



- Reacts quickly thanks to minimal break-away force
- Meets the highest requirements for running characteristics, service life and load carrying ability
- Extensive range of accessories

# Round cylinders DSNU/ESNU

Key features

FESTO

## At a glance

- Round cylinders with piston diameter from 32 to 63 mm
- The series is not repairable
- Piston rod and cylinder barrel made of stainless steel
- The cap is roller burnished onto the barrel
- Good running performance and long service life thanks to smooth, hard inner surface of cylinder barrel
- Three cushioning variants available
  - P cushioning
  - PPV cushioning
  - PPS cushioning

## Wide choice of variants

### DSNU-...

- Cylinder barrel made from stainless steel
- Bearing and end caps made from wrought aluminium alloy



### DSNU/ESNU-...MA

- Bearing cap with flange thread
- Short end cap with axial air connection



### DSNU-...MQ

- Bearing cap with flange thread
- Short end cap with lateral air connection



### DSNU-...MH

- Direct mounting on the bearing cap
- Short end cap with lateral air connection



### DSNU-...KP

- With clamping unit





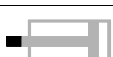







## Cushioning types

	P cushioning	PPS cushioning	PPV cushioning
<b>Mode of operation</b>	<ul style="list-style-type: none"> <li>• The drive is equipped with polymer flexible end position cushioning</li> </ul>	<ul style="list-style-type: none"> <li>• The drive is equipped with self-adjusting end position cushioning</li> </ul>	<ul style="list-style-type: none"> <li>• The drive is equipped with adjustable end position cushioning</li> </ul>
<b>Application</b>	<ul style="list-style-type: none"> <li>• Small loads</li> <li>• Low speeds</li> <li>• Low impact energies</li> </ul>	<ul style="list-style-type: none"> <li>• Small to medium loads</li> <li>• Low to medium speeds</li> <li>• Medium impact energies</li> </ul>	<ul style="list-style-type: none"> <li>• Medium to high loads</li> <li>• High speeds</li> <li>• High impact energies</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>• No adjustment required</li> <li>• Time-saving</li> </ul>	<ul style="list-style-type: none"> <li>• No adjustment required</li> <li>• Time-saving</li> <li>• Powerful</li> </ul>	<ul style="list-style-type: none"> <li>• Very powerful</li> </ul>

# Round cylinders DSNU/ESNU

Key features

Additional variants		
Symbol	Key features	Description
	S2 Through piston rod	For working at both ends with the same force in the forward and return stroke, for attaching external stops
	S6 Heat-resistant seals	Temperature resistance up to max. 120 °C
	S10 Constant motion (slow speed) at low piston speeds	Suitable for slow stroke movements at a constant, stick-slip-free speed over the full stroke of the cylinder. Seal contains silicone grease (not free of paint-wetting impairment substances)
	S11 Low friction	Special seals considerably reduce friction. This means a considerably lower response pressure. Seal contains silicone grease (not free of paint-wetting impairment substances)
	K2 Extended male piston rod thread	–
	K3 Female piston rod thread	–
	K5 Special piston rod thread	Metric standard thread to ISO
	K6 Shortened male piston rod thread	–
	K8 Extended piston rod	–
	R3 High corrosion protection	All external cylinder surfaces comply with corrosion resistance class 3 to Festo standard 940 070. The piston rod is made from corrosion and acid-resistant steel

## Longer service life thanks to the bellows kit DADB



The bellows kit is a leak-free system. To prevent unwanted media being drawn in, the supply and exhaust air must be ducted via a pressure compensation hole in the connection part **1**.

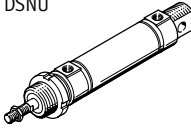
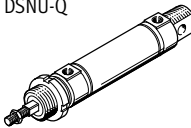
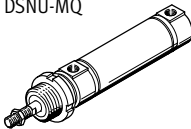
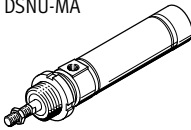
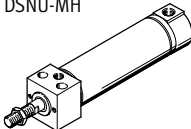
The kit protects the piston rod, seal and bearings from a wide range of media, for example:

- dust,
- chips,
- oil,
- grease,
- fuel.

# Round cylinders DSNU

Product range overview

FESTO

Function	Version	Piston Ø [mm]	Stroke [mm]	Variable stroke <sup>1)</sup> [mm]	Piston rod						
					Through S2	Extended K8	Male thread			Female thread K3	
							Extended K2	Shortened K6	Special thread K5		
Double- acting	<b>Basic version with position sensing</b>										
	DSNU	 32, 40, 50, 63	25, 40, 50, 80, 100, 125, 160, 200, 250, 320	1 ... 500	■	■	■	■	■	■	
	DSNU – Standard cylinder with piston Ø 8 ... 25										
	<b>Protected against rotation</b>										
	DSNU-Q	 32	–	5 ... 300	–	–	–	–	–	–	
		40, 50	–	5 ... 400	■	■	■	■	■	■	
		63	–	5 ... 500	–	–	–	–	–	–	
	DSNU-Q – Standard cylinder with piston Ø 8 ... 25										
	<b>Lateral air connection</b>										
	DSNU-MQ	 32, 40, 50, 63	–	1 ... 500	–	■	■	■	■	■	
DSNU-MQ – Standard cylinder with piston Ø 8 ... 25											
<b>Axial air connection</b>											
DSNU-MA	 32, 40, 50, 63	–	1 ... 500	–	■	■	■	■	■		
DSNU-MA – Standard cylinder with piston Ø 8 ... 25											
<b>Direct mounting</b>											
DSNU-MH	 32, 40, 50, 63	–	1 ... 500	–	■	■	■	■	■		
DSNU-MH – Standard cylinder with piston Ø 8 ... 25											

1) Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing

# Round cylinders DSNU

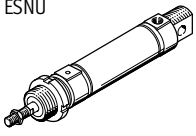
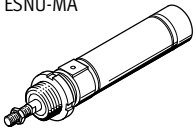
Product range overview

Version	Cushioning			Position sensing	Clamping unit	Heat-resistant seal	Slow speed (constant motion)	Low friction	Corrosion protection	Wiper seal	→ Page/ Internet
	Fixed	Adjustable	Self-adjusting								
	P	PPV	PPS								
<b>Basic version with position sensing</b>											
DSNU	■	■	■	■	■	■	■	■	■	■	11
DSNU – Standard cylinder with piston Ø 8 ... 25											dsnu
<b>Protected against rotation</b>											
DSNU-Q	■	■	-	■	■	■	■	■	■	-	20
DSNU-Q – Standard cylinder with piston Ø 8 ... 25											dsnu
<b>Lateral air connection</b>											
DSNU-MQ	■	■	■	■	■	■	-	-	■	■	11
DSNU-MQ – Standard cylinder with piston Ø 8 ... 25											dsnu
<b>Axial air connection</b>											
DSNU-MA	■	-	-	■	■	■	-	-	■	-	11
DSNU-MA – Standard cylinder with piston Ø 8 ... 25											dsnu
<b>Direct mounting</b>											
DSNU-MH	■	■	-	■	-	■	-	-	■	-	11
DSNU-MH – Standard cylinder with piston Ø 8 ... 25											dsnu

# Round cylinders ESNU

Product range overview



Function	Version	Piston Ø [mm]	Stroke [mm]	Variable stroke <sup>1)</sup> [mm]	Fixed cushioning P	Position sensing A
Single-acting	<b>Basic version with position sensing</b>					
	ESNU 	32, 40, 50, 63	10, 25, 50	1 ... 50	■	■
	ESNU – Standard cylinder with piston Ø 8 ... 25					
	<b>Axial air connection</b>					
ESNU-MA 	32, 40, 50, 63	–	1 ... 50	■	■	
ESNU-MA – Standard cylinder with piston Ø 8 ... 25						

1) Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing

# Round cylinders ESNU

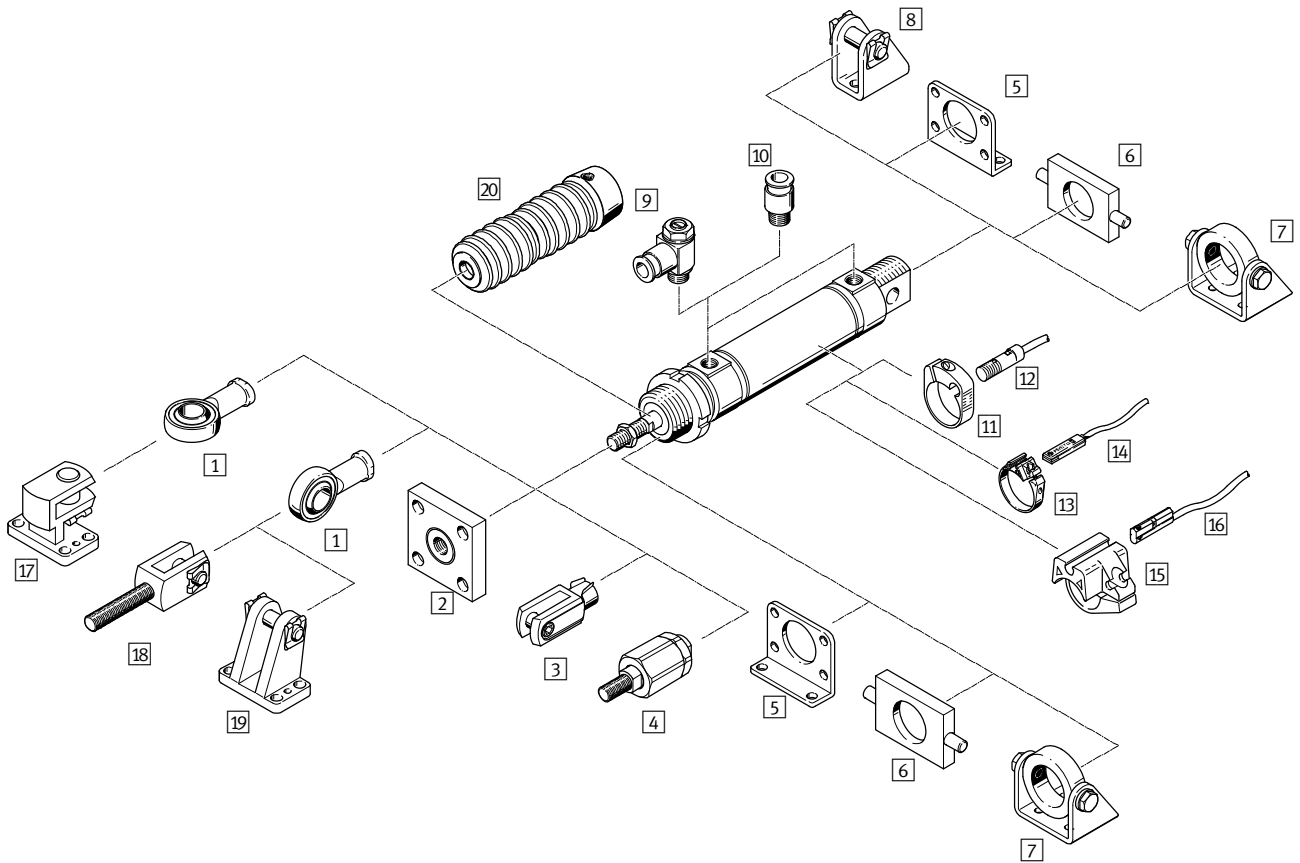
Product range overview



Version	Piston rod					→ Page/Internet
	Extended	Male thread			Female thread	
		Extended	Shortened	Special thread		
	K8	K2	K6	K5	K3	
<b>Basic version with position sensing</b>						
ESNU	■	■	■	■	■	32
ESNU – Standard cylinder with piston $\varnothing$ 8 ... 25						esnu
<b>Axial air connection</b>						
ESNU-MA	■	■	■	■	■	32
ESNU-MA – Standard cylinder with piston $\varnothing$ 8 ... 25						esnu

# Round cylinders DSNU/ESNU

Peripherals overview

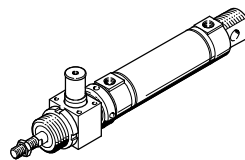
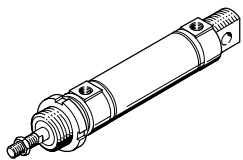
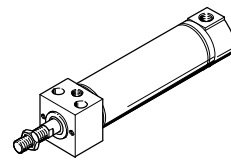
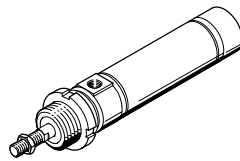
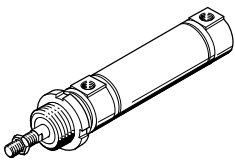


## Variants

DSNU-MQ

DSNU-MA

DSNU-MH

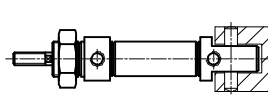
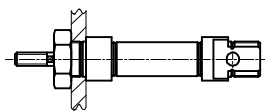
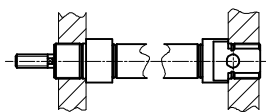


## Mounting options

Mounting front and rear

Mounting via hex nut

Swivel mounting

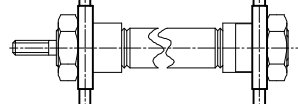
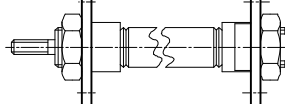
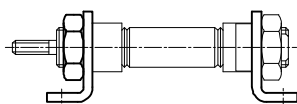
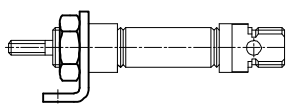


Foot mounting (for short strokes)

Foot mounting

Flange mounting

Swivel mounting





# Round cylinders DSNU/ESNU

Peripherals overview

Mounting attachments and accessories							
	DSNU/ESNU	DSNU/ESNU MA	DSNU MQ	MH	KP	DSNU-Q	→ Page/Internet
1	Rod eye SGS/CRSGS	■	■	■	■	■	41
2	Coupling piece KSG/KSZ	■	■	■	■	■	41
3	Rod clevis SG/CRSG	■	■	■	■	■	41
4	Self-aligning rod coupler FK/CRFK	■	■	■	■	■	41
5	Foot mounting HBN/CRH	■	■	■	-	■	38
	Flange mounting FBN/CRFV	■	■	■	-	■	38
6	Swivel mounting <sup>1)</sup> WBN	■	■	■	-	■	39
7	Swivel mounting <sup>1)</sup> SBN	■	■	■	-	■	39
8	Clevis foot LBN/CRLBN	■	-	-	-	■	40
9	One-way flow control valve GRLA/GRLZ/CRGRLA	■	■	■	■	■	41
10	Push-in fitting QS	■	■	■	■	■	quick star
11	Mounting kit CRSMBR	■	■	■	■	■	47
12	Proximity sensor SMEO/SMTO/CRSMEO-4	■	■	■	■	■	47
13	Mounting kit SMBR-8	■	■	■	■	■	48
14	Proximity sensor SME/SMT-8	■	■	■	■	■	48
15	Mounting kit SMBR-10	■	■	■	■	■	49
16	Proximity sensor SME/SMT-10	■	■	■	■	■	49
17	Right-angle clevis foot LQG	■	■	■	■	■	40
18	Rod clevis SGA	■	■	■	■	■	41
19	Clevis foot LBG	■	■	■	■	■	40
20	Bellows kit <sup>2)</sup> DADB	■	■	■	-	-	40

 Note

1) Cannot be used on the bearing cap in combination with bellows kit DADB.

