



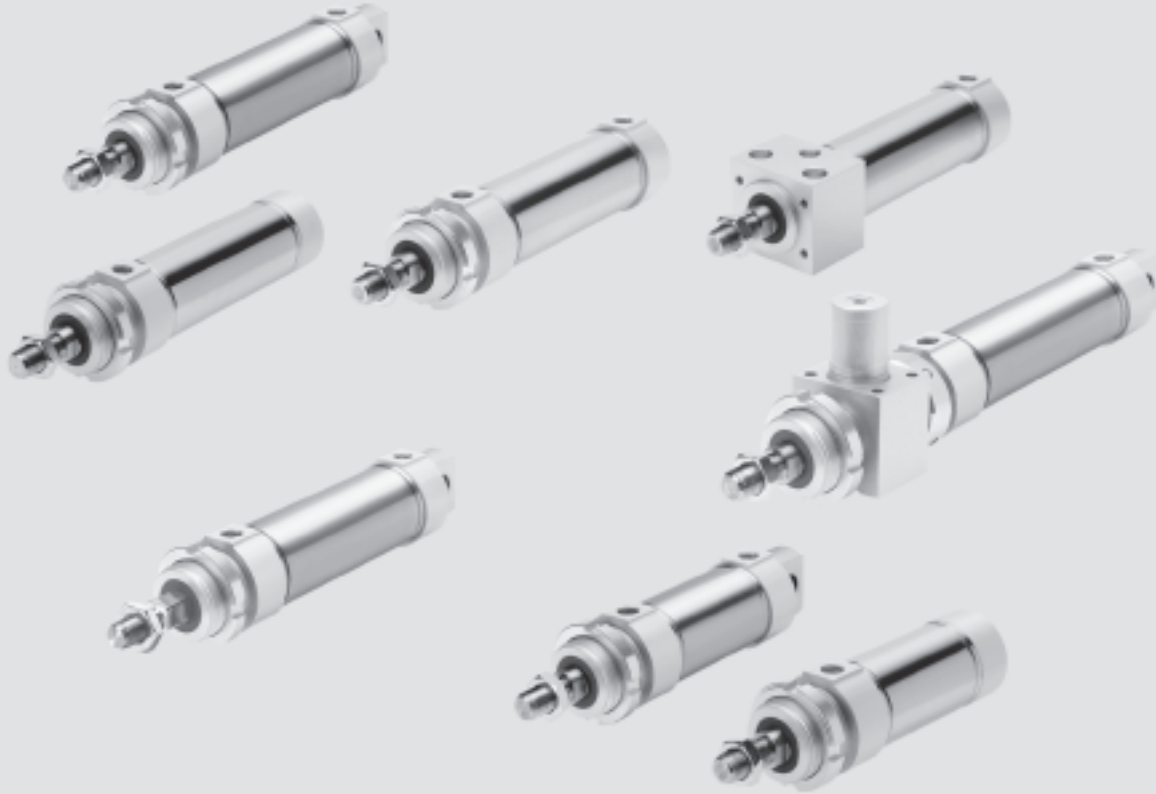
- Quick reacting thanks to minimal break-away force
- Meet the highest requirements for running characteristics, service life and load carrying ability
- Comprehensive range of accessories

Specified types in accordance with ATEX directive for potentially explosive atmospheres
→ www.festo.com/en/ex

Round cylinders DSNU/ESNU

Key features

FESTO



Cylinders with piston rods
Round cylinders

2.4

Optimal range

- Good running performance and long service life thanks to smooth, hard cylinder bore
- Piston rod and cylinder barrel made of stainless steel
- The cap is swaged onto the barrel

Functional

- Three different end caps mean numerous functional and space-saving designs
- Piston diameter 32 to 63 mm. The series is not repairable

Variants

- Non-rotating
- Through piston rod
- With or without position sensing
- Flexible cushioning rings/plates at both ends or pneumatic cushioning adjustable at both ends
- Further piston rod variants

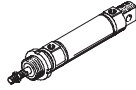
Round cylinders DSNU/ESNU

Key features

Standard range

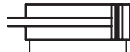
Double-acting

Basic version
DSNU



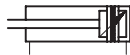
With position sensing
Flexible cushioning rings/plates at both ends

DSNU-P-A



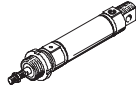
With position sensing
Pneumatic cushioning adjustable at both ends

DSNU-PPV-A



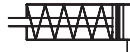
Single-acting

Basic version
ESNU



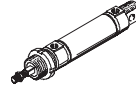
With position sensing
Flexible cushioning rings/plates at both ends

ESNU-P-A



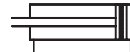
Double-acting Non-rotating

Basic version
DSNU-Q



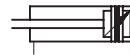
With position sensing
Flexible cushioning rings/plates at both ends

DSNU-P-A-Q



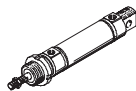
With position sensing
Pneumatic cushioning adjustable at both ends

DSNU-PPV-A-Q



Variants from the modular system

Basic version
DSNU/ESNU



S2: Through piston rod

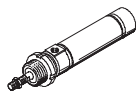


K8: Piston rod extended



Axial air connection

DSNU-MA/ESNU-MA



K2: Extended male piston rod thread

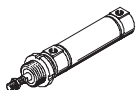


S6: Heat-resistant seal up to max. 120 °C



Lateral air connection

DSNU-MQ



K6: Shortened male piston rod thread

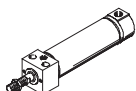


S10: Slow speed (constant motion)



With direct mounting

DSNU-MH



K3: Female piston rod thread

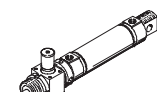


S11: Low friction



With clamping unit

DSNU-...-KP



K5: Special thread on piston rod



R3: High corrosion protection



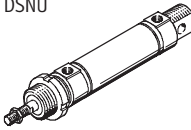
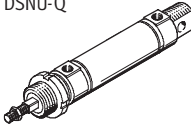
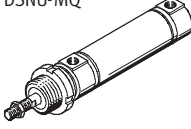
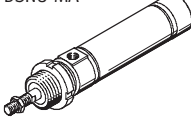
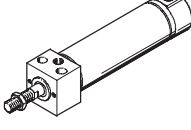
Round cylinders DSNU

Product range overview



Cylinders with piston rods
Round cylinders

2.4

Function	Design	Piston Ø [mm]	Stroke [mm]	Variable stroke ¹⁾ [mm]	Piston rod						
					Through S2	Extended K8	Male thread			Female thread K3	
							Extended K2	Shortened K6	Special thread K5		
Double-acting	Basic version with position sensing										
	DSNU 	32, 40, 50, 63	25, 40, 50, 80, 100, 125, 160, 200, 250, 320	1 ... 500	■	■	■	■	■	■	
	Non-rotating										
	DSNU-Q 	32	-	5 ... 300	■	■	■	■	■	■	
		40, 50	-	5 ... 400	■	■	■	■	■	■	
		63	-	5 ... 500	■	■	■	■	■	■	
Lateral air connection											
DSNU-MQ 	32, 40, 50, 63	-	1 ... 500	-	■	■	■	■	■		
Axial air connection											
DSNU-MA 	32, 40, 50, 63	-	1 ... 500	-	■	■	■	■	■		
Direct mounting											
DSNU-MH 	32, 40, 50, 63	-	1 ... 500	-	■	■	■	■	■		

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

Round cylinders DSNU

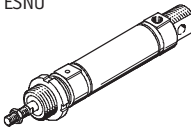
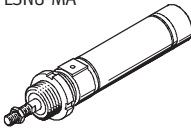
Product range overview

Design	Cushioning		Position sensing	Clamping unit	Heat-resistant seal	Slow speed (constant motion)	Low friction	Corrosion protection	Wiper seal	→Page
	Fixed	Adjustable								
	P	PPV	A	KP	S6	S10	S11	R3	R8	
Basic version with position sensing										
DSNU	■	■	■	■	■	■	■	■	■	1 / 2.4-11
Non-rotating										
DSNU-Q	■	■	■	■	■	■	■	■	-	1 / 2.4-17
Lateral air connection										
DSNU-MQ	■	■	■	■	■	-	-	■	■	1 / 2.4-11
Axial air connection										
DSNU-MA	■	-	■	■	■	-	-	■	-	1 / 2.4-11
Direct mounting										
DSNU-MH	■	■	■	-	■	-	-	■	-	1 / 2.4-11

Round cylinders ESNU

Product range overview



Function	Design	Piston Ø [mm]	Stroke ¹⁾ [mm]	Variable stroke [mm]	Cushioning Fixed P	Position sensing A
Single-acting	Basic version with position sensing					
	ESNU 	32, 40, 50, 63	10, 25, 50	1 ... 50	■	■
	Axial air connection					
	ESNU-MA 	32, 40, 50, 63	–	1 ... 50	■	■

