

Round cylinders DSEU/ESEU

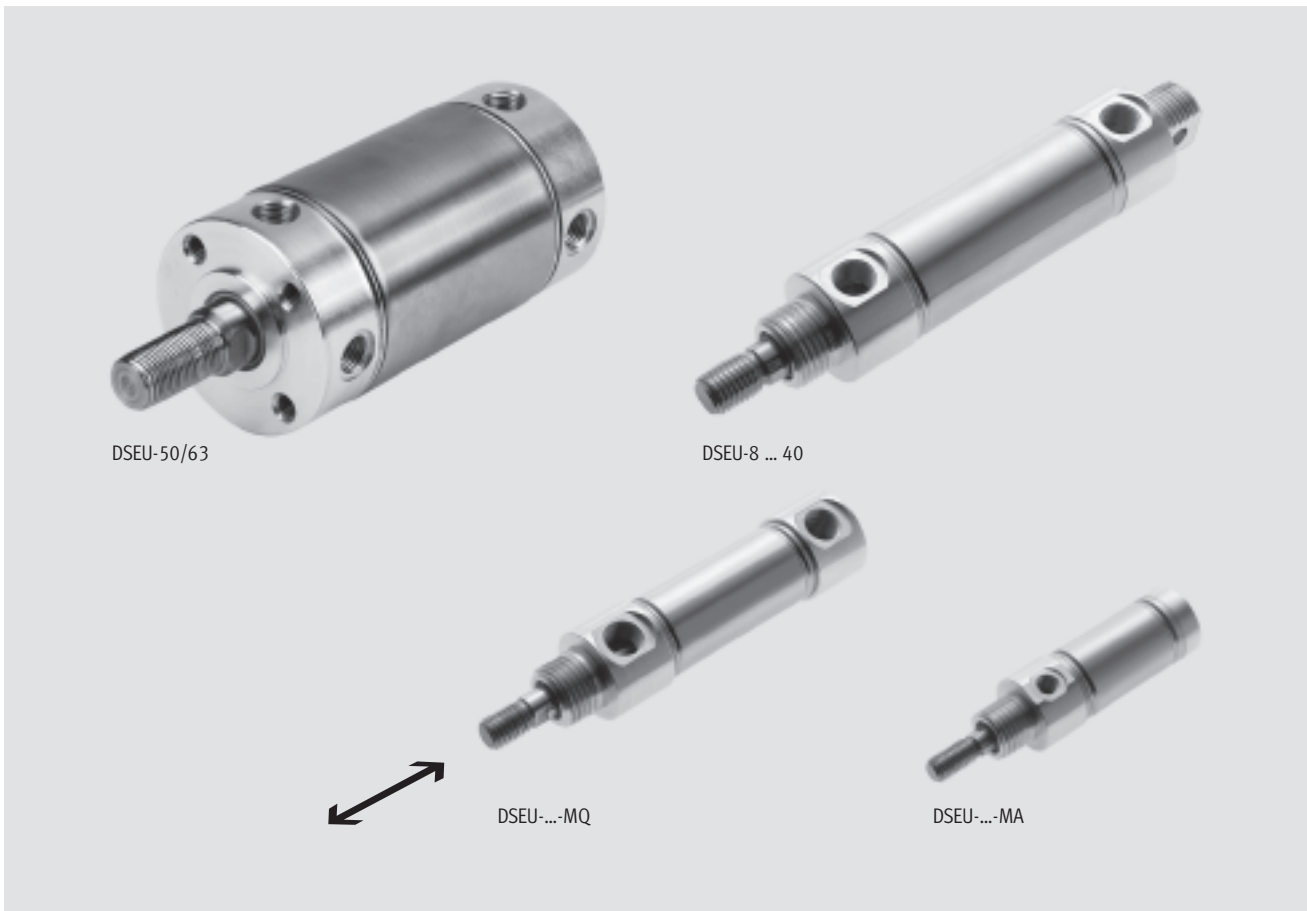


- 1 - Type discontinued  
Available up until 2011

## Round cylinders DSEU/ESEU

Features

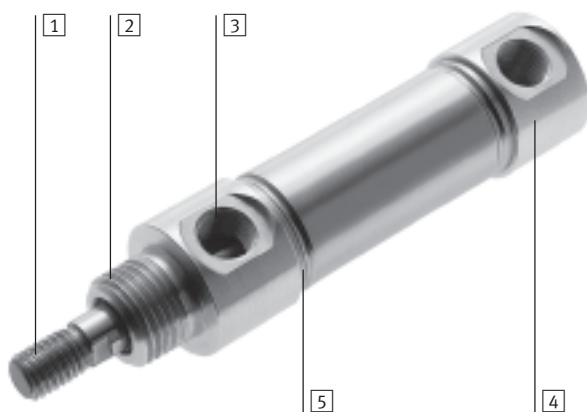
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### Brief description

- Compact design
- Greater flexibility thanks to various end caps
- Practical mounting options
- With flexible cushioning rings in the end-positions
- For contactless position sensing
- Threaded bearing cap
- End cap with threaded spigot and swivel mounting


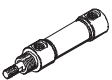

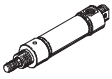

### General data



- 1 Standard thread
- 2 Threaded bearing cap
- 3 Air connections with spot-faced sealing surfaces
- 4 Three different end caps available
- 5 Easy to clean roller burnished groove

## Round cylinders DSEU/ESEU

Product range overview

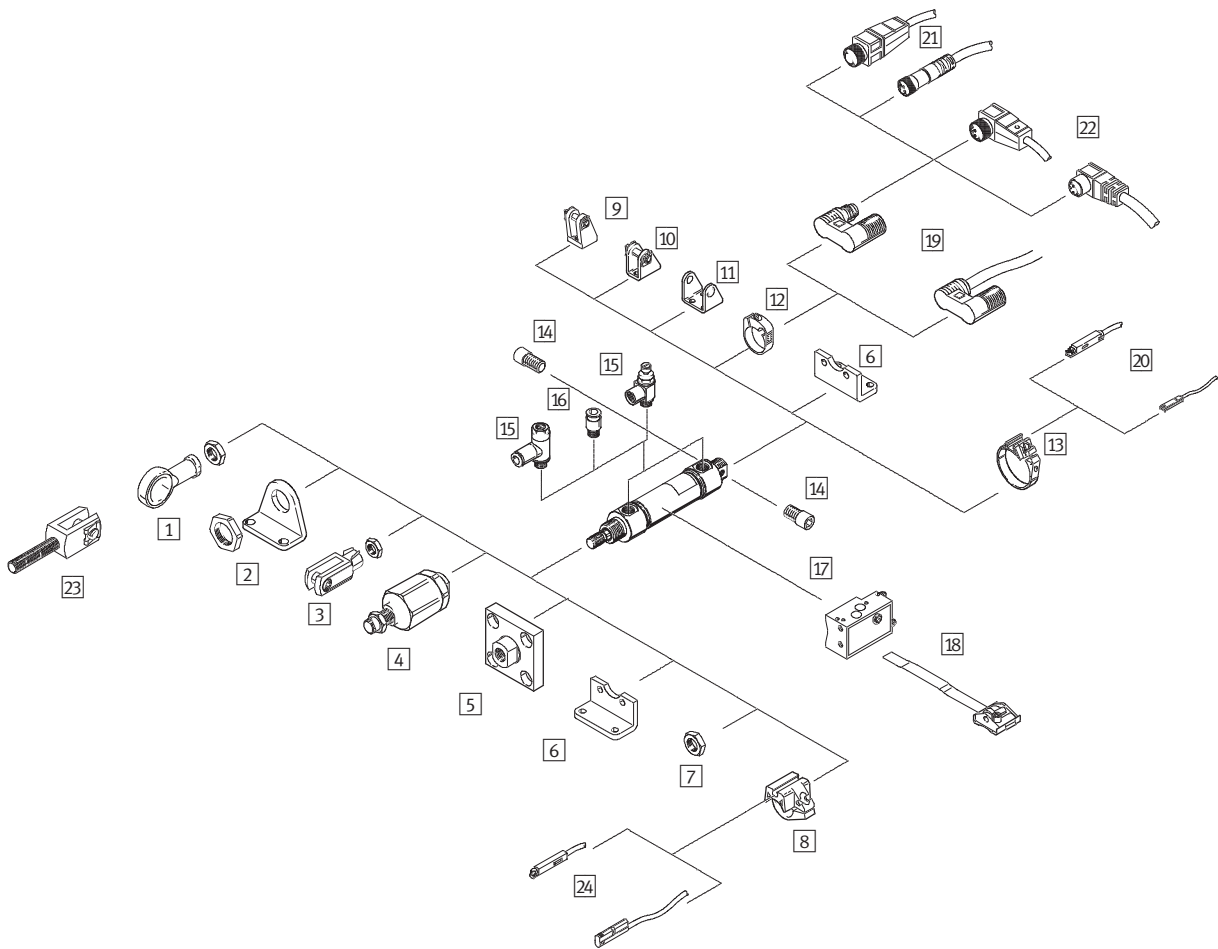
Function	Design	Piston Ø [mm]	Stroke [mm]	Cushioning Fixed P	Position sensing A	→ Page/ Internet
Double- acting	<b>Basic version</b>					
		8, 10	10, 25, 40, 50, 80, 100	■	■	7
		12, 16	10, 25, 40, 50, 80, 100, 125, 160, 200			
		20, 25	10, 25, 40, 50, 80, 100, 125, 160, 200, 250, 320			
		32, 40, 50, 63	25, 40, 50, 80, 100, 125, 160, 200, 250, 320			
	<b>Lateral air connection</b>					
		8, 10	10, 25, 40, 50, 80, 100	■	■	7
		12, 16	10, 25, 40, 50, 80, 100, 125, 160, 200			
		20, 25	10, 25, 40, 50, 80, 100, 125, 160, 200, 250, 320			
		32, 40	25, 40, 50, 80, 100, 125, 160, 200, 250, 320			
	<b>Axial air connection</b>					
		8, 10	10, 25, 40, 50, 80, 100	■	■	7
12, 16		10, 25, 40, 50, 80, 100, 125, 160, 200				
20, 25		10, 25, 40, 50, 80, 100, 125, 160, 200, 250, 320				
32, 40		25, 40, 50, 80, 100, 125, 160, 200, 250, 320				
Single- acting	<b>Basic version</b>					
		8, 10, 12, 16,	10, 25, 50	■	■	11
		20, 25, 32, 40				
	<b>Axial air connection</b>					
	8, 10, 12, 16,	10, 25, 50	■	■	11	
	20, 25, 32, 40					

