE24-M2H-3OLS-3/8	163812			CPE24-M2H-5LS-3/8		163814
Width 24 mm, 230 V AC						
CPE24-M3H-3GL-3/8	163833	CPE24-M3H-5/3G-3/8	170337	CPE24-M3H-5J-3/8		163835
CPE24-M3H-3GLS-3/8	163837	CPE24-M3H-5/3GS-3/8	170338	CPE24-M3H-5JS-3/8		163839
CPE24-M3H-3OL-3/8	163832			CPE24-M3H-5L-3/8		163834
CPE24-M3H-3OLS-3/8	163836			CPE24-M3H-5LS-3/8		163838

Solenoid valves CPE, Compact Performance

Accessories

Individual valve

Mounting on manifold block



- 1 Illuminating seal MEB-LD
→ [meb-ld](#)
- 2 Connecting cable
KMYZ-9/KMEB-1 → 91
- 3 Standard plug socket MSSD-EB
→ [mssd-eb](#)
- 4 Manual override AHB → 91
- 5 Inscription label IBS → 91
- 6 Connecting cable KMEB → 91
- 7 Push-in fittings QS → 114
- 8 Blanking plug B → [b-1/8](#)
- 9 Silencer U for ports 3 and 5
→ 130
- 10 Separator VABD for pressure zones
→ [vabd](#)
- 11 Retainer set CPE-SET for 5/2-way and 5/3-way valves → 91
- 12 Manifold block for manifold assembly CPE-PRS → 92
- 13 Blanking plate CPE-RP for fitting on unused valve positions
→ 91

2/6 Connecting cable KMYZ-9/KMEB-1		
Description	Type	Part No.
Angled socket/open end, with LED, cable length 2.5 m		
2-pin/2-wire, 24 V DC	KMYZ-9-24-2,5-LED-PUR-B	193687
3-pin, 24 V DC	KMEB-1-24-2,5-LED	151688
3-pin, 230 V AC	KMEB-1-230AC-2,5	151690

4 Manual override AHB		
Description	Type	Part No.
For CPE10/CPE14	AHB-MZB	157600
For CPE18/CPE24	AHB-MEB	157601

5 Inscription label IBS		
Type		Part No.
IBS-6X10		18576

11 Retainer set CPE-SET		
Description	Type	Part No.
For 3/2-way valve		
CPE10	CPE10-H3-SET	550577
CPE14	CPE14-H3-SET	550578
CPE18	CPE18-H3-SET	550579
For 5/2-way and 5/3-way valve		
CPE10	CPE10-H5-SET	544394
CPE14	CPE14-H5-SET	544395
CPE10	CPE18-H5-SET	544396

13 Blanking plate CPE-RP		
Description	Type	Part No.
For 3/2-way vacant position		
CPE10	CPE10-RP3	550580
CPE14	CPE14-RP3	550581
CPE18	CPE18-RP3	550582
For 5/2-way and 5/3-way vacant position		
CPE10	CPE10-RP	544479
CPE14	CPE14-RP	544480
CPE18	CPE18-RP	544481

Solenoid valves CPE, Compact Performance

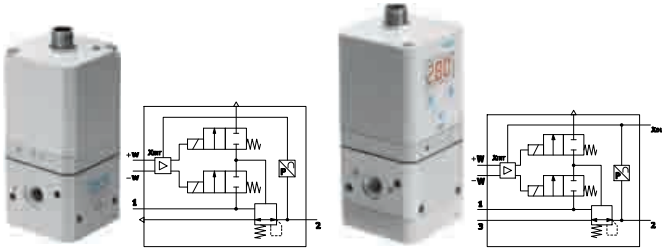
Accessories

12 Manifold block CPE-PRS				
Valve positions	For 3/2-way valve		For 5/2-way and 5/3-way valve	
	Type	Part No.	Type	Part No.
CPE10				
2	CPE10-3/2-PRS-1/4-2	550550	CPE10-PRS-1/4-2	543821
3	CPE10-3/2-PRS-1/4-3	550551	CPE10-PRS-1/4-3	543822
4	CPE10-3/2-PRS-1/4-4	550552	CPE10-PRS-1/4-4	543823
5	CPE10-3/2-PRS-1/4-5	550553	CPE10-PRS-1/4-5	543824
6	CPE10-3/2-PRS-1/4-6	550554	CPE10-PRS-1/4-6	543825
7	CPE10-3/2-PRS-1/4-7	550555	CPE10-PRS-1/4-7	543826
8	CPE10-3/2-PRS-1/4-8	550556	CPE10-PRS-1/4-8	543827
9	CPE10-3/2-PRS-1/4-9	550557	CPE10-PRS-1/4-9	543828
10	CPE10-3/2-PRS-1/4-10	550558	CPE10-PRS-1/4-10	543829

12 Manifold block CPE-PRS				
Valve positions	For 3/2-way valve		For 5/2-way and 5/3-way valve	
	Type	Part No.	Type	Part No.
CPE14				
2	CPE14-3/2-PRS-3/8-2	550559	CPE14-PRS-3/8-2	543830
3	CPE14-3/2-PRS-3/8-3	550560	CPE14-PRS-3/8-3	543831
4	CPE14-3/2-PRS-3/8-4	550561	CPE14-PRS-3/8-4	543832
5	CPE14-3/2-PRS-3/8-5	550562	CPE14-PRS-3/8-5	543833
6	CPE14-3/2-PRS-3/8-6	550563	CPE14-PRS-3/8-6	543834
7	CPE14-3/2-PRS-3/8-7	550564	CPE14-PRS-3/8-7	543835
8	CPE14-3/2-PRS-3/8-8	550565	CPE14-PRS-3/8-8	543836
9	CPE14-3/2-PRS-3/8-9	550566	CPE14-PRS-3/8-9	543837
10	CPE14-3/2-PRS-3/8-10	550567	CPE14-PRS-3/8-10	543838
CPE18				
2	CPE18-3/2-PRS-3/8-2	550568	CPE18-PRS-3/8-2	543839
3	CPE18-3/2-PRS-3/8-3	550569	CPE18-PRS-3/8-3	543840
4	CPE18-3/2-PRS-3/8-4	550570	CPE18-PRS-3/8-4	543841
5	CPE18-3/2-PRS-3/8-5	550571	CPE18-PRS-3/8-5	543842
6	CPE18-3/2-PRS-3/8-6	550572	CPE18-PRS-3/8-6	543843
7	CPE18-3/2-PRS-3/8-7	550573	CPE18-PRS-3/8-7	543844
8	CPE18-3/2-PRS-3/8-8	550574	CPE18-PRS-3/8-8	543845
9	CPE18-3/2-PRS-3/8-9	550575	CPE18-PRS-3/8-9	543846
10	CPE18-3/2-PRS-3/8-10	550576	CPE18-PRS-3/8-10	543847

Proportional pressure regulators VPPE

- Optional setpoint module
- Connection size G $\frac{1}{8}$



Type codes – Basic design

		VPPE	-		-	1/8	-		-		-	
Type												
VPPE	Proportional pressure regulator with switching valve head											
Valve function												
	Without display	With display										
3	3-way pressure regulator, normally closed	-										
3 - 1	-	3-way pressure regulator, normally closed										
Pneumatic connection												
1/8	Female thread G $\frac{1}{8}$											
Pressure regulation range												
	Without display	With display										
2	-	0.02 ... 2 bar										
6	0 ... 6 bar	0.06 ... 6 bar										
10	-	0.1 ... 10 bar										
Analogue setpoint input												
	Without display	With display										
010	0 ... 10 V	0 ... 10 V										
420	-	4 ... 20 mA										
Operator unit												
	Without display	With display										
E1	-	Segmented LED display										
Mounting method												
	In-line valve											

7

Variants

Mounting method

- T Mounting on common supply manifold

Ordering data – Variants

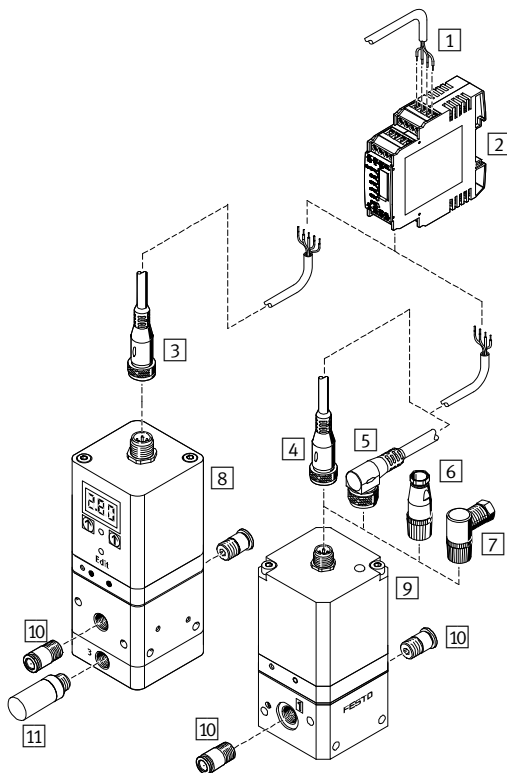
	<p>Configurable product</p>	<p>This product and all its variants can be ordered using the configurator</p>	<p>The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...</p>	<p>Enter the type or configuration part number in the search field.</p>
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Proportional pressure regulators VPPE

Ordering data – Basic design

Pressure regulation range [bar]	Voltage type 0 ... 10 V		Current type 4 ... 20 mA	
	Type	Part No.	Type	Part No.
Without display				
0 ... 6	VPPE-3-1/8-6-010	539639		
With display				
0.02 ... 2	VPPE-3-1-1/8-2-010-E1	557771	VPPE-3-1-1/8-2-420-E1	557774
0.06 ... 6	VPPE-3-1-1/8-6-010-E1	557772	VPPE-3-1-1/8-6-420-E1	557775
0.1 ... 10	VPPE-3-1-1/8-10-010-E1	557773	VPPE-3-1-1/8-10-420-E1	557776

Accessories

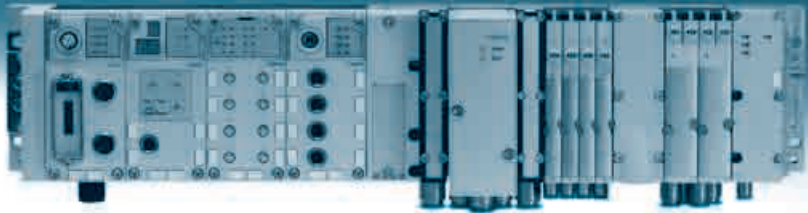


- 1 Digital input/output for actuating the setpoint module MPZ
- 2 Setpoint module MPZ for generating 6+1 analogue voltage signals → [mpz](#)
- 3 Plug socket with cable SIM-M12-5GD → 94
- 4 Plug socket with cable SIM-M12-4GD → 94
- 5 Plug socket with cable SIM-M12-4WD → 94
- 6 Plug socket SIE-GD: straight socket for actuating the VPPE → [sie-gd](#)
- 7 Plug socket SIE-WD-TR → [sie-wd-tr](#): angled socket for actuating the VPPE
- 8 Proportional pressure regulator VPPE
- 9 Proportional pressure regulator with display VPPE-E1
- 10 Push-in fitting QS for standard O.D. tubing → 114
- 11 Silencer U for fitting in exhaust ports → 130

3 Plug socket with cable SIM-M12-5GD for VPPE-E1 with display		
Description	Type	Part No.
Straight socket, 5-pin, M12x1, cable length 2.5 m	SIM-M12-5GD-2,5-PU	175715
Straight socket, 4-pin, M12x1, cable length 5 m	SIM-M12-5GD-5-PU	175716

5 Plug socket with cable SIM-M12-4WD for VPPE without display		
Description	Type	Part No.
Angled socket, 4-pin, M12x1, cable length 5 m	SIM-M12-4WD-5-PU	164258

4 Plug socket with cable SIM-M12-4GD for VPPE without display		
Description	Type	Part No.
Straight socket, 4-pin, M12x1, cable length 5 m	SIM-M12-4GD-5-PU	164259



Valve terminals

Overview

Standard valve terminals

Valve terminal VTSA/VTSA-F

- ISO 15407-2/ISO 5599-2
- Width of standard valves 18/26/42/52 mm, flow rate up to 2,900 l/min

→ [vtsa](#)



Universal valve terminals

Valve terminal MPA-S

- Valve width 10/20 mm, flow rates up to 700 l/min
- Electrical connection: multi-pin plug, AS-interface, CPI, fieldbus

→ [mpa-s](#)



Valve terminal MPA-L

- Valve width 10 mm, flow rate up to 360 l/min
- Electrical connection: multi-pin plug, CPX fieldbus connection
- Fast self-assembly possible

→ [mpa-l](#)



Valve terminal CPV

Compact Performance

- Width 10/14/18 mm, flow rate up to 1,600 l/min
- Maximum flow with minimum space requirement

→ [cpv](#)



Valve terminal VTUG

- Width 10/14 mm
- Flow rate up to 700 l/min
- Modern and low-cost

→ [vtug](#)



Electrical peripherals

Electrical terminal CPX

- Unique modular design
- Comprehensive function integration and diagnostics
- CPX controls MPA, VTSA, Motion Control

→ [cpx](#)

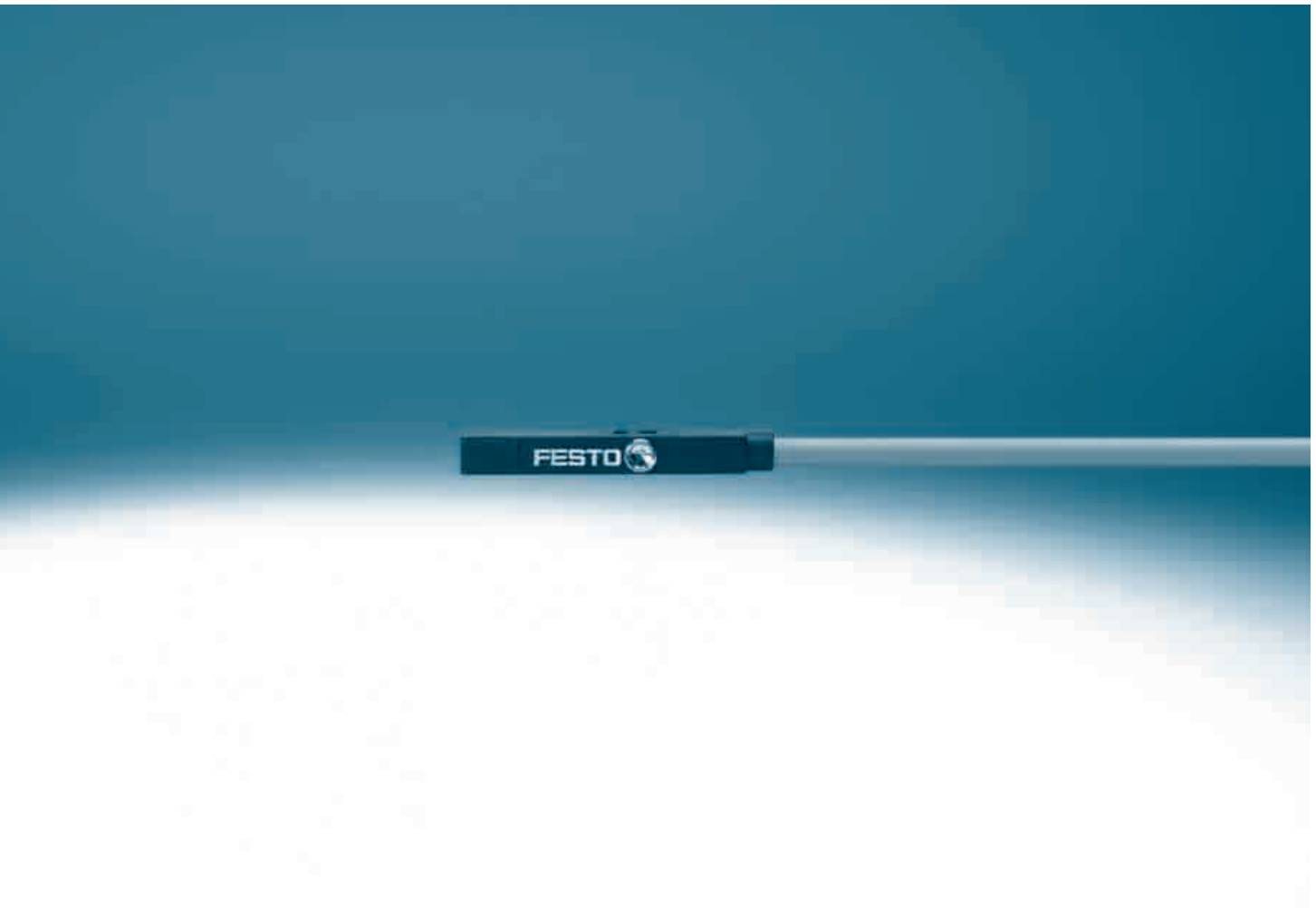


Bus node CTEU-CO

- Fieldbus interfaces:
 - Sub-D plug for self-assembly
 - Terminal strip, 5-pin
 - Sub-D socket, 9-pin
 - 2x M12x1, 5-pin
- Diagnostics:
 - Communication error
 - System diagnostics
 - Undervoltage

