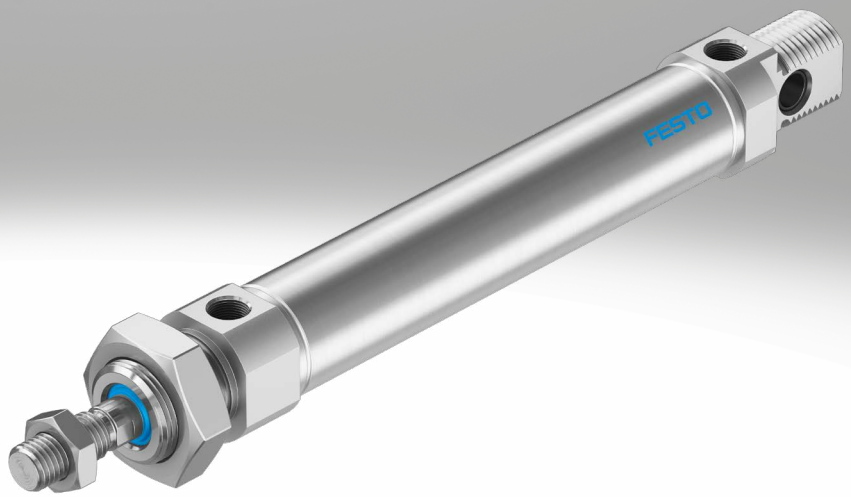
Round cylinders DSNU



★	Festo Core Range Solves the majority of your automation tasks	With the Festo Core Range, we have selected the most important products and functions from our broad product catalogue, and added the quickest delivery.
Worldwide:	Quickest delivery – wherever, whenever	The Core Range offers you the best value for your automation tasks.
Simply good:	Expected high Festo quality	
Fast:	Easy and fast to select	

Just look for the star!

Key features

At a glance

DSNU-8 ... 63

- Stainless steel piston rod
- Good running performance and long service life
- Piston rod with male and female thread
- Extensive range of accessories makes it possible to install the cylinder virtually anywhere

DSNU-8 ... 25

- The basic versions conform to ISO 6432, variants are based on these standards

Wide choice of variants

DSNU

- Piston Ø 8 ... 63 mm
- Cylinder barrel made of stainless steel
- Bearing and end caps made of wrought aluminium alloy

DSNU-...-MA

- Piston Ø 8 ... 63 mm
- Cylinder barrel made of stainless steel
- Bearing cap with threaded flange
- Short end cap with axial supply port

DSNU-...-MQ

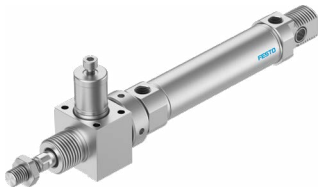
- Piston Ø 8 ... 63 mm
- Cylinder barrel made of stainless steel
- Bearing cap with threaded flange
- Short end cap with lateral supply port

DSNU-...-MH

- Piston Ø 8 ... 63 mm
- Cylinder barrel made of stainless steel
- Direct mounting on bearing cap
- Short end cap with lateral supply port

DSNU-...-KP

- Piston Ø 8 ... 63 mm
- Cylinder barrel made of stainless steel
- With clamping unit



DSNU-...-Q

- Piston Ø 12 ... 63 mm
- Cylinder barrel made of stainless steel
- With square piston rod

Cushioning types

	Cushioning P	Cushioning PPS	Cushioning PPV
Mode of operation	• The drive is equipped with flexible polymer end-position cushioning	• The drive is equipped with self-adjusting end-position cushioning	• The drive is equipped with adjustable end-position cushioning
Application	• Small loads • Low speeds • Low impact energies	• Small to medium loads • Low to medium speeds • Medium impact energies	• Medium to high loads • High speeds • High impact energies
Advantages	• No adjustment required • Saves time	• No adjustment required • Saves time • Powerful	• Very powerful

Key features

Further 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 at low piston speeds	Suitable for very slow and constant (slow speed) and stick-slip-free movements. With very low break-away pressure compared with the standard (low friction).
	L Low friction	• Break-away pressure: low • Dynamic response: Suitable for very fast movements, especially at low operating pressures Application example: Very dynamic movements with no standstill
	K2 Extended male piston rod thread	–
	K3 Female piston rod thread	–
	K5 Custom 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 CRC 3 to Festo standard 940070. The piston rod is made from corrosion- and acid-resistant steel
	R8 Dust protection (wiper seal) (32 ... 63 mm)	The cylinder has a hard-chrome-plated piston rod and a hard wiper seal, which protects against dry, dusty media
	A1 Scraper variant (12 ... 63 mm)	Increased chemical resistance: For longer service life, e.g. when using cooling lubricants.
	A6 Metal scraper (32 ... 63 mm)	The cylinder has a hard-chrome-plated piston rod and metal scraper, which scrapes off hard particles (e.g. welding spatter) that stick to the piston rod. For use in welding systems, for example
	F1A Recommended for production plants for manufacturing lithium-ion batteries	Cylinders free of copper, zinc and nickel (≤ 1%)

For manufacturing lithium-ion batteries

DSNU-...-F1A

Recommended for production plants for manufacturing lithium-ion batteries. Metals with copper, zinc or nickel as the main constituent are excluded from use. Exceptions are nickel in steels, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils.

Accessories

Your Festo contact partner can provide information about which accessories are suitable for manufacturing lithium-ion batteries.

Longer service life with protective bellows kit DADB

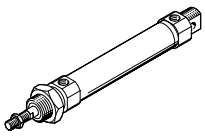
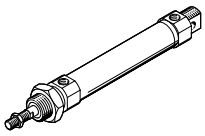
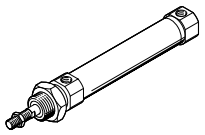
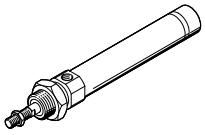
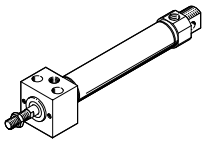
The bellows protects the piston rod, the seal and the bearing from the effects of a wide range of media, which has a positive impact on the service life of these components.

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

The kit protects the piston rod, seal and bearing against a wide variety of media, for example:

- Dust
- Chippings
- Oil
- Grease
- Fuel

Product range overview

Function	Design	Piston ø	Stroke	Variable stroke[1]	Piston rod					
					Through	Extended	Male thread			Female thread
							Extended	Shortened	Custom thread	
		[mm]	[mm]	[mm]	S2	K8	K2	K6	K5	K3
Double-acting	**DSNU-... – Cylinder barrel made of stainless steel**									
		8, 10	10, 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 100, 125, 150, 160, 200, 250, 300, 320, 400, 500	1 ... 100	■	■	■	■	■ From ø 25	■ From ø 20
		12, 16		1 ... 200						
		20		1 ... 320						
		25		1 ... 500						
		32, 40, 50, 63	25, 40, 50, 80, 100, 125, 160, 200, 250, 320	1 ... 500						
	DSNU-Q-... – Protected against rotation									
		12, 16	–	1 ... 160	■	■	■	■	■ From ø 25	■ From ø 20
		20	–	1 ... 200						
		25	–	1 ... 250						
		32	–	1 ... 300						
		40, 50	–	1 ... 400						
		63	–	1 ... 500						
	DSNU-MQ-... – Lateral supply port, short end cap									
		8, 10	–	1 ... 100	–	■	■	■	■	■
		12, 16	–	1 ... 200						
		20	–	1 ... 320						
		25	–	1 ... 500						
		32, 40, 50, 63	–	1 ... 500						
	DSNU-MA-... – Axial supply port, short end cap									
		8, 10	–	1 ... 100	–	■	■	■	■	■
		12, 16	–	1 ... 200						
		20	–	1 ... 320						
		25	–	1 ... 500						
		32, 40, 50 63	–	1 ... 500						
	DSNU-MH-... – Direct mounting									
		8, 10	–	1 ... 100	■	■	■	■	■	■
		12, 16	–	1 ... 200						
		20	–	1 ... 320						
		25	–	1 ... 500						
		32, 40, 50 63	–	1 ... 500						

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

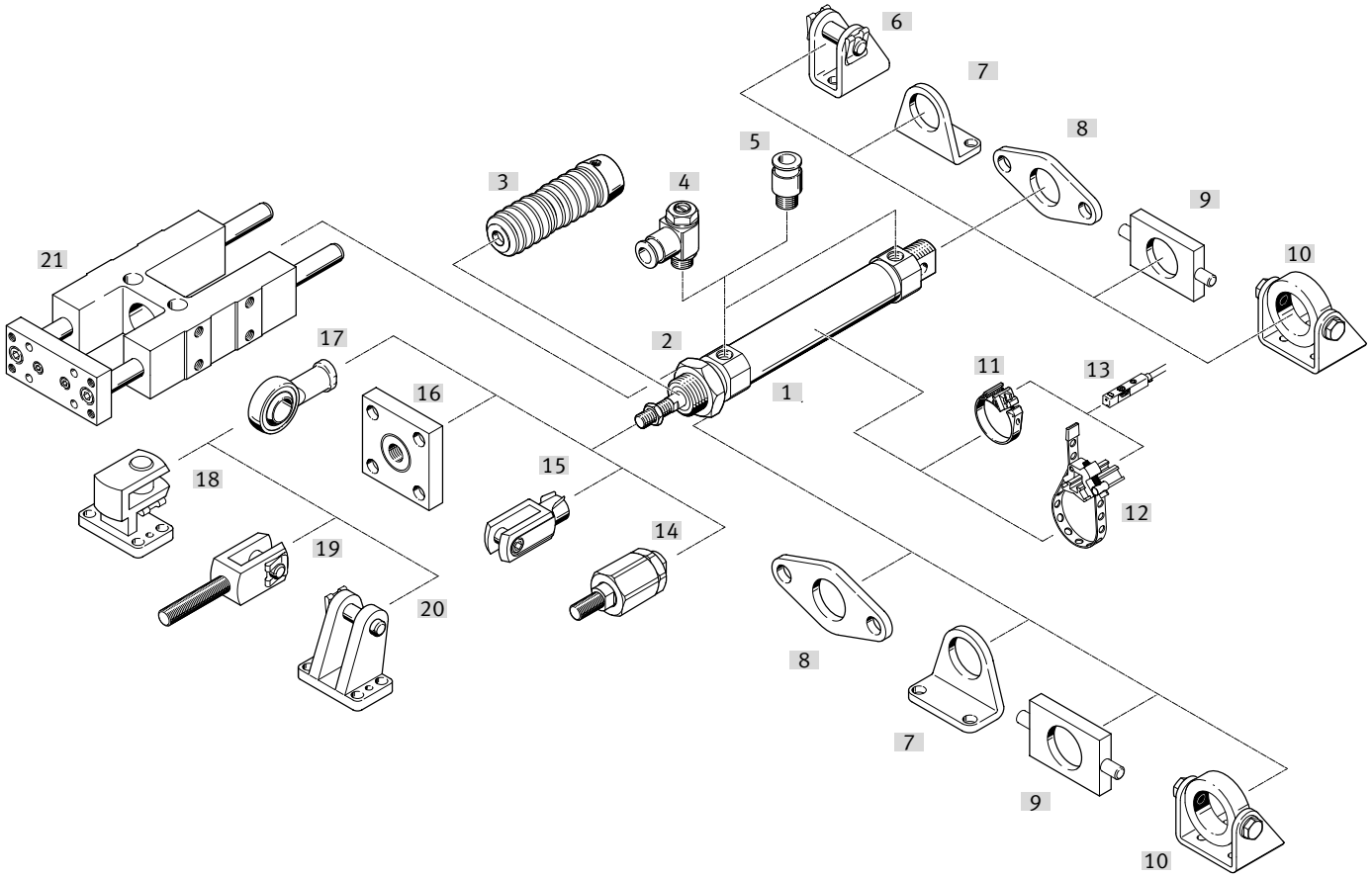
Product range overview

Piston ø	Cushioning			Position sensing	Clamping unit	Heat-resistant seal	Slow speed (constant motion)	Low friction	Corrosion protection	Dust protection (wiper seal)	Wiper seal variant	Metal scraper	For battery production	→ Page/ Internet
	Fixed	Adjustable	Self-adjusting											
	P	PPV[2]	PPS	A	KP	S6	S10	L	R3	R8	A1	A6	F1A	
DSNU-... – Cylinder barrel made of stainless steel														
8 ... 63	■	■ From ø 16	■ From ø 16	■	■	■	■ From ø 12	■	■ From ø 12	■ From ø 32	■ From ø 12	■ From ø 32	■ Up to ø 40	9
DSNU-Q-... – Protected against rotation														
12 ... 63	■ ø 12 and From ø 32	■ From ø 16	–	■	■	■ From ø 32	–	–	■ From ø 16	–	–	–	–	46
DSNU-MQ-... – Lateral supply port														
8 ... 63	■	■ From ø 16	■ From ø 16	■	■	■	–	–	■	■ From ø 32	■	■ From ø 32	■ Up to ø 40	9
DSNU-MA-... – Axial supply port														
8 ... 63	■ From ø 32	–	–	■	■	■	–	–	■	–	■	■	■ Up to ø 40	9
DSNU-MH-... – Direct mounting														
8 ... 63	■	■ From ø 32	–	■	–	■	–	–	■	–	–	–	–	9

2) In the modular product system from ø 12 mm

Peripherals overview

DSNU-...



Peripherals overview

Mounting attachments and accessories

		Piston ø	DSNU					DSNU-Q	→ Page/ Internet
				MA	MQ	MH	KP		
[1]	Round cylinder DSNU								
[2]	Hex nut MSK	16 ... 25	■	■	■	■	■	■	60
[3]	Bellows kit[2] DADB	12 ... 63	■	■	■	–	–	–	62
[4]	One-way flow control valve GRLA/GRLZ	8 ... 63	■	■	■	■	■	■	70
[5]	Push-in fitting QS	8 ... 63	■	■	■	■	■	■	qs
[6]	Clevis foot LBN/CRLBN	8 ... 63	■	–	–	–	■	■	59
[7]	Foot mounting HBN/CRHBN/CRH	8 ... 63	■	■	■	–	■	■	54
[8]	Flange mounting FBN/CRFBN/CRFV	8 ... 63	■	■	■	–	■	■	56
[9]	Swivel mounting[1] WBN	8 ... 63	■	■	■	–	■	■	58
[10]	Swivel mounting[1] SBN	20 ... 63	■	■	■	–	■ ø 20 ... 50	■	58
[11]	Mounting kit SMBR	8 ... 63	■	■	■	■	■	■	68
[12]	Mounting kit SMBR-...-S6	8 ... 63	■	■	■	■	■	■	68
[13]	Proximity switch SMT/CRSMT/SDBT	8 ... 63	■	■	■	■	■	■	68
	Position transmitter SDAS/SDAT/SMAT	8 ... 63	■	■	■	■	■	■	69
[14]	Self-aligning rod coupler FK/CRFK/DARP	8 ... 63	■	■	■	■	■	■	60
[15]	Rod clevis SG/CRSG	8 ... 63	■	■	■	■	■	■	60
[16]	Coupling piece KSG/KSZ	12 ... 63	■	■	■	■	■	■	60
[17]	Rod eye SGS/CRSGS	8 ... 63	■	■	■	■	■	■	60
[18]	Right-angle clevis foot LQG	32 ... 63	■	■	■	■	■	■	59
[19]	Rod clevis SGA	32 ... 63	■	■	■	■	■	■	60
[20]	Clevis foot LBG	32 ... 63	■	■	■	■	■	■	61
[21]	Guide unit FEN	8 ... 25	■	■	■	–	–	–	61

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)

Type codes

DSNU-...