- 1 - Type discontinued  
Available up until 2011

## Round cylinders DSEU/ESEU

Peripherals overview

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## Round cylinders DSEU/ESEU

Peripherals overview

Mounting attachments and accessories				
	Brief description	DSEU Basic version/MA/MQ	ESEU Basic version/MA	→ Page/Internet
1	Rod eye SGS	■	■	20
2	Foot mounting HBE	■ ∅ 8 ... 40	■ ∅ 8 ... 40	17
3	Rod clevis SG	■	■	20
4	Self-aligning rod coupler FK	■	■	20
5	Coupling piece KSG	■	■	20
6	Foot mounting HBE	■ ∅ 50/63	-	17
7	Hex nut MSK	■	■	19
8	Sensor mounting kit SMBR-10	■	■	22
9	Clevis foot mounting LBE	■ ∅ 32/40	■ ∅ 32/40	18
10	Clevis foot mounting LBN	■ ∅ 8 ... 25	■ ∅ 8 ... 25	18
11	Clevis foot mounting LBE	■ ∅ 50/63	-	18
12	Sensor mounting kit CRSMBR	■	■	23
13	Mounting kit SMBR-8	■	■	21
14	Pivot bolt GBS	■	■	19
15	One-way flow control valve GRLA/GRLZ	■	■	24
16	Push-in fitting QS	■	■	quick star
17	Proximity sensors SMPO-1	■	■	24
18	Sensor mounting kit SMBS	■	■	24
19	Proximity sensors SMEO-/SMT0-4U	■	■	23
20	Proximity sensors SME/SMT-8	■	■	21
21	Connecting cable, straight NEBU	■	■	23
22	Connecting cable, angled NEBU	■	■	23
23	Rod clevis SGA	■	■	20
24	Proximity sensors SME/SMT-10	■	■	22

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## Round cylinders DSEU/ESEU

Type codes

	DSEU	25	100	P	A	MQ
<b>Type</b>						
Double-acting						
DSEU	Round cylinder					
Single-acting						
ESEU	Round cylinder					
<b>Piston Ø [mm]</b>						
<b>Stroke [mm]</b>						
<b>Cushioning</b>						
P	Flexible cushioning rings/plates at both ends					
<b>Position sensing</b>						
A	For proximity sensing					
<b>Variant</b>						
MQ	Lateral air connection					
MA	Axial air connection					

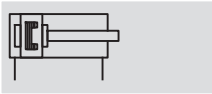
- 2 - Type discontinued  
Available up until 2011

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## Round cylinders DSEU

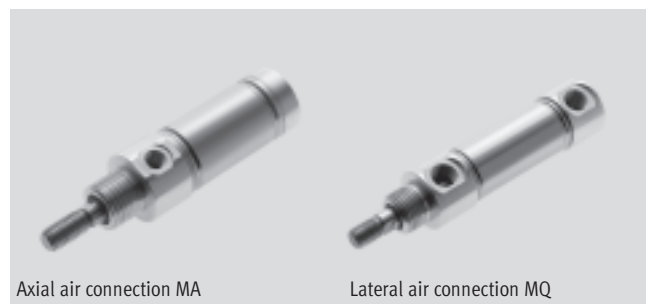
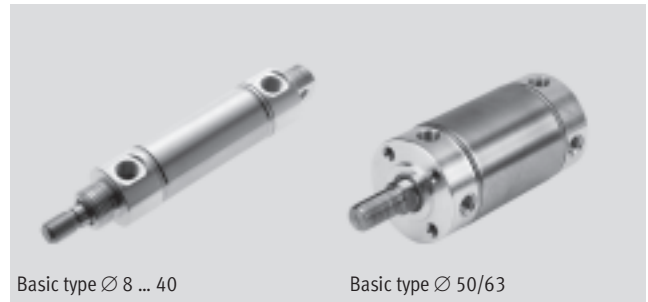
Technical data

Function



⌀ - Diameter  
8 ... 63 mm

— - Stroke length  
10 ... 320 mm



General technical data										
Piston Ø	8	10	12	16	20	25	32	40	50	63
Pneumatic connection	M3	M5	M5	M5	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$
Piston rod thread	M4	M4	M6	M6	M8	M10x1.25	M10x1.25	M12x1.25	M16x1.5	M16x1.5
Design	Piston									
	Piston rod									
	Cylinder barrel									
Cushioning	Flexible cushioning rings/plates at both ends									
Position sensing	For proximity sensing									
Type of mounting	Via accessories									
Mounting position	Any									

Operating pressure [bar]										
Piston Ø	8	10	12	16	20	25	32	40	50	63
Operating medium	Filtered compressed air, lubricated or unlubricated									
Operating pressure [bar]	1.5 ... 10									

Ambient conditions	
Ambient temperature <sup>1)</sup> [°C]	0 ... +80
Corrosion resistance class CRC <sup>2)</sup>	1

1) Note operating range of proximity sensors

2) Corrosion resistance class 1 according to Festo standard 940 070

Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

- 1 - Type discontinued  
Available up until 2011

## Round cylinders DSEU

Technical data

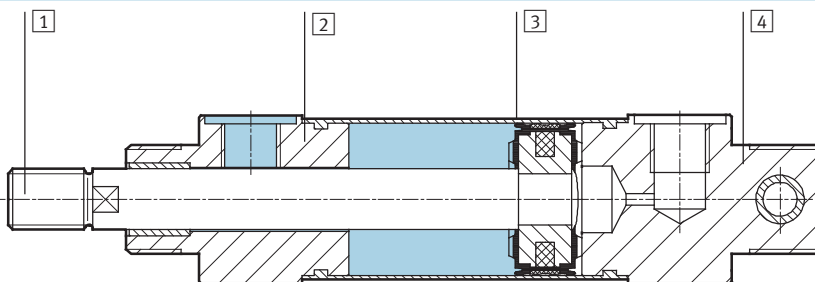
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Forces [N] and impact energy [J]										
Piston $\varnothing$	8	10	12	16	20	25	32	40	50	63
Theoretical force at 6 bar, advancing	30	47	68	121	189	295	483	754	1,178	1,870
Theoretical force at 6 bar, retracting	23	40	51	104	158	247	415	633	990	1,682
Max. impact energy at the end positions	0.02	0.03	0.06	0.10	0.14	0.18	0.26	0.36	0.60	0.64

Weights [g]										
Piston $\varnothing$	8	10	12	16	20	25	32	40	50	63
Product weight at 0 mm stroke	16.7	21.4	38.1	52.7	115	144	237	396	660	984
Additional weight per 10 mm stroke	2.3	2.5	4.4	5.0	7.4	11.2	15.5	24	40	43.9
Moving load at 0 mm stroke	5.3	6.5	16.5	18.4	35.3	53.1	88	165	265	312
Additional load per 10 mm stroke	1	1	2.2	2.2	4	6.2	8.9	15.9	24.8	24.8

### Materials

Sectional view



Round cylinder	
1	Piston rod Stainless steel
2	Bearing end cap Wrought aluminium alloy
3	Cylinder barrel Stainless steel
4	End cap Wrought aluminium alloy
-	Seals Polyurethane, nitrile rubber