→ [cteu-co](#)





Sensors

Overview

FESTO

Proximity sensors

Proximity sensor SME-/SMT-8M,
for T-slot

- Magnetic reed
- Magneto-resistive
- Insertable in the slot from above
- Wide range of mounting and connection options

→ 99



Pressure and vacuum sensors

Pressure sensor SDE5

- Programmable
- Configurable

→ 101



Pressure sensor SPAB, with display

- Switching outputs PNP, NPN
- Voltage output
- Numerical pressure display, on two-part, multi-coloured display

→ 103



Proximity sensors SME-/SMT-8M, for T-slot

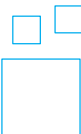


- Switching output via reed contact or non-contacting
- Insertable in the slot from above, does not protrude over the cylinder profile
- Suitable for use with energy chains
- Cable clip and inscription labels included in the scope of delivery
- With switching status display
- Types in accordance with ATEX directive for potentially explosive atmospheres
→ www.festo.com/en/ex

Type codes – Basic design

					24V			
Type								
SME	Proximity sensor, magnetic reed							
SMT	Proximity sensor, magneto-resistive							
Design								
8M	For T-slot, insertable in the slot from above							
8M-A								
Switching output, switching element function								
DS	N/O contact, 3-wire							
ZS	N/O contact, 2-wire							
DO	N/C contact, 3-wire							
PS	PNP, N/O contact, 3-wire							
NS	NPN, N/O contact, 3-wire							
PO	PNP, N/C contact, 3-wire							
Rated operating voltage								
24V	24 V DC							
Cable characteristics								
K	Standard + energy chain							
E	Energy chain + robot							
Cable length [m]								
0,3	0.3 m							
2,5	2.5 m							
5,0	5.0 m							
7,5	7.5 m							
Connection technology								
OE	Open end							
M8	Cable with plug M8x1, snap-on flange							
M8D	Cable with plug M8x1, rotatable thread							
M12	Cable with plug M12x1, rotatable thread							

Ordering data – Variants



Configurable product

This product and all its variants can be ordered using the configurator

The configurator can be found on the DVD under Products or at
→ www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Proximity sensors SME-/SMT-8M, for T-slot**Ordering data – Basic design**

Proximity sensor, magnetic reed	
Type	Part No.
SME-8M-DS-24V-K-0,3-M8D	543861
SME-8M-DS-24V-K-2,5-OE	543862
SME-8M-DS-24V-K-5,0-OE	543863
SME-8M-DS-24V-K-7,5-OE	543876
SME-8M-ZS-24V-K-2,5-OE	543872
SME-8M-DO-24V-K-7,5-OE	546799

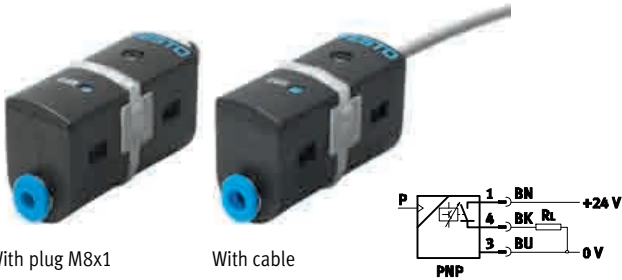
Proximity sensor, magneto-resistive	
Type	Part No.
SMT-8M-PS-24V-K-0,3-M8D	543866
SMT-8M-NS-24V-K-0,3-M8D	543871
SMT-8M-PS-24V-K-0,3-M12	543869
SMT-8M-PS-24V-K-2,5-OE	543867
SMT-8M-NS-24V-K-2,5-OE	543870
SMT-8M-PS-24V-K-5,0-OE	543868
SMT-8M-PO-24V-K-7,5-OE	543873
SMT-8M-A-PS-24V-E-0,3-M8D	574334
SMT-8M-A-PS-24V-E-2,5-OE	574335

Accessories

Mounting kit SMBR		
For Ø	Type	Part No.
8	SMBR-8-8	175091
10	SMBR-8-10	175092
12	SMBR-8-12	175093
16	SMBR-8-16	175094
20	SMBR-8-20	175095
25	SMBR-8-25	175096



Pressure sensors SDE5



With plug M8x1

With cable

- Programmable and configurable pressure switch for simple pressure sensing tasks
- Relative pressure measurement
- Teach-in function for programming
- Integrated microprocessor
- Switching status indicated by an LED visible from all sides

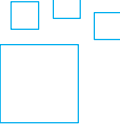
Type codes – Basic design

		SDE5	-	-	-	-	P	-	-	-	
Sensor function											
SDE5	Pressure sensor										
Pressure measuring range											
V1	-1 ... 0 bar										
D2	0 ... 2 bar										
D10	0 ... 10 bar										
Output function											
FP	Freely programmable, N/O contact, N/C contact										
0	Threshold value with fixed hysteresis, 1 teach-in pressure, N/O contact										
C	Threshold value with fixed hysteresis, 1 teach-in pressure, N/C contact										
O1	Threshold value with fixed hysteresis, 2 teach-in pressures, N/O contact										
O2	Threshold value with variable hysteresis, 2 teach-in pressures, N/O contact										
O3	Window comparator with fixed hysteresis, 2 teach-in pressures, N/O contact										
Pneumatic connection											
Push-in connector at both ends											
Q4	For tubing O.D. 4 mm										
Q6	For tubing O.D. 6 mm										
Push-in connector at one end											
Q4E	For tubing O.D. 4 mm										
Q6E	For tubing O.D. 6 mm										
Electrical output											
P	1 switching output PNP										
Electrical connection											
K	Cable, 2.5 m										
M8	Plug M8, 3 pin										
Electrical accessories											
-	Without electrical accessories										
W5	Connecting cable, angled socket, 3-pin, 5 m										
Permanently set X teach-in pressure											
X	Teach-in pressure X = 1 bar										
Permanently set Y teach-in pressure											
5.Y	Teach-in pressure Y = 5.5 bar										

Variants

- Threshold value with fixed hysteresis
- Threshold value with variable hysteresis
- Window comparator with fixed hysteresis
- Connecting cables
- Teach-in points permanently set

Ordering data – Variants



Configurable product

This product and all its variants can be ordered using the configurator

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[→ www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

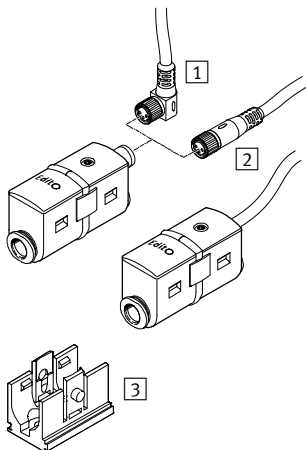
Enter the type or configuration part number in the search field.

Ordering data – Basic design

Output function	Pressure measuring range					
	V1: -1 ... 0 bar		D2: 0 ... 2 bar		D10: 0 ... 10 bar	
	Type	Part No.	Type	Part No.	Type	Part No.
FP					SDE5-D10-FP-Q6E-P-M8	542897
	SDE5-V1-FP-Q6-P-M8	542887			SDE5-D10-FP-Q6-P-M8	542898
					SDE5-D10-FP-Q4E-P-K	542901
					SDE5-D10-FP-Q4E-P-M8	542900
					SDE5-D10-FP-Q6-P-K	542899
0	SDE5-V1-O-Q6E-P-M8	527461			SDE5-D10-O-Q6E-P-M8	527467
			SDE5-D2-O-Q6E-P-K	542888	SDE5-D10-O-Q6E-P-K	542890
	SDE5-V1-O-Q6-P-M8	527458			SDE5-D10-O-Q6-P-M8	527464
	SDE5-V1-O-Q4E-P-M8	527460			SDE5-D10-O-Q4E-P-M8	527466
C					SDE5-D10-O-Q4-P-M8	527463
					SDE5-D10-C-Q6E-P-M8	542894
					SDE5-D10-C-Q4E-P-M8	542889
O1	SDE5-V1-O1-Q6-P-M8	542886			SDE5-D10-C-Q6E-P-K	542895
O2					SDE5-D10-O2-Q6-P-M8	542892
					SDE5-D10-O2-Q6E-P-M8	542891
O3					SDE5-D10-O3-Q6E-P-M8	549980
					SDE5-D10-O3-Q6E-P-M8	549980
With permanently set X teach-in pressure/Y teach-in pressure						
C					SDE5-D10-C-Q6E-P-M8-W5-X	573550
O3					SDE5-D10-O3-Q4E-P-K-X-5.5Y	547010

9

Accessories



- 1 Connecting cable NEBU-M8W3, angled socket → 102
- 2 Connecting cable NEBU-M8G3, straight socket → 102
- 3 Wall bracket (included in the scope of delivery)

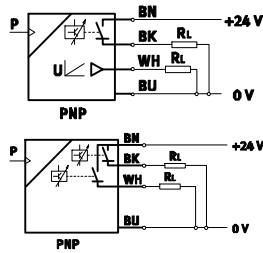
1 Connecting cables NEBU-M8W3, M8x1, angled socket

Description	Type	Part No.
Cable length 2.5 m	NEBU-M8W3-K-2.5-LE3	541338
Cable length 5 m	NEBU-M8W3-K-5-LE3	541341

2 Connecting cables NEBU-M8G3, M8x1, straight socket

Description	Type	Part No.
Cable length 2.5 m	NEBU-M8G3-K-2.5-LE3	541333
Cable length 5 m	NEBU-M8G3-K-5-LE3	541334

Pressure sensors SPAB, with display



E.g. with 1 or 2 switching outputs PNP, switchable, with cable

- Two-part, multi-coloured display
- Copy function (settings can be transferred from one device to another)
- Simple commissioning thanks to intuitive operation
- Compact design 30x30 mm

Type codes – Basic design

SPAB - [] - R - [] - [] - []	
Sensor function	
SPAB	Piezoresistive pressure sensor with multi-coloured display
Pressure measuring range	
B2	-1 ... +1 bar
P10	0 ... +10 bar
Measured variable	
R	Relative pressure
Pneumatic connection	
G18	Male thread G1/8 and female thread M5
Electrical output	
2P	2 switching outputs PNP
2N	2 switching outputs NPN
PB	1 switching output PNP and 1 ... 5 V analogue
NB	1 switching output NPN and 1 ... 5 V analogue
Electrical connection	
K1	Cable, 2.5 m Included in the scope of delivery
M8	Plug M8x1

Variants

Pressure connection		Electrical output	
R18	Male thread R1/8 and female thread M5	PB	1 switching output PNP and 1 ... 5 V analogue
N18	Male thread NPT1/8-27 and female thread M5	NB	1 switching output NPN and 1 ... 5 V analogue

Ordering data – Variants

Configurable product

This product and all its variants can be ordered using the configurator

The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

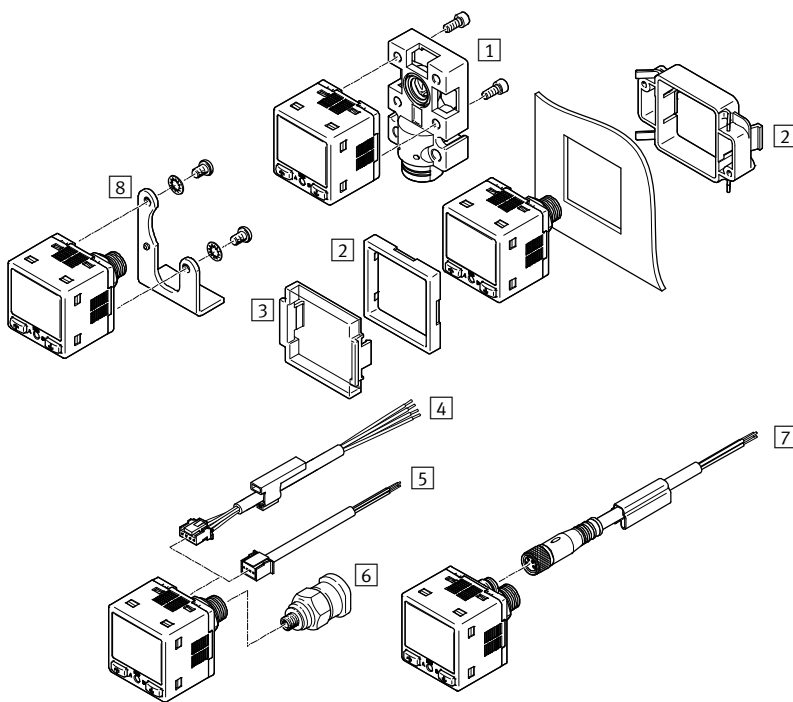
Pressure sensors SPAB, with display

Ordering data – Basic design

Pressure measuring range	Electrical output	Electrical connection			
	Digital	K1: Cable ¹⁾		M8: Plug M8x1	
		Type	Part No.	Type	Part No.
B2: -1 ... +1 bar	2x PNP	SPAB-B2R-G18-2P-K1	552350	SPAB-B2R-G18-2P-M8	553146
	2x NPN	SPAB-B2R-G18-2N-K1	552353	SPAB-B2R-G18-2N-M8	553149
P10: 0 ... 10 bar	2x PNP	SPAB-P10R-G18-2P-K1	552362	SPAB-P10R-G18-2P-M8	553158
	2x NPN	SPAB-P10R-G18-2N-K1	552365	SPAB-P10R-G18-2N-M8	553161