001	Series	
DSNU	Round cylinder, double-acting, based on ISO 6432	

002	Piston diameter	
8	8	
10	10	
12	12	
16	16	
20	20	
25	25	
32	32	
40	40	
50	50	
63	63	

003	Stroke	
...	1 ... 500	

004	Cushioning	
P	Elastic cushioning rings/plates on both sides	
PPS	Pneumatic cushioning, self-adjusting at both ends	
PPV	Pneumatic cushioning, adjustable at both ends	

005	Position sensing	
A	For proximity sensor	

006	Special material properties	
	None	
F1A	Recommended for production facilities for the manufacture of lithium-ion batteries (Cu<=1%, ,Zn<=1%, Ni<=1%)	

007	Cylinder end cap	
	Standard	
MA	Axial air connection, end cap	
MH	Direct mounting, bearing cap	
MQ	Transverse supply port, end cap	

008	Protection against rotation	
Q	Square piston rod	
	None	

009	Piston rod type	
	At one end	
S2	Through piston rod	

010	Piston rod thread extension	
	None	
...K2	1 ... 70 mm	

011	K6 - Shortened male piston rod thread	
	None	
K6	1 ... 10 mm	

012	Piston rod thread type	
	Male thread	
K3	Female thread	

013	Custom thread	
“M10”K5	M10	
“M12”K5	M12	
“M16”K5	M16	

014	Piston rod extension	
	None	
...K8	1 ... 500 mm	

015	Clamping unit	
	None	
KP	attached	

016	Temperature range	
	Standard	
S6	Heat-resistant seals max. 120 °C	

017	Constant motion	
	Standard	
S10	Uniform, slow movement	

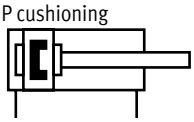
018	Corrosion protection	
	Standard	
R3	High corrosion protection	

019	Scraper variant	
	Standard	
R8	Dust protection	
A6	Metal scraper	

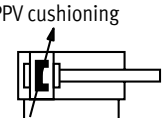
020	EU certification	
	None	
EX4	II 2GD	

Datasheet

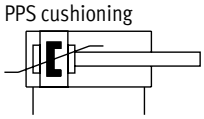
P cushioning



PPV cushioning



PPS cushioning



- Ø - Diameter
  8 ... 25 mm
  ISO 6432

- Ø - Diameter
  32 ... 63 mm

- l - Stroke length
  1 ... 500 mm,
  longer strokes on request

General technical data											
Piston ø		8	10	12	16	20	25	32	40	50	63
Conforms to standard		ISO 6432						–			
Pneumatic connection		M5	M5	M5	M5	G1/8	G1/8	G1/8	G1/4	G1/4	G3/8
Piston rod thread		M4	M4	M6	M6	M8	M10x1.25	M10x1.25	M12x1.25	M16x1.5	M16x1.5
Stroke[1]	[mm]	1 ... 100		1 ... 200		1 ... 320	1 ... 500				
Design		Piston/piston rod/cylinder barrel									
Cushioning											
DSNU-...-P		Elastic cushioning rings/pads at both ends									
DSNU-...-PPV		–		Cushioning, adjustable at both ends							
DSNU-...-PPS		–			Cushioning, self-adjusting at both ends						
Cushioning length											
DSNU-...-PPV	[mm]	–		9	12	15	17	14	18	20	21
DSNU-...-PPS	[mm]	–			12	15	17	14	18	20	21
Position sensing		Via proximity switch									
Type of mounting		Direct mounting (variant MH only)									
		With accessories									
Mounting position		Any									

1) Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.
Longer strokes on request

Datasheet

Operating and environmental conditions											
Piston ø		8	10	12	16	20	25	32	40	50	63
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]									
Note on the operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)									
Operating pressure											
DSNU-...	[MPa]	0.15 ... 1[1]			0.1 ... 1						
	[bar]	1.5 ... 10[1]			1 ... 10						
DSNU-...-S10	[MPa]	–		0.05 ... 1	0.03 ... 1			0.02 ... 1			
	[bar]	–		0.5 ... 10	0.3 ... 10			0.2 ... 10			
DSNU-...-L	[MPa]	0.06 ... 1			0.05 ... 1		0.04 ... 1		0.02 ... 1		
	[bar]	0.6 ... 10			0.5 ... 10		0.4 ... 10		0.2 ... 10		
DSNU-...-A6	[MPa]	–						0.2 ... 1			
	[bar]	–						2 ... 10			
Ambient temperature[2]											
DSNU-...	[°C]	–20 ... +80									
DSNU-...-S6	[°C]	0 ... +120									
DSNU-...-S10/L	[°C]	+5 ... +80									
DSNU-...-R3	[°C]	–20 ... +80									
DSNU-...-A1	[°C]	0 ... +80									
DSNU-...-S6-A6	[°C]	–						0 ... +120			
Corrosion resistance class CRC[3]											
DSNU-...		2									
DSNU-...-R3		3									
DSNU-...-F1A		0									
DSNU-...-P		See certificate						–			
DSNU-...-PPV		See certificate						–			

1) For DSNU-12-... PPV (pneumatic cushioning adjustable at both ends): 0.2 ... 1 MPa (2 ... 10 bar)
2) Note operating range of proximity switches
3) Corrosion resistance class CRC 0 to Festo standard FN 940070
No corrosion stress. Applies to small, visually unimportant standards-based parts such as threaded pins, circlips and clamping sleeves which are usually only available on the market in a phosphated or burnished version (and possibly oiled) as well as to ball bearings (for components < CRC 3) and plain bearings.
Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.
Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

ATEX[1]	
ATEX category for gas	II 2G
Type of ignition protection for gas	Ex h IIC T4 Gb
ATEX category for dust	II 2D
Type of ignition protection for dust	Ex h IIIC T120°C Db
Explosion-proof ambient temperature	–20°C <= Ta <= +60°C
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)
UKCA marking (see declaration of conformity)	To UK EX instructions
Explosion protection certification outside the EU	EPL Db (GB)
	EPL Gb (GB)

1) Note the ATEX certification of the accessories.

Weights [g]										
Piston ø	8	10	12	16	20	25	32	40	50	63
Product weight with 0 mm stroke	34.6	37.3	75	89.9	186.8	238	370.5	661	1087	1445
Additional weight per 10 mm stroke	2.4	2.7	4	4.6	7.2	11	15.5	24	40	44
Moving mass with 0 mm stroke	7.5	8.5	18.5	23	44	71	121	230	413	459
Moving mass per 10 mm stroke	1	1	2	2	4	6	9	16	25	25

Datasheet

Speed [mm/s][1)]							
Piston ø	16	20	25	32	40	50	63
Speed with stick-slip-free operation, S10 horizontal, without load, at 0.6 MPa (6 bar)	10 ... 100			8 ... 100			5 ... 100

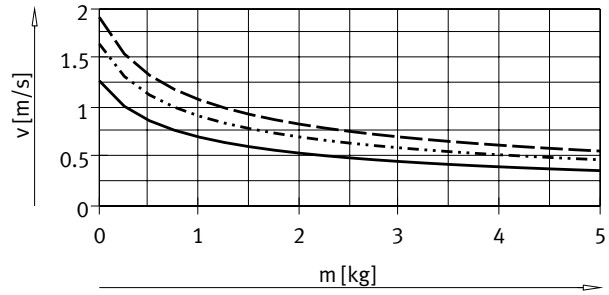
1) Measurements of less than 1 mm/s were not conducted

Forces [N] and impact energy [J]										
Piston ø	8	10	12	16	20	25	32	40	50	63
Theoretical force at 0.6 MPa (6 bar), advancing	30	47	68	121	189	295	483	753	1178	1870
Theoretical force at 0.6 MPa (6 bar), retracting	23	40	51	104	158	247	415	633	990	1682
Impact energy in the end positions for P cushioning[1)]	0.03	0.05	0.07	0.15	0.20	0.30	0.40	0.70	1.00	1.30

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

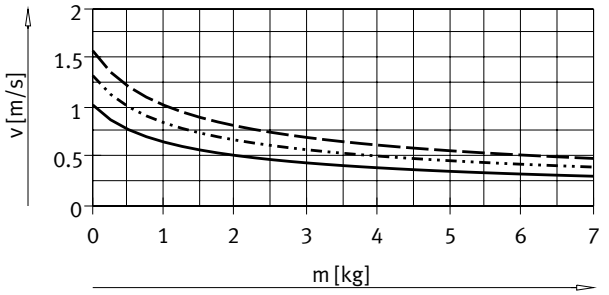
Average piston speed v as a function of payload m in combination with cushioning PPS

Piston ø 16



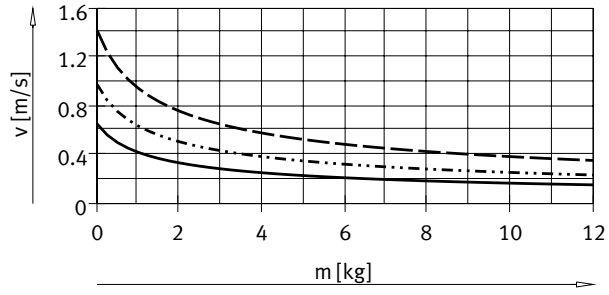
DSNU-16-50
DSNU-16-100
DSNU-16-200

Piston ø 20



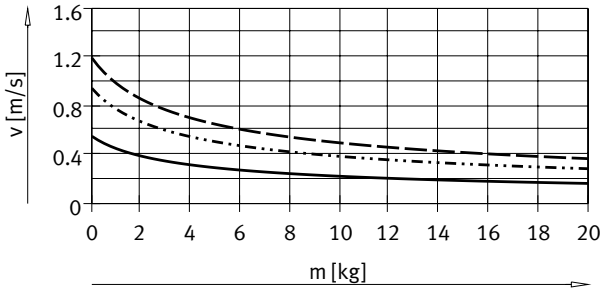
DSNU-20-50
DSNU-20-100
DSNU-20-200

Piston ø 25



DSNU-25-50
DSNU-25-100
DSNU-25-200

Piston ø 32

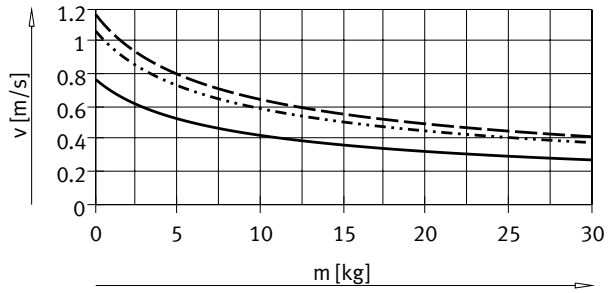


DSNU-32-50
DSNU-32-100
DSNU-32-200

Datasheet

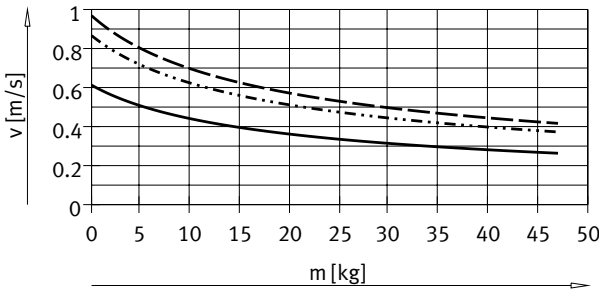
Average piston speed v as a function of payload m in combination with cushioning PPS

Piston Ø 40



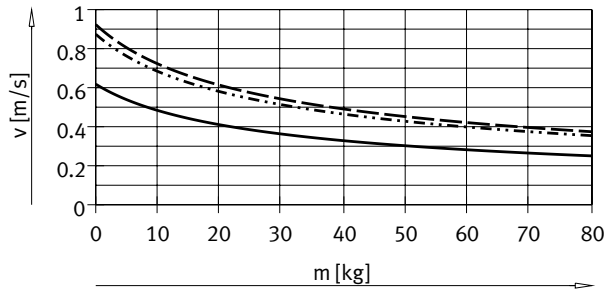
DSNU-40-50
DSNU-40-100
DSNU-40-200

Piston Ø 50



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

Piston Ø 63



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

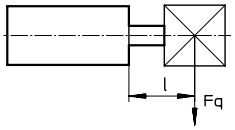
Note:

Engineering software for
P cushioning
PPV cushioning
PPS cushioning
➔ https://www.festo.com/x/pneumatic-sizing

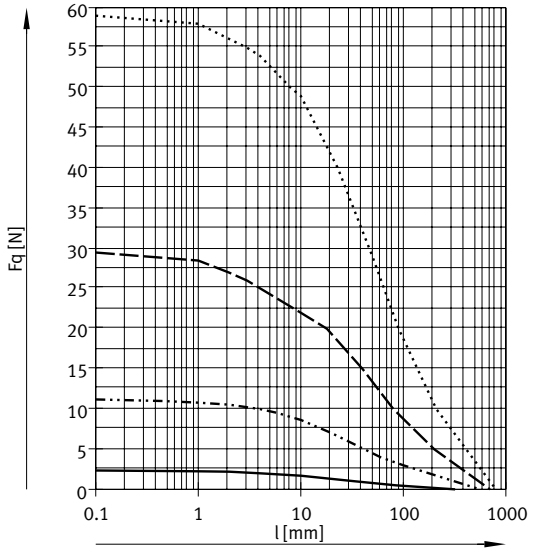
Average piston speed = Stroke/movement time

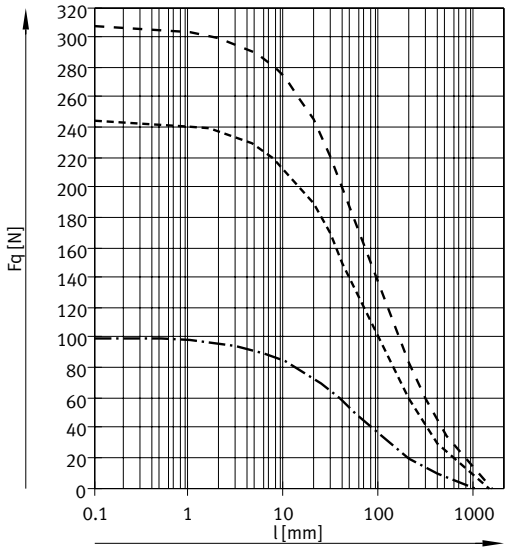
Datasheet

Max. transverse force Fq as a function of projection l



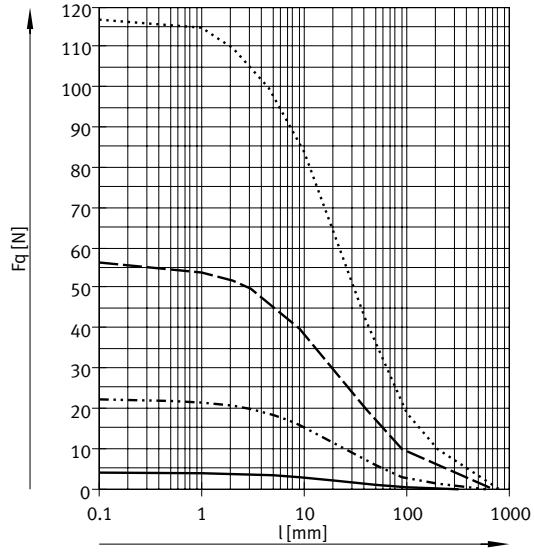
DSNU-...

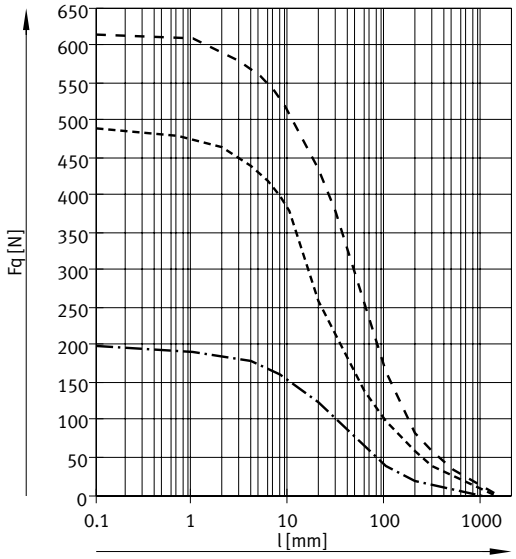




DSNU-8/10
DSNU-12/16
DSNU-20
DSNU-25
DSNU-32
DSNU-40
DSNU-50/63

DSNU-...-S2 – Through piston rod



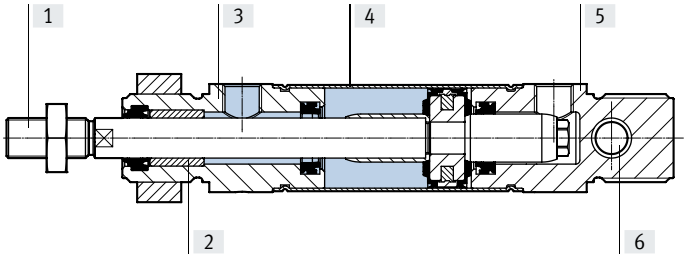


DSNU-8/10
DSNU-12/16
DSNU-20
DSNU-25
DSNU-32
DSNU-40
DSNU-50/63

Datasheet

Materials

Sectional view



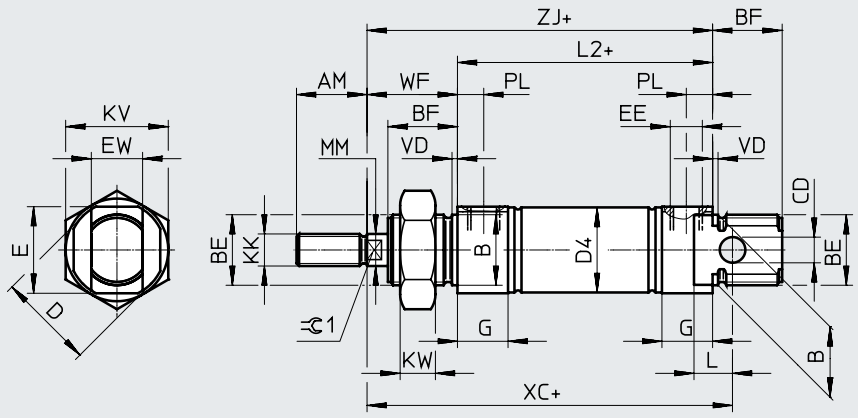
Round cylinder		8 ... 25	32 ... 63
[1]	Piston rod		
	DSNU-...	High-alloy steel	
	DSNU-...-R3	High-alloy stainless steel	
	DSNU-...-A6	–	Hard-chrome-plated tempered steel
[2]	Piston rod bearing	Sintered bronze	
[3]	Bearing cap	Colourless anodised wrought aluminium alloy	
[4]	Cylinder barrel	High-alloy stainless steel	
[5]	End cap	Colourless anodised wrought aluminium alloy	
[6]	Swivel bearing	Polymer	
–	Piston rod wiper seal		
	DSNU-...	TPE-U(PU)	
	DSNU-...-S6/-S10/-L/-A1	FPM	
	DSNU-...-R3	TPE-U (PU) media seal (modified for resistance to hydrolysis and cleaning)	
	Piston rod scraper		
	DSNU-...-A6	–	CuZn
	PWIS conformity	VDMA24364-B1/B2-L[1)]	
	Cleanroom class	Class 6 according to ISO 14644-1	
	Note on materials		
	DSNU-...	RoHS-compliant	
	DSNU-...-S10	Contains paint-wetting impairment substances	
	DSNU-...-F1A	Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	

1) Applies to all variants except S10

Datasheet

Dimensions Download CAD data ➔ www.festo.com

DSNU-8 ... 25



Note

Piston rod nut is not included in the scope of delivery for diameter 8 ... 20.