## Round cylinders DSEU

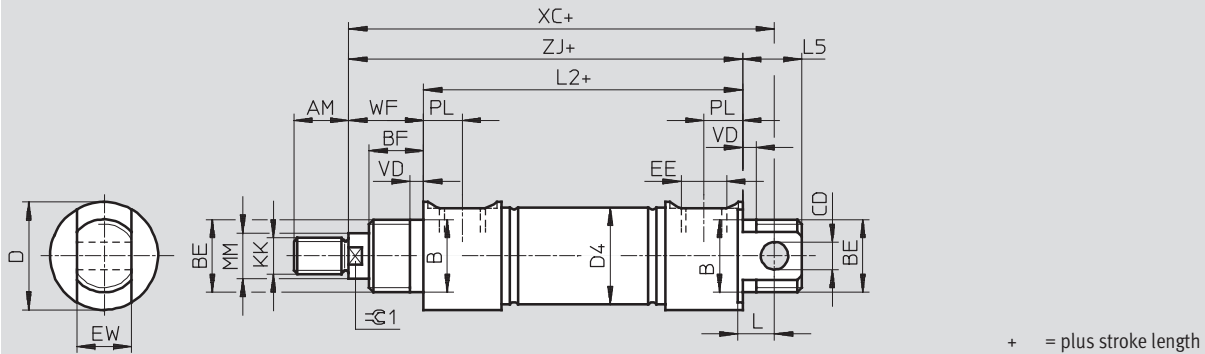
Technical data

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### Dimensions

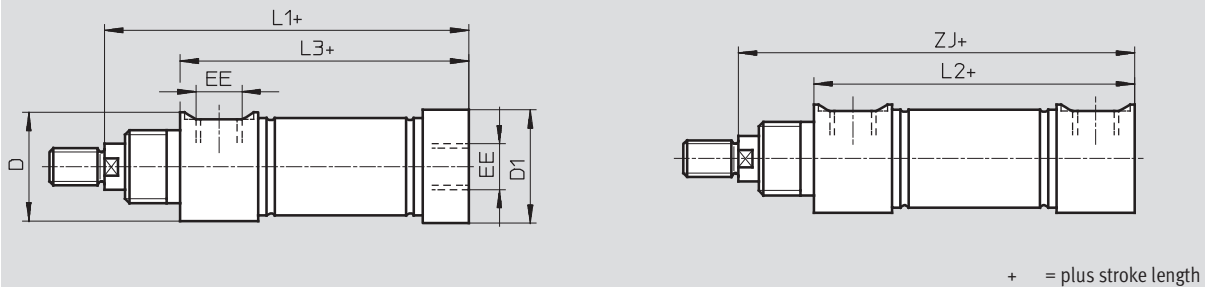
Download CAD data → [www.festo.com](http://www.festo.com)

DSEU-8...40-...



DSEU-8...40-...-MA

DSEU-8...40-...-MQ



∅	AM	B	BE	BF	CD	D	D1	D4	EE	EW	KK	L	L1
[mm]		∅ h9			∅ E10	∅	∅	∅		-0.2			±1
8	8	10	M10x1	7.5	4	12.5	10.5	9.27	M3	8	M4	5.5	40.5
10	8	10	M10x1	8	4	15.5	12.5	11.27	M5	8	M4	5.5	47.5
12	12	12	M12x1.25	8	4	16.8	14.5	13.27	M5	8	M6	6	51.5
16	12	12	M12x1.25	10	4	18.8	17.5	17.27	M5	8	M6	-	57
20	16	16	M16x1.5	12	6	23.7	21.5	21.27	G <sup>1</sup> / <sub>8</sub>	12	M8	8	69
25	16	18	M18x1.5	12	6	27.7	26.7	26.52	G <sup>1</sup> / <sub>8</sub>	12	M10x1.25	-	72
32	16	22	M22x1.5	15	10	34	34	33.6	G <sup>1</sup> / <sub>8</sub>	16	M10x1.25	12	80
40	18	30	M30x1.5	15	10	42	42	41.6	G <sup>1</sup> / <sub>8</sub>	16	M12x1.25	14	87

∅	L2	L3	L5	MM	PL	VD	WF	XC	ZJ	̳1
[mm]	±0.8	±0.8		∅			±1.4	±1	±1	
8	35.5	32	7.5	4	3.3	1.5	8	47.5	44	-
10	42.5	37	8	4	5.5	1.5	10	57.5	53	-
12	44.5	39.5	9	6	5.3	1.5	11.5	61.5	56.5	5
16	49	43	10	6	5.5	3	13.5	69	63	5
20	60.5	53.5	13	8	8.5	3	16	83.5	76	7
25	61.5	55	15	10	8.5	3	17	87	78.5	9
32	67	59	15	12	9	3	21	95	88	10
40	71.5	65.5	15	16	9.5	3	22	98.5	93	13

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## Round cylinders DSEU

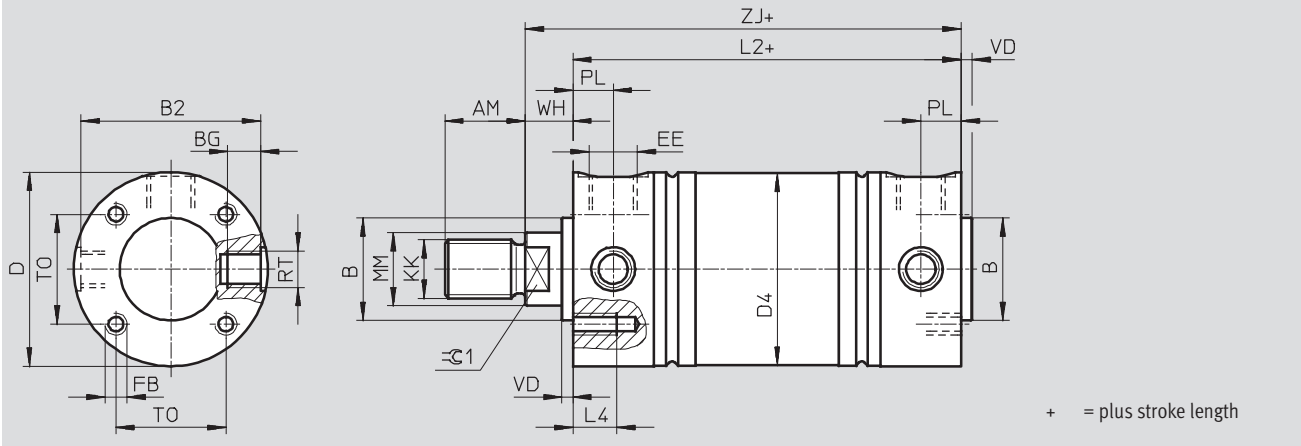
Technical data

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### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

DSEU-50/63



∅	AM	B	B2	BG	D	D4	EE	TC	KK	L2
[mm]		∅		∅	∅	∅				±0.8
50	22	30	49.5	9	53	52.4	G $\frac{1}{4}$	M6	M16x1.5	81.5
63	22	30	63	12	66	65.4	G $\frac{1}{4}$	M6	M16x1.5	87.5

∅	L4	MM	PL	RT	T0	VD	WH	ZJ	∅C1
[mm]		∅					±1.4	±1	
50	12	20	11	M10x1	30	3	12	94	17
63	12	20	13	M12x1.5	30	3	12	99.5	17

- 2 - Type discontinued  
Available up until 2011

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## Round cylinders ESEU

Technical data

Function



⌀ - Diameter  
8 ... 40 mm

┆ - Stroke length  
10 ... 50 mm



General technical data								
Piston Ø	8	10	12	16	20	25	32	40
Pneumatic connection	M3	M5	M5	M5	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$
Piston rod thread	M4	M4	M6	M6	M8	M10x1.25	M10x1.25	M12x1.25
Design	Piston							
	Piston rod							
	Cylinder barrel							
Cushioning	Flexible cushioning rings/plates at both ends							
Position sensing	For proximity sensing							
Type of mounting	Via accessories							
Mounting position	Any							


Operating pressure [bar]								
Piston Ø	8	10	12	16	20	25	32	40
Operating medium	Filtered compressed air, lubricated or unlubricated							
Operating pressure [bar]	2 ... 10							

Ambient conditions	
Variant	Basic version
Ambient temperature <sup>1)</sup> [°C]	0 ... +80
Corrosion resistance class CRC <sup>2)</sup>	1

1) Note operating range of proximity sensors

2) Corrosion resistance class 1 according to Festo standard 940 070

Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

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## Round cylinders ESEU

Technical data

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Forces [N] and impact energy [J]								
Piston Ø	8	10	12	16	20	25	32	40
Theoretical force at 6 bar, advancing, stroke 10 ... 50 mm	24.6	41.6	61	106.5	169	271	413	631
Theoretical force at 6 bar, retracting, stroke 10 mm	4.9	4.9	6.3	13.2	18.3	22.9	62.5	109.3
Theoretical force at 6 bar, retracting, stroke 25 mm	4.1	4.1	5.4	11.9	16.5	21.2	56.6	95.8
Theoretical force at 6 bar, retracting, stroke 50 mm	2.8	2.8	3.9	9.8	13.6	18.5	46.8	73.4
Max. impact energy at the end positions <sup>1)</sup>	0.02	0.03	0.06	0.10	0.14	0.18	0.26	0.36

1) Permissible energy  $E = \frac{1}{2}mv^2$  must not be exceeded during retraction. Supply air flow control valves must be installed for an operating pressure > 6 bar and an applied load on the piston rod. With external stroke limiter, an unrestricted operation is permitted up to 10 bar.