2) The bellows kit protects the cylinder (piston rod, seal and bearings) against a wide range of media and thus prevents premature wear.

It can only be used in combination with an extended piston rod (K8).

# Round cylinders DSNU/ESNU

Type codes

FESTO

DSNU – 32 – 80 – PPV – A – MQ

## Type

Double-acting	
DSNU	Round cylinder
Single-acting	
ESNU	Round cylinder

## Piston Ø [mm]

## Stroke [mm]

## Cushioning

P	Flexible cushioning rings/pads at both ends
PPV	Pneumatic cushioning, adjustable at both ends
PPS	Pneumatic cushioning, self-adjusting at both ends

## Position sensing

A	Via proximity sensor
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## Variant

MQ	Lateral air connection
MA	Axial air connection
MH	With mounting flange on bearing cap

## Modular product system

Individually configurable

DSNU → 28

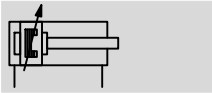
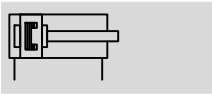
ESNU → 36


- Square piston rod (protection against rotation)
- Through piston rod (piston rod type)
- Extended male piston rod thread
- Male piston rod thread, shortened at one end
- Female piston rod thread (female thread)
- Special piston rod thread (special thread)
- Piston rod extended at front
- Clamping unit on the piston rod
- Heat-resistant seals for temperatures up to 120 °C (temperature resistance)
- Slow speed (constant motion at low piston rod speeds)
- Low friction
- ATEX certification II 2GD
- All external cylinder surfaces conform to corrosion resistance class CRC 3 (corrosion protection)
- Dust protection (wiper seal)


# Round cylinders DSNU

Technical data

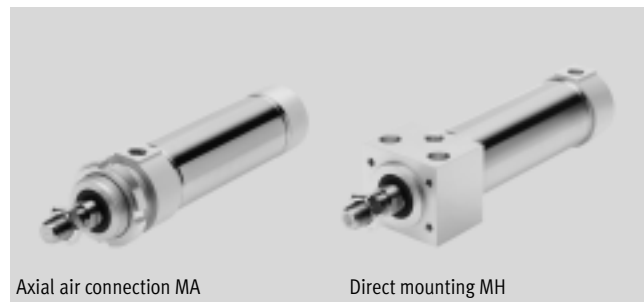
Function



-  - Diameter  
32 ... 63 mm

-  - Stroke length  
1 ... 500 mm

Variants  
→ 18



General technical data					
Piston Ø		32	40	50	63
Pneumatic connection		G1/8	G1/4	G1/4	G3/8
Piston rod thread		M10x1.25	M12x1.25	M16x1.5	M16x1.5
Constructional design		Piston			
		Piston rod			
		Cylinder barrel			
Cushioning	P	Flexible cushioning rings/pads at both ends			
	PPV	Adjustable cushioning at both ends			
	PPS	Self-adjusting cushioning at both ends			
Cushioning length	PPV	[mm] 14	18	20	21
	PPS	[mm] 14	18	20	21
Position sensing		Via proximity sensor			
Type of mounting		Direct mounting (MH variant only)			
		Via accessories			
Mounting position		Any			

Operating conditions					
Piston Ø		32	40	50	63
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [7:4:4]			
Note on operating/pilot medium		Operation with lubricated medium possible (in which case lubricated operation will always be required)			
Operating pressure [bar]	Basic version	1 ... 10			
	S10	0.5 ... 10		0.4 ... 10	
	S11	0.2 ... 10	-	0.2 ... 10	

# Round cylinders DSNU

Technical data

FESTO

Ambient conditions					
Round cylinder	Basic version	S6	S10	S11	R3
Ambient temperature <sup>1)</sup> [°C]	-20 ... +80	0 ... +120	+5 ... +80		-20 ... +80
Corrosion resistance class CRC <sup>2)</sup>	2	2	2	2	3

1) Note operating range of proximity sensors.

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

ATEX <sup>1)</sup>	
ATEX category for gas	II 2G
Explosion ignition protection type for gas	c T4
ATEX category for dust	II 2D
Explosion ignition protection type for dust	c 120°C
Explosion-proof temperature rating	-20°C ≤ Ta ≤ +60°C
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)

1) Make sure that the accessories are suited for ATEX application.

Speed [mm/s]					
Piston Ø		32	40	50	63
Speed with stick-slip-free operation, horizontal, without load, at 6 bar	S10	8 ... 100			5 ... 100
Minimum speed, advancing	S11	<1 <sup>1)</sup>			
Minimum speed, retracting	S11	<1 <sup>1)</sup>			

1) Measurements of less than 1 mm/s were not conducted.

Force [N] and impact energy [J]					
Piston Ø		32	40	50	63
Theoretical force at 6 bar, advancing		483	753	1178	1870
Theoretical force at 6 bar, retracting		415	633	990	1682
Impact energy at the end positions for P cushioning <sup>1)</sup>		0.40	0.70	1	1.3

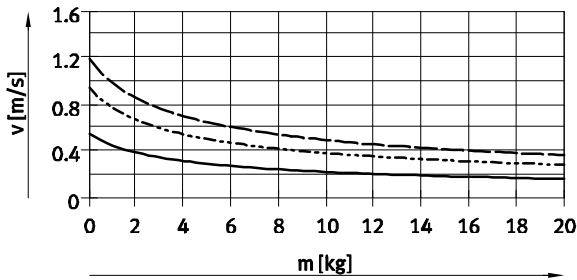
1) The values are reduced by approx. 50% at an ambient temperature of 80 °C.

# Round cylinders DSNU

Technical data

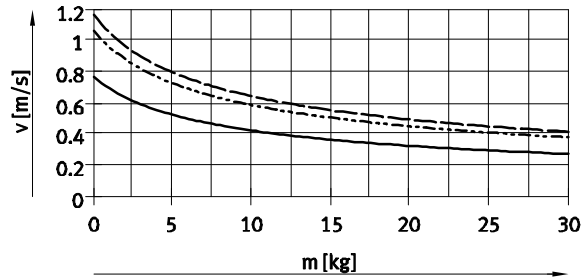
## Mean piston velocity $v$ as a function of applied load $m$ in combination with PPS cushioning

Piston  $\varnothing 32$



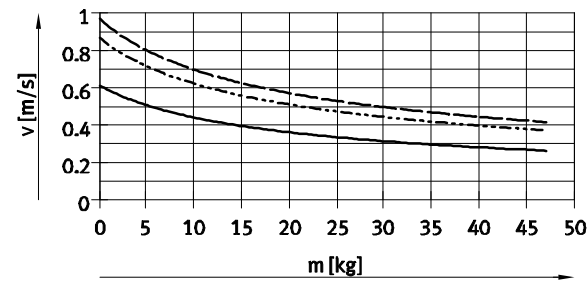
- DSNU-32-50
- - - DSNU-32-100
- · - DSNU-32-200

Piston  $\varnothing 40$



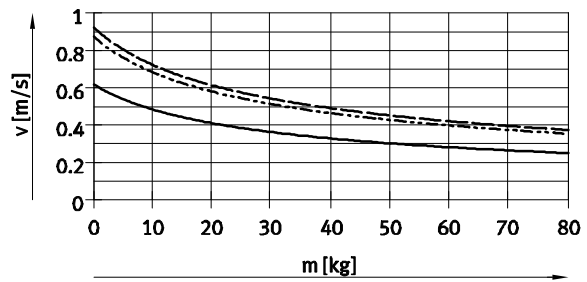
- DSNU-40-50
- - - DSNU-40-100
- · - DSNU-40-200

Piston  $\varnothing 50$



- DSNU-50-50
- - - DSNU-50-100
- · - DSNU-50-200

Piston  $\varnothing 63$



- DSNU-63-50
- - - DSNU-63-100
- · - DSNU-63-200

- · - Note  
Mean piston velocity  
= stroke/movement time

- · - Note

Design software for P cushioning → ProDrive	Additional graphs for PPS cushioning → <a href="http://www.festo.com">www.festo.com</a>	Design software for PPV cushioning → ProDrive
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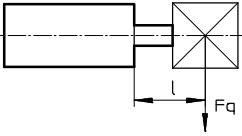
# Round cylinders DSNU

Technical data

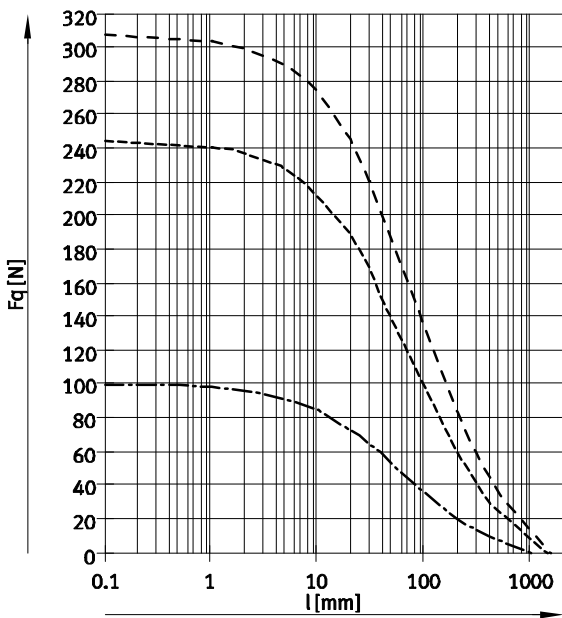
FESTO

Weight [g]				
Piston $\varnothing$	32	40	50	63
Product weight with 0 mm stroke	370.5	661	1087	1445
Additional weight per 10 mm stroke	15.5	24	40	44

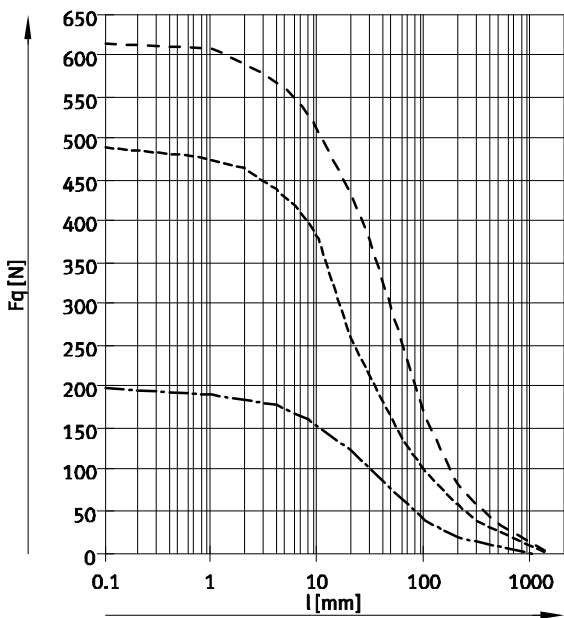
## Max. lateral force $F_q$ as a function of projection $l$



### Basic version



### S2 – Through piston rod



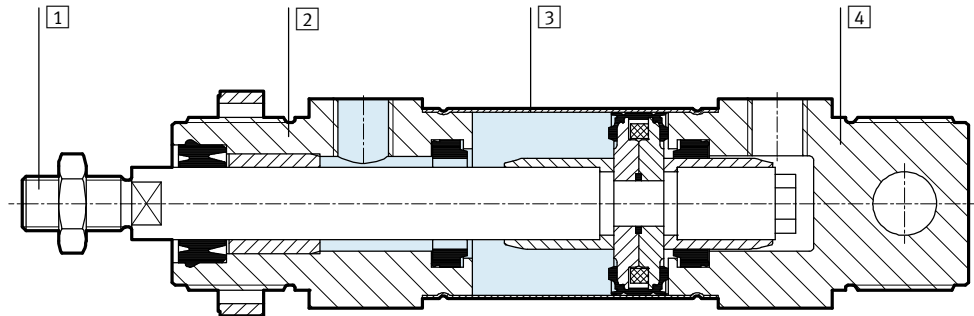
- .....  $\varnothing$  32
- $\varnothing$  40
- . - . -  $\varnothing$  50/63

# Round cylinders DSNU

Technical data

## Materials

Sectional view



Round cylinder	Basic version	S6	S10	S11	R3
1 Piston rod	High-alloy steel				High-alloy stainless steel
2 Bearing cap	Anodised aluminium				
3 Cylinder barrel	High-alloy stainless steel				
4 End cap	Anodised aluminium				
- Seals	Polyurethane, nitrile rubber	Fluoro rubber	Fluoro rubber, polyurethane		Polyurethane, nitrile rubber
Note on materials	RoHS compliant				