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

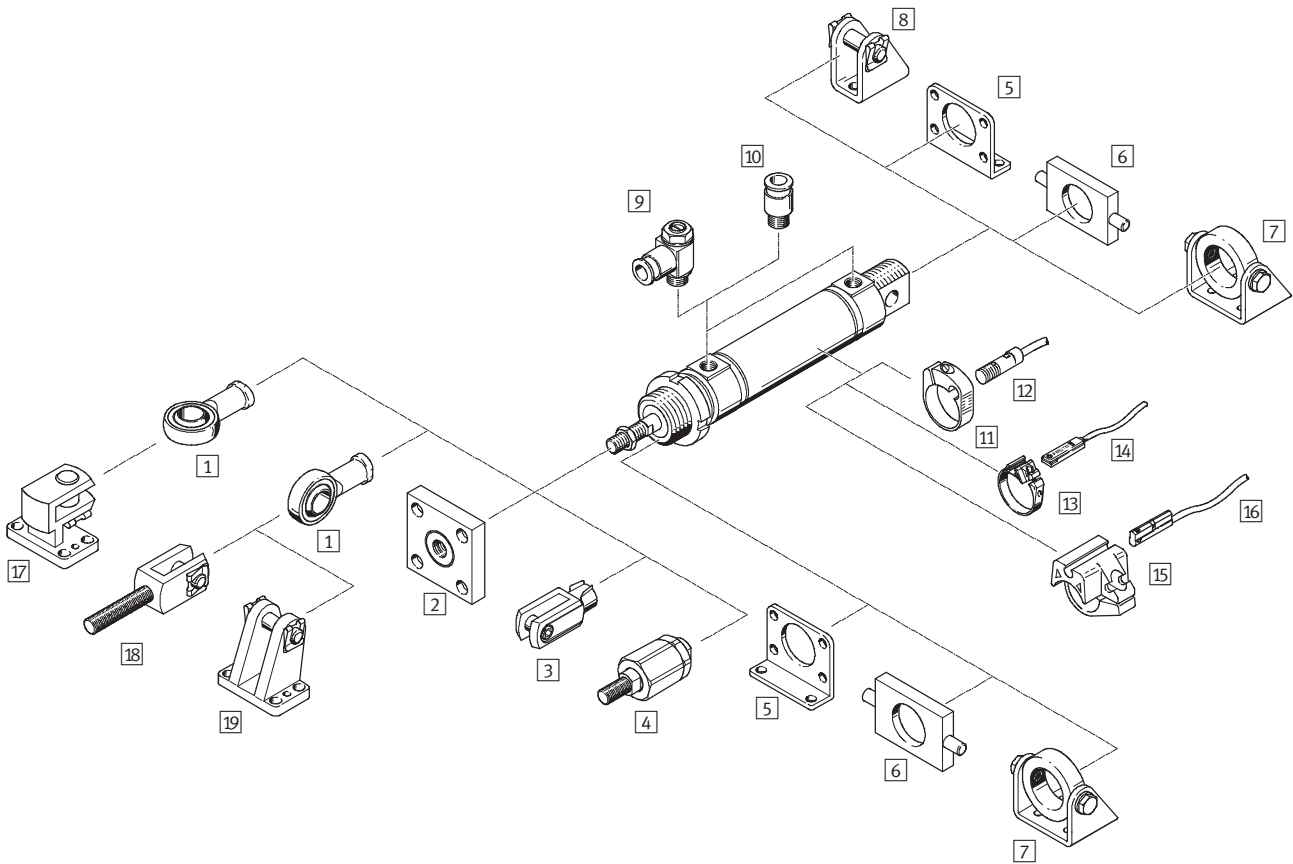
Round cylinders ESNU

Product range overview

Design	Piston rod					→ Page
	Extended K8	Male thread			Female thread K3	
		Extended K2	Shortened K6	Special thread K5		
Basic version with position sensing						
ESNU	■	■	■	■	■	1 / 2.4-28
Axial air connection						
ESNU-MA	■	■	■	■	■	1 / 2.4-28

Round cylinders DSNU/ESNU

Peripherals overview



Cylinders with piston rods
Round cylinders

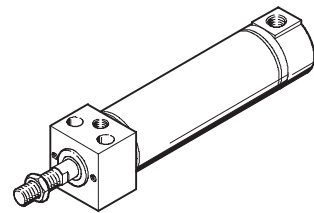
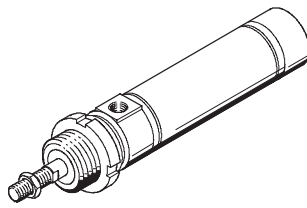
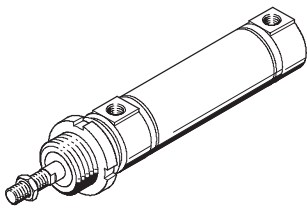
2.4

Variants

DSNU-MQ

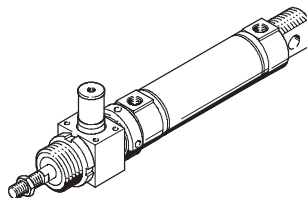
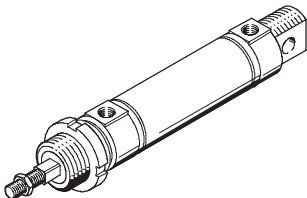
DSNU-MA

DSNU-MH



DSNU-Q

DSNU-KP



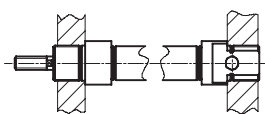
Round cylinders DSNU/ESNU

Peripherals overview

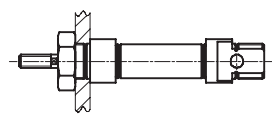
Mounting attachments and accessories							
	DSNU/ESNU	DSNU/ESNU MA	DSNU MQ	MH	KP	DSNU-Q	→Page
1	Rod eye SGS/CRSGS	■	■	■	■	■	1 / 2.4-38
2	Coupling piece KSG/KSZ	■	■	■	■	■	1 / 2.4-38
3	Rod clevis SG/CRSG	■	■	■	■	■	1 / 2.4-38
4	Self-aligning rod coupler FK	■	■	■	■	■	1 / 2.4-38
5	Foot mounting HBN/CRH	■	■	■	-	■	1 / 2.4-34
	Flange mounting FBN/CRFV	■	■	■	-	■	1 / 2.4-35
6	Swivel mounting WBN	■	■	■	-	■	1 / 2.4-36
7	Swivel mounting SBN	■	■	■	-	■	1 / 2.4-36
8	Clevis foot LBN/CRLBN	■	-	-	-	■	1 / 2.4-37
9	One-way flow control valve GRLA/GRLZ/CRGRLA	■	■	■	■	■	1 / 2.4-38
10	Push-in fitting QS	■	■	■	■	■	Volume 3
11	Sensor mounting kit CRSMBR	■	■	■	■	■	1 / 2.4-39
12	Proximity sensor SMEO/SMT0/CRSMEO-4	■	■	■	■	■	1 / 2.4-39
13	Sensor mounting kit SMBR-8	■	■	■	■	■	1 / 2.4-40
14	Proximity sensor SME/SMT-8	■	■	■	■	■	1 / 2.4-40
15	Sensor mounting kit SMBR-10	■	■	■	■	■	1 / 2.4-41
16	Proximity sensor SME/SMT-10	■	■	■	■	■	1 / 2.4-41
17	Clevis foot, lateral LQG	■	■	■	■	■	1 / 2.4-37
18	Rod clevis SGA	■	■	■	■	■	1 / 2.4-38
19	Clevis foot LBG	■	■	■	■	■	1 / 2.4-37

Mounting options

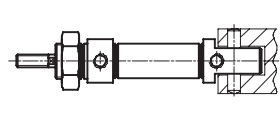
Mounting front and rear



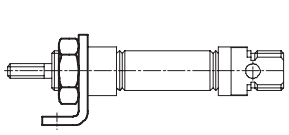
Mounting with hex nut



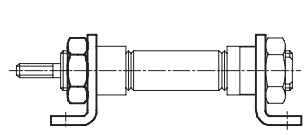
Swivel mounting



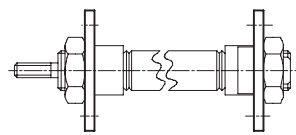
Foot mounting (for short strokes)



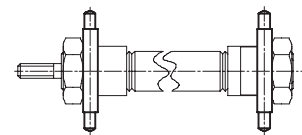
Foot mounting



Flange mounting

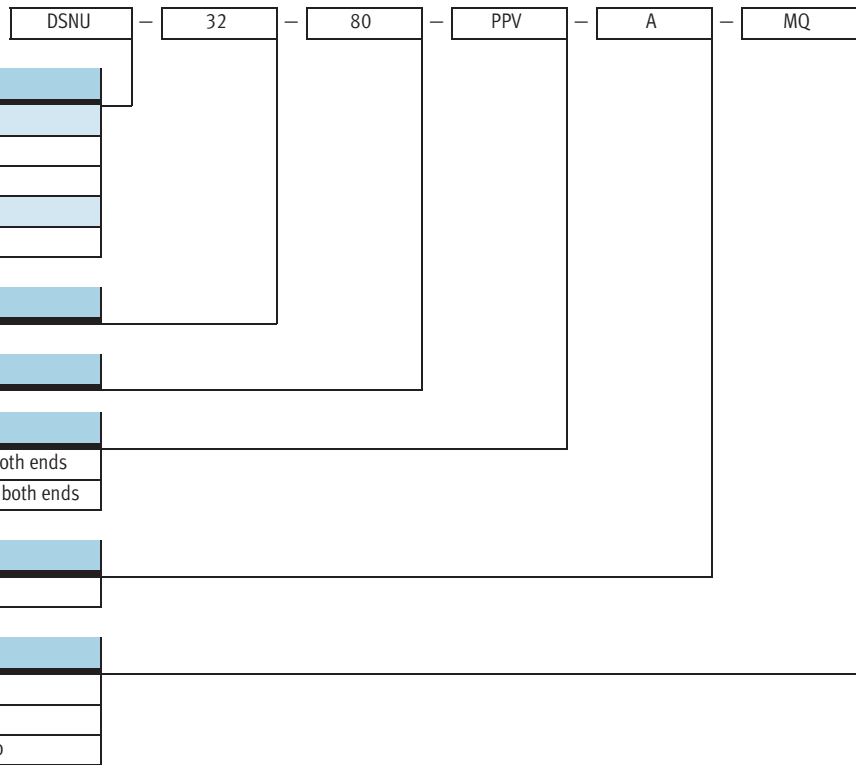


Swivel mounting



Round cylinders DSNU/ESNU

Type codes



Modular product system

Individually configurable

DSNU → 1 / 2.4-24

ESNU → 1 / 2.4-32

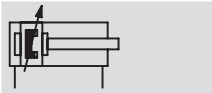
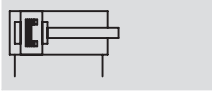
- Square piston rod (protection against rotation)
- Through piston rod (piston rod type)
- Extended male piston rod thread
- Male piston rod thread, shortened at one end
- Female piston rod thread (female thread)
- Special piston rod thread (special thread)
- Extended piston rod
- Clamping unit on piston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