Permissible impact velocity:

$$v_{\text{perm.}} = \sqrt{\frac{2 \times E_{\text{perm.}}}{m_{\text{dead}} + m_{\text{load}}}}$$

$v_{\text{perm.}}$  Permissible impact velocity  
 $E_{\text{perm.}}$  Max. impact energy  
 $m_{\text{dead}}$  Moving load (drive)  
 $m_{\text{load}}$  Moving work load

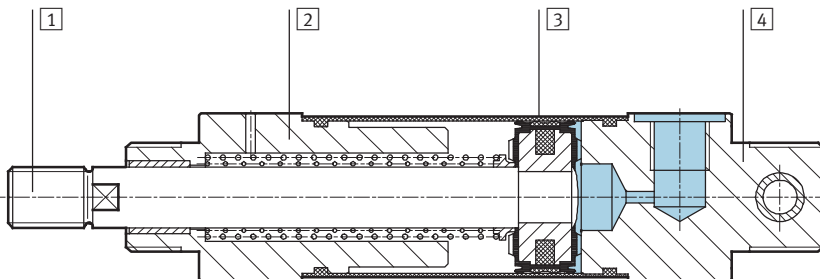
 Note  
 These specifications represent the maximum values which can be reached. Note the maximum permitted impact energy.

Maximum permissible load:

$$m_{\text{load}} = \frac{2 \times E_{\text{perm.}}}{v^2} - m_{\text{dead}}$$

### Materials

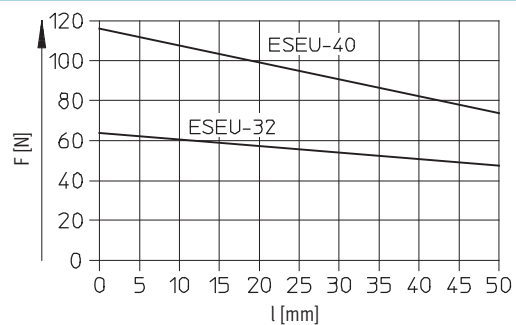
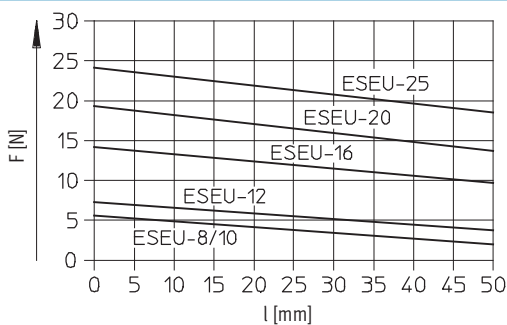
Sectional view



### Round cylinder

1	Piston rod	Stainless steel
2	Bearing end cap	Wrought aluminium alloy
3	Cylinder barrel	Stainless steel
4	End cap	Wrought aluminium alloy
-	Seals	Polyurethane, nitrile rubber

### Spring return force F as a function of the stroke l



## Round cylinders ESEU

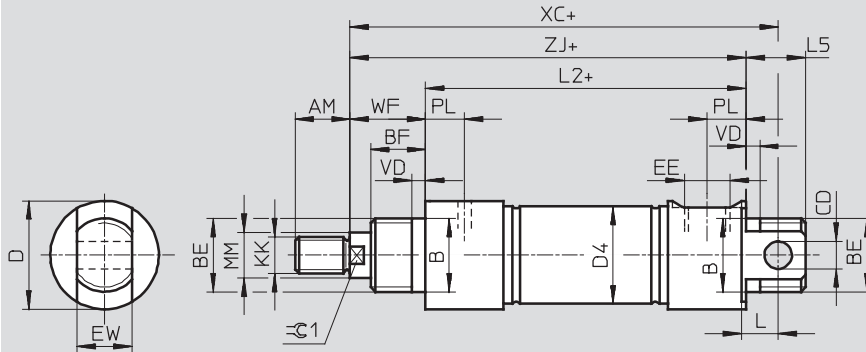
Technical data

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### Dimensions

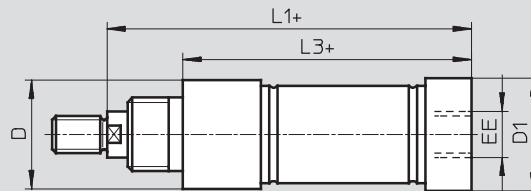
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ESEU-8... 40



+ = plus stroke length

ESEU-... MA



+ = plus stroke length

$\varnothing$ [mm]	AM	B $\varnothing$ h9	BE	BF	CD $\varnothing$ E10	D $\varnothing$	D1 $\varnothing$	D4 $\varnothing$	EE	EW -0.2	KK	L	L1 $\pm 1$
8	8	10	M10x1	7.5	4	12.5	10.5	9.27	M3	8	M4	5.5	52
10	8	10	M10x1	8	4	15.5	12.5	11.27	M5	8	M4	5.5	55
12	12	12	M12x1.25	8	4	16.8	14.5	13.27	M5	8	M6	6	60
16	12	12	M12x1.25	10	4	18.8	17.5	17.27	M5	8	M6	-	72
20	16	16	M16x1.5	12	6	23.7	21.5	21.27	G $\frac{1}{8}$	12	M8	8	83
25	16	18	M18x1.5	12	6	27.7	26.7	26.52	G $\frac{1}{8}$	12	M10x1.25	-	88.5
32	16	22	M22x1.5	15	10	34	34	33.6	G $\frac{1}{8}$	16	M10x1.25	12	84
40	18	30	M30x1.5	15	10	42	42	41.6	G $\frac{1}{8}$	16	M12x1.25	14	103

$\varnothing$ [mm]	L2 $\pm 0.8$	L3 $\pm 0.8$	L5	MM $\varnothing$	PL	VD	WF $\pm 1.4$	XC $\pm 1$	ZJ $\pm 1$	$\approx \pm 1$
8	47	43.5	7.5	4	3.3	1.5	8	59	55.5	-
10	50	44.5	8	4	5.5	1.5	10	65	60.5	-
12	53	48	9	6	5.3	1.5	11.5	70	65	5
16	64	58	10	6	5.5	3	13.5	84	78	5
20	74.5	67.5	13	8	8.5	3	16	97.5	90	7
25	78	71.5	15	10	8.5	3	17	103.5	95	9
32	71	63	15	12	9	3	21	99	92	10
40	87.5	81.5	15	16	9.5	3	22	114.5	109	13


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## Round cylinders DSEU/ESEU