# Round cylinders DSNU

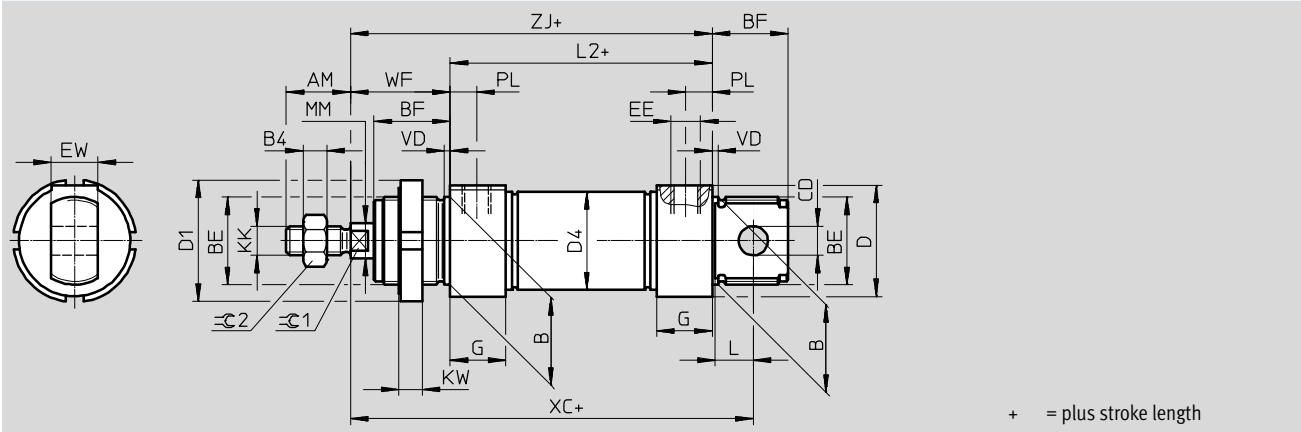
Technical data

FESTO

## Dimensions

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

Basic version



∅	AM	B	B4	BE	BF	CD	D	D1	D4	EE	EW	G
[mm]		∅ h9				∅ E10	∅	∅	∅			
32	22	30	5	M30x1.5	26	10	38	42	33.6	G $\frac{1}{8}$	16	19
40	24	38	6	M38x1.5	30	12	46	50	41.6	G $\frac{1}{4}$	18	25
50	32	45	8	M45x1.5	33	16	57	60	52.4		21	
63							70		65.4	G $\frac{3}{8}$		

∅	KK	KW	L	L2	MM	PL	VD	WF	XC	ZJ	∅C1	∅C2
[mm]					∅				±1			
32	M10x1.25	8	13	69.5	12	9	2	34	117.5	103.5	10	16
40	M12x1.25	10	15	84.6	16	12	3	39	139.6	123.6	13	18
50	M16x1.5		16	86.2	20			44	147.2	130.2	17	24
63				94.2	13	45		156.2	139.2			



# Round cylinders DSNU

Technical data

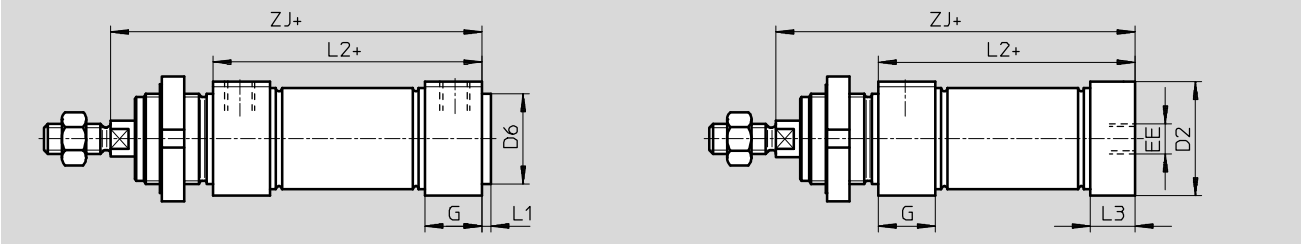


## Dimensions

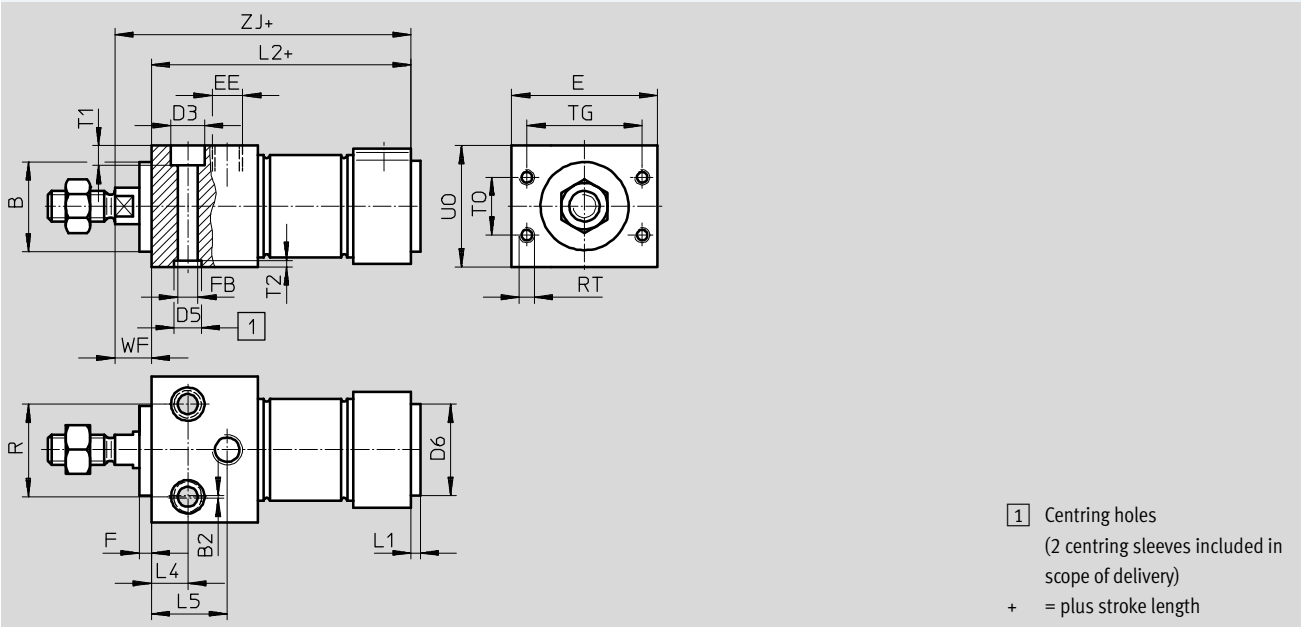
Download CAD data → [www.festo.com](http://www.festo.com)

MQ – Lateral air connection

MA – Axial air connection



MH – Direct mounting



Ø [mm]	B Ø h9	B2	E	EE	G	F	FB Ø	D2 Ø	D3	D5 Ø	D6 Ø	L1	L2		
													-MQ	-MA	-MH
32	30	1	48	G $\frac{1}{8}$	19	4	6.6	34	11	9	30	3	69.5	65.5	85.5
40	38		54	G $\frac{1}{4}$	25		9	42	14	12	38		4	84.6	77.6
50	45	2	64	G $\frac{3}{8}$	28	4	11	66	18	15	45	4	86.2	86.2	109.2
63			72										94.2	94.2	117.2

Ø [mm]	L3	L4	L5	R	RT	T0	T1	T2	TG	U0	WF	ZJ		
												-MQ	-MA	-MH
32	15	12	25	30	M5	19	6.6	2.1	38	40	12	103.5	99.5	97.5
40	18	15	32	38		24	9	2.6	42	48		123.6	116.5	116.6
50	25		35	42	M6	32	15	50	58	130.2	130.2	124.2		
63	28	36	44	M8	36	11		3.1	52	72	139.2	139.2	132.2	

# Round cylinders DSNU

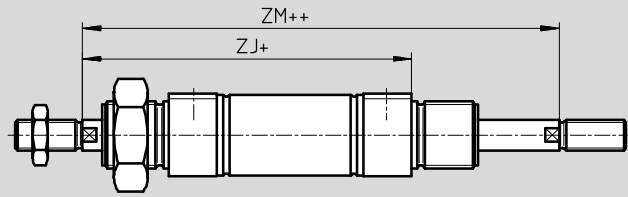
Technical data



## Dimensions

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

### S2 – Through piston rod

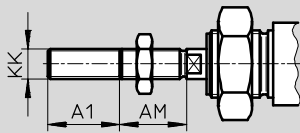


- - Note

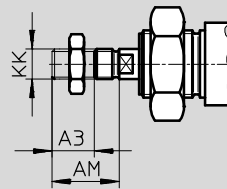
The thread types at both piston rod ends are identical. In combination with variant Q, the left-hand piston rod end is square, the right-hand piston rod end round.

+ = plus stroke length  
++ = plus 2x stroke length

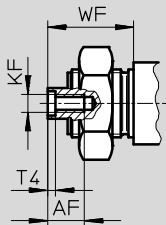
### K2 – Extended male piston rod thread



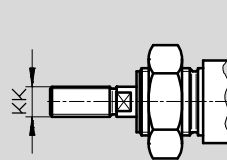
### K6 – Shortened male piston rod thread



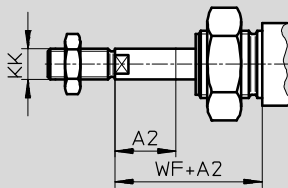
### K3 – Female piston rod thread



### K5 – Special piston rod thread



### K8 – Extended piston rod



- - Note

If variant K8 is required in combination with S2, the piston rod will only be extended on one side.


∅ [mm]	A1 max.	A2 max.	A3 max.	AF	AM	KF	KK		T4	WF	ZJ			ZM
							Basic thread	Special thread <sup>1)</sup>			-MQ	-MA	-MH	
32	35	500	8	12	22	M6	M10x1.25	M10	2.6	34	103.5	99.5	97.5	137.5
40					24	M8	M12x1.25	M12	3.3	39	123.6	111.6	116.6	162.6
50	70		10	16	32	M10	M16x1.5	M16	4.7	44	130.2	130.2	124.2	174.2
63										45	139.2	139.2	132.2	184.2

1) The special threads are only available as male threads. The scope of delivery does not include a hex nut for the piston rod thread

# Round cylinders DSNU

Technical data

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Ordering data										
Type	Piston Ø [mm]	Stroke [mm]	P – Flexible cushioning rings/ pads at both ends		PPV – Pneumatic cushioning, adjustable at both ends		PPS – Pneumatic cushioning, self-adjusting at both ends			
			A – With position sensing		A – With position sensing		A – With position sensing			
			Part No.	Type	Part No.	Type	Part No.	Type		
	32	25	195980	DSNU-32-25-P-A	196020	DSNU-32-25-PPV-A	559295	DSNU-32-25-PPS-A		
		40	195981	DSNU-32-40-P-A	196021	DSNU-32-40-PPV-A	559296	DSNU-32-40-PPS-A		
		50	195982	DSNU-32-50-P-A	196022	DSNU-32-50-PPV-A	559297	DSNU-32-50-PPS-A		
		80	195983	DSNU-32-80-P-A	196023	DSNU-32-80-PPV-A	559298	DSNU-32-80-PPS-A		
		100	195984	DSNU-32-100-P-A	196024	DSNU-32-100-PPV-A	559299	DSNU-32-100-PPS-A		
		125	195985	DSNU-32-125-P-A	196025	DSNU-32-125-PPV-A	559300	DSNU-32-125-PPS-A		
		160	195986	DSNU-32-160-P-A	196026	DSNU-32-160-PPV-A	559301	DSNU-32-160-PPS-A		
		200	195987	DSNU-32-200-P-A	196027	DSNU-32-200-PPV-A	559302	DSNU-32-200-PPS-A		
		250	195988	DSNU-32-250-P-A	196028	DSNU-32-250-PPV-A	559303	DSNU-32-250-PPS-A		
		320	195989	DSNU-32-320-P-A	196029	DSNU-32-320-PPV-A	559304	DSNU-32-320-PPS-A		
			40	25	195990	DSNU-40-25-P-A	196030	DSNU-40-25-PPV-A	559305	DSNU-40-25-PPS-A
				40	195991	DSNU-40-40-P-A	196031	DSNU-40-40-PPV-A	559306	DSNU-40-40-PPS-A
50	195992			DSNU-40-50-P-A	196032	DSNU-40-50-PPV-A	559307	DSNU-40-50-PPS-A		
80	195993			DSNU-40-80-P-A	196033	DSNU-40-80-PPV-A	559308	DSNU-40-80-PPS-A		
100	195994			DSNU-40-100-P-A	196034	DSNU-40-100-PPV-A	559309	DSNU-40-100-PPS-A		
125	195995			DSNU-40-125-P-A	196035	DSNU-40-125-PPV-A	559310	DSNU-40-125-PPS-A		
160	195996			DSNU-40-160-P-A	196036	DSNU-40-160-PPV-A	559311	DSNU-40-160-PPS-A		
200	195997			DSNU-40-200-P-A	196037	DSNU-40-200-PPV-A	559312	DSNU-40-200-PPS-A		
250	195998			DSNU-40-250-P-A	196038	DSNU-40-250-PPV-A	559313	DSNU-40-250-PPS-A		
320	195999			DSNU-40-320-P-A	196039	DSNU-40-320-PPV-A	559314	DSNU-40-320-PPS-A		
	50			25	196000	DSNU-50-25-P-A	196040	DSNU-50-25-PPV-A	559315	DSNU-50-25-PPS-A
				40	196001	DSNU-50-40-P-A	196041	DSNU-50-40-PPV-A	559316	DSNU-50-40-PPS-A
		50	196002	DSNU-50-50-P-A	196042	DSNU-50-50-PPV-A	559317	DSNU-50-50-PPS-A		
		80	196003	DSNU-50-80-P-A	196043	DSNU-50-80-PPV-A	559318	DSNU-50-80-PPS-A		
		100	196004	DSNU-50-100-P-A	196044	DSNU-50-100-PPV-A	559319	DSNU-50-100-PPS-A		
		125	196005	DSNU-50-125-P-A	196045	DSNU-50-125-PPV-A	559320	DSNU-50-125-PPS-A		
		160	196006	DSNU-50-160-P-A	196046	DSNU-50-160-PPV-A	559321	DSNU-50-160-PPS-A		
		200	196007	DSNU-50-200-P-A	196047	DSNU-50-200-PPV-A	559322	DSNU-50-200-PPS-A		
		250	196008	DSNU-50-250-P-A	196048	DSNU-50-250-PPV-A	559323	DSNU-50-250-PPS-A		
		320	196009	DSNU-50-320-P-A	196049	DSNU-50-320-PPV-A	559324	DSNU-50-320-PPS-A		
			63	25	196010	DSNU-63-25-P-A	196050	DSNU-63-25-PPV-A	559325	DSNU-63-25-PPS-A
				40	196011	DSNU-63-40-P-A	196051	DSNU-63-40-PPV-A	559326	DSNU-63-40-PPS-A
50	196012			DSNU-63-50-P-A	196052	DSNU-63-50-PPV-A	559327	DSNU-63-50-PPS-A		
80	196013			DSNU-63-80-P-A	196053	DSNU-63-80-PPV-A	559328	DSNU-63-80-PPS-A		
100	196014			DSNU-63-100-P-A	196054	DSNU-63-100-PPV-A	559329	DSNU-63-100-PPS-A		
125	196015			DSNU-63-125-P-A	196055	DSNU-63-125-PPV-A	559330	DSNU-63-125-PPS-A		
160	196016			DSNU-63-160-P-A	196056	DSNU-63-160-PPV-A	559331	DSNU-63-160-PPS-A		
200	196017			DSNU-63-200-P-A	196057	DSNU-63-200-PPV-A	559332	DSNU-63-200-PPS-A		
250	196018			DSNU-63-250-P-A	196058	DSNU-63-250-PPV-A	559333	DSNU-63-250-PPS-A		
320	196019			DSNU-63-320-P-A	196059	DSNU-63-320-PPV-A	559334	DSNU-63-320-PPS-A		

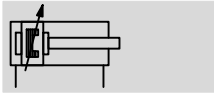
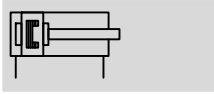
 Note

Variable strokes and additional variants can be configured and ordered through the DSNU modular product system → 28.