Round cylinders DSNU

Technical data

FESTO

Function

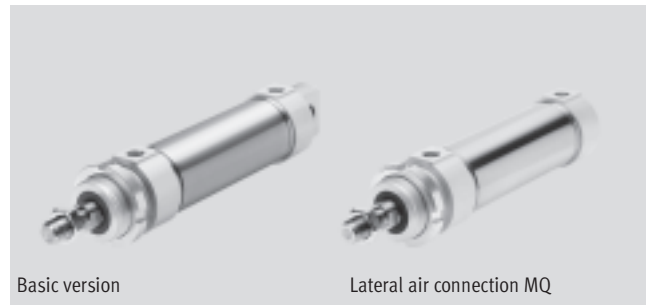


⊘ - Diameter
32 ... 63 mm

┆ - Stroke length
1 ... 500 mm

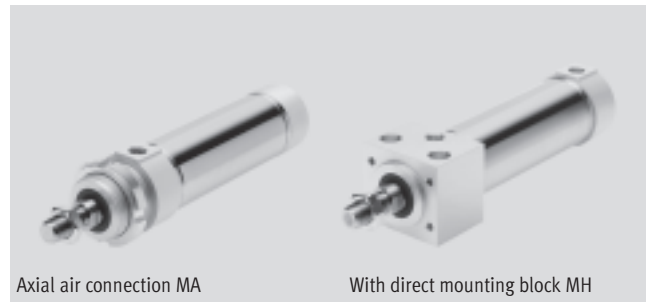
Variants

→ 1 / 2.4-15



Basic version

Lateral air connection MQ



Axial air connection MA

With direct mounting block MH

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			
	Piston rod			
	Cylinder barrel			
Cushioning	Flexible cushioning rings/plates at both ends			
	Pneumatic cushioning adjustable at both ends			
Cushioning length (PPV) [mm]	14	18	20	21
Position sensing	For proximity sensing			
Type of mounting	Direct mounting (MH variant only)			
	Via accessories			
Assembly position	Any			

Operating conditions				
Piston ∅	32	40	50	63
Operating medium	Filtered compressed air, lubricated or unlubricated			
Operating pressure	Basic version	1 ... 10		
	S10	0.5 ... 10	0.4 ... 10	0.2 ... 10
	S11	0.2 ... 10	–	0.2 ... 10

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

1) Note operating range of proximity sensors

2) 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 normal industrial environment or media such as coolants or lubricating agents

Corrosion resistance class 3 according to Festo standard 940 070

Components requiring higher corrosion resistance. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface

Round cylinders DSNU

Technical data



Forces [N] and impact energy [J]				
Piston Ø	32	40	50	63
Theoretical force at 6 bar, advancing	483	753	1,178	1,870
Theoretical force at 6 bar, retracting	415	633	990	1,682
Impact energy at the end positions	0.40	0.70	1	1.3

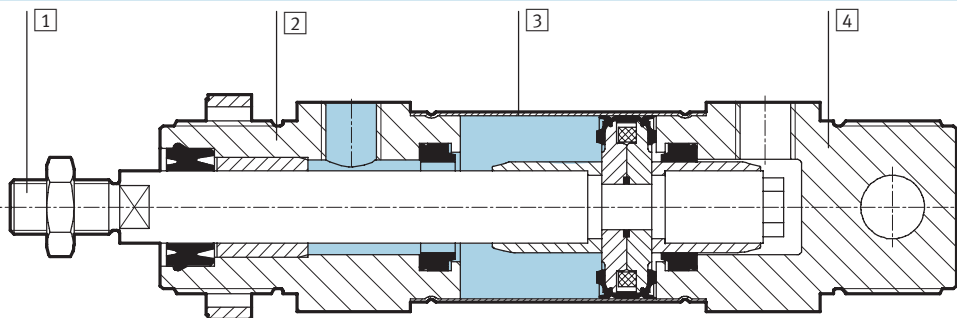
Speed [mm/s]				
Piston Ø	32	40	50	63
Speed with judder-free running, S10 horizontal, without load, at 6 bar	8 ... 100			5 ... 100
Minimum speed, advancing S11	<1 ¹⁾			
Minimum speed, retracting S11	<1 ¹⁾			

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

Weights [g]				
Piston Ø	32	40	50	63
Product weight with 0 mm stroke	370.5	661	1,087	1,445
Additional weight per 10 mm stroke	15.5	24	40	44

Materials

Sectional view



Round cylinder	Basic version	S6	S10	S11	R3
1 Piston rod	High-alloy steel				High-alloy stainless steel
2 Bearing cap	Wrought aluminium alloy				
3 Cylinder barrel	High-alloy stainless steel				
4 End cap	Wrought aluminium alloy				
- Seals	Polyurethane, nitrile rubber	Fluoro rubber		Polyurethane, nitrile rubber	

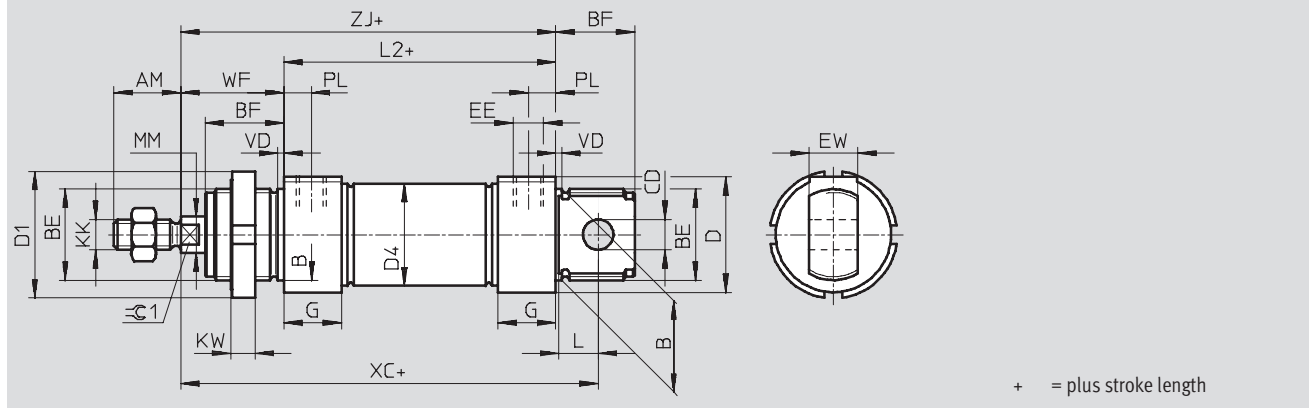
Round cylinders DSNU

Technical data



Dimensions Download CAD data → www.festo.com/en/engineering

Basic version



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

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

Cylinders with piston rods
Round cylinders

2.4

Round cylinders DSNU

Technical data

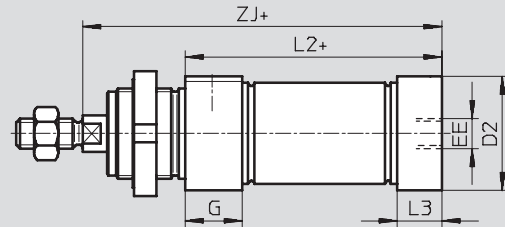
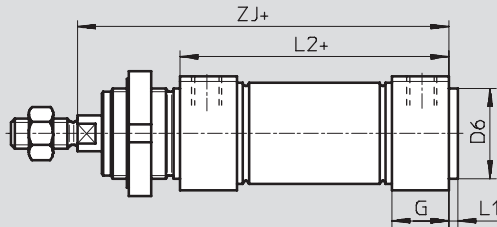


Dimensions

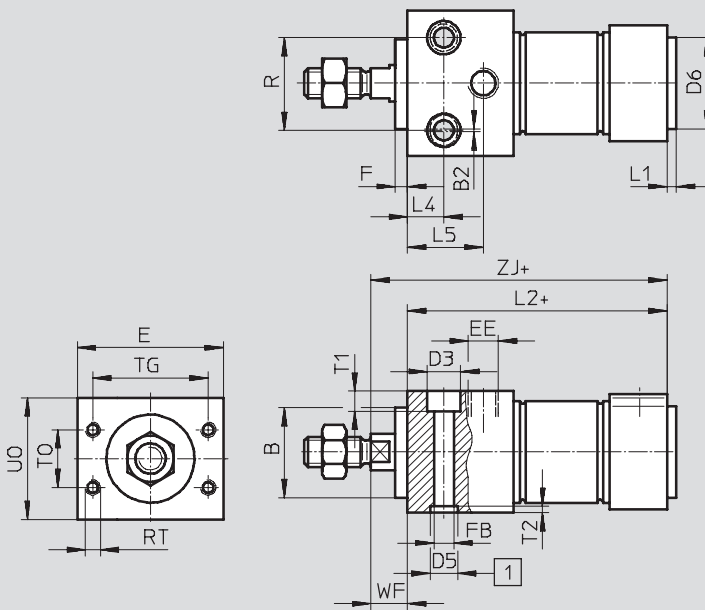
Download CAD data → www.festo.com/en/engineering

MQ – Lateral air connection

MA – Axial air connection



MH – With direct mounting block



- 1 Centring holes
(2 centring sleeves included in scope of delivery)
- + = plus stroke length

∅ [mm]	B ∅ h9	B2	E	EE	G	F	FB ∅	D2 ∅	D3	D5 ∅	D6 ∅	L1	L2		
													-MQ	-MA	-MH
32	30	1	48	G1/8	19	4	6.6	34	11	9	30	3	69.5	65.5	85.5
40	38		54	G1/4	25		9	42	14	12	38	4	84.6	77.6	104.6
50	45	2	64	G3/8	28	11	66	18	15	45	86.2		86.2	109.2	
63			72								94.2	94.2	117.2		

∅ [mm]	L3	L4	L5	R	RT	TO	T1	T2	TG	UO	WF	ZJ		
												-MQ	-MA	-MH
32	15	12	25	30	M5	16	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	11	3.1	50	58	15	130.2	130.2	124.2
63	28	36	44	M8	36	52			72	139.2		139.2	132.2	