Technical data

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Ordering data						
Stroke [mm]	Piston Ø 8 [mm]		Piston Ø 10 [mm]		Piston Ø 12 [mm]	
	Part No.	Type	Part No.	Type	Part No.	Type
<b>Double-acting cylinder</b>						
Basic version						
10	188 772	DSEU-8-10-P-A	188 779	DSEU-10-10-P-A	188 785	DSEU-12-10-P-A
25	188 773	DSEU-8-25-P-A	188 780	DSEU-10-25-P-A	188 786	DSEU-12-25-P-A
40	188 774	DSEU-8-40-P-A	188 781	DSEU-10-40-P-A	188 787	DSEU-12-40-P-A
50	188 775	DSEU-8-50-P-A	188 782	DSEU-10-50-P-A	188 788	DSEU-12-50-P-A
80	188 776	DSEU-8-80-P-A	188 783	DSEU-10-80-P-A	188 789	DSEU-12-80-P-A
100	188 777	DSEU-8-100-P-A	188 784	DSEU-10-100-P-A	188 790	DSEU-12-100-P-A
125	–	–	–	–	188 791	DSEU-12-125-P-A
160	–	–	–	–	188 792	DSEU-12-160-P-A
200	–	–	–	–	188 793	DSEU-12-200-P-A
250	–	–	–	–	–	–
320	–	–	–	–	–	–
Axial air connection – MA						
10	188 623	DSEU-8-10-P-A-MA	188 630	DSEU-10-10-P-A-MA	188 636	DSEU-12-10-P-A-MA
25	188 624	DSEU-8-25-P-A-MA	188 631	DSEU-10-25-P-A-MA	188 637	DSEU-12-25-P-A-MA
40	188 625	DSEU-8-40-P-A-MA	188 632	DSEU-10-40-P-A-MA	188 638	DSEU-12-40-P-A-MA
50	188 626	DSEU-8-50-P-A-MA	188 633	DSEU-10-50-P-A-MA	188 639	DSEU-12-50-P-A-MA
80	188 627	DSEU-8-80-P-A-MA	188 634	DSEU-10-80-P-A-MA	188 640	DSEU-12-80-P-A-MA
100	188 628	DSEU-8-100-P-A-MA	188 635	DSEU-10-100-P-A-MA	188 641	DSEU-12-100-P-A-MA
125	–	–	–	–	188 642	DSEU-12-125-P-A-MA
160	–	–	–	–	188 643	DSEU-12-160-P-A-MA
200	–	–	–	–	188 644	DSEU-12-200-P-A-MA
250	–	–	–	–	–	–
320	–	–	–	–	–	–
Lateral air connection – MQ						
10	188 740	DSEU-8-10-P-A-MQ	188 747	DSEU-10-10-P-A-MQ	188 753	DSEU-12-10-P-A-MQ
25	188 741	DSEU-8-25-P-A-MQ	188 748	DSEU-10-25-P-A-MQ	188 754	DSEU-12-25-P-A-MQ
40	188 742	DSEU-8-40-P-A-MQ	188 749	DSEU-10-40-P-A-MQ	188 755	DSEU-12-40-P-A-MQ
50	188 743	DSEU-8-50-P-A-MQ	188 750	DSEU-10-50-P-A-MQ	188 756	DSEU-12-50-P-A-MQ
80	188 744	DSEU-8-80-P-A-MQ	188 751	DSEU-10-80-P-A-MQ	188 757	DSEU-12-80-P-A-MQ
100	188 745	DSEU-8-100-P-A-MQ	188 752	DSEU-10-100-P-A-MQ	188 758	DSEU-12-100-P-A-MQ
125	–	–	–	–	188 759	DSEU-12-125-P-A-MQ
160	–	–	–	–	188 760	DSEU-12-160-P-A-MQ
200	–	–	–	–	188 761	DSEU-12-200-P-A-MQ
250	–	–	–	–	–	–
320	–	–	–	–	–	–
<b>Single-acting cylinder</b>						
Basic version						
10	191 127	ESEU-8-10-P-A	191 133	ESEU-10-10-P-A	191 139	ESEU-12-10-P-A
25	191 128	ESEU-8-25-P-A	191 134	ESEU-10-25-P-A	191 140	ESEU-12-25-P-A
50	191 129	ESEU-8-50-P-A	191 135	ESEU-10-50-P-A	191 141	ESEU-12-50-P-A
Axial air connection – MA						
10	191 130	ESEU-8-10-P-A-MA	191 136	ESEU-10-10-P-A-MA	191 142	ESEU-12-10-P-A-MA
25	191 131	ESEU-8-25-P-A-MA	191 137	ESEU-10-25-P-A-MA	191 143	ESEU-12-25-P-A-MA
50	191 132	ESEU-8-50-P-A-MA	191 138	ESEU-10-50-P-A-MA	191 144	ESEU-12-50-P-A-MA


 Type discontinued  
Available up until 2011

FESTO

## Round cylinders DSEU/ESEU

Technical data

Ordering data						
Stroke [mm]	Piston Ø 16 [mm]		Piston Ø 20 [mm]		Piston Ø 25 [mm]	
	Part No.	Type	Part No.	Type	Part No.	Type
<b>Double-acting cylinder</b>						
Basic version						
10	188 794	DSEU-16-10-P-A	188 560	DSEU-20-10-P-A	188 572	DSEU-25-10-P-A
25	188 795	DSEU-16-25-P-A	188 561	DSEU-20-25-P-A	188 573	DSEU-25-25-P-A
40	188 796	DSEU-16-40-P-A	188 562	DSEU-20-40-P-A	188 574	DSEU-25-40-P-A
50	188 797	DSEU-16-50-P-A	188 563	DSEU-20-50-P-A	188 575	DSEU-25-50-P-A
80	188 798	DSEU-16-80-P-A	188 564	DSEU-20-80-P-A	188 576	DSEU-25-80-P-A
100	188 799	DSEU-16-100-P-A	188 565	DSEU-20-100-P-A	188 577	DSEU-25-100-P-A
125	188 800	DSEU-16-125-P-A	188 566	DSEU-20-125-P-A	188 578	DSEU-25-125-P-A
160	188 801	DSEU-16-160-P-A	188 567	DSEU-20-160-P-A	188 579	DSEU-25-160-P-A
200	188 802	DSEU-16-200-P-A	188 568	DSEU-20-200-P-A	188 580	DSEU-25-200-P-A
250	–		188 569	DSEU-20-250-P-A	188 581	DSEU-25-250-P-A
320	–		188 570	DSEU-20-320-P-A	188 582	DSEU-25-320-P-A
Axial air connection – MA						
10	188 645	DSEU-16-10-P-A-MA	188 654	DSEU-20-10-P-A-MA	188 666	DSEU-25-10-P-A-MA
25	188 646	DSEU-16-25-P-A-MA	188 655	DSEU-20-25-P-A-MA	188 667	DSEU-25-25-P-A-MA
40	188 647	DSEU-16-40-P-A-MA	188 656	DSEU-20-40-P-A-MA	188 668	DSEU-25-40-P-A-MA
50	188 648	DSEU-16-50-P-A-MA	188 657	DSEU-20-50-P-A-MA	188 669	DSEU-25-50-P-A-MA
80	188 649	DSEU-16-80-P-A-MA	188 658	DSEU-20-80-P-A-MA	188 670	DSEU-25-80-P-A-MA
100	188 650	DSEU-16-100-P-A-MA	188 659	DSEU-20-100-P-A-MA	188 671	DSEU-25-100-P-A-MA
125	188 651	DSEU-16-125-P-A-MA	188 660	DSEU-20-125-P-A-MA	188 672	DSEU-25-125-P-A-MA
160	188 652	DSEU-16-160-P-A-MA	188 661	DSEU-20-160-P-A-MA	188 673	DSEU-25-160-P-A-MA
200	188 653	DSEU-16-200-P-A-MA	188 662	DSEU-20-200-P-A-MA	188 674	DSEU-25-200-P-A-MA
250	–		188 663	DSEU-20-250-P-A-MA	188 675	DSEU-25-250-P-A-MA
320	–		188 664	DSEU-20-320-P-A-MA	188 676	DSEU-25-320-P-A-MA
Lateral air connection – MQ						
10	188 762	DSEU-16-10-P-A-MQ	188 697	DSEU-20-10-P-A-MQ	188 709	DSEU-25-10-P-A-MQ
25	188 763	DSEU-16-25-P-A-MQ	188 698	DSEU-20-25-P-A-MQ	188 710	DSEU-25-25-P-A-MQ
40	188 764	DSEU-16-40-P-A-MQ	188 699	DSEU-20-40-P-A-MQ	188 711	DSEU-25-40-P-A-MQ
50	188 765	DSEU-16-50-P-A-MQ	188 700	DSEU-20-50-P-A-MQ	188 712	DSEU-25-50-P-A-MQ
80	188 766	DSEU-16-80-P-A-MQ	188 701	DSEU-20-80-P-A-MQ	188 713	DSEU-25-80-P-A-MQ
100	188 767	DSEU-16-100-P-A-MQ	188 702	DSEU-20-100-P-A-MQ	188 714	DSEU-25-100-P-A-MQ
125	188 768	DSEU-16-125-P-A-MQ	188 703	DSEU-20-125-P-A-MQ	188 715	DSEU-25-125-P-A-MQ
160	188 769	DSEU-16-160-P-A-MQ	188 704	DSEU-20-160-P-A-MQ	188 716	DSEU-25-160-P-A-MQ
200	188 770	DSEU-16-200-P-A-MQ	188 705	DSEU-20-200-P-A-MQ	188 717	DSEU-25-200-P-A-MQ
250	–		188 706	DSEU-20-250-P-A-MQ	188 718	DSEU-25-250-P-A-MQ
320	–		188 707	DSEU-20-320-P-A-MQ	188 719	DSEU-25-320-P-A-MQ
<b>Single-acting cylinder</b>						
Basic version						
10	191 145	ESEU-16-10-P-A	191 151	ESEU-20-10-P-A	191 157	ESEU-25-10-P-A
25	191 146	ESEU-16-25-P-A	191 152	ESEU-20-25-P-A	191 158	ESEU-25-25-P-A
50	191 147	ESEU-16-50-P-A	191 153	ESEU-20-50-P-A	191 159	ESEU-25-50-P-A
Axial air connection – MA						
10	191 148	ESEU-16-10-P-A-MA	191 154	ESEU-20-10-P-A-MA	191 160	ESEU-25-10-P-A-MA
25	191 149	ESEU-16-25-P-A-MA	191 155	ESEU-20-25-P-A-MA	191 161	ESEU-25-25-P-A-MA
50	191 150	ESEU-16-50-P-A-MA	191 156	ESEU-20-50-P-A-MA	191 162	ESEU-25-50-P-A-MA