# Round cylinders DSNU-Q, protected against rotation

Technical data

## Function



⌀ - Diameter  
32 ... 63 mm

▬ - Stroke length  
5 ... 500 mm



General technical data				
Piston ⌀	32	40	50	63
Pneumatic connection	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$
Piston rod thread	M10x1.25	M12x1.25	M16x1.5	M16x1.5
Constructional design	Piston			
	Protected against rotation with square piston rod			
Max. torque at the piston rod [Nm]	0.8	1.1	1.5	1.5
Cushioning	Flexible cushioning rings/pads at both ends			
	Pneumatic cushioning, adjustable at both ends			
Cushioning length (PPV) [mm]	14	18	20	21
Position sensing	Via proximity sensor			
Type of mounting	Via accessories			
Mounting position	Any			

Operating conditions				
Piston ⌀	32	40	50	63
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]			
Note on operating/pilot medium	Operation with lubricated medium possible (in which case lubricated operation will always be required)			
Operating pressure [bar]	1 ... 10			

Ambient conditions		
Round cylinder	Basic version	R3
Ambient temperature <sup>1)</sup> [°C]	-20 ... +80	
Corrosion resistance class CRC <sup>2)</sup>	2	3

1) Note operating range of proximity sensors

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

# Round cylinders DSNU-Q, protected against rotation

Technical data

ATEX <sup>1)</sup>	
ATEX category for gas	II 2G
Explosion ignition protection type for gas	c T4
ATEX category for dust	II 2D
Explosion ignition protection type for dust	c 120°C
Explosion-proof temperature rating	-20°C ≤ Ta ≤ +60°C
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)

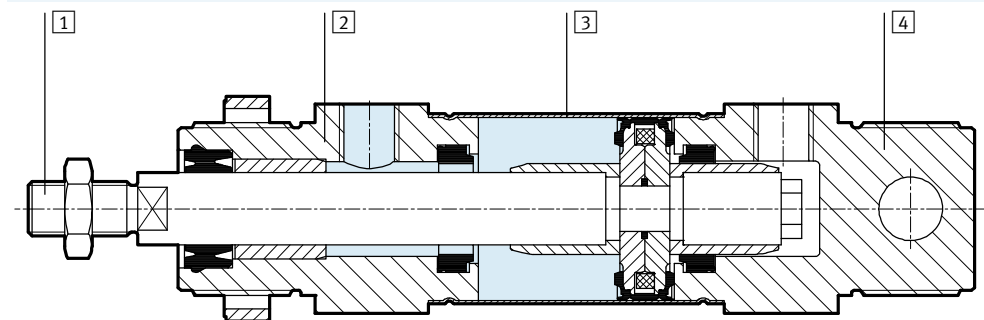
1) Make sure that the accessories are suited for ATEX application.

Force [N] and impact energy [J]				
Piston Ø	32	40	50	63
Theoretical force at 6 bar, advancing	483	753	1178	1870
Theoretical force at 6 bar, retracting	415	633	990	1682
Impact energy at the end positions	0.40	0.70	1	1.3

Weight [g]				
Piston Ø	32	40	50	63
Product weight with 0 mm stroke	370.5	661	1087	1445
Additional weight per 10 mm stroke	15.5	24	40	44

## Materials

Sectional view

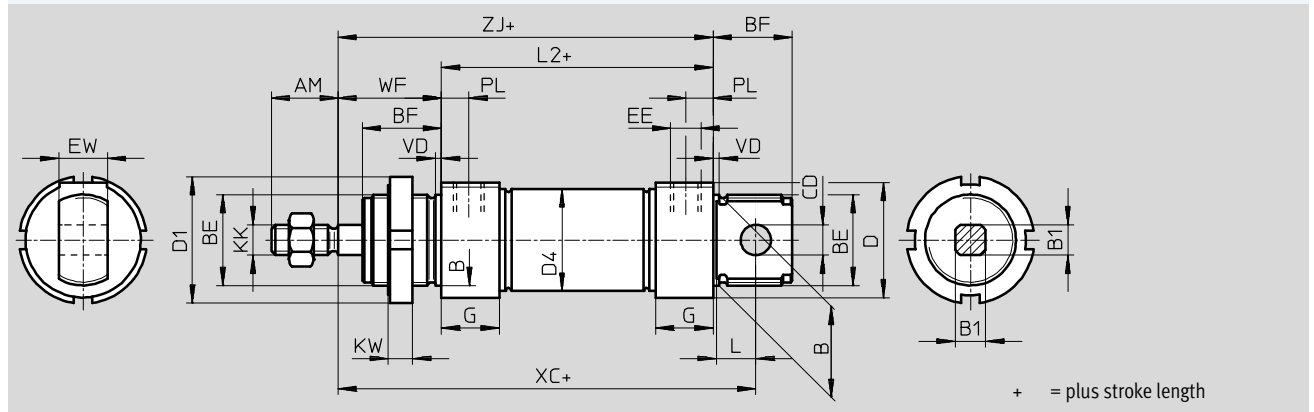


Round cylinder	Basic version	R3
1 Piston rod	High-alloy steel	High-alloy stainless steel
2 Bearing cap	Anodised aluminium	
3 Cylinder barrel	High-alloy stainless steel	
4 End cap	Anodised aluminium	
- Seals	Polyurethane, nitrile rubber	
Note on materials	RoHS compliant	

# Round cylinders DSNU-Q, protected against rotation

Technical data

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



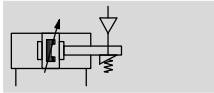
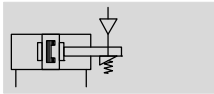
∅	AM	B	B1	BE	BF	CD	D	D1	D4	EE	EW
[mm]		∅ h9	□			∅ E10	∅	∅	∅		
32	22	30	10	M30x1.5	26	10	38	42	33.6	G $\frac{1}{8}$	16
40	24	38	12	M38x1.5	30	12	46	50	41.6	G $\frac{1}{4}$	18
50	32	45	16	M45x1.5	33	16	57	60	52.4	G $\frac{1}{4}$	21
63	32	45	16	M45x1.5	33	16	70	60	65.4	G $\frac{3}{8}$	21

∅	G	KK	KW	L	L2	PL	VD	WF	XC	ZJ
[mm]									±1	
32	19	M10x1.25	8	13	69.5	9	2	34	117.5	103.5
40	25	M12x1.25	10	15	84.6	12	3	39	139.6	123.6
50	25	M16x1.5	10	16	86.2	12	3	44	147.2	130.2
63	28	M16x1.5	10	16	94.2	13	3	45	156.2	139.2

# Round cylinders DSNU-KP, with clamping unit

Technical data

Function



⌀ - Diameter  
32 ... 63 mm

┆ - Stroke length  
1 ... 500 mm

-  - Note

Additional measures are required for use in safety-related applications; in Europe, for example, the standards listed under the EC Machinery Directive must be observed. Without additional measures in accordance with statutory minimum requirements, the product is not suitable for use in safety-related sections of control systems.



General technical data						
Piston Ø		32	40	50	63	
Pneumatic connection		G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	
Piston rod thread		M10x1.25	M12x1.25	M16x1.5	M16x1.5	
Constructional design		Piston				
		Piston rod				
		Cylinder barrel				
Cushioning	P	Flexible cushioning rings/pads at both ends				
	PPV	Pneumatic cushioning, adjustable at both ends				
	PPS	Cushioning, self-adjusting at both ends				
Cushioning length	PPV	[mm]	14	18	20	21
	PPS	[mm]	14	18	20	21
Position sensing		Via proximity sensor				
Type of mounting		Via through-holes				
		Via accessories				
Mounting position		Any				
Clamping unit holding force		[N]	600	1000	1400	2000
Axial play under load		[mm]	0.5		0.8	
Clamping unit pneumatic connection			M5	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$

Operating conditions					
Piston Ø		32	40	50	63
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [7:4:4]			
Note on operating/pilot medium		Operation with lubricated medium possible (in which case lubricated operation will always be required)			
Operating pressure		[bar]	3 ... 10		

Ambient conditions		
Round cylinder	Basic version	R3
Ambient temperature <sup>1)</sup>	[°C]	-10 ... +80
Corrosion resistance class CRC <sup>2)</sup>		2
		3

1) Note operating range of proximity sensors

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

# Round cylinders DSNU-KP, with clamping unit

Technical data

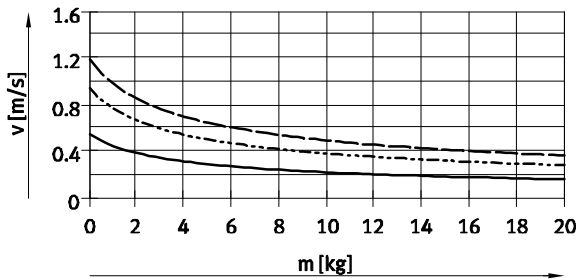
FESTO

Force [N] and impact energy [J]				
Piston $\varnothing$	32	40	50	63
Theoretical force at 6 bar, advancing	483	753	1178	1870
Theoretical force at 6 bar, retracting	415	633	990	1682
Impact energy at the end positions <sup>1)</sup>	0.40	0.70	1	1.3

1) The values are reduced by approx. 50% at an ambient temperature of 80 °C.

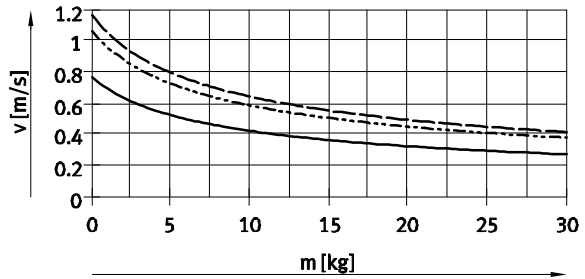
## Mean piston velocity $v$ as a function of applied load $m$ in combination with PPS cushioning

Piston  $\varnothing$  32



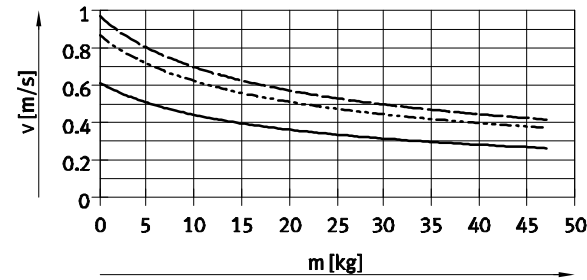
— DSNU-32-50  
 - - - DSNU-32-100  
 - · - DSNU-32-200

Piston  $\varnothing$  40



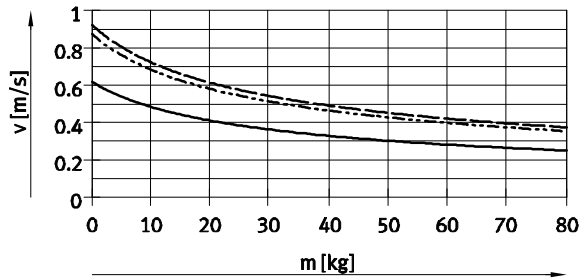
— DSNU-40-50  
 - - - DSNU-40-100  
 - · - DSNU-40-200

Piston  $\varnothing$  50



— DSNU-50-50  
 - - - DSNU-50-100  
 - · - DSNU-50-200

Piston  $\varnothing$  63



— DSNU-63-50  
 - - - DSNU-63-100  
 - · - DSNU-63-200

- · - Note  
 Mean piston velocity  
 = stroke/movement time

- · - Note

Design software for  
 P cushioning  
 → ProDrive

Additional graphs for  
 PPS cushioning  
 → [www.festo.com](http://www.festo.com)

Design software for  
 PPV cushioning  
 → ProDrive

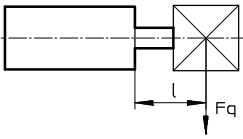
Weight [g]				
Piston $\varnothing$	32	40	50	63
Product weight with 0 mm stroke	711.5	1287	2059	2556
Additional weight per 10 mm stroke	15.5	24	40	44



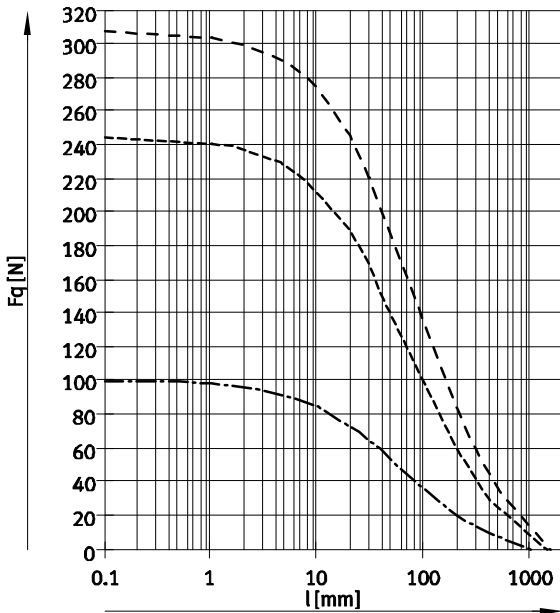
# Round cylinders DSNU-KP, with clamping unit