\+ = plus stroke length

ø [mm]	AM	B ø h8	BE	BF	CD ø H9	D ø	D4 ø	E	EE	EW	G
8	12	12	M12x1.25	12	4	16	9.3	14	M5	8	10
10							11.3				
12	16	16	M16x1.5	17	6	20	13.3	18		12	
16							17.3				
20	20	22	M22x1.5	20	8	30	21.3	26	G1/8	16	16
25	22			22			26.5	27			

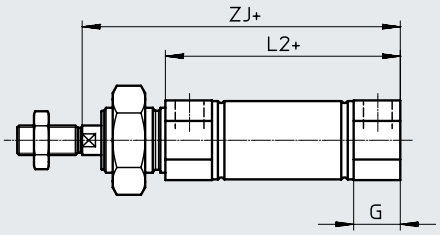
ø [mm]	KK	KV	KW	MM ø	L	L2	PL	VD	WF ±1.2	XC ±1	ZJ	⌀1
8	M4	19	6	4	6	46	6	2	16	64	62	–
10												
12	M6	24	8	6	9	50			22	75	72	5
16						56				82	78	
20	M8	32	11	8	12	68	8.2		24	95	92	7
25	M10x1.25			10		69.5			28	104	97.5	9

Datasheet

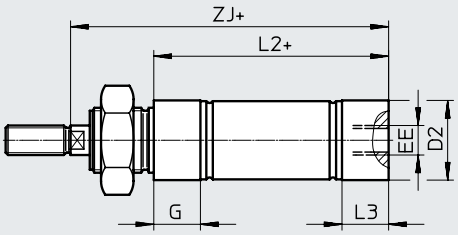
Dimensions Download CAD data ➔ www.festo.com

DSNU-8 ... 25

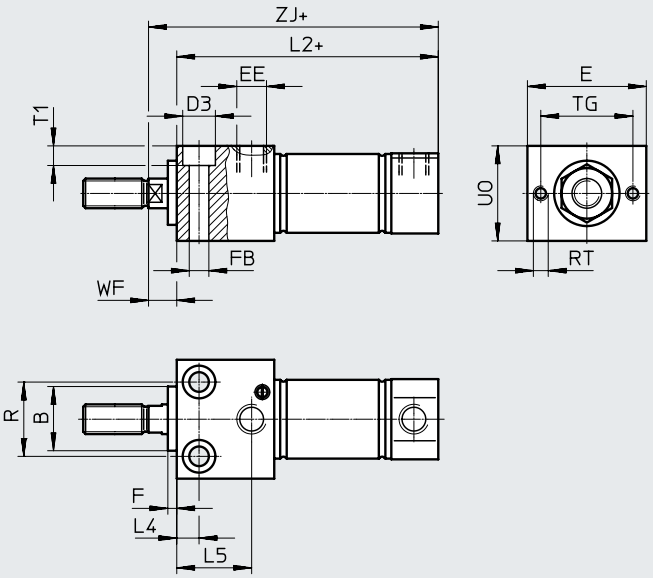
MQ – Lateral supply port, short end cap



MA – Axial supply port, short end cap



MH – With direct mounting



\+ = plus stroke length

ø [mm]	B ø h8	D2 ø	D3 ø	E	EE	F	FB ø	G	L2 DSNU-... -MQ	L2 DSNU-... -MA	L2 DSNU-... -MH
8	12	10.5	6	24	M5	3	3.4	10	46	43.6	53.5
10		12.5								43.1	53.8
12	16	14.5	8	30			4.5		50	47.7	62
16		17.5							56	53.7	67.8
20	22	21.7	10	40	G1/8		5.5	16	68	66.5	81.5
25		26.7	11				6.6		69.5	68.5	86.2

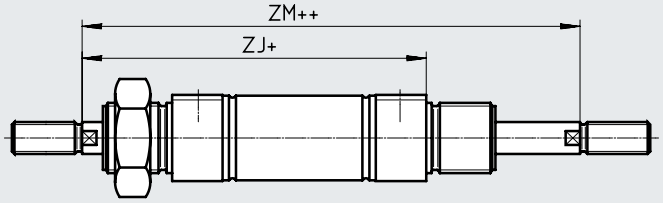
ø [mm]	L3	L4	L5	R	RT	TG	T1	UO	WF	ZJ DSNU-... -MQ	ZJ DSNU-... -MA	ZJ DSNU-... -MH
8	7.6	5	14	12	M3	18	3.4	16	8	62	59.6	61.5
10	7.1										59.1	61.8
12	7.7	6	18.1	16	M4	23	4.5	22	10	72	69.7	72
16										78	75.7	77.8
20	14.5	7.5	22.4	22	M5	31	5.5	28		92	90.5	91.5
25	14		25.2	25			6.6	32	11	97.5	96.5	97.2

Datasheet

Dimensions Download CAD data ➔ www.festo.com

DSNU-8 ... 25

S2 – Through piston rod

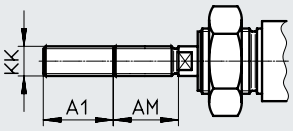


Note

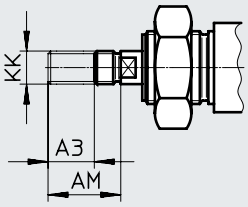
The thread types at both piston rod ends are identical. In combination with variant Q, the left piston rod end is square, the right piston rod end round.

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

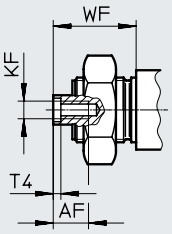
K2 – Extended male piston rod thread



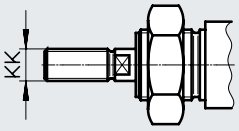
K6 – Shortened male piston rod thread



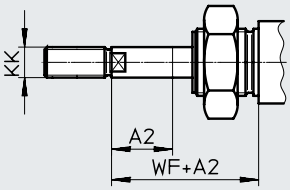
K3 – Female piston rod thread



K5 – Custom piston rod thread



K8 – Extended piston rod



Note

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

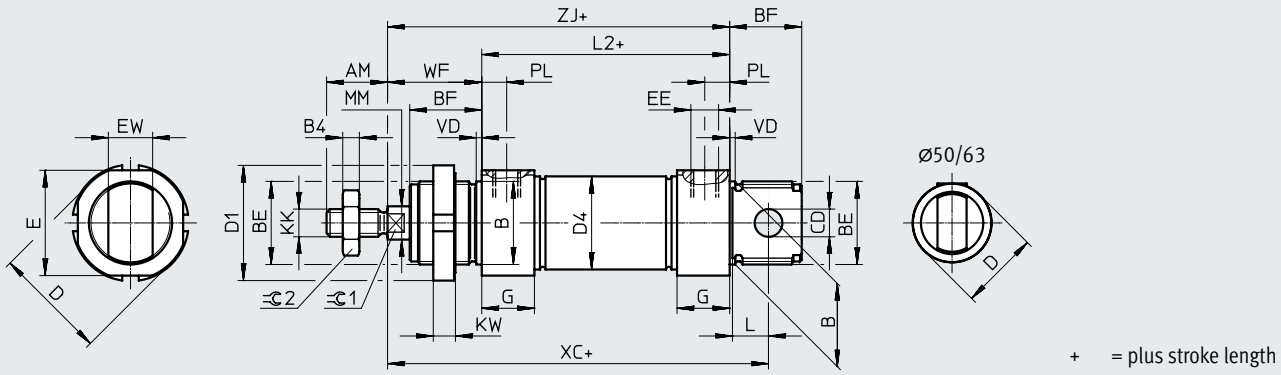
ø [mm]	A1 max.	A2 max.	A3 max.	AF	AM	KF	KK		T4	WF ±1.2	ZJ			ZM
							Basic thread	Custom thread[1]			DSNU-...			
											-MQ	-MA	-MH	
8	15	50	4	–	12	–	M4	–	–	16	62	59.6	61.5	78.4
10				–		–		–	–			59.1	61.8	
12	20	100		–	16	–	M6	–	–	22	72	69.7	72	94
16				–		–		–	–		78	75.7	77.8	100
20	25	110	8	12	20	M4	M8	–	2	24	92	90.5	91.5	116
25	35	150			22	M6	M10x1.25	M10	2.6	28	97.5	96.5	97.2	125.5

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

Datasheet

Dimensions Download CAD data ➔ www.festo.com

DSNU-32 ... 63



\+ = plus stroke length

ø [mm]	AM	B ø h8	BE	BF	B4	CD ø H9	D ø	D1 ø	D4 ø	E	EE	EW
32	22	30	M30x1.5	26	5	10	41	42	33.6	38	G1/8	16
40	24	38	M38x1.5	30	6	12	49	50	41.6	45	G1/4	18
50	32	45	M45x1.5	33	8	16	57	60	52.4	–		21
63							70		65.4		G3/8	

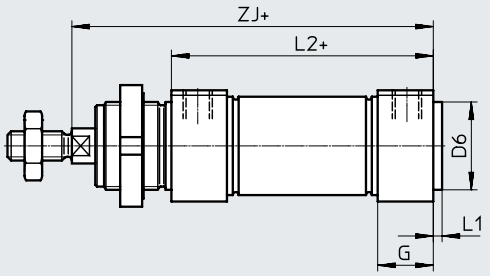
ø [mm]	G	KK	KW	MM ø	L	L2	PL	VD	WF ±1.2	XC ±1	ZJ	⊂1	⊂2
32	19	M10x1.25	8	12	13	69.5	9	2	34	117.5	103.5	10	16
40	25	M12x1.25	10	16	15	84.6	12	3	39	139.6	123.6	13	18
50		M16x1.5		20	16	86.2			44	147.2	130.2	17	24
63	28					94.2	13		45	156.2	139.2		

Datasheet

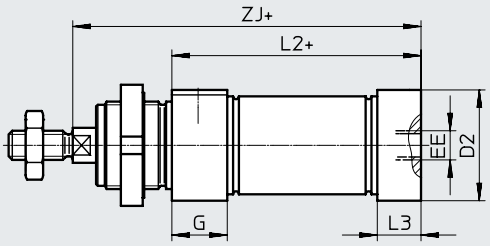
Dimensions Download CAD data ➔ www.festo.com

DSNU-32 ... 63

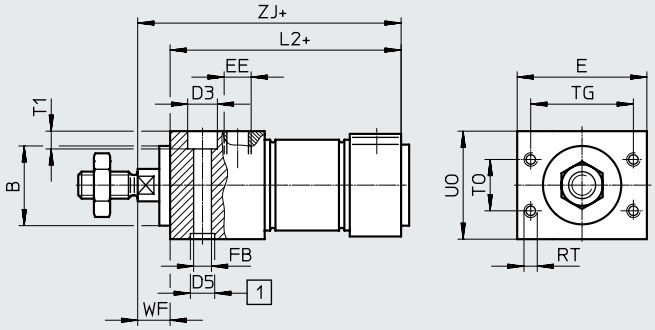
MQ – Lateral supply port, short end cap

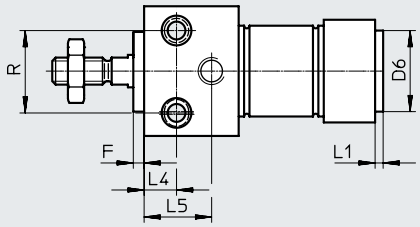


MA – Axial supply port, short end cap



MH – With direct mounting





[1] Centring holes
(2 centring sleeves included in the scope of delivery)

\+ = plus stroke length

ø [mm]	B ø h8	B2	E	EE	G	F	FB ø	D2 ø	D3 ø	D5 ø	D6 ø	L1	L2 DSNU-... -MQ	L2 DSNU-... -MA	L2 DSNU-... -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		64					53			45		86.2	86.2	109.2
63		2	72	G3/8	28		11	66	18	15			94.2	94.2	117.2

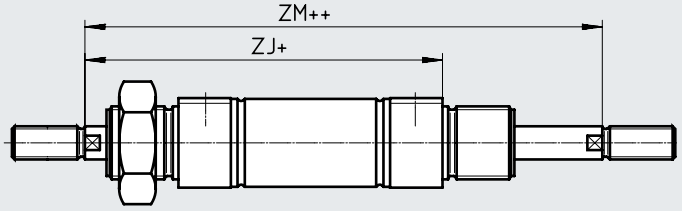
ø [mm]	L3	L4	L5	R	RT	TO	T1	T2	TG	UO	WF	ZJ DSNU-... -MQ	ZJ DSNU-... -MA	ZJ DSNU-... -MH
32	15	12	25	30	M5	19	6.6	2.1	38	40	12	103.5	99.5	97.5
40	18	15	32	38		24	9	2.6	42	48		123.6	116.6	116.6
50	25		35	42	M6	32			50	58	15	130.2	130.2	124.2
63	28		36	44	M8	36	11	3.1	52	72		139.2	139.2	132.2

Datasheet

Dimensions Download CAD data ➔ www.festo.com

DSNU-32 ... 63

S2 – Through piston rod



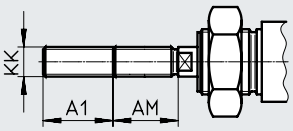
Note

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

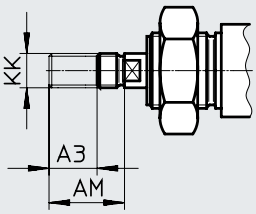
\+ = plus stroke length

++ = plus 2x stroke length

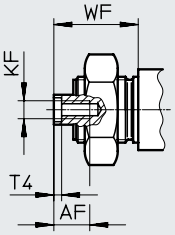
K2 – Extended male piston rod thread



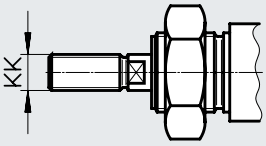
K6 – Shortened male piston rod thread



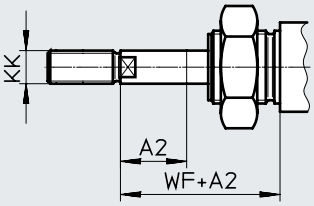
K3 – Female piston rod thread



K5 – Custom piston rod thread



K8 – Extended piston rod



Note

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

ø [mm]	A1 max.	A2 max.	A3 max.	AF	AM	KF	KK		T4	WF ±1.2	ZJ			ZM
							Basic thread	Custom thread[1]			DSNU-...			
											-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 custom threads are only available as male threads. The scope of delivery does not include a hex nut for the piston rod thread

Datasheet

★ Core Range

Ordering data

Piston ø	Stroke	P – Elastic cushioning rings/pads at both ends A – With position sensing		PPV – Pneumatic cushioning, adjustable at both ends A – With position sensing		PPS – Pneumatic cushioning, self-adjusting at both ends A – With position sensing	
[mm]	[mm]	Part no.	Type	Part no.	Type	Part no.	Type
12	10	★ 19189	DSNU-12-10-P-A	–		–	
	15	★ 1908255	DSNU-12-15-P-A				
	20	★ 1908256	DSNU-12-20-P-A				
	25	★ 19190	DSNU-12-25-P-A				
	30	★ 1908257	DSNU-12-30-P-A				
	40	★ 19191	DSNU-12-40-P-A				
	50	★ 19192	DSNU-12-50-P-A				
	60	★ 1908258	DSNU-12-60-P-A				
	80	★ 19193	DSNU-12-80-P-A				
	100	★ 19194	DSNU-12-100-P-A				
	125	★ 19195	DSNU-12-125-P-A				
	160	★ 19196	DSNU-12-160-P-A				
	200	★ 19197	DSNU-12-200-P-A				
16	10	★ 19198	DSNU-16-10-P-A	★ 1908266	DSNU-16-10-PPV-A	★ 1908274	DSNU-16-10-PPS-A
	15	★ 1908259	DSNU-16-15-P-A	★ 1908267	DSNU-16-15-PPV-A	★ 1908275	DSNU-16-15-PPS-A
	20	★ 1908260	DSNU-16-20-P-A	★ 1908268	DSNU-16-20-PPV-A	★ 1908276	DSNU-16-20-PPS-A
	25	★ 19199	DSNU-16-25-P-A	★ 33973	DSNU-16-25-PPV-A	★ 559263	DSNU-16-25-PPS-A
	30	★ 1908261	DSNU-16-30-P-A	★ 1908269	DSNU-16-30-PPV-A	★ 1908277	DSNU-16-30-PPS-A
	35	★ 1908262	DSNU-16-35-P-A	★ 1908270	DSNU-16-35-PPV-A	★ 1908278	DSNU-16-35-PPS-A
	40	★ 19200	DSNU-16-40-P-A	★ 19229	DSNU-16-40-PPV-A	★ 559264	DSNU-16-40-PPS-A
	50	★ 19201	DSNU-16-50-P-A	★ 19230	DSNU-16-50-PPV-A	★ 559265	DSNU-16-50-PPS-A
	60	★ 1908263	DSNU-16-60-P-A	★ 1908271	DSNU-16-60-PPV-A	★ 1908279	DSNU-16-60-PPS-A
	70	★ 1908264	DSNU-16-70-P-A	★ 1908272	DSNU-16-70-PPV-A	★ 1908280	DSNU-16-70-PPS-A
	80	★ 19202	DSNU-16-80-P-A	★ 19231	DSNU-16-80-PPV-A	★ 559266	DSNU-16-80-PPS-A
	100	★ 19203	DSNU-16-100-P-A	★ 19232	DSNU-16-100-PPV-A	★ 559267	DSNU-16-100-PPS-A
	125	★ 19204	DSNU-16-125-P-A	★ 19233	DSNU-16-125-PPV-A	★ 559268	DSNU-16-125-PPS-A
	150	★ 1908265	DSNU-16-150-P-A	★ 1908273	DSNU-16-150-PPV-A	★ 1908281	DSNU-16-150-PPS-A
	160	★ 19205	DSNU-16-160-P-A	★ 19234	DSNU-16-160-PPV-A	★ 559269	DSNU-16-160-PPS-A
	200	★ 19206	DSNU-16-200-P-A	★ 19235	DSNU-16-200-PPV-A	★ 559270	DSNU-16-200-PPS-A