1) Connecting cable NEBU-L1 (2.5 m) included in the scope of delivery

Accessories



- 1) Adapter plate SASF-P for pressure sensor SPAB-...-F with pneumatic connection with M5 female thread → [sasf-p](#)
- 2) Front panel installation kit SAMH-P4-F → 104
- 3) Protective cover SACC-P4-G → 104
- 4) Connecting cable NEBS-L1G4 → [nebs](#)
- 5) Connecting cable NEBU-L1G4 → 104
- 6) Push-in fitting QSM-M5 → 119
- 7) Connecting cable NEBU-M8 → 104
- 8) Mounting bracket SAMH-P4-A → 104

2) Front panel installation kit SAMH-P4-F

Type	Part No.
SAMH-P4-F	552377

3) Protective cover SACC

Type	Part No.
SACC-P4-G	552378

5) Connecting cable NEBU-L1G4

Description	Type	Part No.
Circuit board connector, 4-wire, straight socket, square design		
Cable length 2.5 m	NEBU-L1G4-K-2.5-LE4 ¹⁾	552374
Cable length 5 m	NEBU-L1G4-K-5-LE4	552375

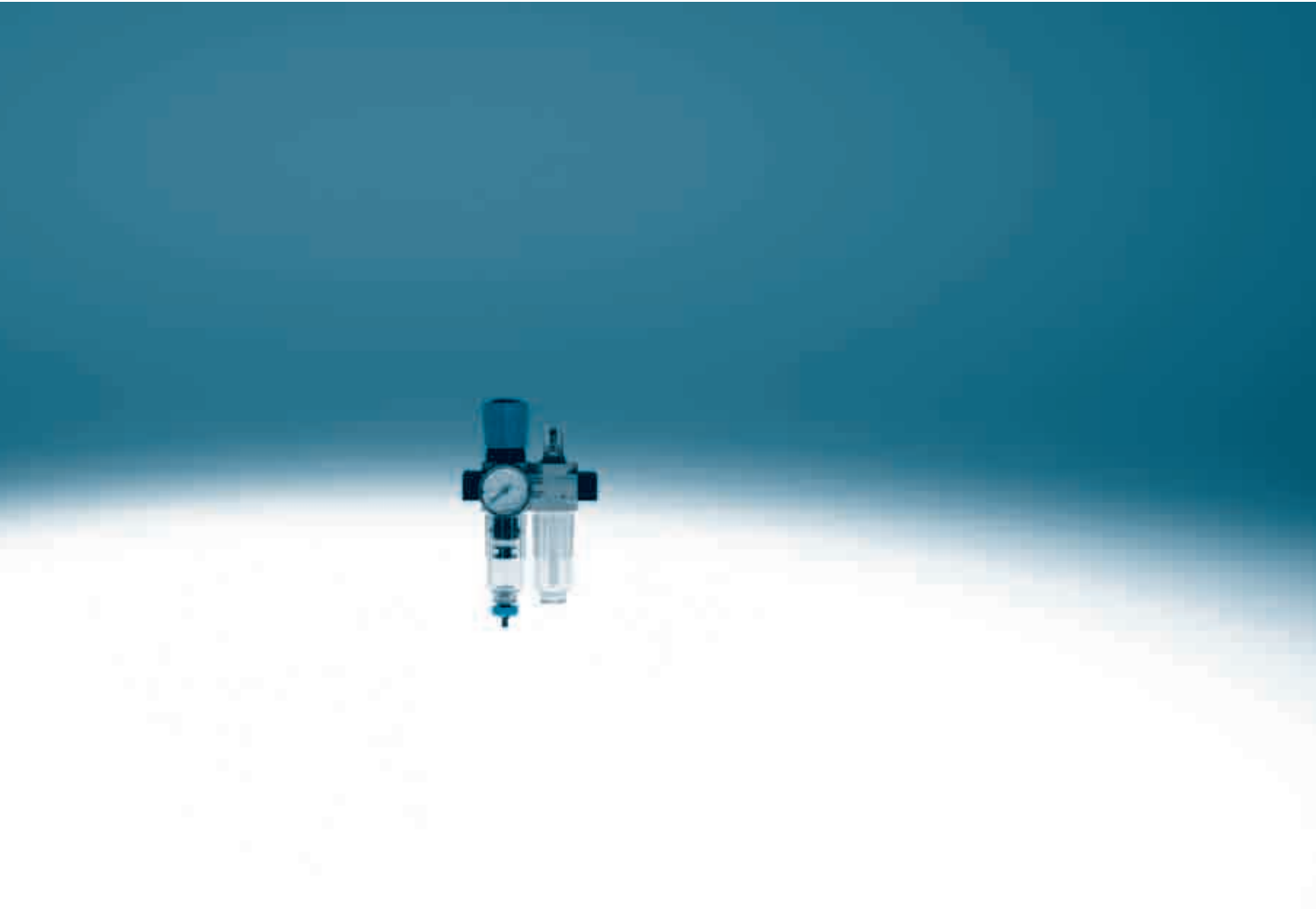
1) Included in the scope of delivery of SPAB-...-K1.

7) Connecting cable NEBU-M8

Description	Type	Part No.
M8x1, 4-wire, straight socket		
Cable length 2.5 m	NEBU-M8G4-K-2.5-LE4	541342
Cable length 5 m	NEBU-M8G4-K-5-LE4	541343
M8x1, 4-wire, angled socket		
Cable length 2.5 m	NEBU-M8W4-K-2.5-LE4	541344
Cable length 5 m	NEBU-M8W4-K-5-LE4	541345

8) Mounting bracket SAMH-P4-A

Type	Part No.
SAMH-P4-A	552376



Compressed air preparation

Overview

FESTO

D series, metal design

D series service units, metal design

- Sturdy and versatile metal series
- 4 sizes, 10 connection sizes, 2 pressure ranges
- Broad range of functions: individual devices or pre-assembled and tested combinations

→ 107



MS series

MS series service units

- Easy to mount and compact
- High flow rate: up to 22,000 l/min
- Broad range of functions: individual components, pre-assembled combinations, application-specific combinations or complete turnkey solutions

→ [ms series](#)



D series service units, metal design



- Sturdy and versatile metal series
- 3 sizes: mini, midi and maxi
- Connection sizes: G1/8, G1/4, G3/8, G1/2, G3/4, G1
- 2 pressure ranges: 7 and 12 bar
- Broad range of functions: individual devices or pre-assembled and tested combinations
- Types in accordance with ATEX directive for potentially explosive atmospheres
→ www.festo.com/en/ex

Type codes – Basic design

			D		
Type					
FRC	Service unit				
LFR	Filter regulator				
LR	Pressure regulator				
Pneumatic connection					
MINI					
1/8, 1/4	Thread G1/8, G1/4				
MIDI					
3/8, 1/2	Thread G3/8, G1/2				
MAXI					
3/4, 1	Thread G3/4, G1				
Series					
D	Series				
Pressure regulation range					
–	0.5 ... 12 bar				
Grade of filtration					
–	40 µm				
Pressure gauge					
–	With pressure gauge				
Size					
MINI	Grid dimension 40 mm				
MIDI	Grid dimension 55 mm				
MAXI	Grid dimension 66 mm				
Condensate drain					
–	Manual rotary				
A	Fully automatic				

Variants

Size: micro (grid dimension 25 mm)

Connection sizes: M5, M7, QS4, QS6

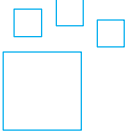
Pressure range: 0.5 ... 7 bar

Grade of filtration: 5 µm

Pressure gauge: without pressure gauge

D series service units, metal design

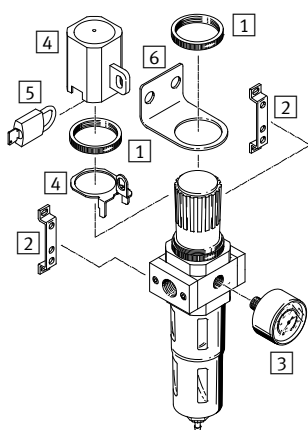
Ordering data – Variants

	Configurable product	This product and all its variants can be ordered using the configurator:	The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...	Enter the type or configuration part number in the search field.
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Ordering data – Basic design

Size	Connection	Service unit FRC		Filter regulator LFR		Pressure regulator LR	
		Type	Part No.	Type	Part No.	Type	Part No.
Manual rotary condensate drain							
Mini	G $\frac{1}{8}$	FRC-1/8-D-MINI	159604	LFR-1/8-D-MINI	159630	LR-1/8-D-MINI	159624
	G $\frac{1}{4}$	FRC-1/4-D-MINI	159605	LFR-1/4-D-MINI	159631	LR-1/4-D-MINI	159625
Midi	G $\frac{3}{8}$	FRC-3/8-D-MIDI	159588	LFR-3/8-D-MIDI	159582	LR-3/8-D-MIDI	159580
	G $\frac{1}{2}$	FRC-1/2-D-MIDI	158590	LFR-1/2-D-MIDI	159584	LR-1/2-D-MIDI	159581
Maxi	G $\frac{3}{4}$	FRC-3/4-D-MAXI	159606	LFR-3/4-D-MAXI	159632	LR-3/4-D-MAXI	159626
	G1	FRC-1-D-MAXI	159607	LFR-1-D-MAXI	159633	LR-1-D-MAXI	159627
Fully automatic condensate drain							
Mini	G $\frac{1}{8}$	FRC-1/8-D-MINI-A	159608	LFR-1/8-D-MINI-A	159634		
	G $\frac{1}{4}$	FRC-1/4-D-MINI-A	159609	LFR-1/4-D-MINI-A	159635		
Midi	G $\frac{3}{8}$	FRC-3/8-D-MIDI-A	159589	LFR-3/8-D-MIDI-A	159583		
	G $\frac{1}{2}$	FRC-1/2-D-MIDI-A	159591	LFR-1/2-D-MIDI-A	159585		
Maxi	G $\frac{3}{4}$	FRC-3/4-D-MAXI-A	159610	LFR-3/4-D-MAXI-A	159636		
	G1	FRC-1-D-MAXI-A	159611	LFR-1-D-MAXI-A	159637		

Accessories



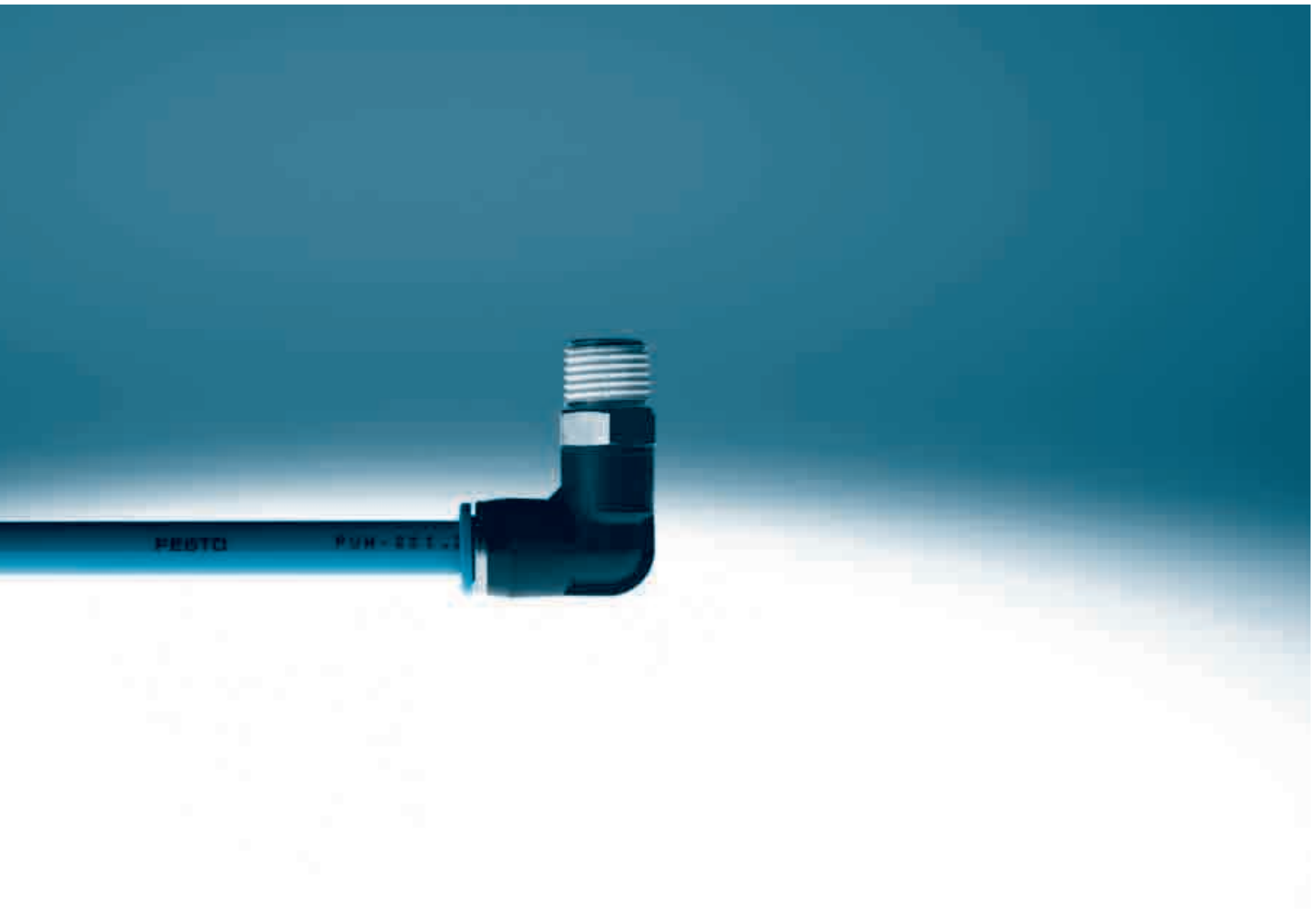
- 1 Knurled nut HMR (included in the scope of delivery)
- 2 Mounting bracket HFOE → 108
- 3 Pressure gauge MA → [ma](#)
- 4 Regulator lock LRVS → 108
- 5 Padlock LRVS-D → 108
- 6 Mounting bracket HR-D → 108

2 Mounting bracket HFOE		
Size	Type	Part No.
Mini	HFOE-D-MINI	159638
Midi/maxi	HFOE-D-MIDI/MAXI	159593

4 Regulator lock LRVS		
Size	Type	Part No.
Mini	LRVS-D-MINI	193781
Midi	LRVS-D-MIDI	193782
Maxi	LRVS-D-MAXI	193783

5 Padlock LRVS-D		
Size	Type	Part No.
Mini/midi/maxi	LRVS-D	193786

6 Mounting bracket HR-D		
Size	Type	Part No.
Mini	HR-D-MINI	164936
Midi	HR-D-MIDI	162804
Maxi	HR-D-MAXI	162805



Pneumatic connection technology

Overview

FESTO

Tubing

Standard O.D. tubing

Plastic tubing

PUN

- High resistance to stress cracks
- 112



Plastic tubing

PUN-H

- Resistant to hydrolysis
- pun-h



Plastic tubing

PEN

- Resistant to cleaning agents
- 112



Plastic tubing

PLN

- Resistant to cleaning agents
- pln



Fittings

Push-in fittings

Push-in fitting

QS, Quick Star, standard

- Extensive range
 - Temperature range up to 80 °C, pressure range up to 14 bar
- 114



Push-in fitting

QSM, Quick Star, mini

- Compact for maximum component density in confined spaces
 - Temperature range up to 80 °C, pressure range up to 14 bar
- 118



Push-in fitting

QS-B, Quick Star

- For core pneumatic applications
 - Temperature range up to 60 °C, pressure range up to 10 bar
- 121



Push-in fitting

QS-F, Quick Star

- Solid-metal push-in fitting with chrome-plated surface finish
 - Temperature range up to 150 °C, pressure range up to 16 bar
- qs-f



Threaded fittings

Threaded fitting NPFB

- Resistant to mechanical loads
- 125



Distributors

Multiple distributor QSLV, Quick Star

- Up to 6 outlets
 - Easy insertion of tubing
 - Easy release
- 129



Pneumatic connection technology

Overview

FESTO

Silencers

Silencer U/UC/UO

- For noise reduction and avoiding contamination at the exhaust ports of pneumatic components

→ 130



Plastic tubing PUN/PEN, standard O.D.