 Type discontinued  
Available up until 2011

## Round cylinders DSEU/ESEU

Technical data

FESTO

Ordering data								
Stroke [mm]	Piston Ø 32 [mm]		Piston Ø 40 [mm]		Piston Ø 50 [mm]		Piston Ø 63 [mm]	
	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type
<b>Double-acting cylinder</b>								
Basic version								
10	–		–		–		–	
25	188 583	DSEU-32-25-P-A	188 593	DSEU-40-25-P-A	188 603	DSEU-50-25-P-A	188 613	DSEU-63-25-P-A
40	188 584	DSEU-32-40-P-A	188 594	DSEU-40-40-P-A	188 604	DSEU-50-40-P-A	188 614	DSEU-63-40-P-A
50	188 585	DSEU-32-50-P-A	188 595	DSEU-40-50-P-A	188 605	DSEU-50-50-P-A	188 615	DSEU-63-50-P-A
80	188 586	DSEU-32-80-P-A	188 596	DSEU-40-80-P-A	188 606	DSEU-50-80-P-A	188 616	DSEU-63-80-P-A
100	188 587	DSEU-32-100-P-A	188 597	DSEU-40-100-P-A	188 607	DSEU-50-100-P-A	188 617	DSEU-63-100-P-A
125	188 588	DSEU-32-125-P-A	188 598	DSEU-40-125-P-A	188 608	DSEU-50-125-P-A	188 618	DSEU-63-125-P-A
160	188 589	DSEU-32-160-P-A	188 599	DSEU-40-160-P-A	188 609	DSEU-50-160-P-A	188 619	DSEU-63-160-P-A
200	188 590	DSEU-32-200-P-A	188 600	DSEU-40-200-P-A	188 610	DSEU-50-200-P-A	188 620	DSEU-63-200-P-A
250	188 591	DSEU-32-250-P-A	188 601	DSEU-40-250-P-A	188 611	DSEU-50-250-P-A	188 621	DSEU-63-250-P-A
320	188 592	DSEU-32-320-P-A	188 602	DSEU-40-320-P-A	188 612	DSEU-50-320-P-A	188 622	DSEU-63-320-P-A
<b>Axial air connection – MA</b>								
10	–		–		–		–	
25	188 677	DSEU-32-25-P-A-MA	188 687	DSEU-40-25-P-A-MA				
40	188 678	DSEU-32-40-P-A-MA	188 688	DSEU-40-40-P-A-MA				
50	188 679	DSEU-32-50-P-A-MA	188 689	DSEU-40-50-P-A-MA				
80	188 680	DSEU-32-80-P-A-MA	188 690	DSEU-40-80-P-A-MA				
100	188 681	DSEU-32-100-P-A-MA	188 691	DSEU-40-100-P-A-MA				
125	188 682	DSEU-32-125-P-A-MA	188 692	DSEU-40-125-P-A-MA				
160	188 683	DSEU-32-160-P-A-MA	188 693	DSEU-40-160-P-A-MA				
200	188 684	DSEU-32-200-P-A-MA	188 694	DSEU-40-200-P-A-MA				
250	188 685	DSEU-32-250-P-A-MA	188 695	DSEU-40-250-P-A-MA				
320	188 686	DSEU-32-320-P-A-MA	188 696	DSEU-40-320-P-A-MA				
<b>Lateral air connection – MQ</b>								
10	–		–		–		–	
25	188 720	DSEU-32-25-P-A-MQ	188 730	DSEU-40-25-P-A-MQ				
40	188 721	DSEU-32-40-P-A-MQ	188 731	DSEU-40-40-P-A-MQ				
50	188 722	DSEU-32-50-P-A-MQ	188 732	DSEU-40-50-P-A-MQ				
80	188 723	DSEU-32-80-P-A-MQ	188 733	DSEU-40-80-P-A-MQ				
100	188 724	DSEU-32-100-P-A-MQ	188 734	DSEU-40-100-P-A-MQ				
125	188 725	DSEU-32-125-P-A-MQ	188 735	DSEU-40-125-P-A-MQ				
160	188 726	DSEU-32-160-P-A-MQ	188 736	DSEU-40-160-P-A-MQ				
200	188 727	DSEU-32-200-P-A-MQ	188 737	DSEU-40-200-P-A-MQ				
250	188 728	DSEU-32-250-P-A-MQ	188 738	DSEU-40-250-P-A-MQ				
320	188 729	DSEU-32-320-P-A-MQ	188 739	DSEU-40-320-P-A-MQ				
<b>Single-acting cylinder</b>								
Basic version								
10	191 163	ESEU-32-10-P-A	191 169	ESEU-40-10-P-A	–		–	
25	191 164	ESEU-32-25-P-A	191 170	ESEU-40-25-P-A				
50	191 165	ESEU-32-50-P-A	191 171	ESEU-40-50-P-A				
<b>Axial air connection – MA</b>								
10	191 166	ESEU-32-10-P-A-MA	191 172	ESEU-40-10-P-A-MA	–		–	
25	191 167	ESEU-32-25-P-A-MA	191 173	ESEU-40-25-P-A-MA				
50	191 168	ESEU-32-50-P-A-MA	191 174	ESEU-40-50-P-A-MA				



## Round cylinders DSEU/ESEU

Accessories

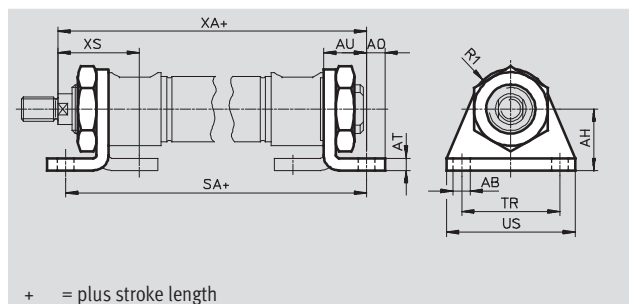
### Foot mounting HBE

for piston  $\varnothing$  8 ... 40 mm

Material:

Galvanised steel

Free of copper, PTFE and silicone



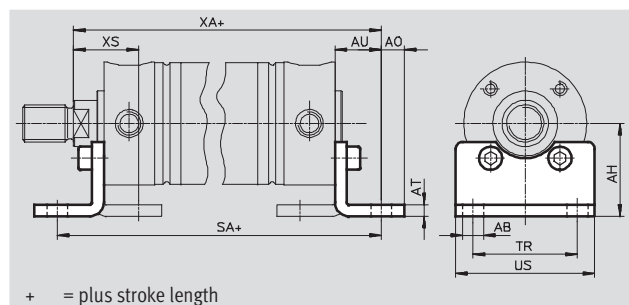
### Foot mounting HBE

for piston  $\varnothing$  50/63 mm

Material:

Galvanised steel

Free of copper, PTFE and silicone



Dimensions and ordering data														Part No.	Type	
For $\varnothing$	AB $\varnothing$	AH	AO	AT	AU	R1	SA		TR	US	XA		XS			CRC <sup>1)</sup>
[mm]							ESEU	DSEU			ESEU	DSEU				
8	3.4	15	4	2.5	8	9	63	51.5	16	24	63.5	52	13.5	2	188 987	HBE-8/10
10	3.4	15	4	2.5	8	9	66	58.5	16	24	68.5	61	15.5	2	188 987	HBE-8/10
12	4.5	16	5	3	11	10	75	66.5	25	35	76	67.5	19.5	2	188 988	HBE-12/16
16	4.5	16	5	3	11	10	86	71	25	35	89	74	21.5	2	188 988	HBE-12/16
20	5.5	20	6	4	14	13	102.5	88.5	32	42	104	90	26	2	188 989	HBE-20
25	5.5	25	6	4	14	15	106	89.5	30	42	109	92.5	27	2	188 990	HBE-25
32	6.6	25	8	5	17	20	105	101	40	54	109	105	33	2	188 991	HBE-32
40	6.6	35	8	4	17	23	121.5	105.5	45	60	126	110	35	2	188 992	HBE-40
50	9	40	10	5	20	-	-	121.5	45	60	-	114	27	2	188 993	HBE-50/63
63	9	40	10	5	20	-	-	127.5	45	60	-	119.5	27	2	188 993	HBE-50/63