Round cylinders DSNU

Technical data



Dimensions Download CAD data → www.festo.com/en/engineering

S2 – Through piston rod

Note
The thread designs on 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 ¹⁾			-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

Cylinders with piston rods
Round cylinders
2.4


Round cylinders DSNU

Technical data

FESTO

Cylinders with piston rods
Round cylinders

2.4

Ordering data						
Type	Piston Ø [mm]	Stroke [mm]	Flexible cushioning rings/plates at both ends		Pneumatic cushioning adjustable at both ends	
			Part No.	Type	Part No.	Type
	32	25	195 980	DSNU-32-25-P-A	196 020	DSNU-32-25-PPV-A
		40	195 981	DSNU-32-40-P-A	196 021	DSNU-32-40-PPV-A
		50	195 982	DSNU-32-50-P-A	196 022	DSNU-32-50-PPV-A
		80	195 983	DSNU-32-80-P-A	196 023	DSNU-32-80-PPV-A
		100	195 984	DSNU-32-100-P-A	196 024	DSNU-32-100-PPV-A
		125	195 985	DSNU-32-125-P-A	196 025	DSNU-32-125-PPV-A
		160	195 986	DSNU-32-160-P-A	196 026	DSNU-32-160-PPV-A
		200	195 987	DSNU-32-200-P-A	196 027	DSNU-32-200-PPV-A
		250	195 988	DSNU-32-250-P-A	196 028	DSNU-32-250-PPV-A
		320	195 989	DSNU-32-320-P-A	196 029	DSNU-32-320-PPV-A
	40	25	195 990	DSNU-40-25-P-A	196 030	DSNU-40-25-PPV-A
		40	195 991	DSNU-40-40-P-A	196 031	DSNU-40-40-PPV-A
		50	195 992	DSNU-40-50-P-A	196 032	DSNU-40-50-PPV-A
		80	195 993	DSNU-40-80-P-A	196 033	DSNU-40-80-PPV-A
		100	195 994	DSNU-40-100-P-A	196 034	DSNU-40-100-PPV-A
		125	195 995	DSNU-40-125-P-A	196 035	DSNU-40-125-PPV-A
		160	195 996	DSNU-40-160-P-A	196 036	DSNU-40-160-PPV-A
		200	195 997	DSNU-40-200-P-A	196 037	DSNU-40-200-PPV-A
		250	195 998	DSNU-40-250-P-A	196 038	DSNU-40-250-PPV-A
		320	195 999	DSNU-40-320-P-A	196 039	DSNU-40-320-PPV-A
	50	25	196 000	DSNU-50-25-P-A	196 040	DSNU-50-25-PPV-A
		40	196 001	DSNU-50-40-P-A	196 041	DSNU-50-40-PPV-A
		50	196 002	DSNU-50-50-P-A	196 042	DSNU-50-50-PPV-A
		80	196 003	DSNU-50-80-P-A	196 043	DSNU-50-80-PPV-A
		100	196 004	DSNU-50-100-P-A	196 044	DSNU-50-100-PPV-A
		125	196 005	DSNU-50-125-P-A	196 045	DSNU-50-125-PPV-A
		160	196 006	DSNU-50-160-P-A	196 046	DSNU-50-160-PPV-A
		200	196 007	DSNU-50-200-P-A	196 047	DSNU-50-200-PPV-A
		250	196 008	DSNU-50-250-P-A	196 048	DSNU-50-250-PPV-A
		320	196 009	DSNU-50-320-P-A	196 049	DSNU-50-320-PPV-A
	63	25	196 010	DSNU-63-25-P-A	196 050	DSNU-63-25-PPV-A
		40	196 011	DSNU-63-40-P-A	196 051	DSNU-63-40-PPV-A
		50	196 012	DSNU-63-50-P-A	196 052	DSNU-63-50-PPV-A
		80	196 013	DSNU-63-80-P-A	196 053	DSNU-63-80-PPV-A
		100	196 014	DSNU-63-100-P-A	196 054	DSNU-63-100-PPV-A
		125	196 015	DSNU-63-125-P-A	196 055	DSNU-63-125-PPV-A
160		196 016	DSNU-63-160-P-A	196 056	DSNU-63-160-PPV-A	
200		196 017	DSNU-63-200-P-A	196 057	DSNU-63-200-PPV-A	
250		196 018	DSNU-63-250-P-A	196 058	DSNU-63-250-PPV-A	
320		196 019	DSNU-63-320-P-A	196 059	DSNU-63-320-PPV-A	

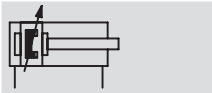
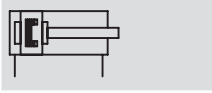
 Note

Further variants can be configured and ordered via the DSNU product modules → 1 / 2.4-24.


Round cylinders DSNU-Q, non-rotating

Technical data

Function



-  - Diameter
32 ... 63 mm

-  - Stroke length
5 ... 500 mm



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 Non-rotating with square piston rod			
Max. torque at the piston rod [Nm]	0.8	1.1	1.5	1.5
Cushioning	Flexible cushioning rings/plates at both ends Pneumatic cushioning adjustable at both ends			
Cushioning length (PPV) [mm]	14	18	20	21
Position sensing	For proximity sensing			
Type of mounting	Via accessories			
Assembly position	Any			

Operating conditions				
Piston Ø	32	40	50	63
Operating medium	Filtered compressed air, lubricated or unlubricated			
Operating pressure [bar]	1 ... 10			

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

1) Note operating range of proximity sensors

2) 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 normal industrial environment or media such as coolants or lubricating agents

Corrosion resistance class 3 according to Festo standard 940 070

Components requiring higher corrosion resistance. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface

Round cylinders DSNU-Q, non-rotating

Technical data

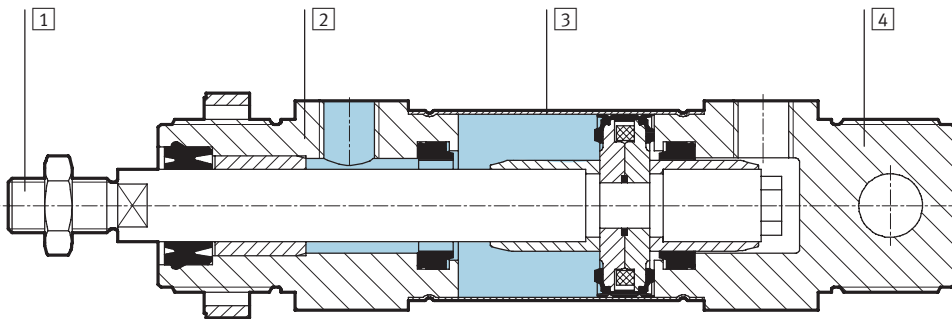


Forces [N] and impact energy [J]				
Piston Ø	32	40	50	63
Theoretical force at 6 bar, advancing	483	753	1,178	1,870
Theoretical force at 6 bar, retracting	415	633	990	1,682
Impact energy at end positions	0.40	0.70	1	1.3

Weights [g]				
Piston Ø	32	40	50	63
Product weight with 0 mm stroke	370.5	661	1,087	1,445
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	Wrought aluminium alloy	
3 Cylinder barrel	High-alloy stainless steel	
4 End cap	Wrought aluminium alloy	
- Seals	Polyurethane, nitrile rubber	

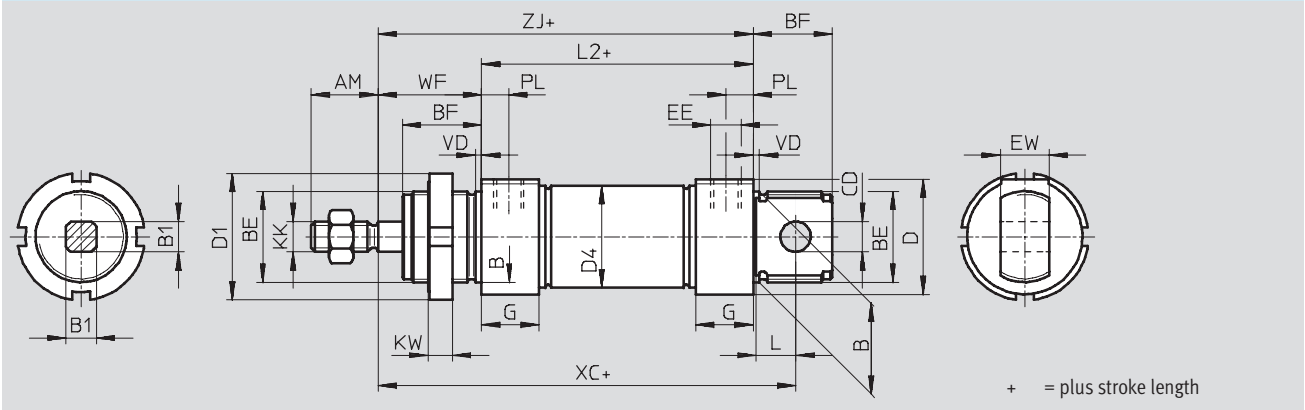
Round cylinders DSNU-Q, non-rotating

Technical data



Dimensions Download CAD data → www.festo.com/en/engineering

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 ¹ / ₈	16
40	24	38	12	M38x1.5	30	12	46	50	41.6	G ¹ / ₄	18
50	32	45	16	M45x1.5	33	16	57	60	52.4	G ¹ / ₄	21
63	32	45	16	M45x1.5	33	16	70	60	65.4	G 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

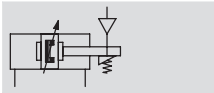
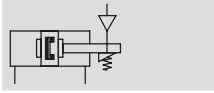
Cylinders with piston rods
Round cylinders
2.4

Round cylinders DSNU-KP, with clamping cartridge

Technical data

FESTO

Function



Ø - Diameter
32 ... 63 mm

— - Stroke length
1 ... 500 mm



⚠ - Note

Additional measures are required for use in safety-related control systems; 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	Flexible cushioning rings/plates at both ends			
	Pneumatic cushioning adjustable at both ends			
Cushioning length (PPV) [mm]	14	18	20	21
Position sensing	For proximity sensing			
Type of mounting	Via through-holes			
	Via accessories			
Assembly position	Any			
Clamping unit holding force [N]	600	1,000	1,400	2,000
Max. axial backlash with clamped piston rod without load [mm]	0.5		0.7	
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	Filtered compressed air, lubricated or unlubricated			
Operating pressure [bar]	3 ... 10			