Technical data

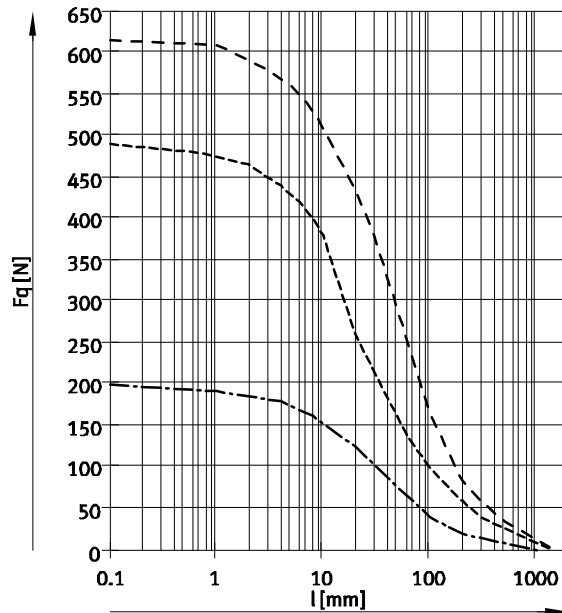
## Max. lateral force $F_q$ as a function of projection $l$



### Basic version



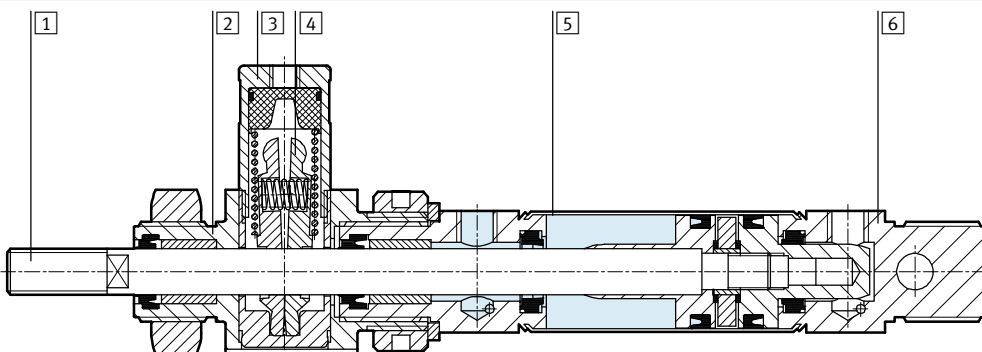
### S2 – Through piston rod



- Ø 32
- Ø 40
- Ø 50/63

## Materials

### Sectional view



Round cylinder	Basic version	R3
1 Piston rod	High-alloy steel	High-alloy stainless steel
2 Bearing cap	Anodised aluminium	
3 Housing, clamping unit	Wrought aluminium alloy	
4 Clamping jaws	Brass	
5 Cylinder barrel	High-alloy stainless steel	
6 End cap	Anodised aluminium	
- Piston, clamping unit	Polyacetate	
- Spring	Spring steel	
- Seals	Polyurethane, nitrile rubber	
Note on materials	RoHS compliant	

# Round cylinders DSNU-KP, with clamping unit

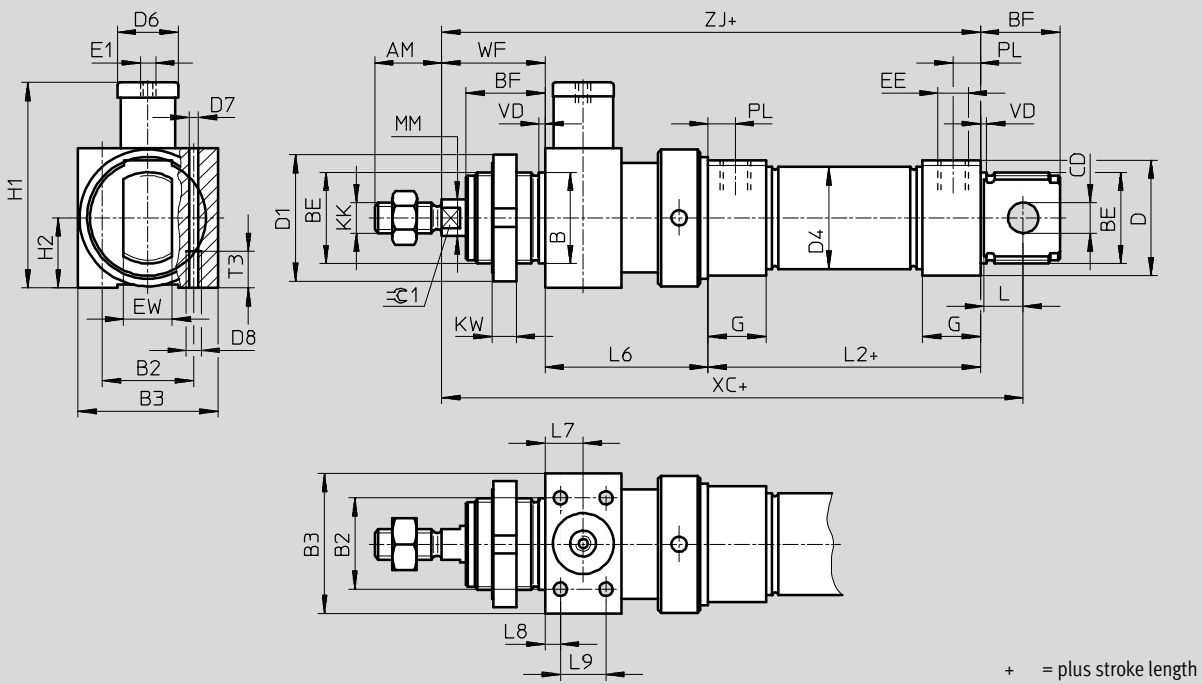
Technical data

FESTO

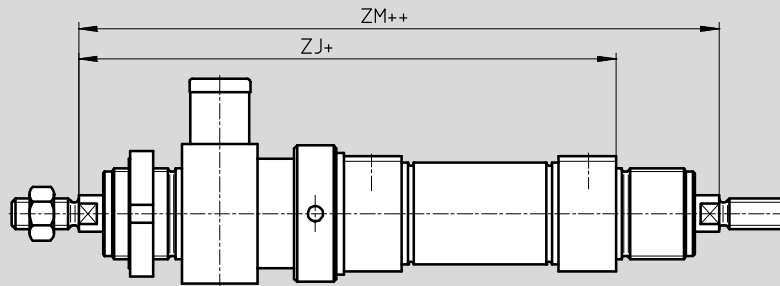
## Dimensions

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

Basic version



## S2 – Through piston rod



 Note

The thread types at both piston rod ends are identical. The clamping unit is mounted on only one side.

In combination with variant Q, the right-hand piston rod is square, the left-hand piston rod round.

The clamping unit is mounted on the left-hand, round piston rod.

+ = plus stroke length

++ = plus 2x stroke length

# Round cylinders DSNU-KP, with clamping unit

Technical data

∅ [mm]	AM	B ∅ h9	B2	B3	BE	BF	CD ∅ E10	D ∅	D1 ∅	D4 ∅	D6	D7
32	22	30	30	46	M30x1.5	26	10	38	42	33.6	20	4.4
40	24	38	36	56	M38x1.5	30	12	46	50	41.6	24	6.8
50	32	45	50	65	M45x1.5	33	16	57	60	52.4	30	8.5
63			54	72	M45x1.5			70		65.4	38	

∅ [mm]	D8	E1	EE	EW	G	H1	H2	KK	KW	MM ∅	L	L2
32	M5	M5	G $\frac{1}{8}$	16	19	67.5	23	M10x1.25	8	12	13	69.5
40	M8	G $\frac{1}{8}$	G $\frac{1}{4}$	18	25	89	28	M12x1.25	10	16	15	84.6
50	M10	G $\frac{1}{8}$		21		107.5	32.5	M16x1.5		20	16	86.2
63		G $\frac{1}{8}$	G $\frac{3}{8}$	28	121.5	36	94.2					

∅ [mm]	L6	L7	L8	L9	T3	PL	VD	WF	XC	ZJ	ZM	≈±1
	±0.75								±1			
32	55	12.5	5	15	12	9	2	34.5	173	159	191	10
40	69	17	7	20	18	12	3	40.5	210.1	194.1	230.1	13
50	78	20		26	20			45.5	226.7	209.7	250.7	17
63	86	24	8	32	21	13		46.5	243.7	226.7	268.7	

# Round cylinders DSNU

Ordering data – Modular products



Ordering table							
Size	32	40	50	63	Condi- tions	Code	Enter code
<b>M</b> Module No.	<b>193992</b>	<b>193993</b>	<b>193994</b>	<b>193995</b>			
Function	Double-acting round cylinder					<b>DSNU</b>	DSNU
Piston Ø [mm]	32	40	50	63		-...	
Stroke [mm]	1 ... 500					-...	
Cushioning	Flexible cushioning rings/pads at both ends					-P	
	Pneumatic cushioning, adjustable at both ends				<b>1</b>	-PPV	
	Pneumatic cushioning, self-adjusting at both ends				<b>15</b>	-PPS	
<b>O</b> Position sensing	Via proximity sensor				<b>2</b>	-A	
Cylinder end cap	Lateral air connection, end cap				<b>3</b>	-MQ	
	Axial air connection, end cap				<b>4</b>	-MA	
	Mounting flange at front (direct mounting), bearing cap				<b>5</b>	-MH	
Type of piston rod	Through piston rod				<b>6</b>	-S2	
Extended male thread [mm]	Piston rod with extended male thread						
	1 ... 35	1 ... 70			<b>7</b>	-...K2	

- |                     |                           |                      |   |
|---------------------|---------------------------|----------------------|---|
| <b>1</b> <b>PPV</b> | Not with MA               | <b>5</b> <b>MH</b>   | Not with combination S6-R3                                      |
| <b>2</b> <b>A</b>   | Minimum stroke: 10 mm     |                      | Not with KP, S10, S11, R8                                       |
| <b>3</b> <b>MQ</b>  | Not with S2, S10, S11     | <b>6</b> <b>S2</b>   | Not with MQ, MA, S10, S11                                       |
| <b>4</b> <b>MA</b>  | Not with S2, S10, S11, R8 | <b>7</b> <b>K2</b>   | Not with K3, K6   |
|                     |                           | <b>15</b> <b>PPS</b> | Not with MA, MH, S6, S10, S11<br>and not with combination MQ-R3 |

- Note  
The bellows kit DADB must not be used in combination with the variant MH.  
The running characteristics change slightly when the bellows kit DADB is combined with the variant S10 or S11.

### Transfer order code

**DSNU** -  -  -  -  -  -  -  -

# Round cylinders DSNU

Ordering data – Modular products



Ordering table							
Size	32	40	50	63	Condi- tions	Code	Enter code
↓ Shortened male thread	Piston rod with shortened male thread						
0 [mm]	1 ... 8		1 ... 10		8	-...K6	
Female thread	Piston rod with female thread						
	(M6)	(M8)	(M10)		9	-K3	
Special thread	Piston rod with special thread						
	M10	M12	M16			-“...”K5	
Piston rod extended at one end	Extended piston rod at one end						
[mm]	1 ... 500					...K8	
Clamping unit	Attached				10	-KP	
Temperature resistance	Heat-resistant seals for temperatures up to 120 °C				11	-S6	
Slow speed (constant motion)	Slow speed (constant motion at low piston speeds)				12	-S10	
Running characteristics	Low friction				13	-S11	
Corrosion protection	High corrosion protection				14	-R3	
Wiper seal	Metal wiper seal					-R8	
EU certification	II 2GD				15	-EX4	

- 8 **K6** Not with K3
- 9 **K3** Not with K5
- 10 **KP** Not with S6, S10, S11, R3, R8

- 11 **S6** Not with S10, S11
- 12 **S10** Not with S11, R3, R8
- 13 **S11** Not with R3, R8
- 14 **R3** Not with R8
- 15 **EX4** Not with KP and S6

**Transfer order code**

- [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]


# Round cylinders DSNU-Q, protected against rotation

Ordering data – Modular products

Ordering table							
Size	32	40	50	63	Condi- tions	Code	Enter code
<b>M</b> Module No.	<b>193992</b>	<b>193993</b>	<b>193994</b>	<b>193995</b>			
Function	Double-acting round cylinder					<b>DSNU</b>	DSNU
Piston Ø [mm]	32	40	50	63		-...	
Stroke [mm]	1 ... 500					-...	
Cushioning	Flexible cushioning rings/pads at both ends					-P	
	Pneumatic cushioning, adjustable at both ends				<b>1</b>	-PPV	
<b>O</b> Position sensing	Via proximity sensor				<b>2</b>	-A	
Cylinder end cap	Lateral air connection, end cap				<b>3</b>	-MQ	
	Axial air connection, end cap				<b>3</b>	-MA	
	Mounting flange at front (direct mounting), bearing cap				<b>4</b>	-MH	
Protection against rotation	Square piston rod					-Q	-Q
	Restricted stroke [mm] 5 ... 300   5 ... 400   5 ... 500						
Type of piston rod	Through piston rod					-S2	
Extended male thread [mm]	Piston rod with extended male thread						
	1 ... 35		1 ... 70		<b>5</b>	-...K2	

- 1 PPV** Not with MA
- 2 A** Minimum stroke: 10 mm
- 3 MQ, MA** Not with S2

- 4 MH** Not with combinations: Q-R3, S6-R3  
Not with KP
- 5 K2** Not with K3, K6

 - Note  
The bellows kit DADB must not be used in combination with the variant Q.