- Suitable for every application: food industry approval, flame retardant to UL 94 V0, anti-static, halogen-free, hydrolysis resistant, suitable for use with energy chains, free of paint-wetting impairment substances to FN 942 010
- Individual configuration for plastic tubing
- Types in accordance with ATEX directive for potentially explosive atmospheres
→ www.festo.com/en/ex

Type codes – Basic design

Material	
PUN	Polyurethane
PEN	Polyethylene

Approval	
H	Hydrolysis resistant, approved for use in the food industry.

Outside Ø x wall thickness [mm]	
3X0,5	3.0 mm x 0.5 mm
4X0,75	4.0 mm x 0.75 mm
6X1	6.0 mm x 1.0 mm
8X1	8.0 mm x 1.0 mm
8X1,25	8.0 mm x 1.25 mm
10X1,5	10 mm x 1.5 mm
12X1,75	12.0 mm x 1.75 mm
12X2	12.0 mm x 2.0 mm
14X2	14.0 mm x 2.0 mm
16X2,5	16.0 mm x 2.5 mm

Colour	
SW	Black
BL	Blue
SI	Silver
NT	Natural

Packaging unit [m]	
	50 m
100	100 m
200	200 m
300	300 m
400	400 m
500	500 m

Variants

Materials: polyamide, perfluoroalkoxy alkane

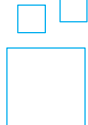
Approvals: food industry approval, anti-static, halogen-free, hydrolysis resistant, flame retardant to UL 94 V0, suitable for use with energy chains, free of paint-wetting impairment substances to FN 942 010

Tubing pair: duo tubing

Colours: green, red, white, yellow, brown, blue/black

Plastic tubing PUN/PEN, standard O.D.






Ordering data – Variants

 <p>Configurable product</p>	<p>This product and all its variants can be ordered using the configurator</p>	<p>The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...</p>	<p>Enter the type or configuration part number in the search field.</p>
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Ordering data – Basic design

O.D. [mm]	PUN: Polyurethane		PUN-H: Polyurethane, hydrolysis resistant		PEN: Polyethylene	
	Type	Part No.	Type	Part No.	Type	Part No.
3.0	PUN-3X0,5-SW	159661				
	PUN-3X0,5-SW-500	553936				
4.0	PUN-4X0,75-SW	159663	PUN-H-4x0,75-SI	558278	PEN-4X0,75-NT	543246
	PUN-4X0,75-SW-500	553937	PUN-H-4x0,75-SI-500	558271	PEN-4X0,75-SW	543240
			PUN-H-4x0,75-BL	197383		
			PUN-H-4x0,75-BL-500	558257		
6.0	PUN-6X1-SW	159665	PUN-H-6x1-SI	558279	PEN-6X1-NT	543247
	PUN-6X1-SW-500	553938	PUN-H-6x1-SI-500	558272	PEN-6X1-SW	543241
			PUN-H-6x1-BL	197384		
			PUN-H-6x1-BL-500	558258		
8.0	PUN-8X1,25-SW	159667	PUN-H-8x1,25-SI	558280	PEN-8X1,25-NT	543248
	PUN-8X1,25-SW-400	553939	PUN-H-8x1,25-SI-400	558273	PEN-8X1,25-SW	543242
			PUN-H-8x1,25-BL	197385		
			PUN-H-8x1,25-BL-400	558259		
10.0	PUN-10X1,5-SW	159669	PUN-H-10x1,5-SI	558281	PEN-10X1,5-NT	543249
	PUN-10X1,5-SW-300	553940	PUN-H-10x1,5-SI-300	558274	PEN-10X1,5-SW	543243
			PUN-H-10x1,5-BL	197386		
			PUN-H-10x1,5-BL-300	558260		
12.0					PEN-12X1,75-NT	543250
					PEN-12X1,75-SW	543244
	PUN-12X2-SW	159671	PUN-H-12x2-SI	558282		
	PUN-12X2-SW-200	553941	PUN-H-12x2-SI-200	558275		
			PUN-H-12x2-BL	197387		
			PUN-H-12x2-BL-200	558261		
14.0	PUN-14X2-SW	570391				
16.0	PUN-16X2,5-SW	159673			PEN-16X2,5-NT	543251
	PUN-16X2,5-SW-100	553942			PEN-16X2,5-SW	543245

Possible fittings

Fitting	PUN	PUN-H	PEN
Push-in fitting QS, Quick Star, standard series → 114 	■ Recommended fitting	■ Recommended fitting	■
Push-in fitting QS-B, Quick Star, core functionality → qs-b 	■	■	■ Recommended fitting
Push-in fitting QS-F, Quick Star, metal → qs-f 	■	■ Recommended fitting	■
Barbed fitting CN → cn 	■		■
Quick connector CK → ck 	■	■	■

Push-in fittings QS, Quick Star

Standard series



- Simple and reliable connection and release
- Wide range of variants: standard, mini size, metal, stainless steel, flame-retardant with R, G, NPT and metric thread
- Types in accordance with ATEX directive for potentially explosive atmospheres
→ www.festo.com/en/ex

Type codes – Basic design

Quick Star QS, standard series

QS	Straight, male thread with external hex
QS-...-I	Straight, male thread with internal hex
QS-...H	Straight, with push-in sleeve
QSF	Straight, female thread with external hex
QSL	L-shape, male thread with external hex
QSLF	L-shape, female thread with external hex
QSLV	L-shape, male thread with external hex
QST	T-shape, male thread with external hex
QSY	Y-shape
QSS	Push-in bulkhead connector
QSC-...H	Blanking plug

Pneumatic connection 1

G thread		R thread	
G1/8	G $\frac{1}{8}$	1/8	R $\frac{1}{8}$
G1/4	G $\frac{1}{4}$	1/4	R $\frac{1}{4}$
G3/8	G $\frac{3}{8}$	3/8	R $\frac{3}{8}$
G1/2	G $\frac{1}{2}$	1/2	R $\frac{1}{2}$
Push-in connector		Push-in sleeve	
4	4 mm	4	4 mm
6	6 mm	6	6 mm
8	8 mm	8	8 mm
10	10 mm	10	10 mm
12	12 mm	12	12 mm

Pneumatic connection 2

Push-in connector		Push-in sleeve	
4	4 mm	4	4 mm
6	6 mm	6	6 mm
8	8 mm	8	8 mm
10	10 mm	10	10 mm
12	12 mm	12	12 mm
16	16 mm	16	16 mm

Packaging unit

	10 pieces
20	20 pieces
50	50 pieces
100	100 pieces

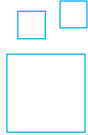
Push-in fittings QS, Quick Star

Standard series

Variants

Type	Design	Version	Connection														
			M thread		R thread				G thread				For tubing O.D.				
			M5	R1/8	R1/4	R3/8	R1/2	G1/8	G1/4	G3/8	G1/2	3	4	6	8	10	12
QS, Quick Star, standard series																	
QS	Straight	Push-in fitting	-	■	■	■	■	■	■	■	■	■	-	■	■	■	■
		Push-in connector	-	-	-	-	-	-	-	-	-	-	-	■	■	■	■
QSS		Push-in bulkhead connector	-	-	-	-	-	-	-	-	-	-	■	■	■	■	
QSL	L-shape	Push-in fitting	■	■	■	■	■	■	■	■	■	-	■	■	■	■	
		Push-in connector	-	-	-	-	-	-	-	-	-	-	■	■	■	■	
QST	T-shape	Push-in fitting	-	■	■	■	■	■	■	■	■	-	■	■	■	■	
		Push-in connector	-	-	-	-	-	-	-	-	-	-	■	■	■	■	
QSW	W-shape	Push-in fitting	-	■	■	■	■	-	-	-	-	-	■	■	■	■	
		Push-in connector	-	-	-	-	-	-	-	-	-	-	■	■	■	■	
QSX	X-shape	Push-in connector	-	-	-	-	-	-	-	-	-	-	-	■	■		
QSY	Y-shape	Push-in fitting	■	■	■	■	■	■	■	■	■	■	■	■	■	-	
QS-F, Quick Star, metal																	
CRQS, Quick Star, stainless steel																	
QS-V0, Quick Star, flame-retardant																	

Ordering data – Variants



Configurable product

This product and all its variants can be ordered using the configurator

The configurator can be found on the DVD under Products or at
www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Ordering data – Basic design

Push-in fitting QS, straight				
Connection 1	Connection 2	Type	Part No.	
R thread (male thread with external hex)/push-in connector				
R1/8	8 mm	QS-1/8-8	153004	
		QS-1/8-8-50	130676	
	10 mm	QS-1/8-10	190643	
R1/4	6 mm	QS-1/4-6	153003	
		QS-1/4-8	153005	
	8 mm	QS-1/4-8-50	130678	
		10 mm	QS-1/4-10	153007
		QS-1/4-10-50	130679	
R3/8	12 mm	QS-1/4-12	164980	
		8 mm	QS-3/8-8	153006
	10 mm	QS-3/8-10	153008	
		12 mm	QS-3/8-12	153009
R1/2	16 mm	QS-3/8-16	164957	
		10 mm	QS-1/2-10	190646
	12 mm	QS-1/2-12	153010	
		16 mm	QS-1/2-16	153011
		QS-1/2-16-20	130685	
G thread (male thread with external hex)/push-in connector				
G1/8	8 mm	QS-G1/8-8	186098	
		G1/4	6 mm	QS-G1/4-6
	8 mm	QS-G1/4-8	186099	
G1/4	10 mm	QS-G1/4-10	186101	

Push-in connector QS, straight			
Connection 1	Connection 2	Type	Part No.
Push-in connector/push-in connector			
8 mm	8 mm	QS-8	153033
		QS-8-50	130688
	10 mm	10 mm	QS-10
12 mm	12 mm	QS-12	153035
16 mm	16 mm	QS-16	153036
Push-in connector/push-in connector, reducing			
8 mm	6 mm	QS-8-6	153038
10 mm	6 mm	QS-10-6	130607
	8 mm	QS-10-8	153039
12 mm	8 mm	QS-12-8	130608
	10 mm	QS-12-10	153040

Push-in connector QS-...H, straight			
Connection 1	Connection 2	Type	Part No.
Push-in sleeve/push-in connector, reducing			
6 mm	4 mm	QS-6H-4	153041
8 mm	6 mm	QS-8H-6	153042
10 mm	6 mm	QS-10H-6	130623
10 mm	8 mm	QS-10H-8	153043
12 mm	8 mm	QS-12H-8	130624
12 mm	10 mm	QS-12H-10	153044

Push-in fittings QS, Quick Star

Standard series

Ordering data – Basic design

Push-in fitting QS-...-I, straight			
Connection 1	Connection 2	Type	Part No.
R thread (male thread with internal hex)/push-in connector			
R $\frac{1}{8}$	8 mm	QS-1/8-8-I	153015
R $\frac{1}{4}$	6 mm	QS-1/4-6-I	153014
	8 mm	QS-1/4-8-I	153016
	10 mm	QS-1/4-10-I	153018
G thread (male thread with internal hex)/push-in connector			
G $\frac{1}{8}$	8 mm	QS-G1/8-8-I	186109
G $\frac{1}{4}$	6 mm	QS-G1/4-6-I	186108
	8 mm	QS-G1/4-8-I	186110
	10 mm	QS-G1/4-10-I	186112

Push-in fitting QSF, straight			
Connection 1	Connection 2	Type	Part No.
G thread (female thread with external hex)/push-in connector			
G $\frac{1}{8}$	4 mm	QSF-1/8-4-B	153022
	6 mm	QSF-1/8-6-B	153023
	8 mm	QSF-1/8-8-B	153025
G $\frac{1}{4}$	6 mm	QSF-1/4-6-B	153024
	8 mm	QSF-1/4-8-B	153026
	10 mm	QSF-1/4-10-B	153028

Push-in fitting QSL, L-shape, rotatable 360°			
Connection 1	Connection 2	Type	Part No.
R thread (male thread with external hex)/push-in connector			
R $\frac{1}{8}$	8 mm	QSL-1/8-8	153048
		QSL-1/8-8-50	130730
	10 mm	QSL-1/8-10	190658
R $\frac{1}{4}$	6 mm	QSL-1/4-6	153047
		QSL-1/4-6-100	130731
	8 mm	QSL-1/4-8	153049
		QSL-1/4-8-50	130732
	10 mm	QSL-1/4-10	153051
		QSL-1/4-10-50	130733
12 mm	QSL-1/4-12	164981	
R $\frac{3}{8}$	6 mm	QSL-3/8-6	190660
	8 mm	QSL-3/8-8	153050
	10 mm	QSL-3/8-10	153052
	12 mm	QSL-3/8-12	153053
	16 mm	QSL-3/8-16	164958
R $\frac{1}{2}$	10 mm	QSL-1/2-10	190661
	12 mm	QSL-1/2-12	153054
	16 mm	QSL-1/2-16	153055
		QSL-1/2-16-20	130739
G thread (male thread with external hex)/push-in connector			
G $\frac{1}{8}$	8 mm	QSL-G1/8-8	186119
G $\frac{1}{4}$	6 mm	QSL-G1/4-6	186118
	8 mm	QSL-G1/4-8	186120
	10 mm	QSL-G1/4-10	186122
	12 mm	QSL-G1/4-12	186351
G $\frac{3}{8}$	8 mm	QSL-G3/8-8	186121
	10 mm	QSL-G3/8-10	186123
	12 mm	QSL-G3/8-12	186124
	16 mm	QSL-G3/8-16	186348
G $\frac{1}{2}$	12 mm	QSL-G1/2-12	186125
	16 mm	QSL-G1/2-16	186126

Push-in connector QSL, L-shape			
Connection 1	Connection 2	Type	Part No.
Push-in connector/push-in connector			
8 mm	8 mm	QSL-8	153072
10 mm	10 mm	QSL-10	153073
12 mm	12 mm	QSL-12	153074
16 mm	16 mm	QSL-16	153075

Push-in fitting QSLF, L-shape, rotatable 360°			
Connection 1	Connection 2	Type	Part No.
G thread (female thread with external hex)/push-in connector			
G $\frac{1}{8}$	4 mm	QSLF-1/8-4-B	153273
	6 mm	QSLF-1/8-6-B	153274
	8 mm	QSLF-1/8-8-B	153276
G $\frac{1}{4}$	6 mm	QSLF-1/4-6-B	153275
	8 mm	QSLF-1/4-8-B	153277
	10 mm	QSLF-1/4-10-B	153279