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

1) Note operating range of proximity sensors

2) 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 normal industrial environment or media such as coolants or lubricating agents

Corrosion resistance class 3 according to Festo standard 940 070

Components requiring higher corrosion resistance. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface

Round cylinders DSNU-KP, with clamping cartridge

Technical data

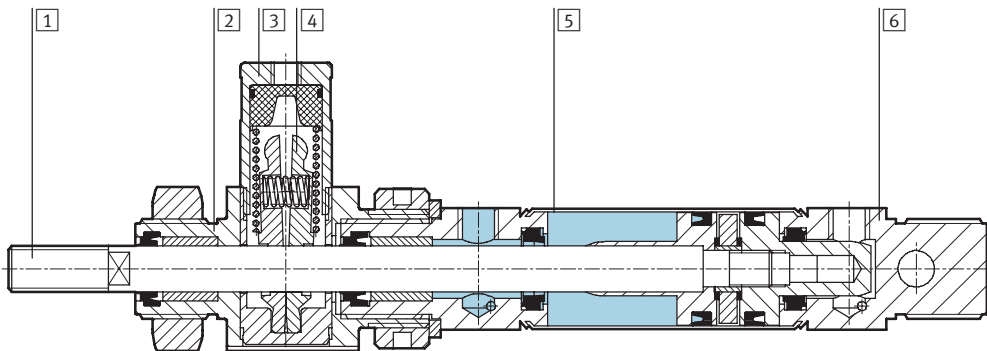
Forces [N] and impact energy [J]				
Piston Ø	32	40	50	63
Theoretical force at 6 bar, advancing	483	753	1,178	1,870
Theoretical force at 6 bar, retracting	415	633	990	1,682
Impact energy at the end positions ¹⁾	0.40	0.70	1	1.3

1) The values are reduced by approx. 50% at 80 °C

Weights [g]				
Piston Ø	32	40	50	63
Product weight with 0 mm stroke	711.5	1,287	2,059	2,556
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	Wrought aluminium alloy	
3 Clamping unit housing	Wrought aluminium alloy	
4 Clamping jaws	Brass	
5 Cylinder barrel	High-alloy stainless steel	
6 End cap	Wrought aluminium alloy	
- Clamping unit piston	Polyacetate	
- Spring	Spring steel	
- Seals	Polyurethane, nitrile rubber	

Round cylinders DSNU-KP, with clamping cartridge

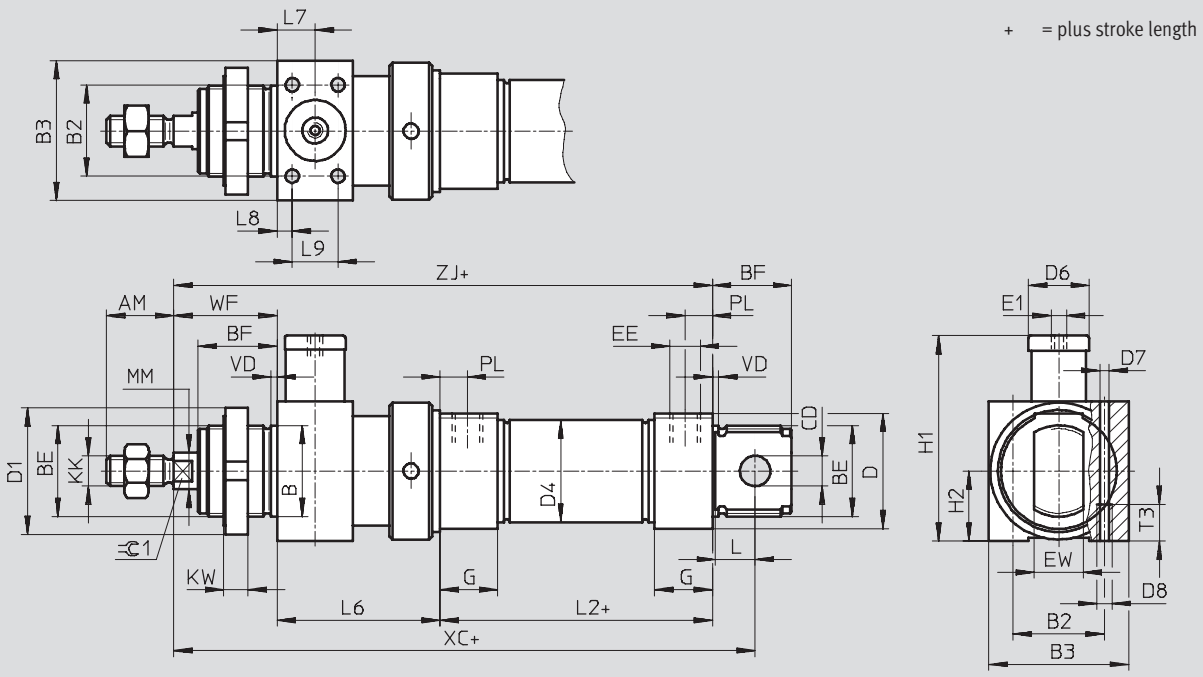
Technical data



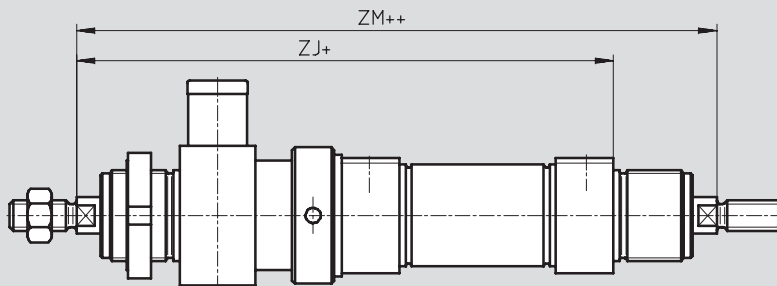
Dimensions

Download CAD data → www.festo.com/en/engineering

Basic version



S2 – Through piston rod



- - Note

The thread designs on both piston rod ends are identical. The clamping cartridge is mounted on only one side.

In combination with variant Q, the front piston rod is square, the rear piston rod round. The clamping

cartridge is mounted on the rear, round piston rod.

+ = plus stroke length

++ = plus stroke length

Round cylinders DSNU-KP, with clamping cartridge

FESTO

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		

∅ [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 ±0.75	L7	L8	L9	T3	PL	VD	WF	XC ±1	ZJ	ZM	≈C1
32	55	12.5	5	15	12	9	2	34	171	157	191	10
40	69	17	7	20	18	12	3	39	207.1	191.1	230.1	13
50	78	20		26	20			44	223.7	206.7	250.7	17
63	86	24	8	32	21	13		45	240.7	223.7	268.7	

Cylinders with piston rods
Round cylinders

2.4

Round cylinders DSNU

Ordering data – Modular products



Cylinders with piston rods
Round cylinders
2.4

M Mandatory data					O Options →			
Module No.	Function	Piston Ø	Stroke	Cushioning	Position sensing	Cylinder cap	Type of piston rod	Male thread extended
193 992	DSNU	32	1 ... 500	P	A	MQ	S2	...K2
193 993		40		PPV		MA		
193 994		50				MH		
193 995		63						
Ordering example								
193 994	DSNU	- 50	- 400	- PPV	- A	- MQ	-	-

Ordering table								
Size		32	40	50	63	Condi- tions	Code	Enter code
M	Module No.	193 992	193 993	193 994	193 995			
	Function	Double-acting round cylinder					DSNU	DSNU
	Piston Ø [mm]	32	40	50	63		-...	
	Stroke [mm]	1 ... 500					-...	
	Cushioning	Flexible cushioning rings/plates at both ends					-P	
		Pneumatic cushioning adjustable at both ends				1	-PPV	
O	Position sensing	For proximity sensing				2	-A	
	Cylinder cap	Lateral air connection, end cap				3	-MQ	
		Axial air connection, end cap				4	-MA	
		Mounting flange at front (direct mounting), bearing cap				5	-MH	
	Type of piston rod	Through piston rod				6	-S2	
	Male thread extended [mm]	1 ... 35		1 ... 70		7	-...K2	

- | | | | |
|-------|---------------------------|------|----------------------------|
| 1 PPV | Not with MA | 5 MH | Not with combination S6-R3 |
| 2 A | Minimum stroke: 10 mm | | Not with KP, S10, S11, R8 |
| 3 MQ | Not with S2, S10, S11 | 6 S2 | Not with MQ, MA, S10, S11 |
| 4 MA | Not with S2, S10, S11, R8 | 7 K2 | Not with K3, K6 |

Transfer order code

Round cylinders DSNU

Ordering data – Modular products



Options

Male thread shortened	Female thread	Special thread	Piston rod extended	Clamping unit	Temperature-resistant	Constant motion	Running characteristics	Corrosion protection	Wiper seal
...K6	K3	"... "K5	...K8	KP	S6	S10	S11	R3	R8
- 8K6	-	-	-	-	- S6	-	-	- R3	-

Ordering table

Size	32	40	50	63	Condi- tions	Code	Enter code
Male thread shortened [mm]	Piston rod with shortened male thread 1 ... 8			1 ... 10	8	-...K6	
Female thread	(M6)	(M8)	(M10)		9	-K3	
Special thread	Special piston rod thread M10 M12 M16					-"... "K5	
Piston rod extended at front [mm]	Extended piston rod at front 1 ... 500					...K8	
Clamping unit	Attached				10	-KP	
Temperature-resistant	Heat-resistant seals up to max. 120 °C				11	-S6	
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 scraper					-R8	