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

- 1 - Type discontinued  
Available up until 2011

## Round cylinders DSEU/ESEU

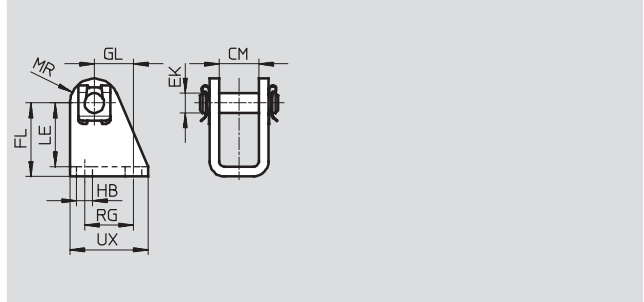
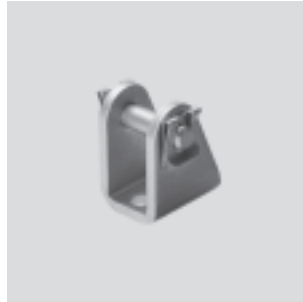
Accessories

FESTO

### Clevis foot mounting LBN

for piston  $\varnothing$  8 ... 25 mm

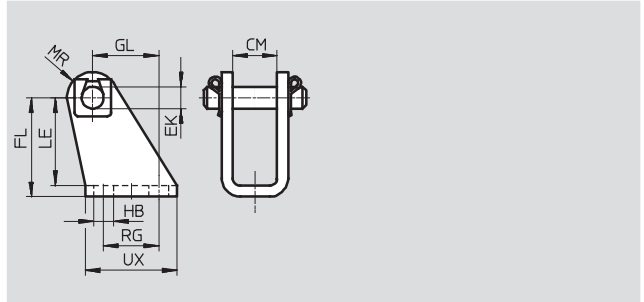
Material:  
Galvanised steel  
Free of copper, PTFE and silicone



### Clevis foot mounting LBE

for piston  $\varnothing$  32/40 mm

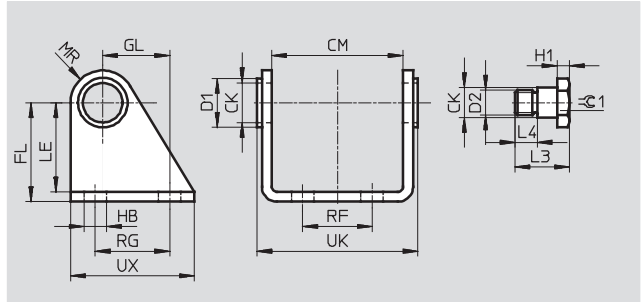
Material:  
Galvanised steel  
Free of copper, PTFE and silicone



### Clevis foot mounting LBE

for piston  $\varnothing$  50/63 mm

Material:  
Galvanised steel  
Free of copper, PTFE and silicone



### Dimensions and ordering data

For $\varnothing$ [mm]	CK $\varnothing$	CM	D1 $\varnothing$	D2	EK $\varnothing$	FL	GL	H1	HB $\varnothing$	L3	L4 $\pm 0.1$
8 ... 16	-	8.1	-	-	4	24 +0.3/-0.2	13.8	-	4.5	-	-
20/25	-	12.1	-	-	6	27 +0.3/-0.2	13	-	5.5	-	-
32/40	-	16.1	-	-	10	34 +0.4/-0.2	16	-	6.6	-	-
50	12	53.1	20	M10x1	-	40 +0.4/-0.2	27	5	9	22	9
63	14	66.1	23	M12x1.5	-	45 +0.4/-0.2	30	6	9	27.5	12

For $\varnothing$ [mm]	LE	MR	RF	RG $\pm 0.2$	UK	UX	$\approx \varnothing 1$	CRC <sup>1)</sup>	Part No.	Type
8 ... 16	21.5	5	-	12.5	-	20	-	2	6 057	LBN-8/10
20/25	24	7	-	15	-	25	-	2	6 058	LBN-12/16
32/40	30	11	-	20	-	34	-	2	188 994	LBE-32/40
50	36	13	28	30	65.1	50	17	2	188 995	LBE-50
63	40	14	36	34	81.1	54	19	2	188 996	LBE-63

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

## Round cylinders DSEU/ESEU

Accessories

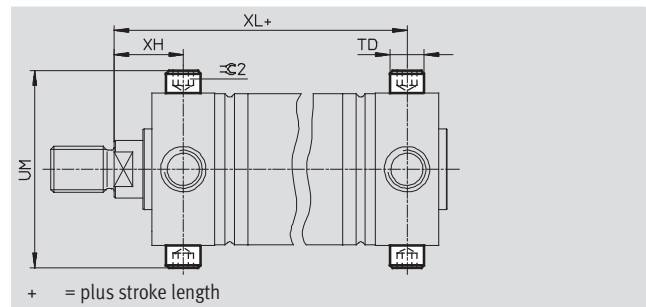
### Pivot pin GBS

for swivel mounting of drives with appropriate design

Material:

Case-hardened steel

Free of copper, PTFE and silicone



Dimensions and ordering data									
For $\varnothing$	TD	UM	XH	XL	$\approx$ C2	CRC <sup>1)</sup>	Weight	Part No.	Type
[mm]	$\varnothing$ f8						[g]		
50	12	68.5	23	83	6	2	20	9 237	GBS-40
63	14	85	25	86.5	6	2	40	9 238	GBS-50

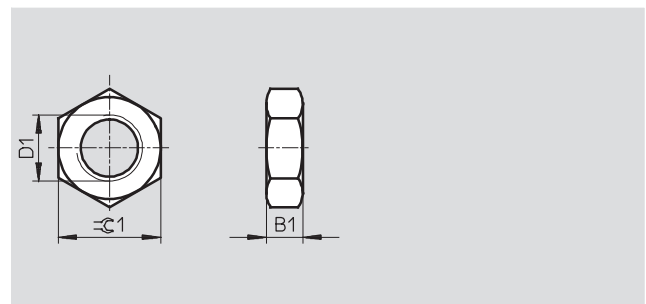
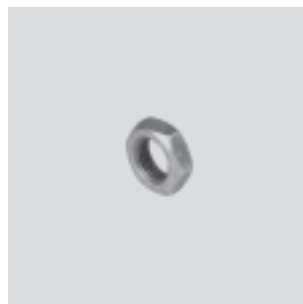
1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

### Hex nut MSK

Material:

Galvanised steel



Dimensions and ordering data										
For $\varnothing$	D1	B1	$\approx$ C1	Conforms to DIN EN ISO 8675	Based on DIN EN ISO 8675	CRC <sup>1)</sup>	Weight	Part No.	Type	PU <sup>2)</sup>
[mm]							[g]			
Piston rod nut										
25/32	M10x1.25	5	17	–	■	2	7	189 005	MSK-M10x1,25	10
40	M12x1.25	6	19	–	■	2	9	189 006	MSK-M12x1,25	10
50/63	M16x1.5	8	24	■	–	2	18	189 007	MSK-M16x1,5	10
Bearing cap nut										
8/10	M10x1	5	17	–	■	2	15	189 004	MSK-M10x1	10
12/16	M12x1.25	6	19	–	■	2	9	189 006	MSK-M12x1,25	10
20	M16x1.5	8	24	■	–	2	18	189 007	MSK-M16x1,5	10
25	M18x1.5	6	24	–	■	2	24	189 008	MSK-M18x1,5	1
32	M22x1.5	11	32	–	■	2	40	189 009	MSK-M22x1,5	1
40	M30x1.5	10.5	36	–	■	2	36	189 010	MSK-M30x1,5	1

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.


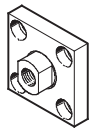



2) Packaging unit quantity

- 1 - Type discontinued  
Available up until 2011

## Round cylinders DSEU/ESEU

Accessories

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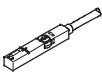
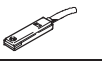
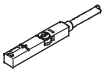
Ordering data – Piston rod attachments				Technical data → Internet: piston-rod attachment			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
<b>Rod eye SGS</b>				<b>Coupling piece KSG</b>			
	8	9 253	SGS-M4		8	-	-
	10				10		
	12	9 254	SGS-M6		12		
	16				16		
	20	9 255	SGS-M8		20		
	25	9 261	SGS-M10x1,25		25	32 963	KSG-M10x1,25
	32				32		
	40	9 262	SGS-M12x1,25		40	32 964	KSG-M12x1,25
	50	9 263	SGS-M16x1,5		50	32 965	KSG-M16x1,5
	63				63		
<b>Rod clevis SGA</b>				<b>Rod clevis SG</b>			
	8	-			8	6 532	SG-M4
	10				10		
	12				12	3 110	SG-M6
	16				16		
	20				20	3 111	SG-M8
	25	32 954	SGA-M10x1,25		25	6 144	SG-M10x1,25
	32				32		
	40	10 767	SGA-M12x1,25		40	6 145	SG-M12x1,25
	50	10 768	SGA-M16x1,5		50	6 146	SG-M16x1,5
	63				63		
<b>Self-aligning rod coupler FK</b>							
	8	6 528	FK-M4				
	10						
	12	2 061	FK-M6				
	16						
	20	2 062	FK-M8				
	25	6 140	FK-M10x1,25				
	32						
	40	6 141	FK-M12x1,25				
	50	6 142	FK-M16x1,5				
	63						