Push-in fitting QSLV, L-shape, rotatable 360°			
Connection 1	Connection 2	Type	Part No.
R thread (male thread with external hex)/push-in connector			
R $\frac{1}{8}$	4 mm	QSLV-1/8-4	153086
	6 mm	QSLV-1/8-6	153087
	8 mm	QSLV-1/8-8	153089
R $\frac{1}{4}$	6 mm	QSLV-1/4-6	153088
	8 mm	QSLV-1/4-8	153090
	10 mm	QSLV-1/4-10	153092

Push-in fitting QST, T-shape, rotatable 360°			
Connection 1	Connection 2	Type	Part No.
R thread (male thread with external hex)/push-in connector			
R $\frac{1}{8}$	8 mm	QST-1/8-8	153109
R $\frac{1}{4}$	6 mm	QST-1/4-6	153108
	8 mm	QST-1/4-8	153110
	10 mm	QST-1/4-10	153112

Push-in connector QST, T-shape			
Connection 1	Connection 2	Type	Part No.
Push-in connector/push-in connector			
8 mm	8 mm	QST-8	153130
		QST-8-50	130804
10 mm	10 mm	QST-10	153131
		QST-10-50	130805
12 mm	12 mm	QST-12	153132
16 mm	16 mm	QST-16	153133
Push-in connector/push-in connector, reducing			
6 mm	4 mm	QST-6-4	153134
8 mm	6 mm	QST-8-6	153135
10 mm	6 mm	QST-10-6	130614
	8 mm	QST-10-8	153136
12 mm	8 mm	QST-12-8	130615
	10 mm	QST-12-10	153137
16 mm	12 mm	QST-16-12	130616

Push-in fittings QS, Quick Star

Standard series

Ordering data – Basic design

Push-in connector QSY, Y-shape			
Connection 1	Connection 2	Type	Part No.
Push-in connector/push-in connector			
8 mm	8 mm	QSY-8	153150
10 mm	10 mm	QSY-10	153151
12 mm	12 mm	QSY-12	153152
16 mm	16 mm	QSY-16	130609
Push-in connector/push-in connector, reducing			
6 mm	4 mm	QSY-6-4	153153
8 mm	4 mm	QSY-8-6	153154
10 mm	6 mm	QSY-10-6	130611
	8 mm	QSY-10-8	153155
12 mm	8 mm	QSY-12-8	130612
	10 mm	QSY-12-10	153156

Push-in bulkhead connector QSS			
Connection 1	Connection 2	Type	Part No.
8 mm	8 mm	QSS-8	153159
10 mm	10 mm	QSS-10	153160
12 mm	12 mm	QSS-12	153161

Blanking plug QSC-...H			
Connection 1	Connection 2	Type	Part No.
Push-in sleeve			
4 mm	None	QSC-4H	153267
6 mm	None	QSC-6H	153268
8 mm	None	QSC-8H	153269
10 mm	None	QSC-10H	153270
12 mm	None	QSC-12H	153271
16 mm	None	QSC-16H	153272

Push-in fittings QSM, Quick Star

Mini series



QSM-G1/8-6-I



QSM-6



QSMLM5-6



QSMT-M5-6



QSMY-3



QSMS

- Simple and reliable connection and release
- Wide range of variants: standard, mini size, metal, stainless steel, flame-retardant with R, G, NPT and metric thread
- Types in accordance with ATEX directive for potentially explosive atmospheres
→ www.festo.com/en/ex

Type codes – Basic design

Quick Star QS, mini series

QSM	Straight, male thread with external hex
QSM-...-I	Straight, male thread with internal hex
QSM-...-I-R	Straight, male thread with internal hex, round release ring
QSML	L-shape, male thread with external hex
QSMT	T-shape, male thread with external hex
QSMY	Y-shape
QSMS	Push-in bulkhead connector

Pneumatic connection 1

M thread	
M3	M3
M5	M5
M7	M7
G thread	
G1/8	G1/8
R thread	
1/8	R1/8
Push-in connector	
4	4 mm
6	6 mm
8	8 mm
10	10 mm
12	12 mm

Pneumatic connection 2

Push-in connector	
3	3 mm
4	4 mm
6	6 mm

Packaging unit

	10 pieces
100	100 pieces

Push-in fittings QSM, Quick Star

Mini series

Variants

Type	Design	Version	Connection								
			M thread			R thread	G thread	For tubing O.D.			
			M3	M5	M7	R $\frac{1}{8}$	G $\frac{1}{8}$	3	4	6	
QSM, Quick Star, mini											
QSM	Straight	Push-in fitting	■	■	■	■	■	■	■	■	■
		Push-in connector	–	–	–	–	–	■	■	■	■
QSMS	L-shape	Push-in bulkhead connector	–	–	–	–	–	■	■	■	■
QSMML		Push-in fitting	■	■	–	■	■	■	■	■	■
QSMML	L-shape	Push-in connector	–	–	–	–	–	■	■	■	■
		QSMML	Push-in fitting	■	■	–	■	■	■	■	■
QSMML	T-shape	Push-in connector	–	–	–	–	–	■	■	■	■
		QSMML	Push-in fitting	■	■	–	■	■	■	■	■
QSMML	X-shape	Push-in connector	–	–	–	–	–	■	■	■	■
QSMML	Y-shape	Push-in connector	–	–	–	–	–	■	■	■	■
QSM-B, Quick Star, mini											
QSM-B	Straight	Push-in fitting	■	■	■	■	–	■	■	■	■
QSMML-B	L-shape	Push-in fitting	■	■	■	■	–	■	■	■	■
QSMML-B	T-shape	Push-in fitting	■	■	–	■	–	■	■	■	■

Ordering data – Variants

Configurable product

This product and all its variants can be ordered using the configurator

The configurator can be found on the DVD under Products or at
www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Ordering data – Basic design

Push-in fitting QSM, straight			
Connection 1	Connection 2	Type	Part No.
M thread (male thread with external hex)/push-in connector			
M3	3 mm	QSM-M3-3	153301
	4 mm	QSM-M3-4	153303
M5	4 mm	QSM-M5-4	153304
	6 mm	QSM-M5-6	153306
R thread (male thread with external hex)/push-in connector			
R $\frac{1}{8}$	4 mm	QSM-1/8-4	153305
	6 mm	QSM-1/8-6	153307
	6 mm	QSM-1/8-6-100	130756

Push-in connector QSM, straight			
Connection 1	Connection 2	Type	Part No.
Push-in connector/push-in connector			
3 mm	3 mm	QSM-3	153323
4 mm	4 mm	QSM-4	153324
6 mm	6 mm	QSM-6	153325
6 mm	6 mm	QSM-6-100	130759
Push-in connector/push-in connector, reducing			
4 mm	3 mm	QSM-4-3	153326
6 mm	4 mm	QSM-6-4	153327

Push-in connector QSM-...-I, straight			
Connection 1	Connection 2	Type	Part No.
R thread (male thread with internal hex)/push-in connector			
R $\frac{1}{8}$	4 mm	QSM-1/8-4-I	153316
	6 mm	QSM-1/8-6-I	153318
G thread (male thread with internal hex)/push-in connector			
G $\frac{1}{8}$	4 mm	QSM-G1/8-4-I	186266
	6 mm	QSM-G1/8-6-I	186267

Push-in fitting QSM-...-I-R, straight, round release ring			
Connection 1	Connection 2	Type	Part No.
M thread (male thread with external hex)/push-in connector			
M3	3 mm	QSM-M3-3-I-R	133001
	4 mm	QSM-M3-4-I-R	133002
M5	4 mm	QSM-M5-4-I-R	133004
	6 mm	QSM-M5-6-I-R	133005
M7	6 mm	QSM-M7-6-I-R	133007

Push-in fittings QSM, Quick Star

Mini series

Ordering data – Basic design

Push-in fitting QSML, L-shape, rotatable 360°			
Connection 1	Connection 2	Type	Part No.
M thread (male thread with external hex)/push-in connector			
M3	3 mm	QSML-M3-3	153330
	4 mm	QSML-M3-4	153332
M5	3 mm	QSML-M5-3	153331
	4 mm	QSML-M5-4	153333
	4 mm	QSML-M5-4-100	130771
	6 mm	QSML-M5-6	153335
	6 mm	QSML-M5-6-100	130772
M7	6 mm	QSML-M7-6	186353
R thread (male thread with external hex)/push-in connector			
R $\frac{1}{8}$	4 mm	QSML-1/8-4	153334
	6 mm	QSML-1/8-6	153336
	6 mm	QSML-1/8-6-100	130765
G thread (male thread with external hex)/push-in connector			
G $\frac{1}{8}$	4 mm	QSML-G1/8-4	186268
	6 mm	QSML-G1/8-6	186269

Push-in connector QSML, L-shape			
Connection 1	Connection 2	Type	Part No.
Push-in connector/push-in connector			
3 mm	3 mm	QSML-3	153343
4 mm	4 mm	QSML-4	153344
6 mm	6 mm	QSML-6	153345

Push-in fitting QSMT, T-shape, rotatable 360°			
Connection 1	Connection 2	Type	Part No.
M thread (male thread with external hex)/push-in connector			
M3	3 mm	QSMT-M3-3	153351
	4 mm	QSMT-M3-4	153353
M5	4 mm	QSMT-M5-4	153354
	6 mm	QSMT-M5-6	153356
R thread (male thread with external hex)/push-in connector			
R $\frac{1}{8}$	4 mm	QSMT-1/8-4	153355
	6 mm	QSMT-1/8-6	153357

Push-in connector QSMT, T-shape			
Connection 1	Connection 2	Type	Part No.
Push-in connector/push-in connector			
3 mm	3 mm	QSMT-3	153365
4 mm	4 mm	QSMT-4	153366
6 mm	6 mm	QSMT-6	153367
6 mm	6 mm	QSMT-6-100	130783

Push-in connector QSMY, Y-shape			
Connection 1	Connection 2	Type	Part No.
Push-in connector/push-in connector			
3 mm	3 mm	QSMY-3	153370
4 mm	4 mm	QSMY-4	153371
6 mm	6 mm	QSMY-6	153372

Push-in bulkhead connector QSMS			
Connection 1	Connection 2	Type	Part No.
3 mm	3 mm	QSMS-3	153375
4 mm	4 mm	QSMS-4	153376
6 mm	6 mm	QSMS-6	153377

Push-in fittings QS-B, Quick Star

Core functionality



QS-B-1/8-4

QS-B-1/8-6-l

QS-B-4-l

QSL-B-4

QSL-B-1/8-4

QST-B-1/8-4

QSTL-B-1/8-4

QSY-B-6-4

- Simple and reliable connection and release
- Wide range of variants: standard, mini size, metal, stainless steel, flame-retardant with R, G, NPT and metric thread
- Types in accordance with ATEX directive for potentially explosive atmospheres
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Type codes – Basic design

Quick Star QS-B, core functionality

QS-B	Straight, male thread with external hex
QS-B-...-l	Straight, male thread with internal hex
QSL-B	L-shape, male thread with external hex
QSL-B	L-shape, long design, male thread with external hex
QST-B	T-shape, male thread with external hex
QSTL-B	T-shape, male thread with external hex, additional push-in connector, in-line
QSY-B	Y-shape

Pneumatic connection 1

R thread	
1/8	R1/8
1/4	R1/4
3/8	R3/8
1/2	R1/2
Push-in connector	
4	4 mm
6	6 mm
8	8 mm
10	10 mm
12	12 mm
16	16 mm

Pneumatic connection 2

Push-in connector	
4	4 mm
6	6 mm
8	8 mm
10	10 mm
12	12 mm

Packaging unit

10	10 pieces
20	20 pieces

Push-in fitting QSL-B with polyurethane tubing PUN-E



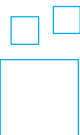
Push-in fittings QS-B, Quick Star

Core functionality

Variants

Type	Design	Version	Connection													
			M thread			R thread				For tubing O.D.						
			M3	M5	M7	R $\frac{1}{8}$	R $\frac{1}{4}$	R $\frac{3}{8}$	R $\frac{1}{2}$	3	4	6	8	10	12	16
QS-B, Quick Star																
QS-B	Straight	Push-in fitting	-	-	-	■	■	■	■	-	■	■	■	■	■	■
		Push-in connector	-	-	-	-	-	-	-	-	■	■	■	■	■	■
QSL-B	L-shape	Push-in fitting	-	-	-	■	■	■	■	-	■	■	■	■	■	■
		Push-in connector	-	-	-	-	-	-	-	-	■	■	■	■	■	■
QST-B	T-shape	Push-in fitting	-	-	-	■	■	■	■	-	■	■	■	■	■	■
		Push-in connector	-	-	-	-	-	-	-	-	■	■	■	■	■	■
QSY-B	Y-shape	Push-in fitting	-	■	-	■	■	■	■	-	■	■	■	■	■	-
		Push-in connector	-	-	-	-	-	-	-	-	■	■	■	■	■	■
QSM-B, Quick Star, mini																
QSM-B	Straight	Push-in fitting	■	■	■	■	-	-	-	■	■	■	-	-	-	-
QSM-L-B	L-shape	Push-in fitting	■	■	■	■	-	-	-	■	■	■	-	-	-	-
QSM-T-B	T-shape	Push-in fitting	■	■	-	■	-	-	-	■	■	■	-	-	-	-

Ordering data – Variants



Configurable product

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Enter the type or configuration part number in the search field.