- 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

Transfer order code

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

Round cylinders DSNU-Q, non-rotating

Ordering data – Modular products



Cylinders with piston rods
Round cylinders
2.4

M Mandatory data					O Options				
Module No.	Function	Piston Ø	Stroke	Cushioning	Position sensing	Cylinder cap	Protection against torsion	Type of piston rod	Male thread extended
193 992	DSNU	32	1 ... 500	P	A	MQ	Q	S2	...K2
193 993		40		PPV		MA			
193 994		50				MH			
193 995		63							
Ordering example									
193 992	DSNU	32	500	P	A	MA	Q		

Ordering table											
Size	32		40		50		63		Condi-tions	Code	Enter code
M	Module No.	193 992		193 993		193 994		193 995			
	Function	Double-acting round cylinder									DSNU
	Piston Ø [mm]	32	40	50	63					-...	
	Stroke [mm]	1 ... 500									-...
	Cushioning	Flexible cushioning rings/plates at both ends									-P
		Pneumatic cushioning adjustable at both ends									1 -PPV
O	Position sensing	For proximity sensors									2 -A
	Cylinder cap	Lateral air connection, end cap									3 -MQ
		Axial air connection, end cap									3 -MA
		Mounting flange at front (direct mounting), bearing cap									4 -MH
	Protection against torsion	Square piston rod									-Q
		Restricted stroke [mm]			5 ... 300			5 ... 400			
	Type of piston rod	Through piston rod									-S2
	Male thread extended [mm]	1 ... 35			1 ... 70			5 -...K2			

- | | | | |
|----------|-----------------------|------|----------------------------------|
| 1 PPV | Not with MA | 4 MH | Not with combination Q-R3, S6-R3 |
| 2 A | Minimum stroke: 10 mm | | Not with KP |
| 3 MQ, MA | Not with S2 | 5 K2 | Not with K3, K6 |

Transfer order code

Round cylinders DSNU-Q, non-rotating

Ordering data – Modular products



→ 0 Options						
Male thread shortened	Female thread	Special thread	Piston rod extended	Clamping unit	Temperature-resistant	Corrosion protection
...K6	K3	“...”K5	...K8	KP	S6	R3
-	- K3 -	-	-	- KP -	-	-

Ordering table							
Size	32	40	50	63	Condi- tions	Code	Enter code
↓ Male thread shortened 0 [mm]	Piston rod with shortened male thread 1 ... 4		1 ... 10		6	-...K6	
Female thread	Female piston rod thread (M6) (M8) (M10)				7	-K3	
Special thread	Special piston rod thread M10 M12 M16					-“...”K5	
Piston rod extended [mm]	Extended piston rod 1 ... 500					...K8	
Clamping unit	Attached				8	-KP	
Temperature-resistant	Heat-resistant seals up to max. 120 °C					-S6	
Corrosion protection	High corrosion protection					-R3	

6 K6 Not with K3
7 K3 Not with K5

8 KP Only with S2
Not with S6, R3

Transfer order code

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

Round cylinders ESNU

Technical data



Function



- \varnothing - Diameter
32 ... 63 mm
- | - Stroke length
1 ... 50 mm

Additional variants

→ 1 / 2.4-31



Basic version



Axial air connection MA

General technical data				
Piston \varnothing	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/plates at both ends			
Position sensing	For proximity sensing			
Type of mounting	Via accessories			
Assembly position	Any			

Operating conditions				
Piston \varnothing	32	40	50	63
Operating medium	Filtered compressed air, lubricated or unlubricated			
Operating pressure [bar]	1.2 ... 10			

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

1) Note operating range of proximity sensors

2) 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 normal industrial environment or media such as coolants or lubricating agents

Round cylinders ESNU

Technical data

FESTO

Forces [N] and impact energy [J]				
Piston Ø	32	40	50	63
Theoretical force at 6 bar, advancing	442	688	1,071	1,763
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 ¹⁾	0.40	0.70	1	1.3

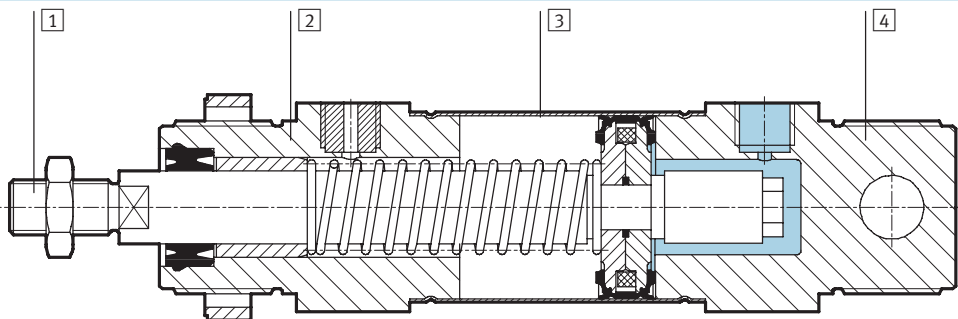
1) The values are reduced by approx. 50% at 80 °C

Weights ESNU-... [g]				
Piston Ø	32	40	50	63
Product weight with 0 mm stroke	370.5	661	1,087	1,445
Additional weight per 10 mm stroke	15.5	24	40	44

Weights ESNU-...-MA [g]				
Piston Ø	32	40	50	63
Product weight with 0 mm stroke	330	585	1,013	1,369
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	Wrought aluminium alloy
3	Cylinder barrel	High-alloy stainless steel
4	End cap	Wrought aluminium alloy
-	Seals	Polyurethane, nitrile rubber
-	Spring	Spring steel

Round cylinders ESNU

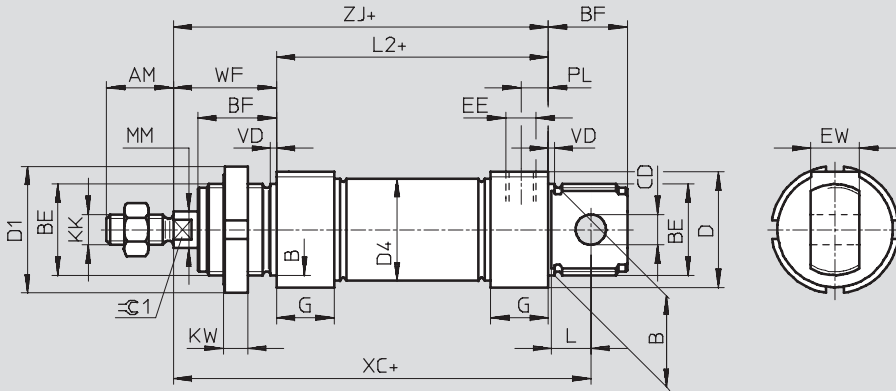
Technical data



Dimensions

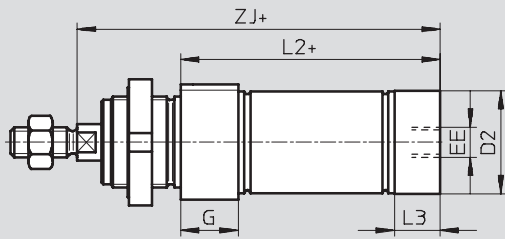
Download CAD data → www.festo.com/en/engineering

Basic version



+ = plus stroke length

MA – Axial air connection



+ = plus stroke length

∅	AM	B ∅ h9	BE	BF	CD ∅ E10	D ∅	D1 ∅	D2 ∅	D4 ∅	EE	EW	G	KK
[mm]													
32	22	30	M30x1.5	26	10	38	42	34	33.6	G $\frac{1}{8}$	16	19	M10x1.25
40	24	38	M38x1.5	30	12	46	50	42	41.6	G $\frac{1}{4}$	18	25	M12x1.25
50	32	45	M45x1.5	33	16	57	60	53	52.4	G $\frac{3}{8}$	21	28	M16x1.5
63						70		66					

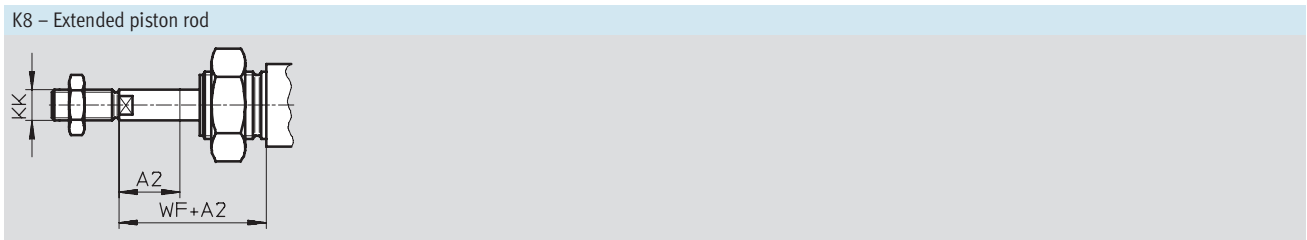
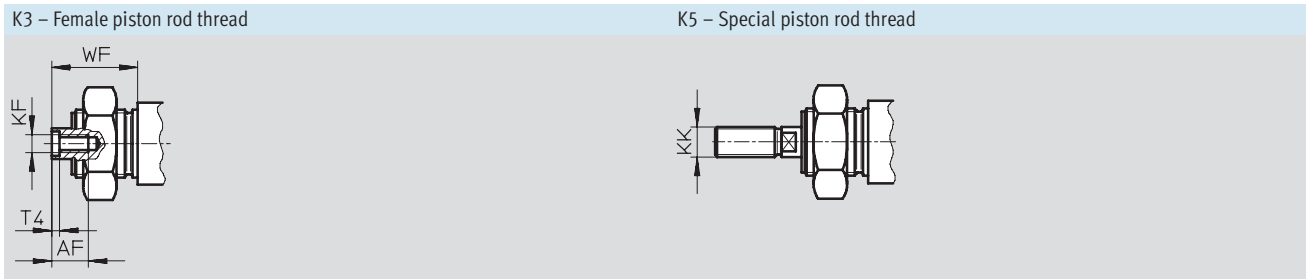
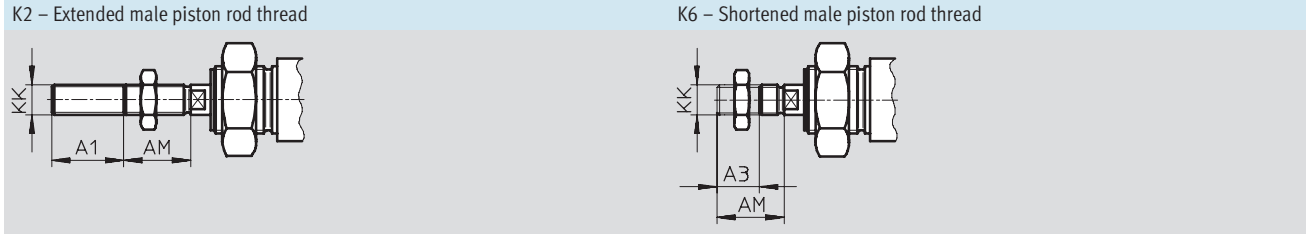
∅	KW	L	L2		L3	PL	MM ∅	VD	WF	XC ±1	ZJ		∅C1
				-MA								-MA	
[mm]													
32	8	13	69.5	65.5	15	9	12	2	34	117.5	103.5	99.5	10
40	10	15	84.6	77.6	18	12	16	3	39	139.6	123.6	116.6	13
50		16	86.2	86.2	25				44	147.2	130.2	130.2	17
63			94.2	94.2	28	13			45	156.2	139.2	139.2	