Datasheet

★ Core Range

Ordering data

Piston ø	Stroke	P – Elastic cushioning rings/pads at both ends A – With position sensing		PPV – Pneumatic cushioning, adjustable at both ends A – With position sensing		PPS – Pneumatic cushioning, self-adjusting at both ends A – With position sensing	
[mm]	[mm]	Part no.	Type	Part no.	Type	Part no.	Type
20	10	★ 19207	DSNU-20-10-P-A	★ 1908289	DSNU-20-10-PPV-A	★ 1908297	DSNU-20-10-PPS-A
	15	★ 1908282	DSNU-20-15-P-A	★ 1908290	DSNU-20-15-PPV-A	★ 1908298	DSNU-20-15-PPS-A
	20	★ 1908283	DSNU-20-20-P-A	★ 1908291	DSNU-20-20-PPV-A	★ 1908299	DSNU-20-20-PPS-A
	25	★ 19208	DSNU-20-25-P-A	★ 33974	DSNU-20-25-PPV-A	★ 559271	DSNU-20-25-PPS-A
	30	★ 1908284	DSNU-20-30-P-A	★ 1908292	DSNU-20-30-PPV-A	★ 1908300	DSNU-20-30-PPS-A
	35	★ 1908285	DSNU-20-35-P-A	★ 1908293	DSNU-20-35-PPV-A	★ 1908301	DSNU-20-35-PPS-A
	40	★ 19209	DSNU-20-40-P-A	★ 19236	DSNU-20-40-PPV-A	★ 559272	DSNU-20-40-PPS-A
	50	★ 19210	DSNU-20-50-P-A	★ 19237	DSNU-20-50-PPV-A	★ 559273	DSNU-20-50-PPS-A
	60	★ 1908286	DSNU-20-60-P-A	★ 1908294	DSNU-20-60-PPV-A	★ 1908302	DSNU-20-60-PPS-A
	70	★ 1908287	DSNU-20-70-P-A	★ 1908295	DSNU-20-70-PPV-A	★ 1908303	DSNU-20-70-PPS-A
	80	★ 19211	DSNU-20-80-P-A	★ 19238	DSNU-20-80-PPV-A	★ 559274	DSNU-20-80-PPS-A
	100	★ 19212	DSNU-20-100-P-A	★ 19239	DSNU-20-100-PPV-A	★ 559275	DSNU-20-100-PPS-A
	125	★ 19213	DSNU-20-125-P-A	★ 19240	DSNU-20-125-PPV-A	★ 559276	DSNU-20-125-PPS-A
	150	★ 1908288	DSNU-20-150-P-A	★ 1908296	DSNU-20-150-PPV-A	★ 1908304	DSNU-20-150-PPS-A
	160	★ 19214	DSNU-20-160-P-A	★ 19241	DSNU-20-160-PPV-A	★ 559277	DSNU-20-160-PPS-A
	200	★ 19215	DSNU-20-200-P-A	★ 19242	DSNU-20-200-PPV-A	★ 559278	DSNU-20-200-PPS-A
	250	★ 19216	DSNU-20-250-P-A	★ 19243	DSNU-20-250-PPV-A	★ 559279	DSNU-20-250-PPS-A
	300	★ 19217	DSNU-20-300-P-A	★ 19244	DSNU-20-300-PPV-A	★ 559280	DSNU-20-300-PPS-A
	320	★ 34718	DSNU-20-320-P-A	★ 34720	DSNU-20-320-PPV-A	★ 559281	DSNU-20-320-PPS-A
25	10	★ 19218	DSNU-25-10-P-A	★ 1908312	DSNU-25-10-PPV-A	★ 1908320	DSNU-25-10-PPS-A
	15	★ 1908305	DSNU-25-15-P-A	★ 1908313	DSNU-25-15-PPV-A	★ 1908321	DSNU-25-15-PPS-A
	20	★ 1908306	DSNU-25-20-P-A	★ 1908314	DSNU-25-20-PPV-A	★ 1908322	DSNU-25-20-PPS-A
	25	★ 19219	DSNU-25-25-P-A	★ 33975	DSNU-25-25-PPV-A	★ 559282	DSNU-25-25-PPS-A
	30	★ 1908307	DSNU-25-30-P-A	★ 1908315	DSNU-25-30-PPV-A	★ 1908323	DSNU-25-30-PPS-A
	35	★ 1908308	DSNU-25-35-P-A	★ 1908316	DSNU-25-35-PPV-A	★ 1908324	DSNU-25-35-PPS-A
	40	★ 19220	DSNU-25-40-P-A	★ 19245	DSNU-25-40-PPV-A	★ 559283	DSNU-25-40-PPS-A
	50	★ 19221	DSNU-25-50-P-A	★ 19246	DSNU-25-50-PPV-A	★ 559284	DSNU-25-50-PPS-A
	60	★ 1908309	DSNU-25-60-P-A	★ 1908317	DSNU-25-60-PPV-A	★ 1908325	DSNU-25-60-PPS-A
	70	★ 1908310	DSNU-25-70-P-A	★ 1908318	DSNU-25-70-PPV-A	★ 1908326	DSNU-25-70-PPS-A
	80	★ 19222	DSNU-25-80-P-A	★ 19247	DSNU-25-80-PPV-A	★ 559285	DSNU-25-80-PPS-A
	100	★ 19223	DSNU-25-100-P-A	★ 19248	DSNU-25-100-PPV-A	★ 559286	DSNU-25-100-PPS-A
	125	★ 19224	DSNU-25-125-P-A	★ 19249	DSNU-25-125-PPV-A	★ 559287	DSNU-25-125-PPS-A
	150	★ 1908311	DSNU-25-150-P-A	★ 1908319	DSNU-25-150-PPV-A	★ 1908327	DSNU-25-150-PPS-A
	160	★ 19225	DSNU-25-160-P-A	★ 19250	DSNU-25-160-PPV-A	★ 559288	DSNU-25-160-PPS-A
	200	★ 19226	DSNU-25-200-P-A	★ 19251	DSNU-25-200-PPV-A	★ 559289	DSNU-25-200-PPS-A
	250	★ 19227	DSNU-25-250-P-A	★ 19252	DSNU-25-250-PPV-A	★ 559290	DSNU-25-250-PPS-A
	300	★ 19228	DSNU-25-300-P-A	★ 19253	DSNU-25-300-PPV-A	★ 559291	DSNU-25-300-PPS-A
	320	★ 34719	DSNU-25-320-P-A	★ 34721	DSNU-25-320-PPV-A	★ 559292	DSNU-25-320-PPS-A

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Ordering data

Piston ø	Stroke	P – Elastic cushioning rings/pads at both ends A – With position sensing		PPV – Pneumatic cushioning, adjustable at both ends A – With position sensing		PPS – Pneumatic cushioning, self-adjusting at both ends A – With position sensing	
[mm]	[mm]	Part no.	Type	Part no.	Type	Part no.	Type
8	10	**19177**	**DSNU-8-10-P-A**	–		–	
	15	**1908247**	**DSNU-8-15-P-A**				
	20	**1908248**	**DSNU-8-20-P-A**				
	25	**19178**	**DSNU-8-25-P-A**				
	30	**1908249**	**DSNU-8-30-P-A**				
	40	**19179**	**DSNU-8-40-P-A**				
	50	**19180**	**DSNU-8-50-P-A**				
	60	**1908250**	**DSNU-8-60-P-A**				
	80	**19181**	**DSNU-8-80-P-A**				
	100	**19182**	**DSNU-8-100-P-A**				
10	10	**19183**	**DSNU-10-10-P-A**	–		–	
	15	**1908251**	**DSNU-10-15-P-A**				
	20	**1908252**	**DSNU-10-20-P-A**				
	25	**19184**	**DSNU-10-25-P-A**				
	30	**1908253**	**DSNU-10-30-P-A**				
	40	**19185**	**DSNU-10-40-P-A**				
	50	**19186**	**DSNU-10-50-P-A**				
	60	**1908254**	**DSNU-10-60-P-A**				
	80	**19187**	**DSNU-10-80-P-A**				
	100	**19188**	**DSNU-10-100-P-A**				
12	70	**5249943**	**DSNU-12-70-P-A**	–		–	
	150	**5249947**	**DSNU-12-150-P-A**				
25	400	**35191**	**DSNU-25-400-P-A**	**35193**	**DSNU-25-400-PPV-A**	**559293**	**DSNU-25-400-PPS-A**
	500	**35192**	**DSNU-25-500-P-A**	**35194**	**DSNU-25-500-PPV-A**	**559294**	**DSNU-25-500-PPS-A**
32	10	**5249365**	**DSNU-32-10-P-A**	–		–	
	15	**5249366**	**DSNU-32-15-P-A**				
	20	**5249367**	**DSNU-32-20-P-A**				
	25	**195980**	**DSNU-32-25-P-A**	**196020**	**DSNU-32-25-PPV-A**	**559295**	**DSNU-32-25-PPS-A**
	30	**5249368**	**DSNU-32-30-P-A**	**5249851**	**DSNU-32-30-PPV-A**	**5249968**	**DSNU-32-30-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**
	60	**5249369**	**DSNU-32-60-P-A**	**5249853**	**DSNU-32-60-PPV-A**	**5249970**	**DSNU-32-60-PPS-A**
	70	**5249370**	**DSNU-32-70-P-A**	**5249854**	**DSNU-32-70-PPV-A**	**5249971**	**DSNU-32-70-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**
	150	**5249371**	**DSNU-32-150-P-A**	**5249855**	**DSNU-32-150-PPV-A**	**5249972**	**DSNU-32-150-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**
	300	**5249372**	**DSNU-32-300-P-A**	**5249856**	**DSNU-32-300-PPV-A**	**5249973**	**DSNU-32-300-PPS-A**
	320	**195989**	**DSNU-32-320-P-A**	**196029**	**DSNU-32-320-PPV-A**	**559304**	**DSNU-32-320-PPS-A**

Datasheet

Ordering data

Piston ø	Stroke	P – Elastic cushioning rings/pads at both ends A – With position sensing		PPV – Pneumatic cushioning, adjustable at both ends A – With position sensing		PPS – Pneumatic cushioning, self-adjusting at both ends A – With position sensing	
[mm]	[mm]	Part no.	Type	Part no.	Type	Part no.	Type
40	10	**5262529**	**DSNU-40-10-P-A**	–		–	
	15	**5262530**	**DSNU-40-15-P-A**				
	20	**5262531**	**DSNU-40-20-P-A**				
	25	**195990**	**DSNU-40-25-P-A**	**196030**	**DSNU-40-25-PPV-A**	**559305**	**DSNU-40-25-PPS-A**
	30	**5262532**	**DSNU-40-30-P-A**	**5262705**	**DSNU-40-30-PPV-A**	**5262768**	**DSNU-40-30-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**
	60	**5262534**	**DSNU-40-60-P-A**	**5262706**	**DSNU-40-60-PPV-A**	**5262769**	**DSNU-40-60-PPS-A**
	70	**5262535**	**DSNU-40-70-P-A**	**5262707**	**DSNU-40-70-PPV-A**	**5262771**	**DSNU-40-70-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**
	150	**5262536**	**DSNU-40-150-P-A**	**5262708**	**DSNU-40-150-PPV-A**	**5262772**	**DSNU-40-150-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**
	300	**5262537**	**DSNU-40-300-P-A**	**5262709**	**DSNU-40-300-PPV-A**	**5262773**	**DSNU-40-300-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**

Datasheet

Ordering data

Piston ø	Stroke	P – Elastic cushioning rings/pads at both ends A – With position sensing		PPV – Pneumatic cushioning, adjustable at both ends A – With position sensing	
[mm]	[mm]	Part no.	Type	Part no.	Type
Variable stroke				**Variable stroke**	
8	1 ... 100	**14326**	**DSNU-8-...-P-A**	–	
10	1 ... 100	**14325**	**DSNU-10-...-P-A**		
12	1 ... 200	**14324**	**DSNU-12-...-P-A**		
16	1 ... 200	**14323**	**DSNU-16-...-P-A**	**14320**	**DSNU-16-...-PPV-A**
20	1 ... 320	**14328**	**DSNU-20-...-P-A**	**14321**	**DSNU-20-...-PPV-A**
25	1 ... 500	**14327**	**DSNU-25-...-P-A**	**14322**	**DSNU-25-...-PPV-A**

Ordering data – Modular product system

Ordering table

Size		8	10	12	16	20	25	Conditions	Code	Enter code
Module no.		**193986**	**193987**	**193988**	**193989**	**193990**	**193991**			
Function		Round cylinder, double-acting, based on ISO 6432							**DSNU**	DSNU
Piston ø	[mm]	8	10	12	16	20	25		★ **-...**	
Stroke	[mm]	1 ... 100		1 ... 200		1 ... 320	1 ... 500	[1]	★ **-...**	
Cushioning		Elastic cushioning rings/pads at both ends							★ **-P**	
		–	–	Pneumatic cushioning, adjustable at both ends				[2]	★ **-PPV**	
		–	–	–	Pneumatic cushioning, self-adjusting at both ends			[3]	★ **-PPS**	
Position sensing		Via proximity switch						[4]	★ **-A**	-A
Cylinder cap		Lateral supply port, short end cap						[5]	★ **-MQ**	
		Axial supply port, short end cap						[5]	**-MA**	
		With mounting flange at front (direct mounting), bearing cap						[6]	**-MH**	
Piston rod		Through piston rod						[7]	★ **-S2**	

[1] -... Longer strokes on request
[2] PPV Not with MA. In combination with S6, S10, L, A1 not with piston diameter 12 mm
[3] PPS Not with MA, MH, S6, S10 and not with combination MQ-R3
[4] A Minimum stroke ≥ 10 mm required for reliable sensing
[5] MQ, MA Not with S2, S10
[6] MH Not with combination S6-R3. Not with S10
[7] S2 Not with S10

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 L

Note

Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.
Longer strokes on request

Ordering data – Modular product system

Ordering table

Size		8	10	12	16	20	25	Conditions	Code	Enter code
Extended male thread		Extended male piston rod thread								
	[mm]	1 ... 15		1 ... 20		1 ... 25	1 ... 35	[8]	**-...K2**	
Shortened male thread		Shortened male piston rod thread								
	[mm]	1 ... 4				1 ... 8	1 ... 10	[9]	**-...K6**	
Female thread		Piston rod with female thread								
		–	–	–	–	(M4)	(M6)	[10]	★ **-K3**	
Custom thread		Custom thread on the piston rod								
		–	–	–	–	–	M10		**-"..."K5**	
Extended piston rod at one end		Piston rod extended at one end								
	[mm]	1 ... 50		1 ... 100		1 ... 110	1 ... 150		★ **...K8**	
Temperature resistance		Heat-resistant seals max. 120°C						[11]	★ **-S6**	
Constant motion		–	–	Slow speed (constant motion at low piston speeds)				[12]	**-S10**	
Running characteristic		Low friction						[13]	**-L**	
Corrosion protection		–	–	High corrosion protection					★ **-R3**	
Scraper		–	–	Increased chemical resistance				[14]	**-A1**	
EU certification		II 2GD						[15]	**-EX4**	

[8] K2 Not with K3, K6
[9] K6 Not with K3
[10] K3 Not with K5
[11] S6 Not with S10
[12] S10 Not with R3, L
[13] L Not with MQ, MA, MH, S2, S6, S10
[14] A1 Not with MH, S6, S10, L
[15] EX4 Not with S6

Ordering data – Modular product system

Ordering table

Size		32	40	50	63	Conditions	Code	Enter code
Module no.		**193992**	**193993**	**193994**	**193995**			
Function		Double-acting round cylinder					**DSNU**	DSNU
Piston ø	[mm]	32	40	50	63		★ **-...**	
Stroke	[mm]	1 ... 500				[1]	★ **-...**	
Cushioning		Elastic cushioning rings/pads at both ends					★ **-P**	
		Pneumatic cushioning, adjustable at both ends				[2]	★ **-PPV**	
		Pneumatic cushioning, self-adjusting at both ends				[3]	★ **-PPS**	
Position sensing		Via proximity switch				[4]	★ **-A**	-A
Cylinder cap		Lateral supply port, short end cap				[5]	★ **-MQ**	
		Axial supply port, short end cap				[6]	**-MA**	
		Mounting flange at front (direct mounting), bearing cap				[7]	**-MH**	
Piston rod		Through piston rod				[8]	★ **-S2**	

[1] -... Longer strokes on request
[2] PPV Not with MA
[3] PPS Not with MA, MH, S6, S10, combination MQ-R3 and R8
[4] A Minimum stroke ≥ 10 mm required for reliable sensing
[5] MQ Not with S2, S10
[6] MA Not with S2, S10 R8
[7] MH Not with combination S6-R3. Not with S10, R8
[8] S2 Not with S10

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 L

Note

Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.
Longer strokes on request

Ordering data – Modular product system

Ordering table

Size		32	40	50	63	Conditions	Code	Enter code
Extended male thread		Extended male piston rod thread						
	[mm]	1 ... 35		1 ... 70		[9]	**-...K2**	
Shortened male thread		Shortened male piston rod thread						
	[mm]	1 ... 8		1 ... 10		[10]	**-...K6**	
Female thread		Piston rod with female thread						
		(M6)	(M8)	(M10)		[11]	★ **-K3**	
Custom thread		Custom thread on the piston rod						
		M10	M12	M16			**-"..."K5**	
Extended piston rod at one end		Piston rod extended at one end						
	[mm]	1 ... 500					★ **...K8**	
Temperature resistance		Heat-resistant seals max. 120°C				[12]	★ **-S6**	
Constant motion		Slow speed (constant motion at low piston speeds)				[13]	**-S10**	
Running characteristic		Low friction				[14]	**-L**	
Corrosion protection		High corrosion protection				[15]	★ **-R3**	
Scraper		Dust protection				[16]	**-R8**	
		Increased chemical resistance				[17]	**-A1**	
		Metal scraper				[18]	**-A6**	
EU certification		II 2GD				[19]	**-EX4**	

[9] K2 Not with K3, K6
[10] K6 Not with K3
[11] K3 Not with K5
[12] S6 Not with S10, S1
[13] S10 Not with R3, R8, L
[14] L Not with MQ, MA, MH, S2, S6, S10
[15] R8 Not with MA, MH, S10, L, R3, A1, PPS
[16] R3 Not with R8
[17] A1 Not with MH, S6, S10, L, R8
[18] A6 Not with S10, L, MH, P, PPS, S6, R3, EX4
[19] EX4 Not with S6, S10

Ordering data – Modular product system

Ordering table

Size	8	10	12	16	20	25	32	40	Conditions	Code	Enter code
Module no.	**8150747**	**8149443**	**8149444**	**8149445**	**8149446**	**8149447**	**8149448**	**8149449**			
Function	Standards-based cylinder, double-acting, based on ISO 6432									**DSNU**	DSNU
Piston ø [mm]	8	10	12	16	20	25	32	40		★ **-...**	
Stroke [mm]	1 ... 100		1 ... 200		1 ... 320	1 ... 500			[1]	★ **-...**	
Cushioning	Elastic cushioning rings/pads at both ends									★ **-P**	
	–	–	Pneumatic cushioning, adjustable at both ends							★ **-PPV**	
	–	–	–	Pneumatic cushioning, self-adjusting						★ **-PPS**	
Position sensing	Via proximity switch									★ **-A**	-A
Special material properties	None										
	Recommended for production facilities for manufacturing lithium-ion batteries								[2]	**-F1A**	
Cylinder cap	Standard										
	Lateral supply port, short end cap								[3]	★ **-MQ**	
	Axial supply port, short end cap								[4]	**-MA**	
Piston rod	Piston rod at one end										
	Through piston rod								[5]	★ **-S2**	

[1] -... Longer strokes on request
[2] F1A With A only
[3] MQ Not with PPS
[4] MA Not with PPV, PPS
[5] S2 Not with MQ, MA

Note

Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.
Longer strokes on request

Ordering data – Modular product system

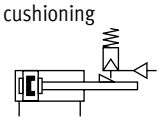
Ordering table

Size		8	10	12	16	20	25	32	40	Conditions	Code	Enter code
Extended male thread		Extended male piston rod thread										
	[mm]	1 ... 15		1 ... 20		1 ... 25	1 ... 35			[6]	**-...K2**	
Shortened male thread		Shortened male piston rod thread										
	[mm]	1 ... 4				1 .. 8				[7]	**-...K6**	
Female thread		Piston rod with female thread										
		–	–	–	–	(M4)	(M6)		(M8)		★ **-K3**	
Custom thread		Custom thread on the piston rod										
		–	–	–	–	–	M10		M12	[8]	**-"..."K5**	
Extended piston rod at one end		Piston rod extended at one end										
	[mm]	1 ... 50		1 ... 100		1 ... 110	1 ... 150	1 ... 500			★ **-...K8**	

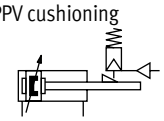
[6] K2 Not with K3
[7] K6 Not with K2, K3
[8] K5 Not with K3

Datasheet

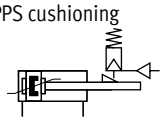
P cushioning



PPV cushioning



PPS cushioning



- Ø - Diameter
  8 ... 25 mm
  ISO 6432

- Ø - Diameter
  32 ... 63 mm

- | - Stroke length
  1 ... 500 mm

- **Note**

If used in safety-oriented applications, additional measures are necessary, e.g. in Europe the standards listed in the EC Machinery Directive must be observed. Without additional measures in accordance with legally specified minimum requirements, the product is not suitable as a safety-oriented component in control systems.