Ordering data – Basic design

Push-in fitting QS-B, straight			
Connection 1	Connection 2	Type	Part No.
R thread (male thread with external hex)/push-in connector			
R $\frac{1}{8}$	4 mm	QS-B-1/8-4-20	130914
	6 mm	QS-B-1/8-6-20	130915
	8 mm	QS-B-1/8-8-20	130916
	10 mm	QS-B-1/8-10-20	132120
R $\frac{1}{4}$	4 mm	QS-B-1/4-4-20	130917
	6 mm	QS-B-1/4-6-20	130918
	8 mm	QS-B-1/4-8-20	130919
	10 mm	QS-B-1/4-10-20	132121
	12 mm	QS-B-1/4-12-20	132122
R $\frac{3}{8}$	6 mm	QS-B-3/8-6-10	130920
	8 mm	QS-B-3/8-8-10	130921
	10 mm	QS-B-3/8-10-10	130922
	12 mm	QS-B-3/8-12-10	132123
	16 mm	QS-B-3/8-16-10	132124
R $\frac{1}{2}$	10 mm	QS-B-1/2-10-10	130924
	12 mm	QS-B-1/2-12-10	130925
	16 mm	QS-B-1/2-16-10	132125

Push-in fitting QS-B-...-I, straight			
Connection 1	Connection 2	Type	Part No.
R thread (male thread with internal hex)/push-in connector			
R $\frac{1}{8}$	4 mm	QS-B-1/8-4-I-20	130990
	6 mm	QS-B-1/8-6-I-20	130991
	8 mm	QS-B-1/8-8-I-20	130992
	10 mm	QS-B-1/8-10-I-20	132151
R $\frac{1}{4}$	6 mm	QS-B-1/4-6-I-20	130994
	8 mm	QS-B-1/4-8-I-20	130995
	10 mm	QS-B-1/4-10-I-20	132152
	12 mm	QS-B-1/4-12-I-20	132153
R $\frac{3}{8}$	8 mm	QS-B-3/8-8-I-10	130997
	10 mm	QS-B-3/8-10-I-10	130998
	12 mm	QS-B-3/8-12-I-10	132154
R $\frac{1}{2}$	10 mm	QS-B-1/2-10-I-10	132000
	12 mm	QS-B-1/2-12-I-10	132001

Push-in fittings QS-B, Quick Star

Core functionality

Ordering data – Basic design

Push-in connector QS-B, straight			
Connection 1	Connection 2	Type	Part No.
Push-in connector/push-in connector			
4 mm	4 mm	QS-B-4-20	130964
6 mm	6 mm	QS-B-6-20	130965
8 mm	8 mm	QS-B-8-20	130966
10 mm	10 mm	QS-B-10-10	130967
12 mm	12 mm	QS-B-12-10	130968
16 mm	16 mm	QS-B-16-10	132144
Push-in connector/push-in connector, reducing			
6 mm	4 mm	QS-B-6-4-20	130969
8 mm	4 mm	QS-B-8-4-20	132145
	6 mm	QS-B-8-6-20	130970
10 mm	6 mm	QS-B-10-6-20	132146
	8 mm	QS-B-10-8-10	130971
12 mm	8 mm	QS-B-12-8-10	132147
	10 mm	QS-B-12-10-10	130972

Push-in fitting QSL-B, L-shape, rotatable 360°			
Connection 1	Connection 2	Type	Part No.
R thread (male thread with external hex)/push-in connector			
R $\frac{1}{8}$	4 mm	QSL-B-1/8-4-20	130926
	6 mm	QSL-B-1/8-6-20	130927
	8 mm	QSL-B-1/8-8-20	130928
	10 mm	QSL-B-1/8-10-20	132126
R $\frac{1}{4}$	4 mm	QSL-B-1/4-4-20	130929
	6 mm	QSL-B-1/4-6-20	130930
	8 mm	QSL-B-1/4-8-20	130931
	10 mm	QSL-B-1/4-10-20	132127
	12 mm	QSL-B-1/4-12-20	132128
R $\frac{3}{8}$	6 mm	QSL-B-3/8-6-10	130932
	8 mm	QSL-B-3/8-8-10	130933
	10 mm	QSL-B-3/8-10-10	130934
	12 mm	QSL-B-3/8-12-10	132129
R $\frac{1}{2}$	16 mm	QSL-B-3/8-16-10	132130
	10 mm	QSL-B-1/2-10-10	130936
	12 mm	QSL-B-1/2-12-10	130937
	16 mm	QSL-B-1/2-16-10	132131

Push-in connector QSL-B, L-shape			
Connection 1	Connection 2	Type	Part No.
Push-in connector/push-in connector			
4 mm	4 mm	QSL-B-4-20	130950
6 mm	6 mm	QSL-B-6-20	130951
8 mm	8 mm	QSL-B-8-20	130952
10 mm	10 mm	QSL-B-10-10	130953
12 mm	12 mm	QSL-B-12-10	130954
16 mm	16 mm	QSL-B-16-10	132138

Push-in fitting QSSL-B, L-shape, long design, rotatable 360°			
Connection 1	Connection 2	Type	Part No.
R thread (male thread with external hex)/push-in connector			
R $\frac{1}{8}$	4 mm	QSSL-B-1/8-4-20	132002
	6 mm	QSSL-B-1/8-6-20	132003
	8 mm	QSSL-B-1/8-8-20	132004
R $\frac{1}{4}$	4 mm	QSSL-B-1/4-4-20	132155
	6 mm	QSSL-B-1/4-6-20	132006
	8 mm	QSSL-B-1/4-8-20	132007
	10 mm	QSSL-B-1/4-10-20	132156
R $\frac{3}{8}$	6 mm	QSSL-B-3/8-6-10	132008
	8 mm	QSSL-B-3/8-8-10	132009
	10 mm	QSSL-B-3/8-10-10	132010
	12 mm	QSSL-B-3/8-12-10	132157
R $\frac{1}{2}$	10 mm	QSSL-B-1/2-10-10	132012
	12 mm	QSSL-B-1/2-12-10	132013

Push-in fitting QST-B, T-shape, rotatable 360°			
Connection 1	Connection 2	Type	Part No.
R thread (male thread with external hex)/push-in connector			
R $\frac{1}{8}$	4 mm	QST-B-1/8-4-20	130938
	6 mm	QST-B-1/8-6-20	130939
	8 mm	QST-B-1/8-8-20	130940
	10 mm	QST-B-1/8-10-20	132132
R $\frac{1}{4}$	4 mm	QST-B-1/4-4-20	130941
	6 mm	QST-B-1/4-6-20	130942
	8 mm	QST-B-1/4-8-20	130943
	10 mm	QST-B-1/4-10-20	132133
	12 mm	QST-B-1/4-12-20	132134
R $\frac{3}{8}$	6 mm	QST-B-3/8-6-10	130944
	8 mm	QST-B-3/8-8-10	130945
	10 mm	QST-B-3/8-10-10	130946
	12 mm	QST-B-3/8-12-10	132135
	16 mm	QST-B-3/8-16-10	132136
R $\frac{1}{2}$	10 mm	QST-B-1/2-10-10	130948
	12 mm	QST-B-1/2-12-10	130949
	16 mm	QST-B-1/2-16-10	132137

Push-in fitting QSTL-B, T-shape, rotatable 360°, additional push-in connector, in-line			
Connection 1	Connection 2	Type	Part No.
R thread (male thread with external hex)/push-in connector			
R $\frac{1}{8}$	4 mm	QSTL-B-1/8-4-20	130978
	6 mm	QSTL-B-1/8-6-20	130979
	8 mm	QSTL-B-1/8-8-20	130980
R $\frac{1}{4}$	4 mm	QSTL-B-1/4-4-20	130981
	6 mm	QSTL-B-1/4-6-20	130982
	8 mm	QSTL-B-1/4-8-20	130983
R $\frac{3}{8}$	6 mm	QSTL-B-3/8-6-10	130984
	8 mm	QSTL-B-3/8-8-10	130985
	10 mm	QSTL-B-3/8-10-10	130986
	12 mm	QSTL-B-3/8-12-10	132149
R $\frac{1}{2}$	10 mm	QSTL-B-1/2-10-10	130988
	12 mm	QSTL-B-1/2-12-10	130989
	16 mm	QSTL-B-1/2-16-10	132150

Push-in fittings QS-B, Quick Star

Core functionality

Ordering data – Basic design

Push-in fitting QSY-B, Y-shape, rotatable 360°			
Connection 1	Connection 2	Type	Part No.
R thread (male thread with external hex)/push-in connector			
R $\frac{1}{8}$	4 mm	QSY-B-1/8-4-20	132014
	6 mm	QSY-B-1/8-6-20	132015
	8 mm	QSY-B-1/8-8-20	132016
R $\frac{1}{4}$	4 mm	QSY-B-1/4-4-20	132017
	6 mm	QSY-B-1/4-6-20	132018
	8 mm	QSY-B-1/4-8-20	132019
	10 mm	QSY-B-1/4-10-20	132160
R $\frac{3}{8}$	6 mm	QSY-B-3/8-6-10	132020
	8 mm	QSY-B-3/8-8-10	132021
	10 mm	QSY-B-3/8-10-10	132022
	12 mm	QSY-B-3/8-12-10	132161
R $\frac{1}{2}$	10 mm	QSY-B-1/2-10-10	132024
	12 mm	QSY-B-1/2-12-10	132025

Push-in connector QSY-B, Y-shape			
Connection 1	Connection 2	Type	Part No.
Push-in connector/push-in connector			
4 mm	4 mm	QSY-B-4-20	130955
6 mm	6 mm	QSY-B-6-20	130956
8 mm	8 mm	QSY-B-8-20	130957
10 mm	10 mm	QSY-B-10-10	130958
12 mm	12 mm	QSY-B-12-10	130959
16 mm	16 mm	QSY-B-16-10	132139
Push-in connector/push-in connector, 2 reducing outlets			
6 mm	4 mm	QSY-B-6-4-20	130960
8 mm	4 mm	QSY-B-8-4-20	132140
	6 mm	QSY-B-8-6-20	130961
10 mm	6 mm	QSY-B-10-6-10	132141
	8 mm	QSY-B-10-8-10	130962
12 mm	8 mm	QSY-B-12-8-10	132142
	10 mm	QSY-B-12-10-10	130963
16 mm	12 mm	QSY-B-16-12-10	132143

Threaded fittings NPFB



- Nickel-plated brass
- Resistant to mechanical loads
- For service units, control cabinet construction or the easy installation of pneumatic controllers

Type codes – Basic design

Design	
NPFB-S	Sleeve, straight
NPFB-R	Reducing sleeve, straight
NPFB-E...	Extension, straight, length 1 to length 4
NPFB-D	Double nipple, male thread/male thread
NPFB-L	Fitting, L-shape
NPFB-T	Fitting, T-shape
NPFB-Y	Fitting, Y-shape
NPFB-X	Fitting, X-shape

Pneumatic connection 1					
M thread		G thread		R thread	
M5	M5	G18	G $\frac{1}{8}$	R18	R $\frac{1}{8}$
		G14	G $\frac{1}{4}$	R14	R $\frac{1}{4}$
		G38	G $\frac{3}{8}$	R38	R $\frac{3}{8}$
		G12	G $\frac{1}{2}$	R12	R $\frac{1}{2}$
		G34	G $\frac{3}{4}$	R34	R $\frac{3}{4}$
		G1	G1	R1	R1

Pneumatic connection 2					
M thread		G thread		R thread	
M5	M5	G18	G $\frac{1}{8}$	R18	R $\frac{1}{8}$
		G14	G $\frac{1}{4}$	R14	R $\frac{1}{4}$
		G38	G $\frac{3}{8}$	R38	R $\frac{3}{8}$
		G12	G $\frac{1}{2}$	R12	R $\frac{1}{2}$
		G34	G $\frac{3}{4}$	R34	R $\frac{3}{4}$
		G1	G1	R1	R1

Thread type	
F	Female thread
M	Male thread

Packaging unit	
	10 pieces

Threaded fittings NPFB

Variants

Type	Design	Version	Connection 1			Connection 2		
			M thread	G thread	R thread	M thread	G thread	R thread
Threaded fittings NPFB ¹⁾								
NPFB-S	Straight	Sleeve	■	■	-	-	-	-
NPFB-R		Reducing sleeve	-	■	-	-	■	-
NPFB-E...		Extension	-	■	-	-	■	-
NPFB-D		Double nipple	■	■	■	■	■	■
NPFB-R		Reducing nipple FM	■	■	-	-	■	-
		Reducing nipple MF	-	■	-	■	■	-
NPFB-L	L-shape	Elbow fitting F	■	■	-	-	-	-
		Elbow fitting MF	■	■	-	■	-	■
		Elbow fitting M	■	-	■	-	-	-
NPFB-T	T-shape	T-fitting F	■	■	-	-	-	-
		T-fitting FMM	■	■	-	■	-	■
		T-fitting FMM	-	■	-	-	-	■
		T-fitting M	-	-	■	-	-	-
		T-fitting MMF	-	-	■	-	-	■
		T-fitting MFF	■	-	■	■	■	-
NPFB-Y	Y-shape	Y-fitting F	-	■	-	-	-	-
		Y-fitting MFF	-	-	■	-	■	-
NPFB-X	X-shape	X-fitting F	-	■	-	-	-	-
		X-fitting MFFF	-	■	-	-	-	■

1) Sealing the cylindrical thread with thread sealing tape GWB-0.1 is recommended.

Ordering data – Variants

Configurable product

This product and all its variants can be ordered using the configurator.

The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Ordering data – Basic design

Sleeve NPFB-S, inline			
Connection 1	Connection 2	Type	Part No.
Female thread/female thread			
M5	M5	NPFB-S-2M5-F	547809
G $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-S-2G18-F	547810
G $\frac{1}{4}$	G $\frac{1}{4}$	NPFB-S-2G14-F	547811
G $\frac{3}{8}$	G $\frac{3}{8}$	NPFB-S-2G38-F	547812
G $\frac{1}{2}$	G $\frac{1}{2}$	NPFB-S-2G12-F	547813
G $\frac{3}{4}$	G $\frac{3}{4}$	NPFB-S-2G34-F	547814

Reducing sleeve NPFB-R, straight			
Connection 1	Connection 2	Type	Part No.
Female thread/female thread			
G $\frac{3}{8}$	G $\frac{1}{8}$	NPFB-R-G38-G18-F	547815
G $\frac{3}{4}$	G $\frac{1}{2}$	NPFB-R-G34-G12-F	547816
Female thread/male thread			
G $\frac{1}{8}$	M5	NPFB-R-G18-M5-FM	547817
G $\frac{1}{4}$	G $\frac{1}{8}$	NPFB-R-G14-G18-FM	547818
G $\frac{3}{8}$	G $\frac{1}{8}$	NPFB-R-G38-G18-FM	547819
G $\frac{3}{8}$	G $\frac{1}{4}$	NPFB-R-G38-G14-FM	547820
G $\frac{1}{2}$	G $\frac{3}{8}$	NPFB-R-G12-G38-FM	547821
Male thread/female thread			
G $\frac{1}{8}$	M5	NPFB-R-G18-M5-MF	547831
G $\frac{1}{4}$	G $\frac{1}{8}$	NPFB-R-G14-G18-MF	547832
G $\frac{3}{8}$	G $\frac{1}{8}$	NPFB-R-G38-G18-MF	547833
G $\frac{3}{8}$	G $\frac{1}{4}$	NPFB-R-G38-G14-MF	547834
G $\frac{1}{2}$	G $\frac{1}{4}$	NPFB-R-G12-G14-MF	547835
G $\frac{1}{2}$	G $\frac{3}{8}$	NPFB-R-G12-G38-MF	547836
G $\frac{3}{4}$	G $\frac{1}{2}$	NPFB-R-G34-G12-MF	547837

Threaded fittings NPFB

Ordering data – Basic design

Extension NPFB-E..., straight			
Connection 1	Connection 2	Type	Part No.
Male thread/female thread, length 1			
G $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-E1-2G18-FM	547822
G $\frac{1}{4}$	G $\frac{1}{4}$	NPFB-E1-2G14-FM	547823
G $\frac{3}{8}$	G $\frac{3}{8}$	NPFB-E1-2G38-FM	547824
G $\frac{1}{2}$	G $\frac{1}{2}$	NPFB-E1-2G12-FM	547825
Male thread/female thread, length 2			
G $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-E2-2G18-FM	547826
G $\frac{1}{4}$	G $\frac{1}{4}$	NPFB-E2-2G14-FM	547827
Male thread/female thread, length 3			
G $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-E3-2G18-FM	547828
G $\frac{1}{4}$	G $\frac{1}{4}$	NPFB-E3-2G14-FM	547829
Male thread/female thread, length 4			
G $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-E4-2G18-FM	547830