Round cylinders ESNU

Technical data



Dimensions Download CAD data → www.festo.com/en/engineering



∅ [mm]	A1 max.	A2 max.	A3 max.	AF	AM	KF	KK		T4	WF
							Basic thread	Special thread ¹⁾		
32	35	50	8	M6	22	12	M10x1.25	M10	2.6	34
40				M8	24		M12x1.25	M12	3.3	39
50			10	M10	32	16	M16x1.5	M16	4.7	44
63				45						

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	195 870	ESNU-32-10-P	196 376	ESNU-32-10-P-A
		25	195 871	ESNU-32-25-P	196 377	ESNU-32-25-P-A
		50	195 872	ESNU-32-50-P	196 378	ESNU-32-50-P-A
	40	10	195 873	ESNU-40-10-P	196 379	ESNU-40-10-P-A
		25	195 874	ESNU-40-25-P	196 380	ESNU-40-25-P-A
		50	195 875	ESNU-40-50-P	196 381	ESNU-40-50-P-A
	50	10	195 876	ESNU-50-10-P	196 382	ESNU-50-10-P-A
		25	195 877	ESNU-50-25-P	196 383	ESNU-50-25-P-A
		50	195 878	ESNU-50-50-P	196 384	ESNU-50-50-P-A
	63	10	195 879	ESNU-63-10-P	196 385	ESNU-63-10-P-A
		25	195 880	ESNU-63-25-P	196 386	ESNU-63-25-P-A
		50	195 881	ESNU-63-50-P	196 387	ESNU-63-50-P-A

Round cylinders ESNU

Ordering data – Modular products



M Mandatory data					O Options →	
Module No.	Function	Piston Ø	Stroke	Cushioning	Position sensing	End cap
194 002	ESNU	32	1 ... 50	P	A	MA
194 003		40				
194 004		50				
194 005		63				
Ordering example						
194 002	ESNU	- 32	- 45	- P	- A	- MA

Ordering table							
Size	32	40	50	63	Condi- tions	Code	Enter code
M Module No.	194 002	194 003	194 004	194 005			
Function	Single-acting round cylinder					ESNU	ESNU
Piston Ø [mm]	32	40	50	63		-...	
Stroke [mm]	1 ... 50					-...	
Cushioning	Flexible cushioning rings/plates at both ends					-P	-P
O Position sensing	For proximity sensing				1	-A	
↓ End cap	Axial air connection					-MA	

1 A Minimum stroke: 10 mm

Transfer order code

	ESNU	-		-		-	P	-		-		-
--	------	---	--	---	--	---	---	---	--	---	--	---

Round cylinders ESNU

Ordering data – Modular products



Options				
Male thread extended	Male thread shortened	Female thread	Special thread	Piston rod extended
...K2	...K6	K3	"...K5	...K8
50K2	-	-	"M10"K5	30K8

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

- 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



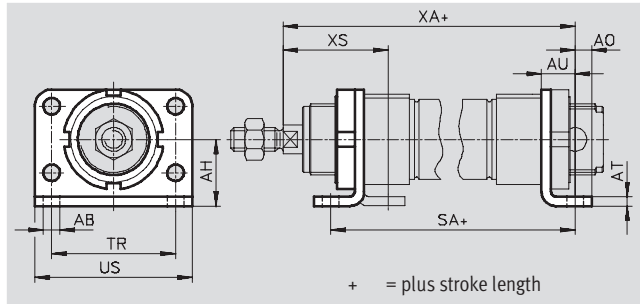
Foot mounting HBN/CRH

Material:

HBN: Galvanised steel

CRH: High-alloy stainless steel

Free of copper, PTFE and silicone



+ = plus stroke length

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 ¹⁾	Weight [g]	Part No.	Type	CRC ¹⁾	Weight [g]	Part No.	Type
32	2	247	195 851	HBN-32x2	4	237	162 951	CRH-32
40	2	446	195 852	HBN-40x2	4	341	162 952	CRH-40
50	2	666	195 853	HBN-50x2	4	559	162 953	CRH-50
63	2	816	195 854	HBN-63x2	4	680	162 954	CRH-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 normal industrial environment or media such as coolants or lubricating agents

Corrosion resistance class 4 according to Festo standard 940 070

Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

Round cylinders DSNU/ESNU

Accessories



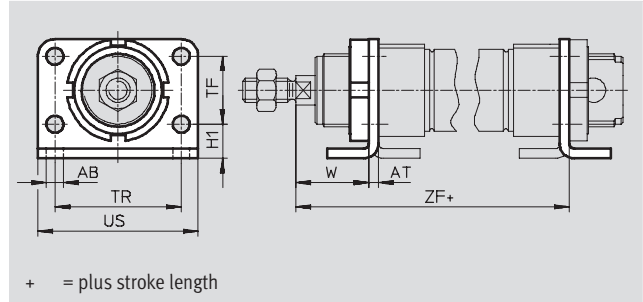
Flange mounting FBN/CRFV

Material:

FBN: Galvanised steel

CRFV: High-alloy stainless steel

Free of copper, PTFE and silicone



Dimensions and ordering data									
For \varnothing	AB	AT	H1	TF	TR	US	W	ZF	
[mm]	\varnothing								-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 \varnothing	Basic version				High corrosion protection			
	[mm]	CRC ¹⁾	Weight [g]	Part No. Type	CRC ¹⁾	Weight [g]	Part No. Type	
32	2	102	195 855 FBN-32	4	102	161 858 CRFV-32		
40	2	190	195 856 FBN-40	4	190	161 859 CRFV-40		
50	2	290	195 857 FBN-50	4	290	161 860 CRFV-50		
63	2	365	195 858 FBN-63	4	365	161 861 CRFV-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 normal industrial environment or media such as coolants or lubricating agents
- Corrosion resistance class 4 according to Festo standard 940 070
 Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

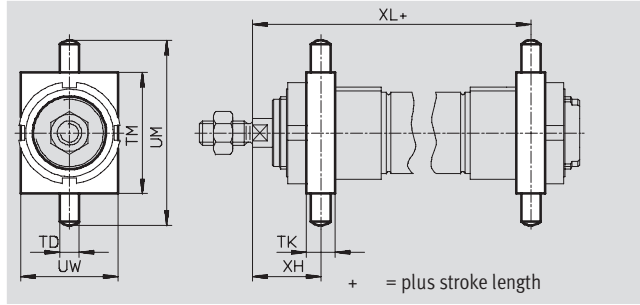
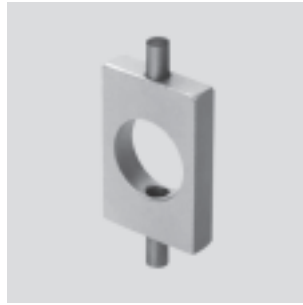
Round cylinders DSNU/ESNU

Accessories



Swivel mounting WBN

Material:
Galvanised steel
Free of copper, PTFE and silicone

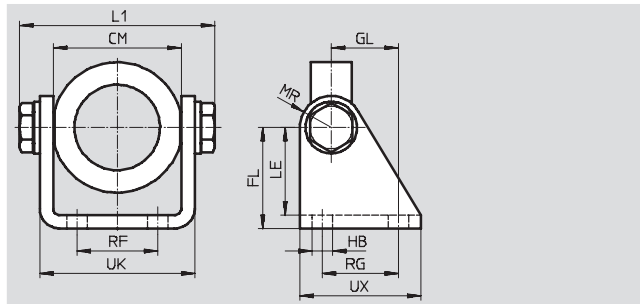


Dimensions and ordering data												
For \varnothing	TD	TK	TM	UM	UW	XH	XL		CRC ¹⁾	Weight	Part No.	Type
[mm]	\varnothing f8							-KP		[g]		
32	8	12	50	76	40	28	109.5	163	2	130	195 863	WBN-32
40	10	15	60	92	50	31.5	126.1	193.6	2	240	195 864	WBN-40
50	12	20	80	116	65	34	140.2	216.7	2	610	195 865	WBN-50/63
63	12	20	80	116	65	35	149.2	233.7	2	610	195 865	WBN-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

Swivel mounting SBN

Material:
Mounting ring: Wrought aluminium alloy, anodised
Bearings: Bronze
Screws: Galvanised steel
Bracket: Steel



Dimensions and ordering data															
For \varnothing	CM	FL	GL	HB	L1	LE	MR	RF	RG	UK	UX	CRC ¹⁾	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	539 924	SBN-32
40	57.1+0.2	45	30	9	88.2	39	14	36	34	69.1	54	2	465	539 925	SBN-40
50/63	70.1+0.4	50	34	9	102.2	44	16	42	35	82.1	65	2	670	539 926	SBN-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