General technical data											
Piston ø		8	10	12	16	20	25	32	40	50	63
Based on standard		ISO 6432						–			
Pneumatic connection		M5	M5	M5	M5	G1/8	G1/8	G1/8	G1/4	G1/4	G3/8
Piston rod thread		M4	M4	M6	M6	M8	M10x1.25	M10x1.25	M12x1.25	M16x1.5	M16x1.5
Stroke[1]	[mm]	1 ... 100		1 ... 200		1 ... 320	1 ... 500				
Design		Piston/piston rod/cylinder barrel									
Cushioning											
DSNU...-P		Elastic cushioning rings/pads at both ends									
DSNU-...-PPV		–		Cushioning, adjustable at both ends							
DSNU-...-PPS		–			Cushioning, self-adjusting at both ends						
Cushioning length											
DSNU-...-PPV	[mm]	–		9	12	15	17	14	18	20	21
DSNU-...-PPS	[mm]	–			12	15	17	14	18	20	21
Position sensing		Via proximity switch									
Type of mounting		Via through-hole									
		With accessories									
Mounting position		Any									
Holding force of the clamping unit	[N]	80	80	180	180	350	350	600	1000	1400	2000
Axial backlash under load	[mm]	0.2		0.3			0.5			0.8	
Pneumatic connection on clamping unit		M5							G1/8		

1) Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.
Longer strokes on request

Datasheet

Operating and environmental conditions		
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Note on the operating/ pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)
Operating pressure	[MPa]	0.3 ... 1
	[bar]	3 ... 10
Ambient temperature	[°C]	–10 ... +80
Corrosion resistance class CRC[1]		
DSNU-...		2
DSNU...-R3		3

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.
Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

Forces [N] and impact energy [J]										
Piston ø	8	10	12	16	20	25	32	40	50	63
Theoretical force at 0.6 MPa (6 bar), advancing	30	47	68	121	189	295	483	753	1178	1870
Theoretical force at 0.6 MPa (6 bar), retracting	23	40	51	104	158	247	415	633	990	1682
Impact energy in the end positions for P cushioning[1]	0.03	0.05	0.07	0.15	0.20	0.30	0.40	0.70	1	1.3

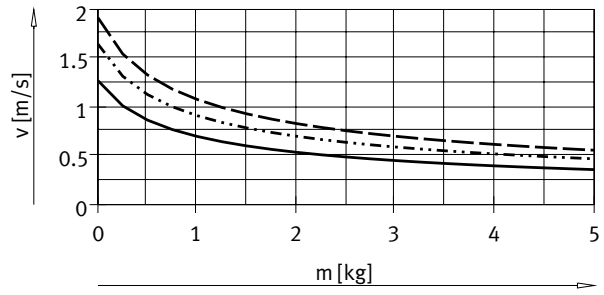
1) The values are reduced by approx. 50% at an ambient temperature of 80°C

Weights [g]										
Piston ø	8	10	12	16	20	25	32	40	50	63
Product weight with 0 mm stroke	97.6	100.3	193	207.9	393.8	456	711.5	1287	2059	2556
Additional weight per 10 mm stroke	2.4	2.7	4	4.6	7.2	11	15.5	24	40	44
Moving mass with 0 mm stroke	7.5	8.5	18.5	23	44	71	121	230	413	459
Moving mass per 10 mm stroke	1	1	2	2	4	6	9	16	25	25

Datasheet

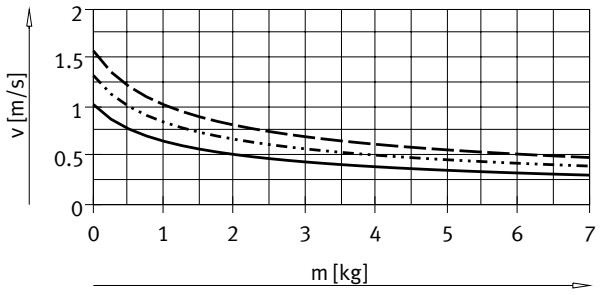
Average piston speed v as a function of payload m in combination with cushioning PPS

Piston Ø 16



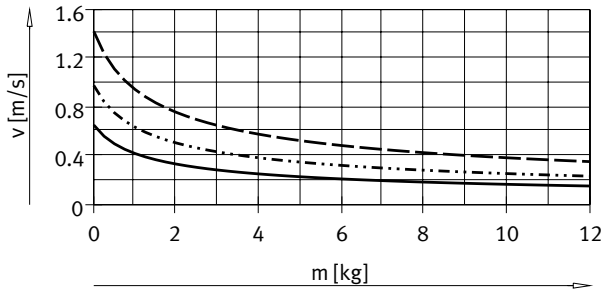
DSNU-16-50
DSNU-16-100
DSNU-16-200

Piston Ø 20



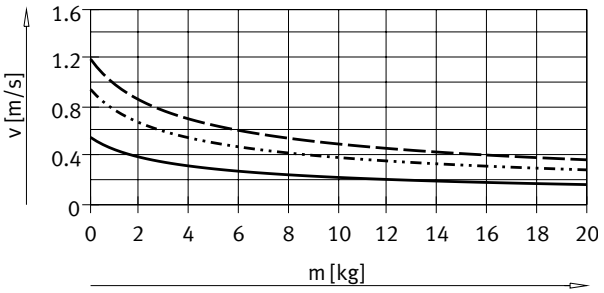
DSNU-20-50
DSNU-20-100
DSNU-20-200

Piston Ø 25



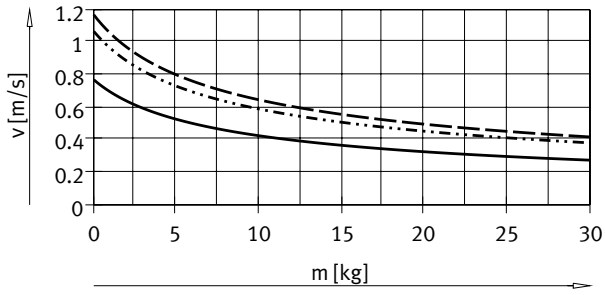
DSNU-25-50
DSNU-25-100
DSNU-25-200

Piston Ø 32



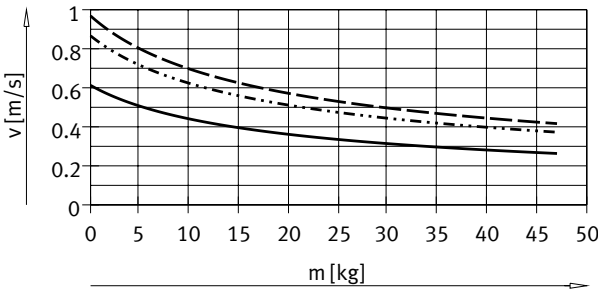
DSNU-32-50
DSNU-32-100
DSNU-32-200

Piston Ø 40



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

Piston Ø 50

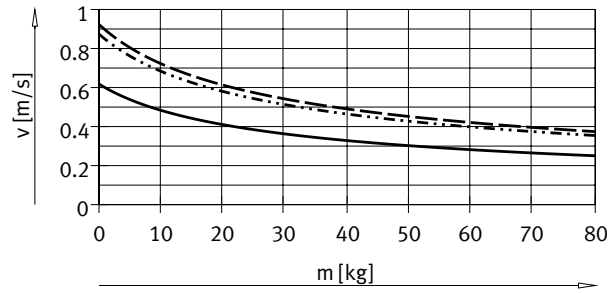


DSNU-50-50
DSNU-50-100
DSNU-50-200

Datasheet

Average piston speed v as a function of payload m in combination with cushioning PPS

Piston ø 63



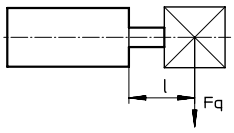
DSNU-63-50
DSNU-63-100
DSNU-63-200

Note:

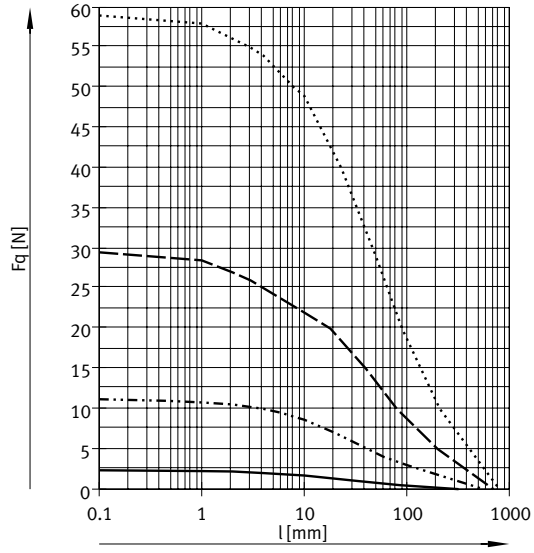
Engineering software for
P cushioning
PPV cushioning
PPS cushioning
→ https://www.festo.com/x/pneumatic-sizing

Average piston speed
= Stroke/movement time

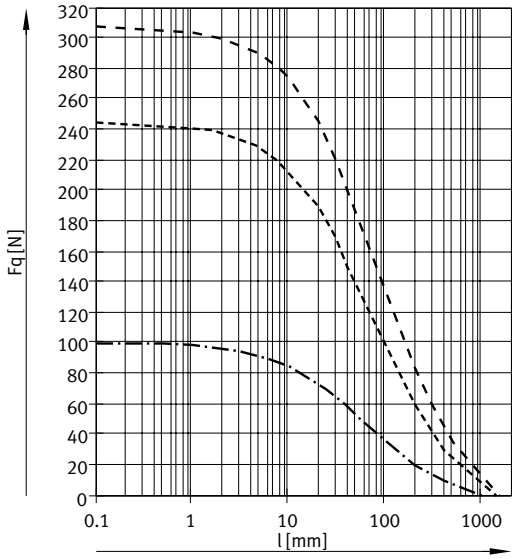
Max. transverse force Fq as a function of projection l



DSNU-...



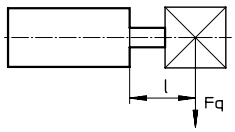
DSNU-8/10
DSNU-12/16
DSNU-20
DSNU-25



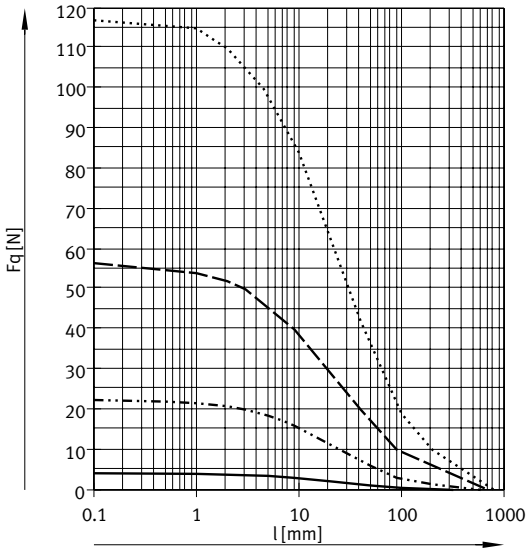
DSNU-32
DSNU-40
DSNU-50/63

Datasheet

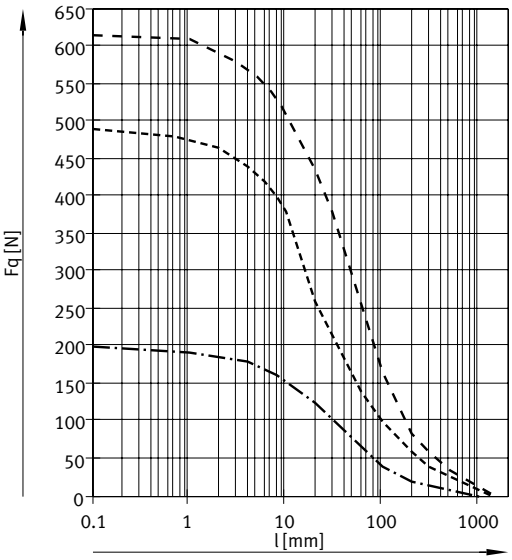
Max. transverse force Fq as a function of projection l



DSNU-...-S2 – Through piston rod



DSNU-8/10
DSNU-12/16
DSNU-20
DSNU-25

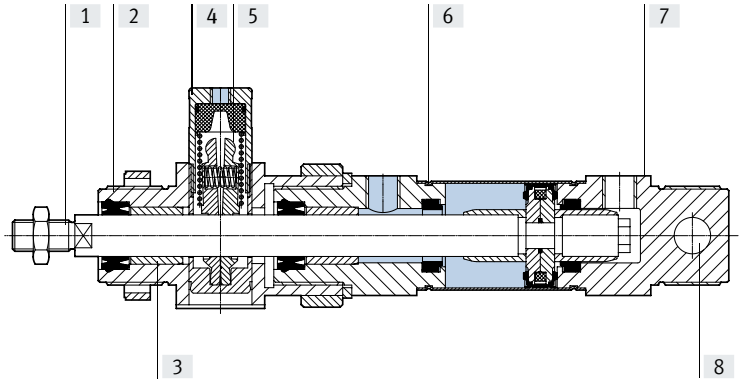


DSNU-32
DSNU-40
DSNU-50/63

Datasheet

Materials

Sectional view

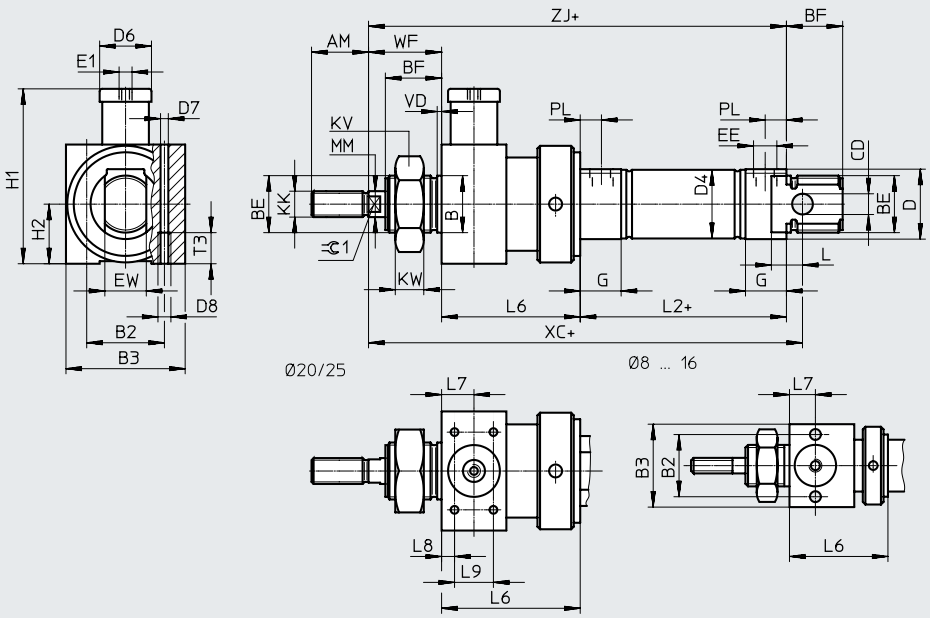


Round cylinder		
[1]	Piston rod	
	DSNU-...	High-alloy steel
	DSNU-...-R3	High-alloy stainless steel
[2]	Bearing cap	Anodised aluminium
[3]	Piston rod bearing	Sintered bronze
[4]	Housing, clamping unit	Wrought aluminium alloy
[5]	Clamping jaw	Brass
[6]	Cylinder barrel	High-alloy stainless steel
[7]	End cap	Anodised aluminium
[8]	Swivel bearing	Polymer
–	Piston, clamping unit	POM
	Spring	Spring steel
	Piston rod wiper seal	TPE-U(PU)
	PWIS conformity	VDMA24364-B1/B2-L
	Cleanroom class	Class 6 according to ISO 14644-1
	Note on materials	RoHS-compliant

Datasheet

Dimensions Download CAD data ➔ www.festo.com

DSNU-8 ... 25



Note

Piston rod nut is not included in the scope of delivery for diameter 8 ... 20.