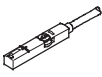
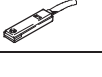

 Type discontinued  
Available up until 2011


## Round cylinders DSEU/ESEU

Accessories

**FESTO**

Ordering data – Proximity sensors for T-slot, magneto-resistive						Technical data → Internet: smt	
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type	
<b>N/O contact</b>							
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	2.5	543 867	SMT-8M-PS-24V-K-2,5-OE	
			Plug M8x1, 3-pin	0.3	543 866	SMT-8M-PS-24V-K-0,3-M8D	
			Plug M12x1, 3-pin	0.3	543 869	SMT-8M-PS-24V-K-0,3-M12	
		NPN	Cable, 3-wire	2.5	543 870	SMT-8M-NS-24V-K-2,5-OE	
Plug M8x1, 3-pin	0.3		543 871	SMT-8M-NS-24V-K-0,3-M8D			
	Insertable in the slot lengthwise, flush with the cylinder profile	PNP	Cable, 3-wire	2.5	175 436	SMT-8-PS-K-LED-24-B	
			Plug M8x1, 3-pin	0.3	175 484	SMT-8-PS-S-LED-24-B	
<b>N/C contact</b>							
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	7.5	543 873	SMT-8M-PO-24V-K7,5-OE	

Ordering data – Proximity sensors for T-slot, magnetic reed						Technical data → Internet: sme		
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type		
<b>N/O contact</b>								
	Insertable in the slot from above, flush with cylinder profile	Contacting	Cable, 3-wire	2.5	543 862	SME-8M-DS-24V-K-2,5-OE		
				5.0	543 863	SME-8M-DS-24V-K-5,0-OE		
			Plug M8x1, 3-pin	Cable, 3-wire	2.5	543 872	SME-8M-ZS-24V-K-2,5-OE	
				0.3	543 861	SME-8M-DS-24V-K-0,3-M8D		
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	150 855	SME-8-K-LED-24		
			Plug M8x1, 3-pin	0.3	150 857	SME-8-S-LED-24		
<b>N/C contact</b>								
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	160 251	SME-8-O-K-LED-24		


Ordering data – Mounting kits for proximity sensors SME/SMT-8				Technical data → Internet: smbr	
Designation	For Ø	Mounting		Part No.	Type
	8	Directly on the cylinder barrel		175 091	SMBR-8-8
	10		175 092	SMBR-8-10	
	12		175 093	SMBR-8-12	
	16		175 094	SMBR-8-16	
	20		175 095	SMBR-8-20	
	25		175 096	SMBR-8-25	
	32		175 097	SMBR-8-32	
	40		175 098	SMBR-8-40	
	50		175 099	SMBR-8-50	
	63		175 100	SMBR-8-63	



**- 1 - Type discontinued**  
**Available up until 2011**

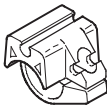
## Round cylinders DSEU/ESEU

Accessories

**FESTO**


Ordering data – Proximity sensors for C-slot, magneto-resistive						Technical data → Internet: smt
	Type of mounting	Switch output	Electrical connection, connection direction	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above	PNP	Cable, 3-wire, in-line	2.5	551 373	SMT-10M-PS-24V-E-2,5-L-OE
			Plug M8x1, 3-pin, in-line	0.3	551 375	SMT-10M-PS-24V-E-0,3-L-M8D
			Plug M8x1, 3-pin, lateral	0.3	551 376	SMT-10M-PS-24V-E-0,3-Q-M8D


Ordering data – Proximity sensors for C-slot, magnetic reed						Technical data → Internet: sme
	Type of mounting	Switch output	Electrical connection, connection direction	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above	Contacting	Plug M8x1, 3-pin, in-line	0.3	551 367	SME-10M-DS-24V-E-0,3-L-M8D
			Cable, 3-wire, in-line	2.5	551 365	SME-10M-DS-24V-E-2,5-L-OE
			Cable, 2-wire, in-line	2.5	551 369	SME-10M-ZS-24V-E-2,5-L-OE
	Insertable in the slot lengthwise	Contacting	Plug M8x1, 3-pin, in-line	0.3	173 212	SME-10-SL-LED-24
			Cable, 3-wire, in-line	2.5	173 210	SME-10-KL-LED-24


Ordering data – Mounting kit for proximity sensors SME/SMT-10				Technical data → Internet: smbr	
Designation	For Ø	Mounting		Part No.	Type
	8	Directly on the cylinder barrel		175 101	SMBR-10-8
	10		173 227	SMBR-10-10	
	12		175 102	SMBR-10-12	
	16		173 228	SMBR-10-16	
	20		175 103	SMBR-10-20	
	25		175 104	SMBR-10-25	
	32		175 105	SMBR-10-32	
	40		175 106	SMBR-10-40	
	50		175 107	SMBR-10-50	
	63		175 108	SMBR-10-63	



## Round cylinders DSEU/ESEU

Accessories

Ordering data – Proximity sensors, u-shaped design, magneto-resistive							Technical data → Internet: smto	
	Mounting	Switch output	Electrical connection		Cable length [m]	Connection direction	Part No.	Type
			Cables	M8 plug				
NO contact								
	Via accessories	PNP	3-wire	–	2.5	In-line	152 836	SMTO-4U-PS-K-LED-24
			–	3-pin	–	In-line	152 742	SMTO-4U-PS-S-LED-24
		NPN	3-wire	–	2.5	In-line	152 837	SMTO-4U-NS-K-LED-24
			–	3-pin	–	In-line	152 743	SMTO-4U-NS-S-LED-24

Ordering data – Proximity sensors, u-shaped design, magnetic reed							Technical data → Internet: smeo	
	Mounting	Electrical connection		Cable length [m]	Connection direction	Part No.	Type	
		Cables	M8 plug					
NO contact								
	Via accessories	3-wire	–	2.5	In-line	36 198	SMEO-4U-K-LED-24	
			5	In-line	175 401	SMEO-4U-K5-LED-24		
		–	3-pin	–	In-line	151 526	SMEO-4U-S-LED-24-B	

Ordering data – Mounting kits for proximity sensors SMEO/SMTO-4				Technical data → Internet: smbr	
	for Ø	Mounting	Part No.	Type	
	8	Directly on the cylinder barrel	19 272	SMBR-8	
	10		19 273	SMBR-10	
	12		19 274	SMBR-12	
	16		19 275	SMBR-16	
	20		19 276	SMBR-20	
	25		19 277	SMBR-25	
	Acid and corrosion-resistant				
	32	Directly on the cylinder barrel	163 888	CRSMBR-32	
	40		163 889	CRSMBR-40	
	50		163 890	CRSMBR-50	
	63		163 891	CRSMBR-63	


Ordering data – Connecting cables					Technical data → Internet: nebu	
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type	
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541 333	NEBU-M8G3-K-2.5-LE3	
			5	541 334	NEBU-M8G3-K-5-LE3	
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541 363	NEBU-M12G5-K-2.5-LE3	
			5	541 364	NEBU-M12G5-K-5-LE3	
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541 338	NEBU-M8W3-K-2.5-LE3	
			5	541 341	NEBU-M8W3-K-5-LE3	
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541 367	NEBU-M12W5-K-2.5-LE3	
			5	541 370	NEBU-M12W5-K-5-LE3	

- 1 - Type discontinued  
Available up until 2011



## Round cylinders DSEU/ESEU

Accessories

FESTO

Ordering data – Rectangular proximity sensors, pneumatic			Technical data → Internet: smpo	
	Mounting	Pneumatic connection	Part No.	Type
3/2-way valve, normally closed				
	Via accessories	Barbed fitting for tubing ID of 3 mm	31 008	SMPO-1-H-B

Ordering data – Mounting kits for proximity sensor SMPO-1			Technical data → Internet: smbs	
	For Ø	Mounting	Part No.	Type
	8 ... 25 mm	On the cylinder profile barrel via clamping strap	151 225	SMBS-1
	32 ... 63 mm		151 226	SMBS-2

Ordering data – One-way flow control valves				Technical data → Internet: grl	
	Connection		Material	Part No.	Type
	Thread	for tubing OD			
For exhaust air					
	M5	3	Metal design	193 137	GRLA-M5-QS-3-D
		4		193 138	GRLA-M5-QS-4-D
	G1/8	4		193 143	GRLA-1/8-QS-4-D
		6		193 144	GRLA-1/8-QS-6-D
For supply air					
	M5	3	Metal design	193 153	GRLZ-M5-QS-3-D
		4		193 154	GRLZ-M5-QS-4-D
	G1/8	4		193 157	GRLZ-1/8-QS-4-D
		6		193 158	GRLZ-1/8-QS-6-D