Round cylinders DSNU/ESNU

Accessories



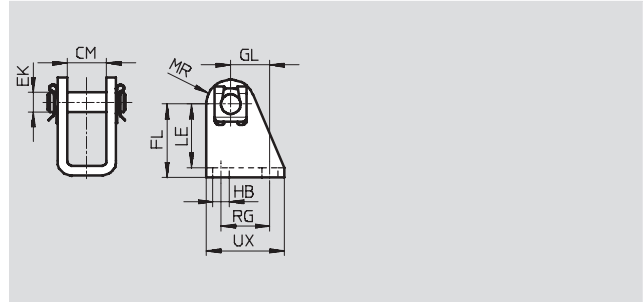
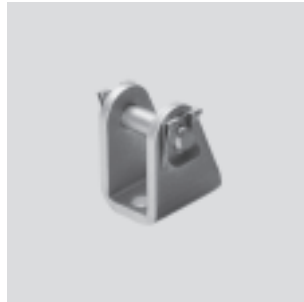
Clevis foot LBN/CRLBN

Material:

LBN: Galvanised steel

CRLBN: High-alloy stainless steel

Free of copper, PTFE and silicone



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 [mm]	Basic version				High corrosion protection			
	CRC ¹⁾	Weight [g]	Part No.	Type	CRC ¹⁾	Weight [g]	Part No.	Type
32	2	109	195 860	LBN-32	4	107	195 866	CRLBN-32
40	2	192	195 861	LBN-40	4	184	195 867	CRLBN-40
50, 63	2	302	195 862	LBN-50/63	4	289	195 868	CRLBN-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 normal industrial environment or media such as coolants or lubricating agents
- Corrosion resistance class 4 according to Festo standard 940 070
 Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

Ordering data – Mounting attachments				Technical data → 1 / 10.1-2			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Clevis foot mounting LBG				Clevis foot, right-angled LQG			
	32	31 761	LBG-32		32	31 768	LQG-32
	40	31 762	LBG-40		40	31 769	LQG-40
	50	31 763	LBG-50		50	31 770	LQG-50
	63	31 764	LBG-63		63	31 771	LQG-63





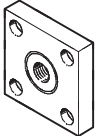
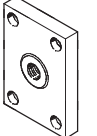
Round cylinders DSNU/ESNU



Accessories





Cylinders with piston rods
Round cylinders

2.4

Ordering data – Piston rod attachments				Technical data → 1 / 10.3-2			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Rod eye SGS				Rod clevis SGA			
	32	9 261	SGS-M10x1,25		32	32 954	SGA-M10x1,25
	40	9 262	SGS-M12x1,25		40	10 767	SGA-M12x1,25
	50	9 263	SGS-M16x1,5		50	10 768	SGA-M16x1,5
	63				63		
Rod clevis SG				Self-aligning rod coupler FK			
	32	6 144	SG-M10x1,25		32	6 140	FK-M10x1,25
	40	6 145	SG-M12x1,25		40	6 141	FK-M12x1,25
	50	6 146	SG-M16x1,5		50	6 142	FK-M16x1,5
	63				63		
Coupling piece KSG				Coupling piece KSZ			
	32	32 963	KSG-M10x1,25		32	36 125	KSZ-M10x1,25
	40	32 964	KSG-M12x1,25		40	36 126	KSZ-M12x1,25
	50	32 965	KSG-M16x1,5		50	36 127	KSZ-M16x1,5
	63				63		


Ordering data – Corrosion resistant piston rod attachments				Technical data → 1 / 10.3-2			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Rod eye CRSGS				Rod clevis CRSG			
	32	195 582	CRSGS-M10x1,25		32	13 569	CRSG-M10x1,25
	40	195 583	CRSGS-M12x1,25		40	13 570	CRSG-M12x1,25
	50	195 584	CRSGS-M16x1,5		50	13 571	CRSG-M16x1,5
	63				63		


Ordering data – One-way flow control valves				Technical data → Volume 2					
Connection	Thread	For tubing O.D.	Material	Part No.	Type				
For exhaust air									
	G ¹ / ₈	3	Metal design	193 142	GRLA- ¹ / ₈ -QS-3-D				
		4		193 143	GRLA- ¹ / ₈ -QS-4-D				
		6		193 144	GRLA- ¹ / ₈ -QS-6-D				
		8		193 145	GRLA- ¹ / ₈ -QS-8-D				
	G ¹ / ₄	6		193 146	GRLA- ¹ / ₄ -QS-6-D				
		8		193 147	GRLA- ¹ / ₄ -QS-8-D				
		10		193 148	GRLA- ¹ / ₄ -QS-10-D				
	G ³ / ₈	6		193 149	GRLA- ³ / ₈ -QS-6-D				
		8		193 150	GRLA- ³ / ₈ -QS-8-D				
		10		193 151	GRLA- ³ / ₈ -QS-10-D				
	For supply air								
		G ¹ / ₈		3	Metal design	193 156	GRLZ- ¹ / ₈ -QS-3-D		
4			193 157	GRLZ- ¹ / ₈ -QS-4-D					
6			193 158	GRLZ- ¹ / ₈ -QS-6-D					
8			193 159	GRLZ- ¹ / ₈ -QS-8-D					


Round cylinders DSNU/ESNU


Accessories


FESTO

Ordering data – Corrosion resistant one-way flow control valves						Technical data → Volume 2	
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	161 404	CRGRLA- $\frac{1}{8}$ -B		
	G $\frac{1}{4}$			161 405	CRGRLA- $\frac{1}{4}$ -B		
	G $\frac{3}{8}$			161 406	CRGRLA- $\frac{3}{8}$ -B		

Ordering data – Proximity sensors, u-shaped design, magneto-resistive							Technical data → www.festo.com/catalogue/sm	
Mounting	Switch output	Electrical connection		Cable length [m]	Connection direction	Part No.	Type	
		Cable	M8 plug					
NO contact								
	Via accessories	PNP	3-wire	–	2.5	In-line	152 836	SMT0-4U-PS-K-LED-24
			–	3-pin	–	In-line	152 742	SMT0-4U-PS-S-LED-24
		NPN	3-wire	–	2.5	In-line	152 837	SMT0-4U-NS-K-LED-24
			–	3-pin	–	In-line	152 743	SMT0-4U-NS-S-LED-24

Ordering data – Proximity sensors, u-shaped design, magnetic reed						Technical data → www.festo.com/catalogue/sm	
Mounting	Electrical connection		Cable length [m]	Connection direction	Part No.	Type	
	Cable	M8 plug					
NO contact							
	Via accessories	3-wire	–	2.5	In-line	36 198	SME0-4U-K-LED-24
		–	3-pin	5	In-line	175 401	SME0-4U-K5-LED-24
		–	3-pin	–	In-line	151 526	SME0-4U-S-LED-24-B

Ordering data – Proximity sensors, round design, magnetic reed, corrosion resistant						Technical data → www.festo.com/catalogue/crsmeo	
Mounting	Electrical connection		Cable length [m]	Connection direction	Part No.	Type	
	Cable	M8 plug					
NO contact							
	Via accessories	3-wire	–	2.5	In-line	161 775	CRSME0-4-K-LED-24

Ordering data – Mounting kit for proximity sensors SME0/SMT0/CRSME0				Technical data → www.festo.com/catalogue/snbr	
Designation	For \varnothing	Part No.	Type		
Mounting kit CRSMBR, corrosion resistant					
	32	163 888	CRSMBR-32		
	40	163 889	CRSMBR-40		
	50	163 890	CRSMBR-50		
	63	163 891	CRSMBR-63		

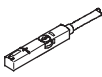

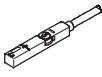
Round cylinders DSNU/ESNU

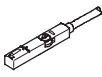


Accessories


FESTO

Cylinders with piston rods
Round cylinders

2.4

Ordering data – Proximity sensors for T-slot, magneto-resistive					Technical data → www.festo.com/catalogue/sm	
	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	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
N/C contact						
	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 → www.festo.com/catalogue/sm		
	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	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	
N/C contact							
	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 → www.festo.com/catalogue/snbr	
Designation	For Ø	Part No.	Type		
Mounting kit SMBR-8					
	32	175 097	SMBR-8-32		
	40	175 098	SMBR-8-40		
	50	175 099	SMBR-8-50		
	63	175 100	SMBR-8-63		

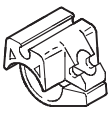
Round cylinders DSNU/ESNU



Accessories

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Ordering data – Proximity sensors for C-slot, magneto-resistive					Technical data → www.festo.com/catalogue/sm	
	Type of mounting	Switch output	Electrical connection, connection direction	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire, in-line	2.5	525 915	SMT-10F-PS-24V-K2,5L-OE
			Plug M8x1, 3-pin, in-line	0.3	525 916	SMT-10F-PS-24V-K0,3L-M8D
			Plug M8x1, 3-pin, lateral	0.3	526 675	SMT-10F-PS-24V-K0,3Q-M8D
	Insertable in the slot lengthwise	PNP	Plug M8x1, 3-pin, in-line	0.3	173 220	SMT-10-PS-SL-LED-24
			Cable, 3-wire, in-line	2.5	173 218	SMT-10-PS-KL-LED-24

Ordering data – Proximity sensors for C-slot, magnetic reed					Technical data → www.festo.com/catalogue/sm	
	Type of mounting	Switch output	Electrical connection, connection direction	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	Contacting	Plug M8x1, 3-pin, in-line	0.3	525 914	SME-10F-DS-24V-K0,3L-M8D
			Cable, 3-wire, in-line	2.5	525 913	SME-10F-DS-24V-K2,5L-OE
			Cable, 2-wire, in-line	2.5	526 672	SME-10F-ZS-24V-K2,5L-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 kits for proximity sensors SME/SMT-10				Technical data → www.festo.com/catalogue/snbr	
Designation	For Ø			Part No.	Type
Mounting kit SMBR-10					
	32			175 105	SMBR-10-32
	40			175 106	SMBR-10-40
	50			175 107	SMBR-10-50
	63			175 108	SMBR-10-63

Ordering data – Connecting cables				Technical data → www.festo.com/catalogue/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

Cylinders with piston rods
Round cylinders

2.4