**Transfer order code**

**DSNU** -  -  -  -  -  -  - **Q** -  -

# Round cylinders DSNU-Q, protected against rotation

Ordering data – Modular products

Ordering table							
Size	32	40	50	63	Condi- tions	Code	Enter code
↓ Shortened male thread	Piston rod with shortened male thread						
0 [mm]	1 ... 8		1 ... 10		6	-...K6	
Female thread	Piston rod with female thread						
	(M6)	(M8)	(M10)		7	-K3	
Special thread	Piston rod with special thread						
	M10	M12	M16			-“...”K5	
Piston rod extended at one end	Extended piston rod at one end						
[mm]	1 ... 500						...K8
Clamping unit	Attached				8	-KP	
Temperature resistance	Heat-resistant seals for temperatures up to 120 °C					-S6	
Corrosion protection	High corrosion protection					-R3	
EU certification	II 2GD				9	-EX4	

6 **K6** Not with K3  
7 **K3** Not with K5

8 **KP** Only with S2  
Not with S6, R3

9 **EX4** Not with KP

**Transfer order code**

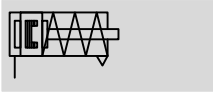
- [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

# Round cylinders ESNU

Technical data

FESTO

Function



Ø - Diameter  
32 ... 63 mm

l - Stroke length  
1 ... 50 mm

Additional variants

→ 35



Basic version



Axial air connection MA

General technical data				
Piston Ø	32	40	50	63
Pneumatic connection	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$
Piston rod thread	M10x1.25	M12x1.25	M16x1.5	M16x1.5
Constructional design	Piston			
	Piston rod			
	Cylinder barrel			
Cushioning	Flexible cushioning rings/pads at both ends			
Position sensing	Via proximity sensor			
Type of mounting	Via accessories			
Mounting position	Any			

Operating conditions				
Piston Ø	32	40	50	63
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]			
Note on operating/ pilot medium	Operation with lubricated medium possible (in which case lubricated operation will always be required)			
Operating pressure [bar]	1.2 ... 10			

Ambient conditions		
Round cylinder		
Ambient temperature <sup>1)</sup> [°C]	-20 ... +80	
Corrosion resistance class CRC <sup>2)</sup>	2	

1) Note operating range of proximity sensors.

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.



# Round cylinders ESNU

Technical data

Force [N] and impact energy [J]				
Piston Ø	32	40	50	63
Theoretical force at 6 bar, advancing	442	688	1071	1763
Spring return force 10 mm stroke	36	60	95	95
Spring return force 25 mm stroke	30	50	82	82
Spring return force 50 mm stroke	20	30	60	60
Impact energy at the end positions <sup>1)</sup>	0.40	0.70	1	1.3

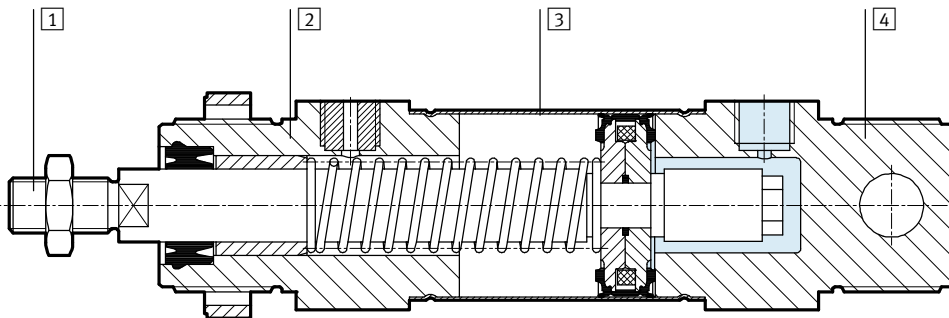
1) The values are reduced by approx. 50% at an ambient temperature of 80 °C.

Weight ESNU-... [g]				
Piston Ø	32	40	50	63
Product weight with 0 mm stroke	370.5	661	1087	1445
Additional weight per 10 mm stroke	15.5	24	40	44

Weight ESNU-...-MA [g]				
Piston Ø	32	40	50	63
Product weight with 0 mm stroke	330	585	1013	1369
Additional weight per 10 mm stroke	15.5	24	40	44

## Materials

Sectional view



Round cylinder	
1	Piston rod High-alloy steel
2	Bearing cap Anodised aluminium
3	Cylinder barrel High-alloy stainless steel
4	End cap Anodised aluminium
-	Seals Polyurethane, nitrile rubber
-	Spring Spring steel
Note on materials RoHS compliant	

# Round cylinders ESNU

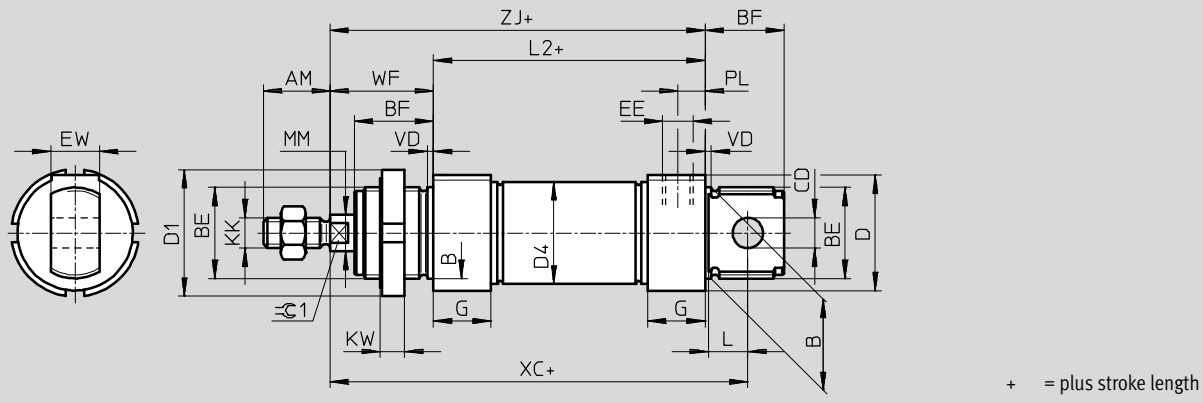
Technical data

FESTO

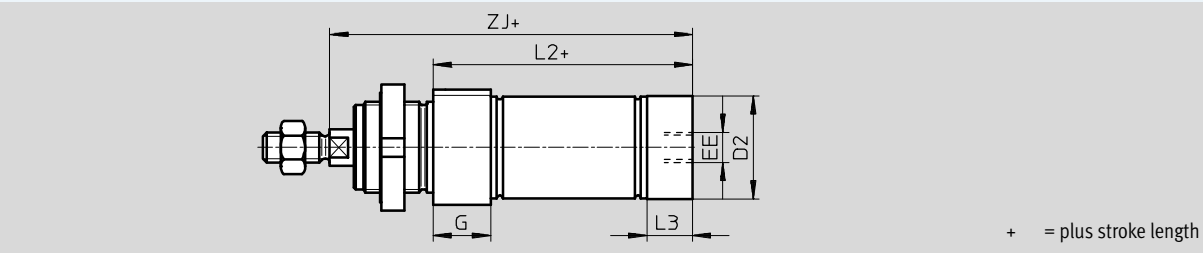
## Dimensions

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

Basic version



## MA – Axial air connection



∅	AM	B	BE	BF	CD	D	D1	D2	D4	EE	EW	G	KK
[mm]		∅ h9			∅ E10	∅	∅	∅	∅				
32	22	30	M30x1.5	26	10	38	42	34	33.6	G <sup>1</sup> / <sub>8</sub>	16	19	M10x1.25
40	24	38	M38x1.5	30	12	46	50	42	41.6	G <sup>1</sup> / <sub>4</sub>	18	25	M12x1.25
50	32	45	M45x1.5	33	16	57	60	53	52.4		21		28
63						70	66	65.4	G <sup>3</sup> / <sub>8</sub>				

∅	KW	L	L2		L3	PL	MM	VD	WF	XC ±1	ZJ		≈C1
[mm]				-MA			∅					-MA	
32	8	13	69.5	65.5	15	9	12	2	34	117.5	103.5	99.5	10
40	10	15	84.6	77.6	18	12	16	3	39	139.6	123.6	116.6	13
50		16	86.2	86.2	25		20		44	147.2	130.2	130.2	17
63		94.2	94.2	28	13	45	156.2		139.2	139.2			

# Round cylinders ESNU

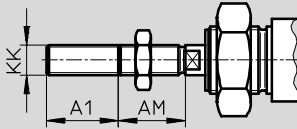
Technical data

FESTO

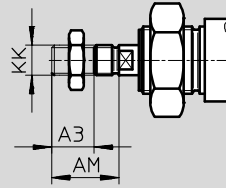
## Dimensions

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

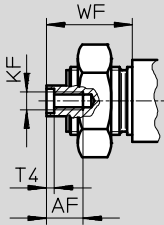
K2 – Extended male piston rod thread



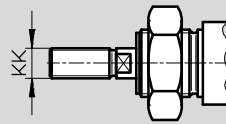
K6 – Shortened male piston rod thread



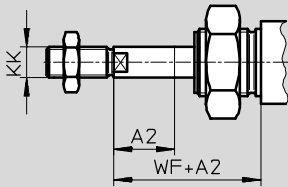
K3 – Female piston rod thread



K5 – Special piston rod thread



K8 – Extended piston rod



∅ [mm]	A1 max.	A2 max.	A3 max.	AF	AM	KF	KK		T4	WF
							Basic thread	Special thread <sup>1)</sup>		
32	35	50	8	12	22	M6	M10x1.25	M10	2.6	34
40							M12x1.25	M12		
50			10	16	32	M10	M16x1.5	M16	4.7	44
63										

1) The special threads are only available as male threads. The scope of delivery does not include a hex nut for the piston rod thread.

## Ordering data

Type	Piston ∅ [mm]	Stroke [mm]	Without position sensing		With position sensing	
			Part No.	Type	Part No.	Type
	32	10	195870	ESNU-32-10-P	196376	ESNU-32-10-P-A
		25	195871	ESNU-32-25-P	196377	ESNU-32-25-P-A
		50	195872	ESNU-32-50-P	196378	ESNU-32-50-P-A
	40	10	195873	ESNU-40-10-P	196379	ESNU-40-10-P-A
		25	195874	ESNU-40-25-P	196380	ESNU-40-25-P-A
		50	195875	ESNU-40-50-P	196381	ESNU-40-50-P-A
	50	10	195876	ESNU-50-10-P	196382	ESNU-50-10-P-A
		25	195877	ESNU-50-25-P	196383	ESNU-50-25-P-A
		50	195878	ESNU-50-50-P	196384	ESNU-50-50-P-A
	63	10	195879	ESNU-63-10-P	196385	ESNU-63-10-P-A
		25	195880	ESNU-63-25-P	196386	ESNU-63-25-P-A
		50	195881	ESNU-63-50-P	196387	ESNU-63-50-P-A

# Round cylinders ESNU

Ordering data – Modular products



Ordering table							
Size	32	40	50	63	Condi- tions	Code	Enter code
<b>M</b> Module No.	<b>194002</b>	<b>194003</b>	<b>194004</b>	<b>194005</b>			
Function	Single-acting round cylinder					<b>ESNU</b>	ESNU
Piston Ø [mm]	32	40	50	63		-...	
Stroke [mm]	1 ... 50					-...	
Cushioning	Flexible cushioning rings/pads at both ends					<b>-P</b>	-P
<b>O</b> Position sensing	Via proximity sensor				<b>1</b>	<b>-A</b>	
<b>↓</b> End cap	Axial air connection					<b>-MA</b>	

**1** A Minimum stroke: 10 mm

Transfer order code

# Round cylinders ESNU

Ordering data – Modular products



Ordering table							
Size	32	40	50	63	Condi- tions	Code	Enter code
↓ 0	Extended male thread [mm]	Piston rod with extended male thread 1 ... 35			2	-...K2	
	Shortened male thread [mm]	Piston rod with shortened male thread 1 ... 8   1 ... 10				-...K6	
	Female thread	(M6)	(M8)	(M10)	3	-K3	
	Special thread	Piston rod with special thread M10   M12   M16				-“...”K5	
	Extended piston rod [mm]	Extended piston rod 1 ... 50				...K8	

2 **K2** Not with female thread K3, shortened male thread K6

3 **K3** Not with special thread K5, shortened male thread K6

Transfer order code

-  -  -  -

# Round cylinders DSNU/ESNU

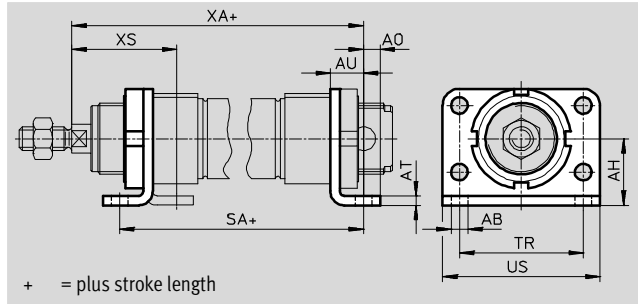
Accessories



## Foot mounting HBN/CRH

Material:

- HBN: Galvanised steel
- CRH: High-alloy stainless steel
- Free of copper and PTFE
- RoHS-compliant



### Dimensions and ordering data

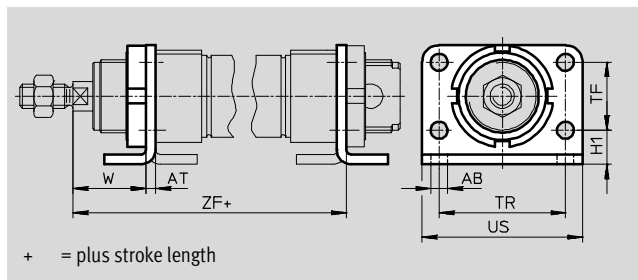
For Ø [mm]	AB Ø	AH	AO	AT	AU	SA		TR	US	XA		XS	
							-KP				-KP		
32	7	28	7	4	14	97.5	151	52	66	117.5	171	44	-
40	9	33	10	5	20	124.6	192.1	60	80	138.6	206.1	49	-
50	9	40	10	6	20	126.2	202.7	70	90	150.2	226.7	58	-
63	9	45	10	6	20	134.2	218.7	76	96	159.2	243.7	59	-

For Ø [mm]	Basic version				High corrosion protection			
	CRC <sup>1)</sup>	Weight [g]	Part No.	Type	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
32	2	247	195851	HBN-32x2	4	237	162951	CRH-32
40	2	446	195852	HBN-40x2	4	341	162952	CRH-40
50	2	666	195853	HBN-50x2	4	559	162953	CRH-50
63	2	816	195854	HBN-63x2	4	680	162954	CRH-63