\+ = plus stroke length

ø [mm]	AM	B ø h8	B2	B3	BE	BF	CD ø H9	D ø	D4 ø	D6 ø	D7 ø	D8
8	12	12	19.5	27	M12x1.25	12	4	16	9.3	12	4.2	M5
10									11.3			
12	16	16	24	32	M16x1.5	17	6	20	13.3	16		
16									17.3			
20	20	22	27	36	M22x1.5	20	8	30	21.3	20		
25	22					22			26.5			

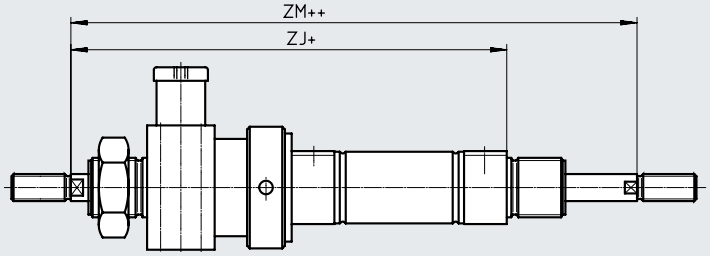
ø [mm]	E1	EE	EW	G	H1	H2	KK	KV	KW	MM ø	L	L2
8	M5	M5	8	10	34.5	13.5	M4	19	6	4	6	46
10												
12			12		41	16	M6	24	8	6	9	50
16												56
20		G1/8	16	16	62.5	18	M8	32	11	8	12	68
25							M10x1.25			10		69.5

ø [mm]	L6	L7	L8	L9	T3	PL	VD	WF ±1.2	XC ±1	ZJ	≂c1
8	29 ±0.65	8	–	–	11	6	2	16	93	91	–
10			–	–							–
12	38 ±0.75	10	–	–				22	113	110	5
16			–	–					120	116	
20	47 ±0.75	13	4.5	20		8.2		24	142	139	7
25	48 ±0.75							28	152	145.5	9

Datasheet

Dimensions Download CAD data ➔ www.festo.com

DSNU-8 ... 25
S2 – Through piston rod



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

Note

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

In combination with variant Q (➔ page 46) the right piston rod is square, the left piston rod round. The clamping unit is mounted on the left-hand, round piston rod.

In combination with variant K8 the piston rod extension is on the right piston rod only. The clamping unit is mounted on the left piston rod that is not extended.

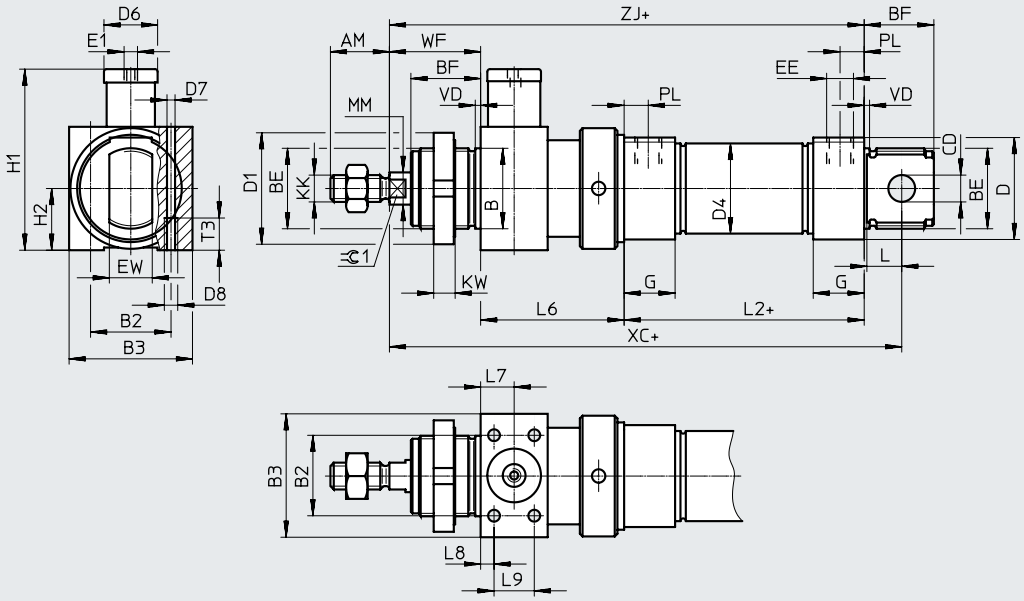
In combination with variant K8 and Q, the piston rod extension is on the right, square piston rod only.

ø [mm]	ZJ	ZM
8	91	107
10		
12	110	132
16	116	138
20	139	163
25	145.5	173.5

Datasheet

Dimensions Download CAD data ➔ www.festo.com

DSNU-32 ... 63



\+ = plus stroke length

ø [mm]	AM	B ø h9	B2	B3	BE	BF	CD ø H9	D ø	D1 ø	D4 ø	D6 ø	D7 ø
32	22	30	30	46	M30x1.5	26	10	41	42	33.6	20	4.4
40	24	38	36	56	M38x1.5	30	12	49	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	

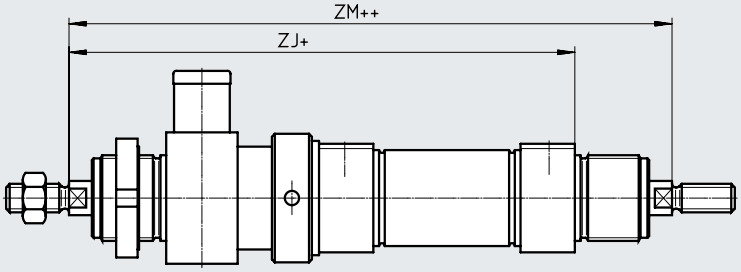
ø [mm]	D8	E1	EE	EW	G	H1	H2	KK	KW	MM ø f8	L	L2
32	M5	M5	G1/8	16	19	67.5	23	M10x1.25	8	12	13	69.5
40	M8	G1/8	G1/4	18	25	89	28	M12x1.25	10	16	15	84.6
50	M10	G1/8		21		107.5	32.5	M16x1.5		20	16	86.2
63		G1/8	G3/8		28	121.5	36					94.2

ø [mm]	L6 ±0.75	L7	L8	L9	T3	PL	VD	WF	XC ±1	ZJ	⫷1
32	55	12.5	5	15	12	9	2	34	172.5	158.5	10
40	69	17	7	20	18	12	3	39	208.6	192.6	13
50	78	20		26	20			44	225.2	208.2	17
63	86	24	8	32	21	13		45	242.2	225.2	

Datasheet

Dimensions Download CAD data ➔ www.festo.com

DSNU-32 ... 63
S2 – Through piston rod



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

Note

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

In combination with variant Q (➔ page 46) the right piston rod is square, the left piston rod round. The clamping unit is mounted on the left-hand, round piston rod.

In combination with variant K8 the piston rod extension is on the right piston rod only. The clamping unit is mounted on the left piston rod that is not extended.

In combination with variant K8 and Q, the piston rod extension is on the right, square piston rod only.

ø [mm]	ZJ	ZM
32	158.5	192.5
40	192.6	231.6
50	208.2	252.2
63	225.2	270.2

Ordering data – Modular product system

Ordering table

Size	8	10	12	16	20	25	Conditions	Code	Enter code
Module no.	**193986**	**193987**	**193988**	**193989**	**193990**	**193991**			
Function	Round cylinder, double-acting, based on ISO 6432							**DSNU**	DSNU
Piston ø [mm]	8	10	12	16	20	25		**-...**	
Stroke [mm]	1 ... 100		1 ... 200		1 ... 320	1 ... 500	[1]	**-...**	
Cushioning	Elastic cushioning rings/pads at both ends							**-P**	
	–	–	Pneumatic cushioning, adjustable at both ends				[2]	**-PPV**	
	–	–	–	Pneumatic cushioning, self-adjusting at both ends			[3]	**-PPS**	
Position sensing	Via proximity switch						[4]	**-A**	-A
Cylinder cap	Lateral supply port, short end cap						[5]	**-MQ**	
	Axial supply port, short end cap						[5]	**-MA**	
Piston rod	Through piston rod							**-S2**	

[1] -... Longer strokes on request
[2] PPV Not with MA
[3] PPS Not with MA, MH and not with combination MQ-R3
[4] A Minimum stroke ≥ 10 mm required for reliable sensing
[5] MQ, MA Not with S2

Note

Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.
Longer strokes on request

Ordering data – Modular product system

Ordering table

Size		8	10	12	16	20	25	Conditions	Code		Enter code
Extended male thread		Extended male piston rod thread									
	[mm]	1 ... 15		1 ... 20		1 ... 25	1 ... 35	[6]	**-...K2**		
Shortened male thread		Shortened male piston rod thread									
	[mm]	1 ... 4				1 ... 8	1 ... 10	[7]	**-...K6**		
Female thread		Piston rod with female thread									
		–	–	–	–	(M4)	(M6)	[8]	**-K3**		
Custom thread		Custom thread on the piston rod									
		–	–	–	–	–	M10		**-"...”K5**		
Extended piston rod at one end		Piston rod extended at one end									
	[mm]	1 ... 50		1 ... 100		1 ... 110	1 ... 150		**...K8**		
Clamping unit		Attached							**-KP**		-KP

[6] K2 Not with K3, K6
[7] K6 Not with K3
[8] K3 Not with K5

Ordering data – Modular product system

Ordering table

Size		32	40	50	63	Conditions	Code		Enter code
Module no.		**193992**	**193993**	**193994**	**193995**				
Function		Double-acting round cylinder					**DSNU**		DSNU
Piston ø	[mm]	32	40	50	63		**-...**		
Stroke	[mm]	1 ... 500				[1]	**-...**		
Cushioning		Elastic cushioning rings/pads at both ends					**-P**		
		Pneumatic cushioning, adjustable at both ends				[2]	**-PPV**		
		Pneumatic cushioning, self-adjusting at both ends				[3]	**-PPS**		
Position sensing		Via proximity switch				[4]	**-A**		-A
Cylinder cap		Lateral supply port, short end cap				[5]	**-MQ**		
		Axial supply port, short end cap				[5]	**-MA**		
Piston rod		Through piston rod					**-S2**		

[1] -... Longer strokes on request
[2] PPV Not with MA
[3] PPS Not with MA, MH and not with combination MQ-R3
[4] A Minimum stroke ≥ 10 mm required for reliable sensing
[5] MQ, MA Not with S2

Note

Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.
Longer strokes on request

Ordering data – Modular product system

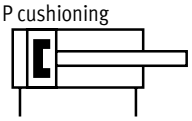
Ordering table

Size		32	40	50	63	Conditions	Code		Enter code
Extended male thread		Extended male piston rod thread							
	[mm]	1 ... 35		1 ... 70		[6]	**-...K2**		
Shortened male thread		Shortened male piston rod thread							
	[mm]	1 ... 8		1 ... 10		[7]	**-...K6**		
Female thread		Piston rod with female thread							
		(M6)	(M8)	(M10)		[8]	**-K3**		
Custom thread		Custom thread on the piston rod							
		M10	M12	M16			**-"..."K5**		
Extended piston rod at one end		Piston rod extended at one end							
	[mm]	1 ... 500					**...K8**		
Clamping unit		Attached					**-KP**		-KP

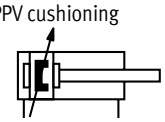
[6] K2 Not with K3, K6
[7] K6 Not with K3
[8] K3 Not with K5

Datasheet

P cushioning



PPV cushioning



- Ø - Diameter
  12 ... 25 mm
  ISO 6432

- Ø - Diameter
  32 ... 63 mm

- | - Stroke length
  1 ... 500 mm

General technical data

Piston ø		12	16	20	25	32	40	50	63
Based on standard		ISO 6432				–			
Pneumatic connection		M5	M5	G1/8	G1/8	G1/8	G1/4	G1/4	G3/8
Piston rod thread		M6	M6	M8	M10x1.25	M10x1.25	M12x1.25	M16x1.5	M16x1.5
Stroke[1]	[mm]	1 ... 160		1 ... 200	1 ... 250	1 ... 300	1 ... 400		1 ... 500
Design		Piston							
		Protected against rotation with square piston rod							
Max. torque at the piston rod	[Nm]	0.10	0.10	0.20	0.45	0.8	1.1	1.5	1.5
Cushioning									
DSNU-...-P		Elastic cushioning rings/ pads at both ends	–			Elastic cushioning rings/pads at both ends			
DSNU-...-PPV		–	Pneumatic cushioning, adjustable at both ends						
Cushioning length (PPV)	[mm]	–	12	15	17	14	18	20	21
Position sensing		Via proximity switch							
Type of mounting		With accessories							
Mounting position		Any							

1) Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.
Longer strokes on request

Operating and environmental conditions

		12	16	20	25	32	40	50	63
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]							
Note on the operating/ pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)							
Operating pressure									
DSNU-...	[MPa]	0.15 ... 1[1]	0.1 ... 1						
	[bar]	1.5 ... 10[1]	1 ... 10						
DSNU-Q-...-S6	[MPa]	–				0.1 ... 0.8			
	[bar]	–				1 ... 8			
Ambient temperature[2]									
DSNU-...	[°C]	–20 ... +80							
DSNU-Q-...-S6	[°C]	–				0 ... +120			
Corrosion resistance class CRC[3]									
DSNU-...		2							
DSNU-Q-...-R3		3							

1) For DSNU-12-... -Q- PPV (pneumatic cushioning adjustable at both ends): 0.2 ... 1 MPa (2 ... 10 bar)
2) Note operating range of proximity switches
3) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.
Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

Datasheet

ATEX[1]	
ATEX category for gas	II 2G
Type of ignition protection for gas	c T4
ATEX category for dust	II 2D
Type of ignition protection for dust	c 120°C
Explosion-proof ambient temperature	–20°C <= Ta <= +60°C
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)
UKCA marking (see declaration of conformity)	To UK EX instructions
Explosion protection certification outside the EU	EPL Db (GB)
	EPL Gb (GB)

1) Note the ATEX certification of the accessories.

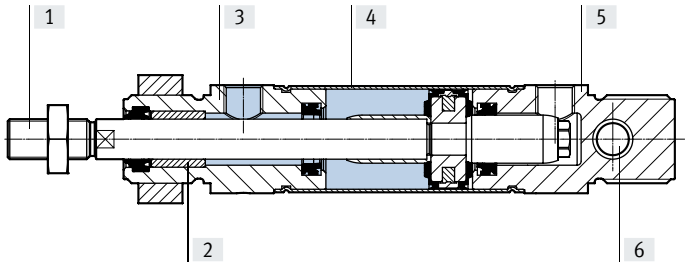
Forces [N] and impact energy [J]								
Piston ø	12	16	20	25	32	40	50	63
Theoretical force at 0.6 MPa (6 bar), advancing	68	121	189	295	483	753	1178	1870
Theoretical force at 0.6 MPa (6 bar), retracting	51	104	158	247	415	633	990	1682
Impact energy in the end positions for P cushioning[1]	0.07	0.15	0.20	0.30	0.40	0.70	1	1.3

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

Weights [g]								
Piston ø	12	16	20	25	32	40	50	63
Product weight with 0 mm stroke	80	110	215	275	370.5	661	1087	1445
Additional weight per 10 mm stroke	4.1	4.7	7.1	10.9	15.5	24	40	44
Moving mass with 0 mm stroke	18.5	23	44	71	121	230	413	459
Moving mass per 10 mm stroke	2	2	4	6	9	16	25	25

Materials

Sectional view

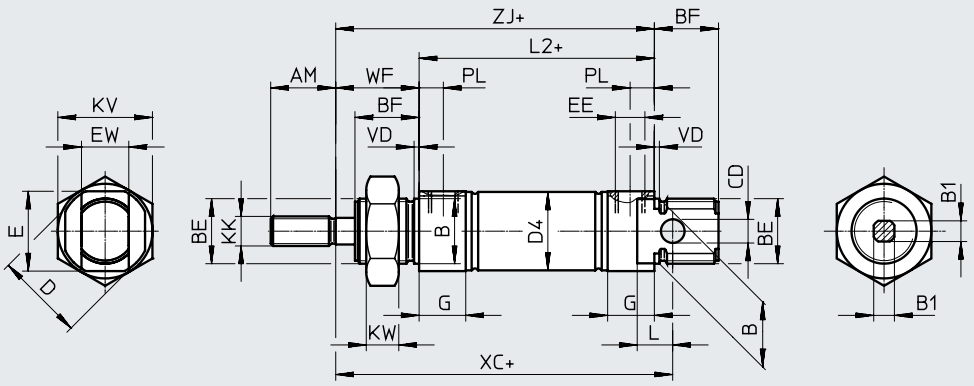


Round cylinder		
[1]	Piston rod	
	DSNU-...	High-alloy steel
	DSNU-...-R3	High-alloy stainless steel
[2]	Piston rod bearing	Sintered bronze
[3]	Bearing cap	Anodised aluminium
[4]	Cylinder barrel	High-alloy stainless steel
[5]	End cap	Anodised aluminium
[6]	Swivel bearing	Polymer
–	Piston rod wiper seal	TPE-U(PU)
	PWIS conformity	VDMA24364-B1/B2-L
	Cleanroom class	Class 6 according to ISO 14644-1
	Note on materials	RoHS-compliant

Datasheet

Dimensions Download CAD data ➔ www.festo.com

DSNU-12 ... 25



- **Note**

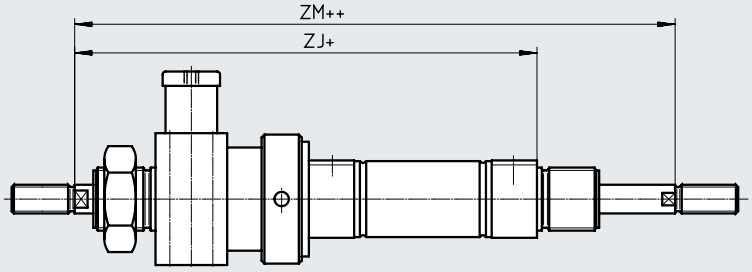
Piston rod nut is not included in the scope of delivery for diameter 12 ... 20.