Double nipple NPFB-D, straight			
Connection 1	Connection 2	Type	Part No.
Male thread/male thread			
M5	M5	NPFB-D-2M5-M	550036
M7	G $\frac{1}{8}$	NPFB-D-M7-G18-M	547799
Male thread/male thread			
G $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-D-2G18-M	547800
G $\frac{1}{8}$	G $\frac{1}{4}$	NPFB-D-G18-G14-M	547801
G $\frac{1}{8}$	G $\frac{3}{8}$	NPFB-D-G18-G38-M	547802
G $\frac{1}{4}$	G $\frac{1}{4}$	NPFB-D-2G14-M	547803
G $\frac{1}{4}$	G $\frac{3}{8}$	NPFB-D-G14-G38-M	547804
G $\frac{1}{4}$	G $\frac{1}{2}$	NPFB-D-G14-G12-M	547805
G $\frac{3}{8}$	G $\frac{3}{8}$	NPFB-D-2G38-M	547806
G $\frac{3}{8}$	G $\frac{1}{2}$	NPFB-D-G38-G12-M	547807
G $\frac{1}{2}$	G $\frac{1}{2}$	NPFB-D-2G12-M	547808
Male thread/male thread			
R $\frac{1}{8}$	R $\frac{1}{8}$	NPFB-D-2R18-M	547787
R $\frac{1}{8}$	R $\frac{1}{4}$	NPFB-D-R18-R14-M	547788
R $\frac{1}{8}$	R $\frac{3}{8}$	NPFB-D-R18-R38-M	547789
R $\frac{1}{4}$	R $\frac{1}{4}$	NPFB-D-2R14-M	547790
R $\frac{1}{4}$	R $\frac{3}{8}$	NPFB-D-R14-R38-M	547791
R $\frac{1}{4}$	R $\frac{1}{2}$	NPFB-D-R14-R12-M	547792
R $\frac{3}{8}$	R $\frac{3}{8}$	NPFB-D-2R38-M	547793
R $\frac{3}{8}$	R $\frac{1}{2}$	NPFB-D-R38-R12-M	547794
R $\frac{1}{2}$	R $\frac{1}{2}$	NPFB-D-2R12-M	547795
R $\frac{1}{2}$	R $\frac{3}{4}$	NPFB-D-R12-R34-M	547796
R $\frac{3}{4}$	R $\frac{3}{4}$	NPFB-D-2R34-M	547797
R1	R1	NPFB-D-2R1-M	547798

Fitting NPFB-L, L-shape			
Connection 1	Connection 2	Type	Part No.
Female thread/female thread			
M5	M5	NPFB-L-2M5-F	547715
G $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-L-2G18-F	547716
G $\frac{1}{4}$	G $\frac{1}{4}$	NPFB-L-2G14-F	547717
G $\frac{3}{8}$	G $\frac{3}{8}$	NPFB-L-2G38-F	547718
G $\frac{1}{2}$	G $\frac{1}{2}$	NPFB-L-2G12-F	547719
G $\frac{3}{4}$	G $\frac{3}{4}$	NPFB-L-2G34-F	547720
G1	G1	NPFB-L-2G1-F	547721
Male thread/female thread			
M5	M5	NPFB-L-2M5-MF	547722
R $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-L-R18-G18-MF	547723
R $\frac{1}{4}$	G $\frac{1}{4}$	NPFB-L-R14-G14-MF	547724
R $\frac{3}{8}$	G $\frac{3}{8}$	NPFB-L-R38-G38-MF	547725
R $\frac{1}{2}$	G $\frac{1}{2}$	NPFB-L-R12-G12-MF	547726
R $\frac{3}{4}$	G $\frac{3}{4}$	NPFB-L-R34-G34-MF	547727
R1	G1	NPFB-L-R1-G1-MF	547728
Male thread/male thread			
M5	M5	NPFB-L-2M5-M	547729
R $\frac{1}{8}$	R $\frac{1}{8}$	NPFB-L-2R18-M	547730
R $\frac{1}{4}$	R $\frac{1}{4}$	NPFB-L-2R14-M	547731
R $\frac{3}{8}$	R $\frac{3}{8}$	NPFB-L-2R38-M	547732
R $\frac{1}{2}$	R $\frac{1}{2}$	NPFB-L-2R12-M	547733
R $\frac{3}{4}$	R $\frac{3}{4}$	NPFB-L-2R34-M	547734
R1	R1	NPFB-L-2R1-M	547735

Fitting NPFB-T, T-shape			
Connection 1	Connection 2	Type	Part No.
Female thread/female thread/female thread			
M5	M5	NPFB-T-3M5-F	547744
G $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-T-3G18-F	547745
G $\frac{1}{4}$	G $\frac{1}{4}$	NPFB-T-3G14-F	547746
G $\frac{3}{8}$	G $\frac{3}{8}$	NPFB-T-3G38-F	547747
G $\frac{1}{2}$	G $\frac{1}{2}$	NPFB-T-3G12-F	547748
G $\frac{3}{4}$	G $\frac{3}{4}$	NPFB-T-3G34-F	547749
G1	G1	NPFB-T-3G1-F	547750
Female thread/male thread/female thread			
M5	M5	NPFB-T-3M5-FMF	547758
G $\frac{1}{8}$	R $\frac{1}{8}$	NPFB-T-2G18-R18-FMF	547759
G $\frac{1}{4}$	R $\frac{1}{4}$	NPFB-T-2G14-R14-FMF	547760
G $\frac{3}{8}$	R $\frac{3}{8}$	NPFB-T-2G38-R38-FMF	547761
G $\frac{1}{2}$	R $\frac{1}{2}$	NPFB-T-2G12-R12-FMF	547762
G $\frac{3}{4}$	R $\frac{3}{4}$	NPFB-T-2G34-R34-FMF	547763
G1	R1	NPFB-T-2G1-R1-FMF	547764
Female thread/male thread/male thread			
G $\frac{1}{8}$	R $\frac{1}{8}$	NPFB-T-G18-2R18-FMM	547771
G $\frac{1}{4}$	R $\frac{1}{4}$	NPFB-T-G14-2R14-FMM	547772
G $\frac{3}{8}$	R $\frac{3}{8}$	NPFB-T-G38-2R38-FMM	547773
G $\frac{1}{2}$	R $\frac{1}{2}$	NPFB-T-G12-2R12-FMM	547774

Threaded fittings NPFB**Ordering data – Basic design**

Fitting NPFB-T, T-shape			
Connection 1	Connection 2	Type	Part No.
Male thread/male thread/male thread			
R $\frac{1}{8}$	R $\frac{1}{8}$	NPFB-T-3R18-M	547765
R $\frac{1}{4}$	R $\frac{1}{4}$	NPFB-T-3R14-M	547766
R $\frac{3}{8}$	R $\frac{3}{8}$	NPFB-T-3R38-M	547767
R $\frac{1}{2}$	R $\frac{1}{2}$	NPFB-T-3R12-M	547768
R $\frac{3}{4}$	R $\frac{3}{4}$	NPFB-T-3R34-M	547769
R1	R1	NPFB-T-3R1-M	547770
Male thread/male thread/female thread			
R $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-T-2R18-G18-MMF	547775
R $\frac{1}{4}$	G $\frac{1}{4}$	NPFB-T-2R14-G14-MMF	547776
R $\frac{3}{8}$	G $\frac{3}{8}$	NPFB-T-2R38-G38-MMF	547777
R $\frac{1}{2}$	G $\frac{1}{2}$	NPFB-T-2R12-G12-MMF	547778
Male thread/female thread/female thread			
M5	M5	NPFB-T-3M5-MFF	547751
R $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-T-R18-2G18-MFF	547752
R $\frac{1}{4}$	G $\frac{1}{4}$	NPFB-T-R14-2G14-MFF	547753
R $\frac{3}{8}$	G $\frac{3}{8}$	NPFB-T-R38-2G38-MFF	547754
R $\frac{1}{2}$	G $\frac{1}{2}$	NPFB-T-R12-2G12-MFF	547755
R $\frac{3}{4}$	G $\frac{3}{4}$	NPFB-T-R34-2G34-MFF	547756
R1	G1	NPFB-T-R1-2G1-MFF	547757

Fitting NPFB-Y, Y-shape			
Connection 1	Connection 2	Type	Part No.
Female thread/female thread/female thread			
G $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-Y-3G18-F	547736
G $\frac{1}{4}$	G $\frac{1}{4}$	NPFB-Y-3G14-F	547737
G $\frac{3}{8}$	G $\frac{3}{8}$	NPFB-Y-3G38-F	547738
G $\frac{1}{2}$	G $\frac{1}{2}$	NPFB-Y-3G12-F	547739
Male thread/female thread/female thread			
R $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-Y-R18-2G18-MFF	547740
R $\frac{1}{4}$	G $\frac{1}{4}$	NPFB-Y-R14-2G14-MFF	547741
R $\frac{3}{8}$	G $\frac{3}{8}$	NPFB-Y-R38-2G38-MFF	547742
R $\frac{1}{2}$	G $\frac{1}{2}$	NPFB-Y-R12-2G12-MFF	547743

Fitting NPFB-X, X-shape			
Connection 1	Connection 2	Type	Part No.
Female thread/female thread/female thread/female thread			
G $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-X-4G18-F	547779
G $\frac{1}{4}$	G $\frac{1}{4}$	NPFB-X-4G14-F	547780
G $\frac{3}{8}$	G $\frac{3}{8}$	NPFB-X-4G38-F	547781
G $\frac{1}{2}$	G $\frac{1}{2}$	NPFB-X-4G12-F	547782
Male thread/female thread/female thread/female thread			
R $\frac{1}{8}$	G $\frac{1}{8}$	NPFB-X-R18-3G18-MFFF	547783
R $\frac{1}{4}$	G $\frac{1}{4}$	NPFB-X-R14-3G14-MFFF	547784
R $\frac{3}{8}$	G $\frac{3}{8}$	NPFB-X-R38-3G38-MFFF	547785
R $\frac{1}{2}$	G $\frac{1}{2}$	NPFB-X-R12-3G12-MFFF	547786

Multiple distributors QSLV, Quick Star



- Easy to insert tubing
 - Easy to release
 - Up to 6 outlets
 - Rotatable 360°
 - Types in accordance with ATEX directive for potentially explosive atmospheres
- www.festo.com/en/ex

Type codes – Basic design

Quick Star QS, standard series

QSLV2 | L-shape, rotatable 360°, 2 outlets

Pneumatic connection 1

R thread

1/8	R1/8
1/4	R1/4

Pneumatic connection 2

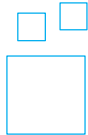
Push-in connector

4	4 mm
6	6 mm
8	8 mm
10	10 mm

Variants

Type	Design	Version	Connection												
			R thread				G thread				For tubing O.D.				
			R1/8	R1/4	R3/8	R1/2	G1/8	G1/4	G3/8	G1/2	4	6	8	10	12
QSLV	L-shape	Multiple distributor, 2 outlets	■	■	■	■	■	■	■	■	■	■	■	■	■
		Multiple distributor, 3 outlets	■	■	■	■	■	■	■	■	■	■	■	■	■
		Multiple distributor, 4 outlets	■	■	■	■	■	■	■	■	■	■	■	■	■
		Multiple distributor, 6 outlets	■	■	■	■	■	■	■	■	■	■	■	■	■
QSQ	L-shape	Multiple distributor, 4 outlets	■	■	-	-	■	■	-	-	■	■	-	-	
QST3		T-shape	3 outlets	■	■	■	-	■	■	■	-	■	■	■	■

Ordering data – Variants



Configurable product

This product and all its variants can be ordered using the configurator

The configurator can be found on the DVD under Products or at www.festo.com/catalogue/...

Enter the type or configuration part number in the search field.

Ordering data – Basic design

Multiple distributor QSLV2, L-shape, 2 outlets, rotatable 360° ¹⁾							
Connection 1	Connection 2	Type	Part No.	Connection 1	Connection 2	Type	Part No.
R thread (male thread with external hex)/push-in connector							
R1/8	4 mm	QSLV2-1/8-4	153211	R1/4	6 mm	QSLV2-1/4-6	153213
	6 mm	QSLV2-1/8-6	153212		8 mm	QSLV2-1/4-8	153215
	8 mm	QSLV2-1/8-8	153214		10 mm	QSLV2-1/4-10	153217

1) Packaging unit: 1 piece

Silencers U/UC/UO



Silencer U

- Sintered metal, polymer or die-cast design
- Compact design

Silencer UC

- With push-in sleeve or threaded connection

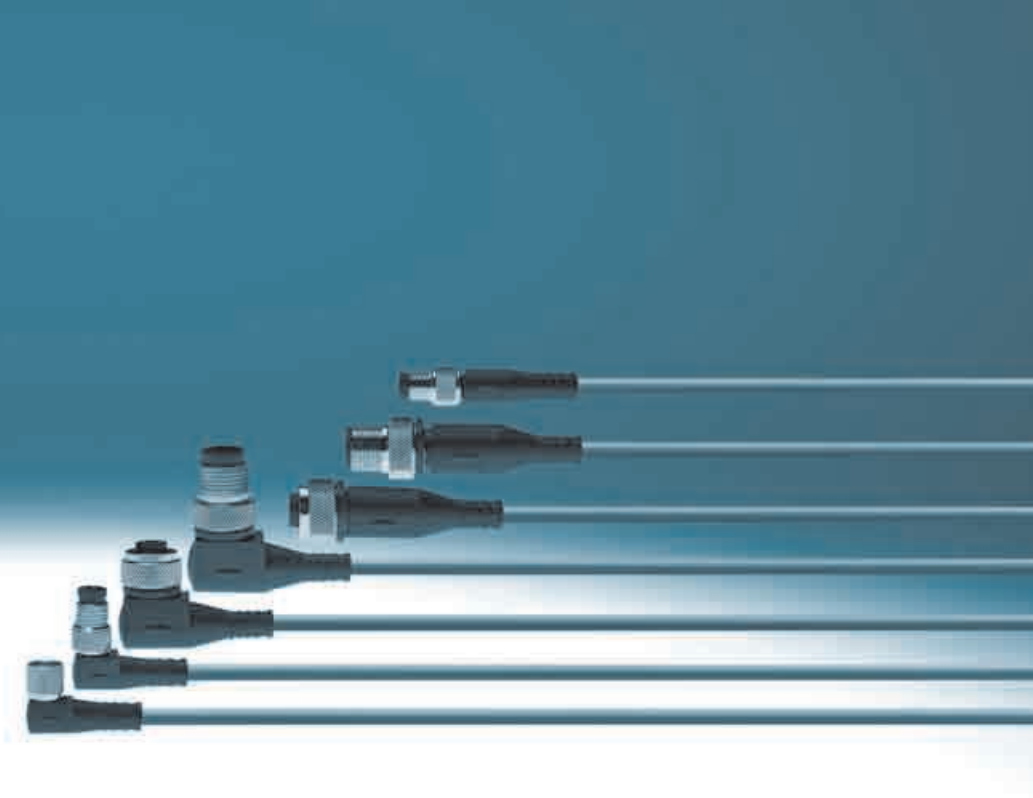
Silencer UO

- Special minimal resistance silencer
- Facilitates trouble-free operation of the vacuum generator