## Flange mounting FBN/CRFV

Material:

- FBN: Galvanised steel
- CRFV: High-alloy stainless steel
- Free of copper and PTFE
- RoHS-compliant



### Dimensions and ordering data

For Ø [mm]	AB Ø	AT	H1	TF	TR	US	W	ZF	
									-KP
32	7	4	14	28	52	66	30	107.5	161
40	9	5	18	30	60	80	29	123.6	191.1
50	9	6	20	40	70	90	38	136.2	212.6
63	9	6	20	50	76	96	39	145.2	229.7

For Ø [mm]	Basic version				High corrosion protection			
	CRC <sup>1)</sup>	Weight [g]	Part No.	Type	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
32	2	102	195855	FBN-32	4	102	161858	CRFV-32
40	2	190	195856	FBN-40	4	190	161859	CRFV-40
50	2	290	195857	FBN-50	4	290	161860	CRFV-50
63	2	365	195858	FBN-63	4	365	161861	CRFV-63

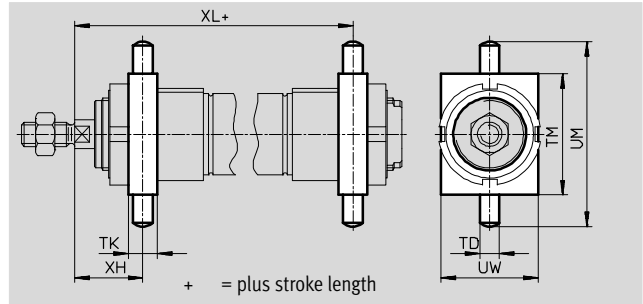
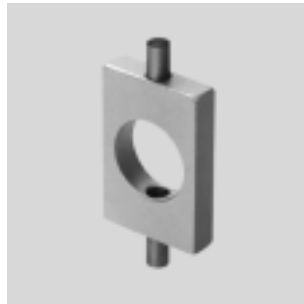
1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
 Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.  
 Corrosion resistance class CRC 4 to Festo standard FN 940070  
 Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

# Round cylinders DSNU/ESNU

Accessories

## Swivel mounting WBN

Material:  
Galvanised steel  
Free of copper and PTFE  
RoHS-compliant  
Cannot be used on the bearing cap in combination with bellows kit DADB.

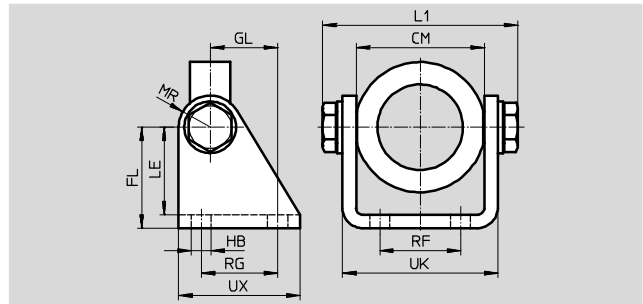
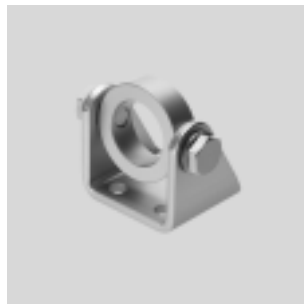


Dimensions and ordering data												
For $\varnothing$	TD	TK	TM	UM	UW	XH	XL		CRC <sup>1)</sup>	Weight	Part No.	Type
[mm]	$\varnothing$ f8							-KP		[g]		
32	8	12	50	76	40	28	109.5	163	2	130	<b>195863</b>	<b>WBN-32</b>
40	10	15	60	92	50	31.5	126.1	193.6	2	240	<b>195864</b>	<b>WBN-40</b>
50	12	20	80	116	65	34	140.2	216.7	2	610	<b>195865</b>	<b>WBN-50/63</b>
63	12	20	80	116	65	35	149.2	233.7	2	610	<b>195865</b>	<b>WBN-50/63</b>

1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

## Swivel mounting SBN

Material:  
Mounting ring: Wrought aluminium alloy, anodised  
Bearing: Bronze  
Screws: Galvanised steel  
Bracket: Steel  
Cannot be used on the bearing cap in combination with bellows kit DADB.



Dimensions and ordering data															
For $\varnothing$	CM	FL	GL	HB	L1	LE	MR	RF	RG	UK	UX	CRC <sup>1)</sup>	Weight	Part No.	Type
[mm]					max.								[g]		
32	46.1+0.2	40	27	9	72.2	35	13	28	30	56.1	50	2	295	<b>539924</b>	<b>SBN-32</b>
40	57.1+0.2	45	30	9	88.2	39	14	36	34	69.1	54	2	465	<b>539925</b>	<b>SBN-40</b>
50/63	70.1+0.4	50	34	9	102.2	44	16	42	35	82.1	65	2	670	<b>539926</b>	<b>SBN-50/63</b>

1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

# Round cylinders DSNU/ESNU

Accessories



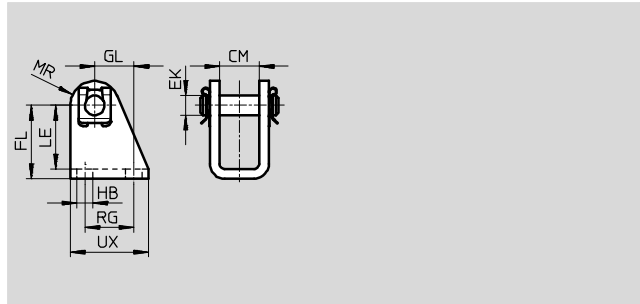
## Clevis foot LBN/CRLBN

Material:

LBN: Galvanised steel

CRLBN: High-alloy stainless steel

Free of copper and PTFE



Dimensions and ordering data									
For Ø	CM	EK	FL	GL	HB	LE	MR	RG	UX
[mm]		Ø							
32	16.1	10	35 +0.4/-0.2	18.5	6.6	31	11	24	35
40	18.1	12	40 +0.4/-0.2	24.5	9	35	13	30	45
50, 63	21.1	16	45 +0.5/-0.2	28	9	39	14	34	50

For Ø	Basic version				High corrosion protection			
	CRC <sup>1)</sup>	Weight [g]	Part No.	Type	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
32	1	109	<b>195860</b>	<b>LBN-32</b>	4	107	<b>195866</b>	<b>CRLBN-32</b>
40	1	192	<b>195861</b>	<b>LBN-40</b>	4	184	<b>195867</b>	<b>CRLBN-40</b>
50, 63	1	302	<b>195862</b>	<b>LBN-50/63</b>	4	289	<b>195868</b>	<b>CRLBN-50/63</b>

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

Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.





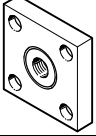
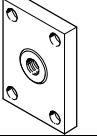
Ordering data – Mounting attachments				Technical data → Internet: clevis foot			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Clevis foot LBG				Right-angle clevis foot LQG			
	32	<b>31761</b>	<b>LBG-32</b>		32	<b>31768</b>	<b>LQG-32</b>
	40	<b>31762</b>	<b>LBG-40</b>		40	<b>31769</b>	<b>LQG-40</b>
	50	<b>31763</b>	<b>LBG-50</b>		50	<b>31770</b>	<b>LQG-50</b>
	63	<b>31764</b>	<b>LBG-63</b>		63	<b>31771</b>	<b>LQG-63</b>






# Round cylinders DSNU/ESNU

Accessories

FESTO



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>Rod clevis SGA</b>			
	32	9261	SGS-M10x1,25		32	32954	SGA-M10x1,25
	40	9262	SGS-M12x1,25		40	10767	SGA-M12x1,25
	50	9263	SGS-M16x1,5		50	10768	SGA-M16x1,5
	63						
<b>Rod clevis SG</b>				<b>Self-aligning rod coupler FK</b>			
	32	6144	SG-M10x1,25		32	6140	FK-M10x1,25
	40	6145	SG-M12x1,25		40	6141	FK-M12x1,25
	50	6146	SG-M16x1,5		50	6142	FK-M16x1,5
	63						
<b>Coupling piece KSG</b>				<b>Coupling piece KSZ</b>			
	32	32963	KSG-M10x1,25		32	36125	KSZ-M10x1,25
	40	32964	KSG-M12x1,25		40	36126	KSZ-M12x1,25
	50	32965	KSG-M16x1,5		50	36127	KSZ-M16x1,5
	63						


Ordering data – Piston rod attachments, corrosion-resistant				Technical data → Internet: crsg			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
<b>Rod eye CRSGS</b>				<b>Rod clevis CRSG</b>			
	32	195582	CRSGS-M10x1,25		32	13569	CRSG-M10x1,25
	40	195583	CRSGS-M12x1,25		40	13570	CRSG-M12x1,25
	50	195584	CRSGS-M16x1,5		50	13571	CRSG-M16x1,5
	63						
<b>Self-aligning rod coupler CRFK</b>							
	32	2305778	CRFK-M10x1,25				
	40	2305779	CRFK-M12x1,25				
	50	2490673	CRFK-M16x1,5				
	63						

# Round cylinders DSNU/ESNU

Accessories

**FESTO**

Ordering data – One-way flow control valves				Technical data → Internet: grl			
	Connection		Material	Part No.	Type		
	Thread	For tubing O.D.					
For exhaust air							
	G $\frac{1}{8}$	3	Metal design	<b>193142</b>	<b>GRLA-<math>\frac{1}{8}</math>-QS-3-D</b>		
		4		<b>193143</b>	<b>GRLA-<math>\frac{1}{8}</math>-QS-4-D</b>		
		6		<b>193144</b>	<b>GRLA-<math>\frac{1}{8}</math>-QS-6-D</b>		
		8		<b>193145</b>	<b>GRLA-<math>\frac{1}{8}</math>-QS-8-D</b>		
	G $\frac{1}{4}$	6		<b>193146</b>	<b>GRLA-<math>\frac{1}{4}</math>-QS-6-D</b>		
		8		<b>193147</b>	<b>GRLA-<math>\frac{1}{4}</math>-QS-8-D</b>		
		10		<b>193148</b>	<b>GRLA-<math>\frac{1}{4}</math>-QS-10-D</b>		
	G $\frac{3}{8}$	6		<b>193149</b>	<b>GRLA-<math>\frac{3}{8}</math>-QS-6-D</b>		
		8		<b>193150</b>	<b>GRLA-<math>\frac{3}{8}</math>-QS-8-D</b>		
		10		<b>193151</b>	<b>GRLA-<math>\frac{3}{8}</math>-QS-10-D</b>		
	For supply air						
		G $\frac{1}{8}$		3	Metal design	<b>193156</b>	<b>GRLZ-<math>\frac{1}{8}</math>-QS-3-D</b>
4			<b>193157</b>	<b>GRLZ-<math>\frac{1}{8}</math>-QS-4-D</b>			
6			<b>193158</b>	<b>GRLZ-<math>\frac{1}{8}</math>-QS-6-D</b>			
8			<b>193159</b>	<b>GRLZ-<math>\frac{1}{8}</math>-QS-8-D</b>			

Ordering data – One-way flow control valves, corrosion-resistant				Technical data → Internet: crgrla	
	Connection		Material	Part No.	Type
	Thread	For push-in fitting			
For exhaust air					
	G $\frac{1}{8}$	CRQS/CRQSL/CRQST	Electrolytically polished stainless steel casting	<b>161404</b>	<b>CRGRLA-<math>\frac{1}{8}</math>-B</b>
	G $\frac{1}{4}$			<b>161405</b>	<b>CRGRLA-<math>\frac{1}{4}</math>-B</b>
	G $\frac{3}{8}$			<b>161406</b>	<b>CRGRLA-<math>\frac{3}{8}</math>-B</b>

# Round cylinders DSNU/ESNU

Accessories



## Bellows kit DADB



General technical data		32	40	50	63
Type DADB-S1-					
Max. cylinder stroke range <sup>1)</sup>	DSNU [mm]	10 ... 500	10 ... 500	10 ... 500	10 ... 500
	ESNU <sup>2)</sup> [mm]	10 ... 50	10 ... 50	10 ... 50	10 ... 50
Type of mounting		Via threaded pin			
Mounting position		Any			
Resistance to media		Dust, chips, oil, grease, fuel (→ Internet: media resistance)			
Ambient temperature <sup>3)</sup>	[°C]	-10 ... +80			
Protection class		IP54			
Corrosion resistance class CRC <sup>4)</sup>		3			

1) In combination with the bellows kit DADB.

2) Slight change in the spring return force.

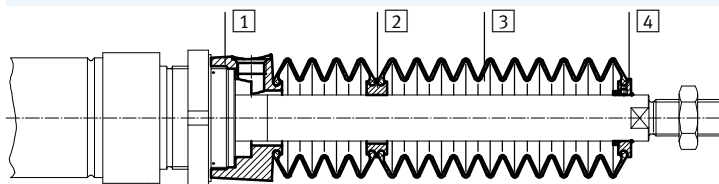
3) Note operating range of proximity sensors and cylinder.

4) Corrosion resistance class 3 as per Festo standard 940 070

Components with heavy corrosion exposure. Externally visible components in direct contact with normal industrial atmosphere or media such as solvents and cleaning agents, where the surface requirement is predominantly functional.