\+ = plus stroke length

ø [mm]	AM	B ø h8	B1	BE	BF	CD ø H9	D ø	D4 ø	E	EE	EW
12	16	16	5.5	M16x1.5	17	6	20	13.3	18	M5	12
16								17.3			
20	20	22	7	M22x1.5	20	8	30	21.3	26	G1/8	16
25	22		9		22			26.5	27		

ø [mm]	G	KK	KV	KW	L	L2	PL	VD	WF ±1.2	XC ±1	ZJ
12	10	M6	24	8	9	50	6	2	22	75	72
16						56				82	78
20	16	M8	32	11	12	68	8.2		24	95	92
25		M10x1.25				69.5			28	104	97.5

S2 – Through piston rod



- **Note**

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

\+ = plus stroke length

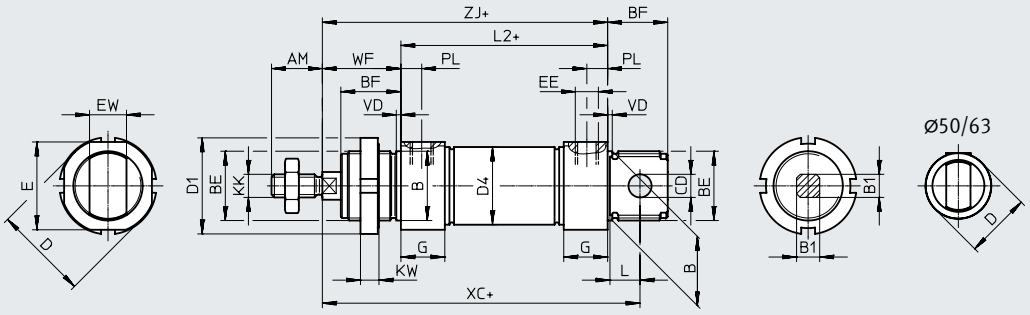
++ = plus 2x stroke length

ø [mm]	ZJ	ZM
12	110	132
16	116	138
20	139	163
25	145.5	173.5

Datasheet

Dimensions Download CAD data ➔ www.festo.com

DSNU-32 ... 63

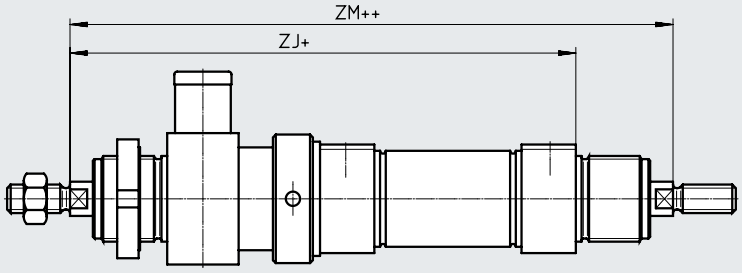


\+ = plus stroke length

ø [mm]	AM	B ø h8	B1	BE	BF	CD ø H9	D ø	D1 ø	D4 ø	E	EE	EW
32	22	30	10	M30x1.5	26	10	41	42	33.6	38	G1/8	16
40	24	38	12	M38x1.5	30	12	49	50	41.6	45	G1/4	18
50	32	45	16	M45x1.5	33	16	57	60	52.4	–	G1/4	21
63	32	45	16	M45x1.5	33	16	70	60	65.4	–	G3/8	21

ø **[mm]**	G	KK	KW	L	L2	PL	VD	WF ±1.2	XC ±1	ZJ
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

S2 – Through piston rod



Note

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

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

ø [mm]	ZJ	ZM
32	158.5	192.5
40	192.6	231.6
50	208.2	252.2
63	225.2	270.2

Ordering data – Modular product system

Ordering table

Size		12	16	20	25	Conditions	Code		Enter code
Module no.		**193988**	**193989**	**193990**	**193991**				
Function		Round cylinder, double-acting, based on ISO 6432					**DSNU**		DSNU
Piston ø	[mm]	12	16	20	25		★ **-...**		
Stroke	[mm]	1 ... 160		1 ... 200	1 ... 250	[1]	★ **-...**		
Cushioning		Elastic cushioning rings/pads at both ends	–	–	–		★ **-P**		
		–	Pneumatic cushioning, adjustable at both ends			[2]	★ **-PPV**		
Position sensing		Via proximity switch				[3]	★ **-A**		-A
Cylinder cap		Lateral supply port, short end cap				[4]	★ **-MQ**		
		Axial supply port, short end cap	–	–	–	[4]	**-MA**		
		–	With mounting flange at front (direct mounting), bearing cap			[5]	**-MH**		
Protection against rotation		Square piston rod					★ **-Q**		-Q
Piston rod		Through piston rod					★ **-S2**		

[1] -... Longer strokes on request
[2] PPV Not with MA
[3] A Minimum stroke ≥ 10 mm required for reliable sensing
[4] MQ, MA Not with S2
[5] MH Not with combination Q-R3

Note

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

Note

Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.
Longer strokes on request

Ordering data – Modular product system

Ordering table

Size		12	16	20	25	Conditions	Code	Enter code
Extended male thread		Extended male piston rod thread						
	[mm]	1 ... 20		1 ... 25	1 ... 35	[6]	**-...K2**	
Shortened male thread		Shortened male piston rod thread						
	[mm]	1 ... 4		1 ... 8	1 ... 10	[7]	**-...K6**	
Female thread		Piston rod with female thread						
		–	–	(M4)	(M6)	[8]	★ **-K3**	
Custom thread		Custom thread on the piston rod						
		–	–	–	M10		**-"..."K5**	
Extended piston rod at one end		Piston rod extended at one end						
	[mm]	1 ... 100		1 ... 110	1 ... 150		★ **...K8**	
Clamping unit		Attached				[9]	**-KP**	
Corrosion protection		–	High corrosion protection				★ **-R3**	
EU certification		II 2GD				[10]	**-EX4**	

[6] K2 Not with K3, K6
[7] K6 Not with K3
[8] K3 Not with K5
[9] KP Only with S2. Not with R3
[10] EX4 Not with KP

Ordering data – Modular product system

Ordering table

Size		32	40	50	63	Conditions	Code	Enter code
Module no.		**193992**	**193993**	**193994**	**193995**			
Function		Double-acting round cylinder					**DSNU**	DSNU
Piston ø	[mm]	32	40	50	63		★ **-...**	
Stroke	[mm]	1 ... 300	1 ... 400		1 ... 500	[1]	★ **-...**	
Cushioning		Elastic cushioning rings/pads at both ends					★ **-P**	
		Pneumatic cushioning, adjustable at both ends				[2]	★ **-PPV**	
Position sensing		Via proximity switch				[3]	★ **-A**	-A
Cylinder cap		Lateral supply port, short end cap				[4]	★ **-MQ**	
		Axial supply port, short end cap				[4]	**-MA**	
		Mounting flange at front (direct mounting), bearing cap				[5]	**-MH**	
Protection against rotation		Square piston rod					★ **-Q**	-Q
Piston rod		Through piston rod					★ **-S2**	

[1] -... Longer strokes on request
[2] PPV Not with MA
[3] A Minimum stroke ≥ 10 mm required for reliable sensing
[4] MQ, MA Not with S2
[5] MH Not with combinations: Q-R3, S6-R3. Not with KP

Note

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

Note

Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.
Longer strokes on request

Ordering data – Modular product system

Ordering table

Size		32	40	50	63	Conditions	Code	Enter code
Extended male thread		Extended male piston rod thread						
	[mm]	1 ... 35		1 ... 70		[6]	**-...K2**	
Shortened male thread		Shortened male piston rod thread						
	[mm]	1 ... 8		1 ... 10		[7]	**-...K6**	
Female thread		Piston rod with female thread						
		(M6)	(M8)	(M10)		[8]	★ **-K3**	
Custom thread		Custom thread on the piston rod						
		M10	M12	M16			**-"..."K5**	
Extended piston rod at one end		Piston rod extended at one end						
	[mm]	1 ... 500					★ **...K8**	
Clamping unit		Attached				[9]	**-KP**	
Temperature resistance		Heat-resistant seals max. 120°C					★ **-S6**	
Corrosion protection		High corrosion protection					★ **-R3**	
EU certification		II 2GD				[10]	**-EX4**	

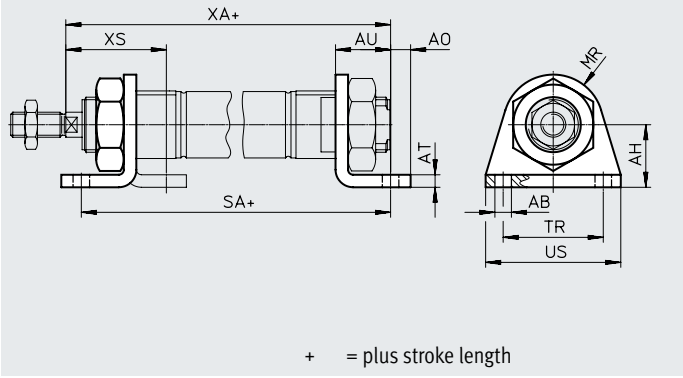
[6] K2 Not with K3, K6
[7] K6 Not with K
[8] K3 Not with K5
[9] KP Only with S2. Not with S6, R3
[10] EX4 Not with KP, S6

Accessories

Foot mounting HBN/CRHBN

Scope of delivery:
HBN/CRHBN-...x1: 1 foot
HBN/CRHBN-...x2: 2 feet and 1 nut

Material:
HBN: Galvanised steel
CRHBN: High-alloy stainless steel
RoHS-compliant



\+ = plus stroke length

Dimensions and ordering data

For ø [mm]	AB ø	AH	AO	AT	AU	R1	SA	SA DSNU-KP	TR	US	XA	XA DSNU-KP	XS	XS DSNU-KP
8, 10	4.5	16	5	3	11	10	68	97	25	35	73	102	24	–
12	5.5	20	6	4	14	13	78	116	32	42	86	124	32	–
16	5.5	20	6	4	14	13	84	122	32	42	92	130	32	–
20	6.6	25	8	5	17	20	102	149	40	54	109	156	36	–
25	6.6	25	8	5	17	20	103.5	151.5	40	54	114.5	162.5	40	–

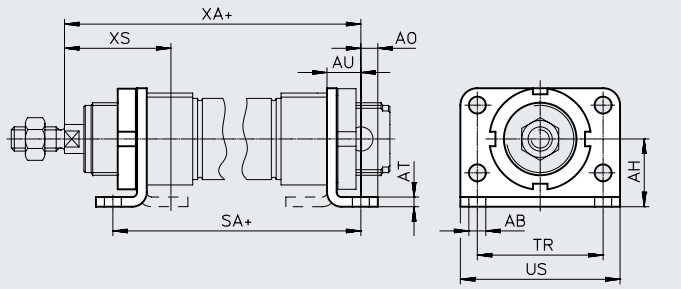
For ø [mm]	Basic version CRC[1]	Weight [g]	Part no.	Type	High corrosion protection CRC[1]	Weight [g]	Part no.	Type
8, 10	1	22	**5123**	**HBN-8/10x1**	–	–	**–**	
	1	54	**5124**	**HBN-8/10x2**	–	–	**–**	
12, 16	1	43	★ **5125**	**HBN-12/16x1**	4	43	**161866**	**CRHBN-12/16x1**
	1	107	★ **5126**	**HBN-12/16x2**	4	107	**162999**	**CRHBN-12/16x2**
20, 25	1	95	★ **5127**	**HBN-20/25x1**	4	94	**161867**	**CRHBN-20/25x1**
	1	237	★ **5128**	**HBN-20/25x2**	4	236	**162998**	**CRHBN-20/25x2**

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or 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, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Accessories

Foot mounting HBN/CRH

Material:
HBN: Galvanised steel
CRH: High-alloy stainless steel
RoHS-compliant



Dimensions and ordering data

For Ø	AB Ø	AH	AO	AT	AU	SA		TR	US	XA		XS	
[mm]							DSNU-KP				DSNU-KP		DSNU-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	143.6	206.1	54	–
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	–

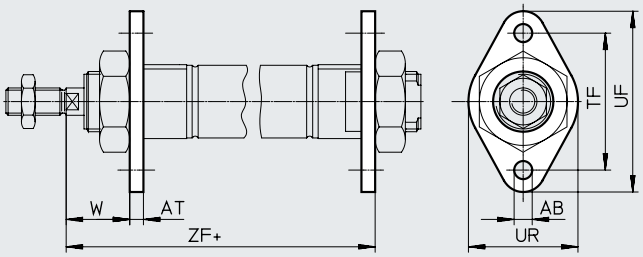
For Ø	Basic version				High corrosion protection			
[mm]	CRC[1)]	Weight [g]	Part no.	Type	CRC[1)]	Weight [g]	Part no.	Type
32	1	353	**195851**	**HBN-32x2**	4	353	**162951**	**CRH-32**
40	1	611	**195852**	**HBN-40x2**	4	611	**162952**	**CRH-40**
50	1	916	**195853**	**HBN-50x2**	4	916	**162953**	**CRH-50**
63	1	1066	**195854**	**HBN-63x2**	4	1066	**162954**	**CRH-63**

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or 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, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (➔ also FN 940082), using appropriate media.

Accessories

Flange mounting FBN/CRFBN

Material:
FBN: Galvanised steel
CRFBN: High-alloy stainless steel



\+ = plus stroke length

Dimensions and ordering data

For ø [mm]	AB ø	AT	TF	UF	UR	W	ZF	
								DSNU-KP
8, 10	4.5	3	30	40	25	13	65	94
12	5.5	4	40	53	30	18	76	114
16	5.5	4	40	53	30	18	82	120
20	6.6	5	50	66	40	19	97	144
25	6.6	5	50	66	40	23	102.5	150.5

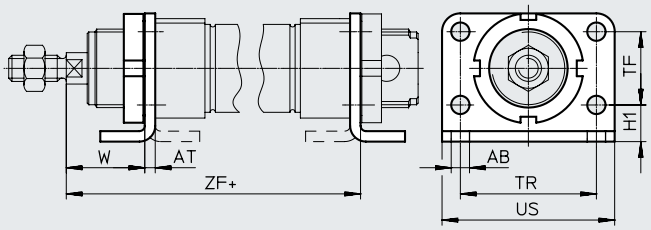
For ø	Basic version				High corrosion protection			
[mm]	CRC[1)]	Weight [g]	Part no.	Type	CRC[1)]	Weight [g]	Part no.	Type
8, 10	1	12	**5129**	**FBN-8/10**	–	–	**–**	**–**
12, 16	1	26	**5130**	**FBN-12/16**	4	26	**161864**	**CRFBN-12/16**
20, 25	1	52	**5131**	**FBN-20/25**	4	52	**161865**	**CRFBN-20/25**

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or 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, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Accessories

Flange mounting FBN/CRFV

Material:
FBN: Galvanised steel
CRFV: High-alloy stainless steel
RoHS-compliant



\+ = plus stroke length

Dimensions and ordering data

For Ø [mm]	AB Ø	AT	H1	TF	TR	US	W ±1.2	ZF	
									DSNU-KP
32	7	4	14	28	52	66	30	107.5	161
40	9	5	18	30	60	80	29	128.6	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

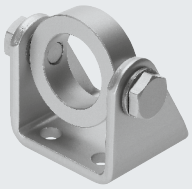
For Ø	Basic version				High corrosion protection			
[mm]	CRC[1)]	Weight [g]	Part no.	Type	CRC[1)]	Weight [g]	Part no.	Type
32	1	103	**195855**	**FBN-32**	4	103	**161858**	**CRFV-32**
40	1	191	**195856**	**FBN-40**	4	191	**161859**	**CRFV-40**
50	1	292	**195857**	**FBN-50**	4	292	**161860**	**CRFV-50**
63	1	367	**195858**	**FBN-63**	4	367	**161861**	**CRFV-63**

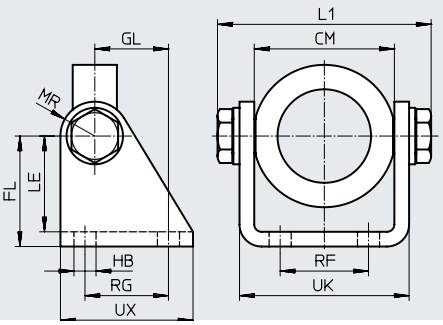
1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).
Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (➔ also FN 940082), using appropriate media.

Accessories

Swivel mounting SBN

Material:
Retaining ring: Anodised wrought aluminium alloy
Bearing: Bronze
Screws: Galvanised steel
Bracket: Steel
Cannot be used on the bearing cap in combination with bellows kit DADB.





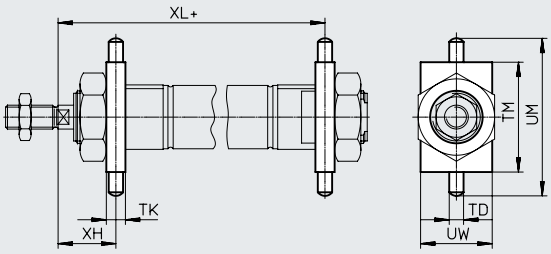
Dimensions and ordering data

For ø [mm]	CM	FL	GL	HB	L1 max.	LE	MR	RF	RG	UK	UX	CRC[1]	Weight [g]	Part no.	Type
20/25	38.1+0.4	35	20	7	60.2	31	12	20	24	46.1	40	1	238	**539927**	**SBN-20/25**
32	46.1+0.2	40	27	9	72.2	35	13	28	30	56.1	50	1	361	**539924**	**SBN-32**
40	57.1+0.2	45	30	9	88.2	39	14	36	34	69.1	54	1	593	**539925**	**SBN-40**
50/63	70.1+0.4	50	34	9	102.2	44	16	42	35	82.1	65	1	894	**539926**	**SBN-50/63**

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).