Ordering data

Version	Type	Part No.	PU ¹⁾	Connection D1		For tubing I.D.	Push-in sleeve Ø	Noise level [dB (A)]
				M thread	G thread			
Sintered metal								
	U-PK-3	4646	1	-	-	3	-	< 70
	U-PK-4	4932	1	-	-	4	-	< 74
	U-M3	163978	1	M3	-	-	-	< 65
Polymer, male thread								
	U-3/8	2309	1	-	G3/8	-	-	< 82
	U-3/8-20	534224	20	-	-	-	-	-
	U-1/2	2310	1	-	G1/2	-	-	< 80
	U-1/2-20	534225	20	-	-	-	-	-
	U-3/4	2311	1	-	G3/4	-	-	< 83
	U-1	2312	1	-	G1	-	-	< 84
Die-cast metal								
	U-1/8-B	6841	1	-	G1/8	-	-	< 74
	U-1/4-B	6842	1	-	G1/4	-	-	< 80
	U-3/8-B	6843	1	-	G3/8	-	-	< 80
	U-1/2-B	6844	1	-	G1/2	-	-	< 80
	U-3/4-B	6845	1	-	G3/4	-	-	< 81
	U-1-B	151990	1	-	G1	-	-	< 80
With push-in sleeve for push-in fitting QS, Quick Star								
	UC-QS-3H	165005	1	-	-	-	3	< 60
	UC-QS-4H	165006	1	-	-	-	4	< 60
	UC-QS-6H	165007	1	-	-	-	6	< 60
	UC-QS-8H	175611	1	-	-	-	8	< 60
	UC-QS-10H	526475	1	-	-	-	10	< 68
Threaded connection, for solenoid valves CPE, Compact Performance								
	UC-M5	165003	1	M5	-	-	-	< 60
	UC-M5-50	534217	50	-	-	-	-	-
	UC-M7	161418	1	M7	-	-	-	< 58
	UC-M7-50	534218	50	-	-	-	-	-
	UC-1/8	161419	1	-	G1/8	-	-	< 59
	UC-1/8-50	534219	50	-	-	-	-	-
	UC-1/4	165004	1	-	G1/4	-	-	< 60
UC-1/4-20	534220	20	-	-	-	-	-	
For vacuum generators VN-T2/T3								
	UO-M7	197582	1	M7	-	-	-	-
	UO-1/8	197583	1	-	G1/8	-	-	-
	UO-1/4	197584	1	-	G1/4	-	-	-

1) Packaging unit



Electrical connection technology

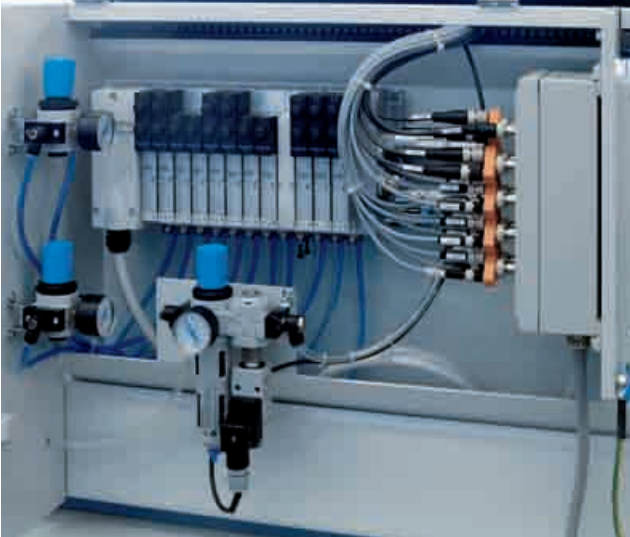
Overview

FESTO

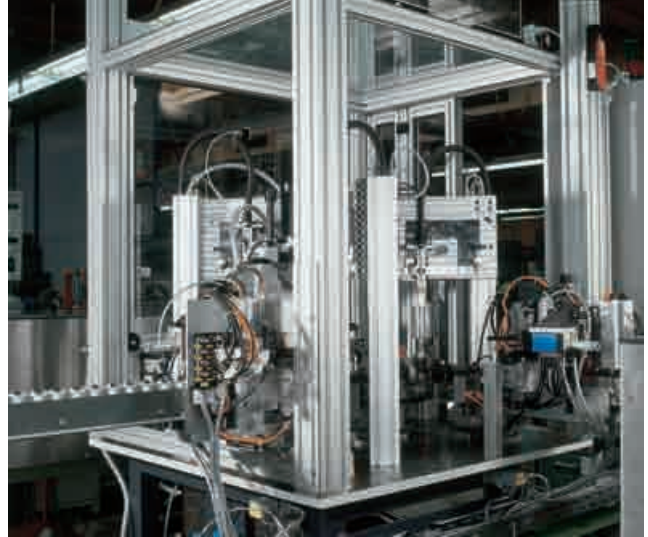
Connecting cables NEBU

The configurable connecting cables offer unlimited combinations in terms of plug sockets, cable lengths, cable qualities and plugs. They are matched to all devices with M8 and M12 plugs such as proximity sensors, position transmitters, pressure and flow sensors, optical and inductive sensors as well as indi-

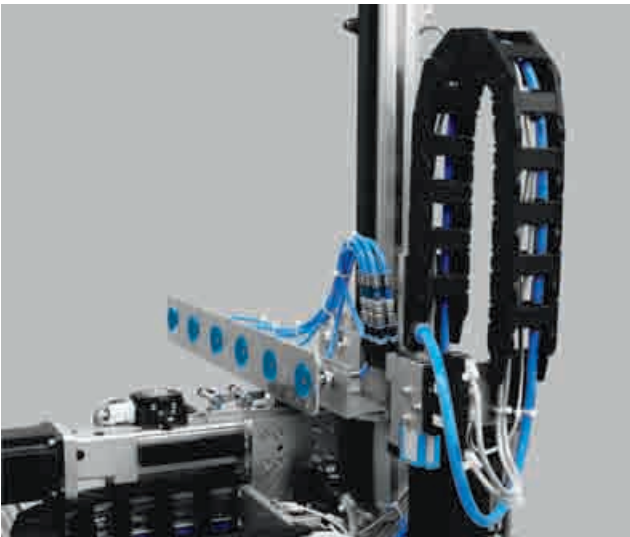
vidual valves. The cable lengths can be freely selected between 0.1 and 30 m. The ends and middle pieces can also be freely selected for maximum customisation.



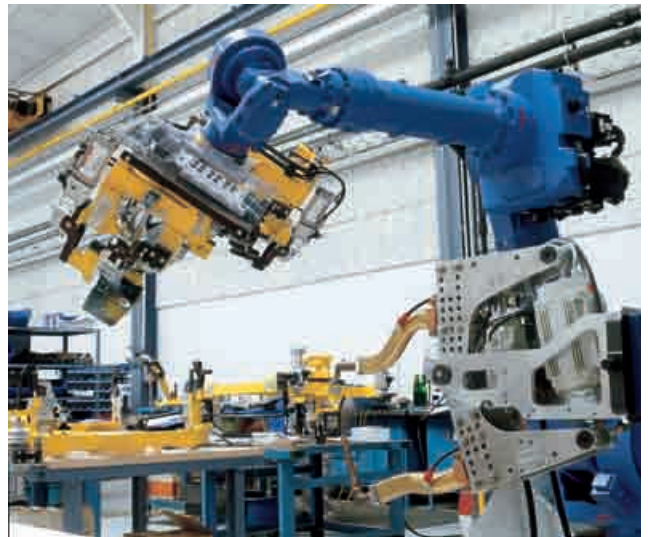
Basic cable: price-optimised cable for simple, mainly static applications, UL certified



Standard cable: good oil resistance, good reverse bending properties, suitable for use with energy chains



Cable suitable for use with energy chains: very good oil resistance, very good reverse bending properties, halogen-free, UL certified



Cable suitable for use with robots: very good oil resistance, very good bending and torsional properties, suitable for use with energy chains, halogen-free, UL certified

The technical data as well as an overview of the range of options for the connecting cables NEBU can be found online → [nebu](https://www.festo.com/catalogue/...).



Valve actuators for process automation

Quarter turn actuator DFPB

- Identical torque characteristic across the entire rotation angle range of 90°
- Sturdy, non-slip and easy-to-clean aluminium housing



→ [dfpb](#)

Standard directional control valves

Solenoid valve NVF3 (5/2)

- Port pattern to NAMUR VDI/VDE 3845
- Flow rate up to 900 l/min

→ [nvf3](#)



Solenoid valve VSNB (3/2, 5/2)

- Port pattern to NAMUR VDI/VDE 3845
- Flow rate up to 950 l/min

→ [vsnb](#)



Application-specific directional control valves

Solenoid valve VOFC/VOFD

- For applications in the chemical and petrochemical industries
- Robust design and high corrosion resistance

→ [vofc](#)



Process/media valves

Ball valve VAPB

- 2-way shut-off valve
- Flow rate 2,000 ... 23,500 l/min
- Flange hole pattern to ISO 5211

→ [vapb](#)



Ball valve VZBA

- 3-way shut-off valve
- Flow rates 75 ... 895 l/min
- Flange hole pattern to ISO 5211

→ [vzba](#)



Ball valve drive unit VZPR

- Pneumatic double-acting quarter turn actuator and 2-way ball valve
- Flow rates 100 ... 8,900 l/min

→ [vzpr](#)



Solenoid valve VZWM

- Diaphragm valve
- Flow rate 1,400 ... 31,000 l/min

→ [vzwm](#)



Angle seat valve VZXF

- Externally controlled 2/2-way valve
- Insensitive to steam or slightly contaminated media
- Flow rate Kv 2.8 ... 47.5 m³/h

→ [vzxf](#)



Provided consistently: comprehensive support

Festo's services and support philosophy are based on the continuous analysis of the value creation chain for different types of customers. Festo has built on this to develop a sophisticated portfolio that supports you along your entire value creation chain. It includes numerous services such as the Energy Saving Services, customised developments of ready-to-install solutions and special designs.

Our digital information system now consists of a database-supported catalogue with over 30,000 products and accessories as well as other tools for configuration, planning and design. Globally standardised application platforms for product lifecycle, production, logistics, sales and finance help to create integrated, global processes for your benefit.

Engineering



- Consulting
- Design aids
- 2D/3D CAD drawings and models
- Design and sizing tools
- Selection tools
- Engineering of ready-to-install solutions

Procurement/logistics



- Festo Online Shop
- 24-hour delivery service
- Logistics optimisation service
- PrePack

Assembly and commissioning



- Ready-to-install solutions
- Commissioning of axis systems
- Compressed air consumption analysis
- Commissioning and training for servopneumatic welding guns

Operation



- Worldwide after sales service
- Energy Saving Services
- Compressed air quality analysis
- Support portal with documentation for the entire product lifecycle

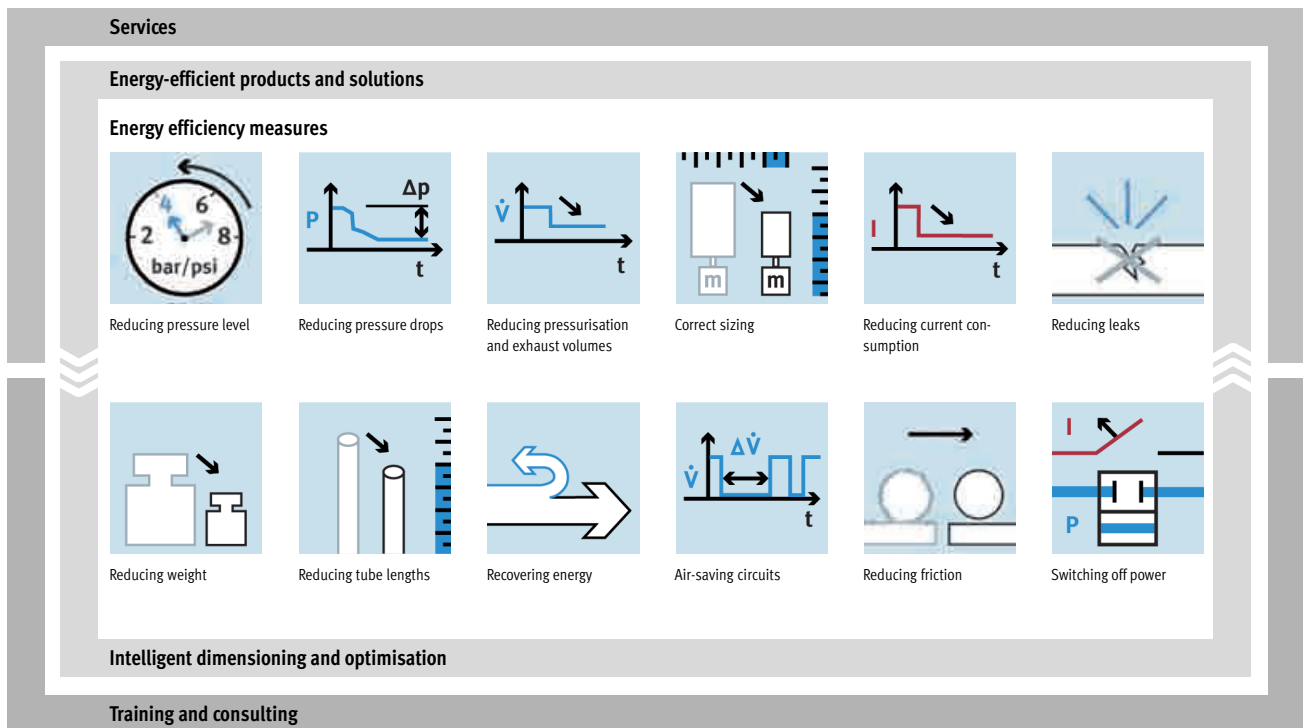
Are you interested in these services?
Simply ask your local contact person or go to → www.festo.com to find out more information about our services.

Successful energy efficiency in practice

We help you to adopt a successful and sustainable approach to energy efficiency. Festo has a sophisticated and practical concept that covers a total of four areas:

- Services
- Energy-efficient products and solutions
- Intelligent dimensioning and optimisation
- Training and consulting

Each of these four areas contributes to greater energy efficiency. For optimum energy efficiency that fulfils or even exceeds current standards, we recommend combining all four areas.



Services

Festo Energy Saving Services offer users of compressed air a tailored range of services for identifying and exploiting potential for compressed air savings.

Energy-efficient products and solutions

Festo components and solutions already offer significant savings potential, especially when combined with highly efficient compressed air preparation up to the front unit.

Intelligent dimensioning

Innovative selection software assists you in correctly dimensioning systems. This software helps to avoid over-sized components and the accumulation of safety factors.

Training and consulting

Benefit from the synergies created through Festo Didactic's proximity with industry and its training expertise.

Simply ask your local contact person or find out more at [→ www.festo.com](http://www.festo.com).

Overview of topics



- Hydraulics
- Pneumatics
- PLC (programmable logic controller)
- Electrical engineering/electronics
- Lean production
- Teamwork
- Coaching
- Sales skills
- Service skills
- Project management
- Presentation skills

Services



- Pre-seminar knowledge analyses
- Regular post-seminar evaluations
- In-house and tailored seminars
- Programmes and projects with guaranteed successful learning outcomes

Public seminars



- 2,900 courses annually
- 39 languages
- 42,000 participants worldwide

Do you want more details about Festo Didactic's programme or a copy of the seminar catalogue?

Simply ask your local contact person or find out more at

→ www.festo-didactic.com