## Materials

Sectional view



Bellows		
1	Connection	Polyamide
2	Intermediate piece	Polyamide
3	Bellows	Nitrile rubber
4	End piece	Polyamide
-	O-ring	Nitrile rubber
Note on materials		Free of copper and PTFE RoHS-compliant

Weight [g]		32	40	50	63
Type DADB-S1-					
Stroke [mm]					
10 ... 50		29	34	55	55
51 ... 125		41	49	75	75
126 ... 175		51	60	89	89
176 ... 250		66	78	113	113
251 ... 300		79	93	131	131
301 ... 350		92	108	149	149
351 ... 375		92	108	151	151
376 ... 425		104	122	169	169
426 ... 475		117	137	187	187
476 ... 500		117	137	189	189

# Round cylinders DSNU/ESNU

Accessories

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## Travel velocity $v$ as a function of tubing length $l$

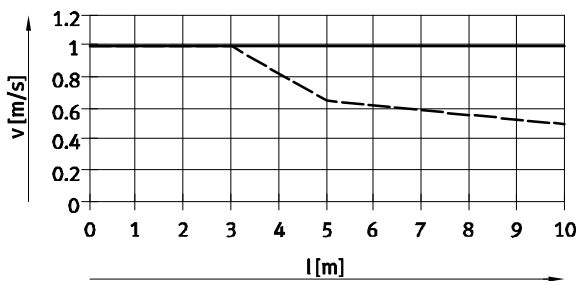


The bellows kit is a leak-free system. To prevent unwanted media being drawn in, the supply and exhaust air must be ducted via a pressure compensation hole in the connection

part **1**. The pressure generated in the bellows kit by the positioning motion is primarily defined by travel velocity

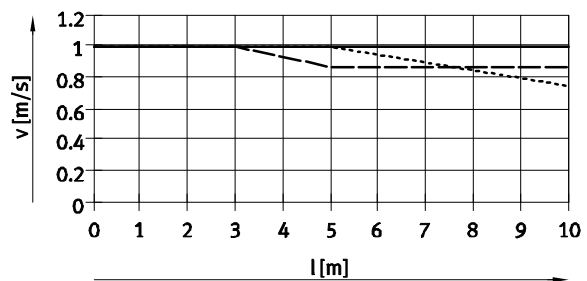
and tubing length. The recommended tubing length based on the travel velocity of the drive can be read from the graph.

### Advancing




—  $\varnothing$  32/50/63  
- - -  $\varnothing$  40

### Returning



—  $\varnothing$  32  
- - -  $\varnothing$  40  
.....  $\varnothing$  50/63

-  - Note

The push-in fittings opposite must be used for the pressure compensation hole.

Silencers can also be used as an alternative. This reduces the travel velocity slightly.

### Tubing size and push-in fitting for pressure compensation hole

$\varnothing$ [mm]	Tubing O.D. [mm]	Push-in fitting	
		Part No.	Type
32, 40	8	186109	QS-G $\frac{1}{8}$ -8-I
		578376	NPQH-DK-G18-Q8-P10
		578362	NPQH-D-G18-S8-P10
50, 63	12	186350	QS-G $\frac{1}{4}$ -12
		578344	NPQH-D-G14-Q12-P10
		578366	NPQH-D-G14-S12-P10

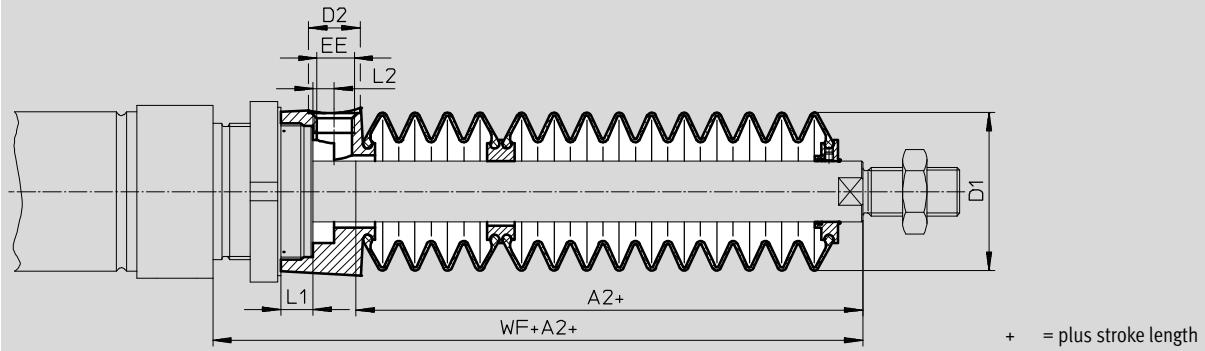
# Round cylinders DSNU/ESNU

Accessories

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## Dimensions

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



Ø Stroke [mm]	32						40							
	A2 <sup>1)</sup>	D1 max.	D2	EE	L1	L2	WF+A2	A2 <sup>1)</sup>	D1 max.	D2	EE	L1	L2	WF+A2
10 ... 50	30	38	14	G1/8	12.9	5.4	64	29	46	14	G1/8	8.1	5.4	68
51 ... 125	48						82	44						83
126 ... 175	63						97	57						96
176 ... 250	82						116	73						112
251 ... 300	97						131	87						126
301 ... 350	113						147	101						140
351 ... 375	115						149	102						141
376 ... 425	131						165	116						155
426 ... 475	147						181	131						170
476 ... 500	149						183	132						171

Ø Stroke [mm]	50/63						
	A2 <sup>1)</sup>	D1 max.	D2	EE	L1	L2	WF+A2
10 ... 50	30	57	17	G1/4	10.65	7	74/75
51 ... 125	48						92/93
126 ... 175	58						102/103
176 ... 250	77						121/122
251 ... 300	88						132/133
301 ... 350	99						143/144
351 ... 375	106						150/151
376 ... 425	117						161/162
426 ... 475	128						172/173
476 ... 500	135						179/180

1) The dimension corresponds to the K8 value (extended piston rod) of the drive

# Round cylinders DSNU/ESNU

Accessories



## Ordering data – Bellows kit

An extended piston rod (order code K8) is absolutely necessary when using a bellows kit.  
 → Ordering data – Modular products.

The necessary dimension for K8 as a function of piston diameter and cylinder stroke as well as the associated bellows kit is indicated in the following table:

### Order example:


Selected standard cylinder:  
 DSNU-32-320-PPV-A-MQ-...  
 Dimension for the corresponding K8 value (see table):  
 113 mm  
 Complete type designation for the standard cylinder:  
 DSNU-32-320-PPV-A-MQ-...-113K8  
 Associated bellows kit:  
 DADB-S1-32-S301-350


Cylinder data			Bellows kit	
∅	Stroke	Dimension for K8	Part No.	Type
[mm]	[mm]	[mm]		
32	10 ... 50	30	553441	DADB-S1-32-S10-50
	51 ... 125	48	553443	DADB-S1-32-S51-125
	126 ... 175	63	553445	DADB-S1-32-S126-175
	176 ... 250	82	553447	DADB-S1-32-S176-250
	251 ... 300	97	553449	DADB-S1-32-S251-300
	301 ... 350	113	553451	DADB-S1-32-S301-350
	351 ... 375	115	553453	DADB-S1-32-S351-375
	376 ... 425	131	553455	DADB-S1-32-S376-425
	426 ... 475	147	553457	DADB-S1-32-S426-475
	476 ... 500	149	553459	DADB-S1-32-S476-500
50	10 ... 50	30	553481	DADB-S1-50-S10-50
	51 ... 125	48	553483	DADB-S1-50-S51-125
	126 ... 175	58	553485	DADB-S1-50-S126-175
	176 ... 250	77	553487	DADB-S1-50-S176-250
	251 ... 300	88	553489	DADB-S1-50-S251-300
	301 ... 350	99	553491	DADB-S1-50-S301-350
	351 ... 375	106	553493	DADB-S1-50-S351-375
	376 ... 425	117	553495	DADB-S1-50-S376-425
	426 ... 475	128	553497	DADB-S1-50-S426-475
	476 ... 500	135	553499	DADB-S1-50-S476-500


Cylinder data			Bellows kit	
∅	Stroke	Dimension for K8	Part No.	Type
[mm]	[mm]	[mm]		
40	10 ... 50	29	553461	DADB-S1-40-S10-50
	51 ... 125	44	553463	DADB-S1-40-S51-125
	126 ... 175	57	553465	DADB-S1-40-S126-175
	176 ... 250	73	553467	DADB-S1-40-S176-250
	251 ... 300	87	553469	DADB-S1-40-S251-300
	301 ... 350	101	553471	DADB-S1-40-S301-350
	351 ... 375	102	553473	DADB-S1-40-S351-375
	376 ... 425	116	553475	DADB-S1-40-S376-425
	426 ... 475	131	553477	DADB-S1-40-S426-475
	476 ... 500	132	553479	DADB-S1-40-S476-500
63	10 ... 50	30	553501	DADB-S1-63-S10-50
	51 ... 125	48	553503	DADB-S1-63-S51-125
	126 ... 175	58	553505	DADB-S1-63-S126-175
	176 ... 250	77	553507	DADB-S1-63-S176-250
	251 ... 300	88	553509	DADB-S1-63-S251-300
	301 ... 350	99	553511	DADB-S1-63-S301-350
	351 ... 375	106	553513	DADB-S1-63-S351-375
	376 ... 425	117	553515	DADB-S1-63-S376-425
	426 ... 475	128	553517	DADB-S1-63-S426-475
	476 ... 500	135	553519	DADB-S1-63-S476-500


# Round cylinders DSNU/ESNU

Accessories

Ordering data – Proximity sensors, round design, magneto-resistive							Technical data → Internet: smto	
	Assembly	Switching output	Electrical connection		Cable length [m]	Connection direction	Part No.	Type
			Cable	Plug M8				
N/O contact								
	Via accessories	PNP	3-wire	–	2.5	In-line	<b>152836</b>	<b>SMT0-4U-PS-K-LED-24</b>
			–	3-pin	–	In-line	<b>152742</b>	<b>SMT0-4U-PS-S-LED-24</b>
		NPN	3-wire	–	2.5	In-line	<b>152837</b>	<b>SMT0-4U-NS-K-LED-24</b>
			–	3-pin	–	In-line	<b>152743</b>	<b>SMT0-4U-NS-S-LED-24</b>

Ordering data – Proximity sensors, round design, magnetic reed							Technical data → Internet: smeo	
	Assembly	Electrical connection		Cable length [m]	Connection direction	Part No.	Type	
		Cable	Plug M8					
N/O contact								
	Via accessories	3-wire	–	2.5	In-line	<b>36198</b>	<b>SME0-4U-K-LED-24</b>	
			5	In-line	<b>175401</b>	<b>SME0-4U-K5-LED-24</b>		
		–	3-pin	–	In-line	<b>151526</b>	<b>SME0-4U-S-LED-24-B</b>	

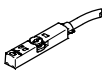
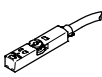
Ordering data – Proximity sensors, round design, magnetic reed, corrosion-resistant							Technical data → Internet: crsmeo	
	Assembly	Electrical connection		Cable length [m]	Connection direction	Part No.	Type	
		Cable	Plug M8					
N/O contact								
	Via accessories	3-wire	–	2.5	In-line	<b>161775</b>	<b>CRSMEO-4-K-LED-24</b>	

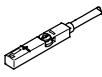


Ordering data – Mounting kits for proximity sensors SME0/SMT0/CRSMEO						Technical data → Internet: crsmbr	
Designation	For Ø					Part No.	Type
Mounting kit CRSMBR, corrosion-resistant							
	32					<b>163888</b>	<b>CRSMBR-32</b>
	40					<b>163889</b>	<b>CRSMBR-40</b>
	50					<b>163890</b>	<b>CRSMBR-50</b>
	63					<b>163891</b>	<b>CRSMBR-63</b>


# Round cylinders DSNU/ESNU

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
N/O contact						
	Insertable in the slot from above, flush with cylinder profile, short design	PNP	Cable, 3-wire	2.5	574335	SMT-8M-A-PS-24V-E-2,5-OE
			Plug M8x1, 3-pin	0.3	574334	SMT-8M-A-PS-24V-E-0,3-M8D
			Plug M12x1, 3-pin	0.3	574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN	Cable, 3-wire	2.5	574338	SMT-8M-A-NS-24V-E-2,5-OE
			Plug M8x1, 3-pin	0.3	574339	SMT-8M-A-NS-24V-E-0,3-M8D
N/C contact						
	Insertable in the slot from above, flush with cylinder profile, short design	PNP	Cable, 3-wire	7.5	574340	SMT-8M-A-PO-24V-E-7,5-OE


Ordering data – Proximity sensors for T-slot, magnetic reed						Technical data → Internet: sme
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	543862	SME-8M-DS-24V-K-2,5-OE
				5.0	543863	SME-8M-DS-24V-K-5,0-OE
			Cable, 2-wire	2.5	543872	SME-8M-ZS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543861	SME-8M-DS-24V-K-0,3-M8D
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	150855	SME-8-K-LED-24
			Plug M8x1, 3-pin	0.3	150857	SME-8-S-LED-24
N/C contact						
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	160251	SME-8-O-K-LED-24



Ordering data – Mounting kits for proximity sensors SME/SMT-8					Technical data → Internet: smbr
Designation	For Ø	Part No.	Type		
Mounting kit SMBR-8					
	32	175097	SMBR-8-32		
	40	175098	SMBR-8-40		
	50	175099	SMBR-8-50		
	63	175100	SMBR-8-63		

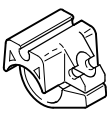




# Round cylinders DSNU/ESNU

Accessories

Ordering data – Proximity sensors for C-slot, magneto-resistive					Technical data → Internet: smt	
	Type of mounting	Switching 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	551373	SMT-10M-PS-24V-E-2,5-L-OE
			Plug M8x1, 3-pin, in-line	0.3	551375	SMT-10M-PS-24V-E-0,3-L-M8D
			Plug M8x1, 3-pin, lateral	0.3	551376	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	Switching 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	551367	SME-10M-DS-24V-E-0,3-L-M8D
			Cable, 3-wire, in-line	2.5	551365	SME-10M-DS-24V-E-2,5-L-OE
			Cable, 2-wire, in-line	2.5	551369	SME-10M-ZS-24V-E-2,5-L-OE
	Insertable in the slot lengthwise	Contacting	Plug M8x1, 3-pin, in-line	0.3	173212	SME-10-SL-LED-24
			Cable, 3-wire, in-line	2.5	173210	SME-10-KL-LED-24

Ordering data – Mounting kits for proximity sensors SME/SMT-10				Technical data → Internet: smbr	
Designation	For Ø			Part No.	Type
Mounting kit SMBR-10					
	32			175105	SMBR-10-32
	40			175106	SMBR-10-40
	50			175107	SMBR-10-50
	63			175108	SMBR-10-63

Ordering data – Connecting cables			Technical data → Internet: nebu	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	541333 NEBU-M8G3-K-2.5-LE3
			5	541334 NEBU-M8G3-K-5-LE3
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541363 NEBU-M12G5-K-2.5-LE3
			5	541364 NEBU-M12G5-K-5-LE3
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541338 NEBU-M8W3-K-2.5-LE3
			5	541341 NEBU-M8W3-K-5-LE3
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541367 NEBU-M12W5-K-2.5-LE3
			5	541370 NEBU-M12W5-K-5-LE3