Swivel mounting WBN

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



Dimensions and ordering data

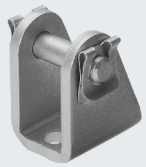
For ø [mm]	TD ø –0.01/ –0.05	TK	TM	UM	UW	XH	XL		CRC[1]	Weight [g]	Part no.	Type
								DSNU-KP				
8, 10	4	6	26	38	20	13	65	94	1	20	**8608**	**WBN-8/10**
12	6	8	38	58	25	18	76	114	1	51	**8609**	**WBN-12/16**
16	6	8	38	58	25	18	82	120	1	51	**8609**	**WBN-12/16**
20	6	8	46	66	30	20	96	143	1	67	**8610**	**WBN-20/25**
25	6	8	46	66	30	24	101.5	149.5	1	67	**8610**	**WBN-20/25**
32	8	12	50	76	40	28	109.5	163	1	131	**195863**	**WBN-32**
40	10	15	60	92	50	31.5	126.1	193.6	1	238	**195864**	**WBN-40**
50	12	20	80	116	65	34	140.2	216.7	1	596	**195865**	**WBN-50/63**
63	12	20	80	116	65	35	149.2	233.7	1	596	**195865**	**WBN-50/63**

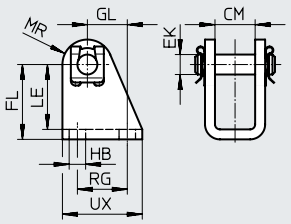
1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).

Accessories

Clevis foot LBN/CRLBN

Material:
LBN: galvanised steel
CRLBN: High-alloy stainless steel
RoHS-compliant





Dimensions and ordering data

For ø [mm]	CM	EK ø	FL	GL	HB	LE	MR	RG	UX
8, 10	8.1	4	24 +0.3/–0.2	13.8	4.5	21.5	5	12.5	20
12, 16	12.1	6	27 +0.3/–0.2	13	5.5	24	7	15	25
20, 25	16.1	8	30 +0.4/–0.2	16	6.6	26	10	20	32
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

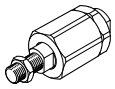
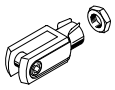
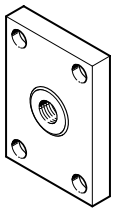
For ø	Basic version				High corrosion protection			
[mm]	CRC[1)]	Weight [g]	Part no.	Type	CRC[1)]	Weight [g]	Part no.	Type
8, 10	1	20	**6057**	**LBN-8/10**	–	–	**–**	
12, 16	1	40	★ **6058**	**LBN-12/16**	4	39	**161862**	**CRLBN-12/16**
20, 25	1	84	★ **6059**	**LBN-20/25**	4	82	**161863**	**CRLBN-20/25**
32	1	110	**195860**	**LBN-32**	4	106	**195866**	**CRLBN-32**
40	1	191	**195861**	**LBN-40**	4	185	**195867**	**CRLBN-40**
50, 63	1	300	**195862**	**LBN-50/63**	4	283	**195868**	**CRLBN-50/63**

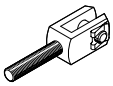
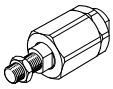
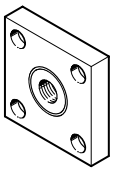
1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).
Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Accessories

Ordering data – Piston rod attachments

Datasheets → Internet: piston rod attachment

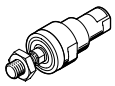
Designation	For ⌀	Part no.	Type
Rod eye SGS			
	8	9253	SGS-M4
	10		
	12	★ 9254	SGS-M6
	16		
	20	★ 9255	SGS-M8
	25	★ 9261	SGS-M10x1.25
	32		
	40	★ 9262	SGS-M12x1.25
	50	★ 9263	SGS-M16x1.5
	63		
Self-aligning rod coupler FK			
	8	6528	FK-M4
	10		
	12	★ 2061	FK-M6
	16		
	20	★ 2062	FK-M8
	25	★ 6140	FK-M10x1.25
	32		
	40	★ 6141	FK-M12x1.25
	50	★ 6142	FK-M16x1.5
	63		
Rod clevis SG			
	8	6532	SG-M4
	10		
	12	★ 3110	SG-M6
	16		
	20	★ 3111	SG-M8
	25	★ 6144	SG-M10x1.25
	32		
	40	★ 6145	SG-M12x1.25
	50	★ 6146	SG-M16x1.5
	63		
Coupling piece KSZ			
	12	36123	KSZ-M6
	16		
	20	36124	KSZ-M8
	25	36125	KSZ-M10x1.25
	32		
	40	36126	KSZ-M12x1.25
	50	36127	KSZ-M16x1.5
	63		

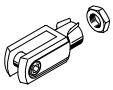
Designation	For ⌀	Part no.	Type
Rod clevis SGA			
	8	–	
	10		
	12		
	16		
	20		
	25		
	32	32954	SGA-M10x1.25
	40	10767	SGA-M12x1.25
	50	10768	SGA-M16x1.5
	63		
Self-aligning rod coupler DARP			
	8	8170110	DARP-M4-F
	10		
	12	8170115	DARP-M6-F
	16		
	20	8170116	DARP-M8-F
	25	8170119	DARP-M10P-F
	32		
	40	8170120	DARP-M12P-F
	50	8170121	DARP-M16P-F
	63		
Coupling piece KSG			
	8	–	
	10		
	12		
	16		
	20		
	25	32963	KSG-M10x1.25
	32		
	40	32964	KSG-M12x1.25
	50	32965	KSG-M16x1.5
	63		
Hex nut MSK			
	16	189007	MSK-M16x1.5
	20	★ 189009	MSK-M22x1.5
	25		

Accessories

Ordering data – Piston rod attachments, corrosion-resistant

Datasheets → Internet: piston rod attachment

Designation	For Ø	Part no.	Type
Rod eye CRSGS			
	12	**195580**	**CRSGS-M6**
	16		
	20	**195581**	**CRSGS-M8**
	25	**195582**	**CRSGS-M10x1.25**
	32		
	40	**195583**	**CRSGS-M12x1.25**
	50	**195584**	**CRSGS-M16x1.5**
	63		
Self-aligning rod coupler CRFK			
	25	**2305778**	**CRFK-M10x1.25**
	32		
	40	**2305779**	**CRFK-M12x1.25**
	50	**2490673**	**CRFK-M16x1.5**
	63		

Designation	For Ø	Part no.	Type
Rod clevis CRSG			
	8	**8165295**	**CRSG-M4**
	12	**13567**	**CRSG-M6**
	16		
	20	**13568**	**CRSG-M8**
	25	**13569**	**CRSG-M10x1.25**
	32		
	40	**13570**	**CRSG-M12x1.25**
	50	**13571**	**CRSG-M16x1.5**
	63		

Ordering data – Mounting components

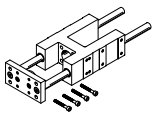
Datasheets → Internet: clevis foot

Designation	For Ø	Part no.	Type
Clevis foot LBG			
	32	**31761**	**LBG-32**
	40	**31762**	**LBG-40**
	50	**31763**	**LBG-50**
	63	**31764**	**LBG-63**

Designation	For Ø	Part no.	Type
Right angle clevis foot LQG			
	32	**31768**	**LQG-32**
	40	**31769**	**LQG-40**
	50	**31770**	**LQG-50**
	63	**31771**	**LQG-63**

Ordering data – Guide units

Datasheets → Internet: feng

	For Ø	Stroke [mm]	With recirculating ball bearing guide		With plain-bearing guide	
			Part no.	Type	Part no.	Type
	8, 10	1 ... 100	**35197**	**FEN-8/10-...-KF**	**35196**	**FEN-8/10-...-GF**
	12, 16	1 ... 200	**33481**	**FEN-12/16-...-KF**	**19168**	**FEN-12/16-...-GF**
	20	2 ... 250	**33482**	**FEN-20-...-KF**	**19169**	**FEN-20-...-GF**
	25	2 ... 250	**33483**	**FEN-25-...-KF**	**19170**	**FEN-25-...-GF**

Accessories

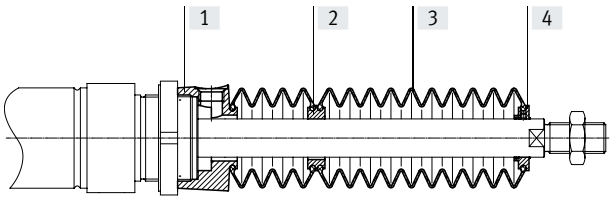
Bellows kit DADB

General technical data									
Type DADB-S1-		12	16	20	25	32	40	50	63
Max. stroke range of the cylinder[1]									
DSNU	[mm]	10 ... 200	10 ... 200	10 ... 320	10 ... 500				
Type of mounting		Via threaded pin							
Mounting position		Any							
Media resistance		Dust, chippings, oil, grease, fuel (➔ Internet: media resistance)							
Ambient temperature[2]	[°C]	–10 ... +80							
Corrosion resistance class CRC[3]		3							

1) In conjunction with the bellows kit DADB
2) Note operating range of proximity switches and cylinder
3) Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

Materials

Sectional view



Bellows		
[1]	Connection	Polyamide
[2]	Adapter	Polyamide
[3]	Bellows	NBR
[4]	End piece	Polyamide
–	O-ring	NBR
	Note on materials	RoHS-compliant
	Suitable for the production of lithium-ion batteries	Metals with more than 5% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils

Accessories

Weights [g]				
Type DADB-S1- Stroke [mm]	12	16	20	25
10 ... 50	7	7	20	19
51 ... 100	9	9	32	31
101 ... 150	13	13	45	44
151 ... 200	16	16	58	57
201 ... 250	–	–	73	72
251 ... 300	–	–	85	84
301 ... 350	–	–	100	98
351 ... 400	–	–	–	109
401 ... 450	–	–	–	124
451 ... 500	–	–	–	136

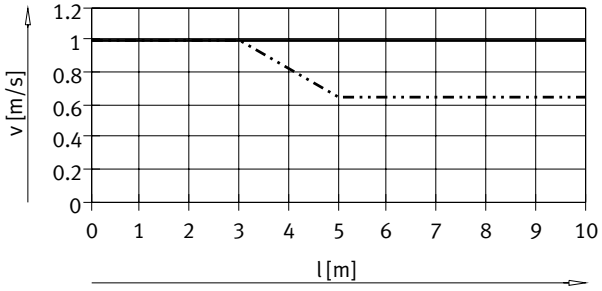
Type DADB-S1- Stroke [mm]	32	40	50 50	63 63
10 ... 50	29	34	55	55
51 ... 125	41	49	75	75
126 ... 175	51	60	89	89
176 ... 250	66	78	113	113
251 ... 300	79	93	131	131
301 ... 350	92	108	149	149
351 ... 375	92	108	151	151
376 ... 425	104	122	169	169
426 ... 475	117	137	187	187
476 ... 500	117	137	189	189

Accessories

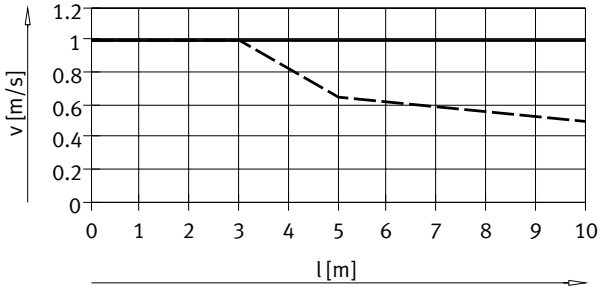
Travel speed v as a function of tubing length l

The bellows kit is a leak-free system.
To prevent unwanted media from being drawn in, the supply and exhaust air must be ducted via a pressure compensation hole in the connection part.
The pressure generated in the bellows kit by the positioning motion is primarily defined by the travel speed and tubing length. The recommended tubing length based on the travel speed of the drive can be read from the graph.

Advancing

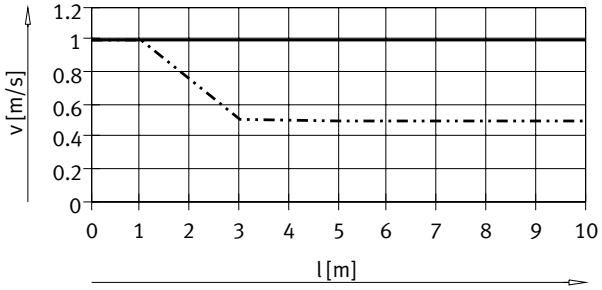


DSNU-12/16
DSNU-20/25

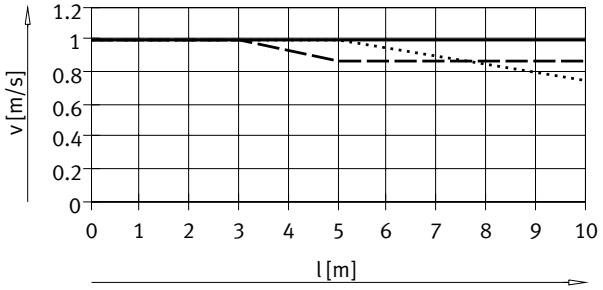


DSNU-32/50/63
DSNU-40

Retracting



DSNU-12/16
DSNU-20/25



DSNU-32
DSNU-40
DSNU-50/63

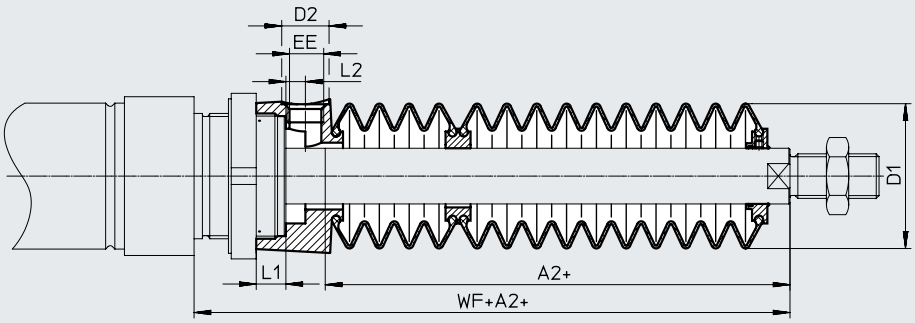
Note
The push-in fittings in the adjacent table must be used for the pressure compensation hole.
Silencers can be used as an alternative. This reduces the travel speed slightly.

Tubing size and push-in fitting for pressure compensation hole

ø [mm]	Tubing O.D. [mm]	Push-in fitting Part no.	Type
12, 16, 20, 25	6	★ 153317	QSM-M5-6-I
		578371	NPQH-DK-M5-Q6-P10
		578335	NPQH-D-M5-Q6-P10
		578359	NPQH-D-M5-S6-P10
32, 40	8	★ 186109	QS-G1/8-8-I
		578376	NPQH-DK-G18-Q8-P10
		578362	NPQH-D-G18-S8-P10
50, 63	12	★ 186350	QS-G1/4-12
		578344	NPQH-D-G14-Q12-P10
		578366	NPQH-D-G14-S12-P10

Accessories

Dimensions Download CAD data ➔ www.festo.com



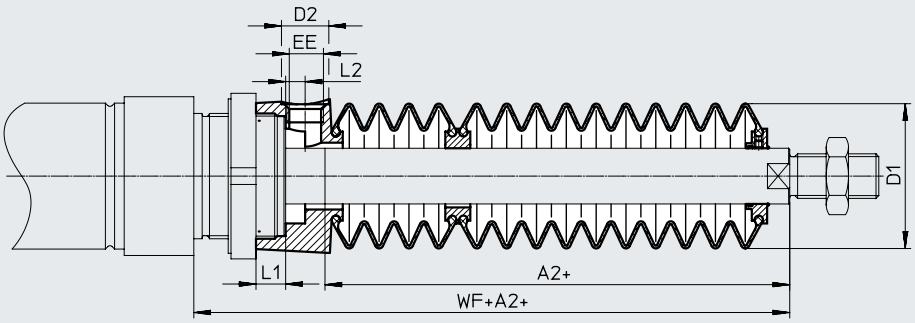
ø	12/16							20						
Stroke [mm]	A2[1]	D1 ø max.	D2 ø	EE	L1	L2	WF+A2	A2[1]	D1 ø max.	D2 ø	EE	L1	L2	WF+A2
10 ... 50	23	22	8.5	M5	5	3.2	45	22	29	8.5	M5	4.2	2.7	46
51 ... 100	34						56	34						58
101 ... 150	48						70	47						71
151 ... 200	59						81	60						84
201 ... 250	–						–	75						99
251 ... 300	–						–	86						110
301 ... 350	–						–	101						125
351 ... 400	–						–	–						–
401 ... 450	–						–	–						–
451 ... 500	–						–	–						–

ø	25						
Stroke [mm]	A2[1]	D1 ø max.	D2 ø	EE	L1	L2	WF+A2
10 ... 50	22	29	8.5	M5	4.2	2.7	50
51 ... 100	34						62
101 ... 150	47						75
151 ... 200	60						88
201 ... 250	75						103
251 ... 300	86						114
301 ... 350	101						129
351 ... 400	112						140
401 ... 450	127						155
451 ... 500	138						166

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

Accessories

Dimensions Download CAD data ➔ www.festo.com



ø	32							40						
Stroke [mm]	A2[1]	D1 ø max.	D2 ø	EE	L1	L2	WF+A2	A2[1]	D1 ø max.	D2 ø	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	50/63						
Stroke [mm]	A2[1]	D1 ø max.	D2 ø	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

Accessories

Ordering data – Bellows kit

An extended piston rod (order code K8) is absolutely essential when using a bellows kit ➔ Ordering data – Modular product system.

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

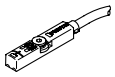
Order example:
Selected round cylinder:
DSNU-25-320-PPV-A-MQ-...
The dimension for the corresponding K8 value (see table): 101 mm
Complete order reference for round cylinder:
DSNU-25-320-PPV-A-MQ-...-101K8
The corresponding bellows kit:
DADB-S1-25-S301-350

Cylinder data			Bellows kit	
ø [mm]	Stroke [mm]	Dimension for K8 [mm]	Part no.	Type
12	10 ... 50	23	**553391**	**DADB-S1-12-S10-50**
	51 ... 100	34	**553393**	**DADB-S1-12-S51-100**
	101 ... 150	48	**553395**	**DADB-S1-12-S101-150**
	151 ... 200	59	**553397**	**DADB-S1-12-S151-200**
16	10 ... 50	23	**553399**	**DADB-S1-16-S10-50**
	51 ... 100	34	**553401**	**DADB-S1-16-S51-100**
	101 ... 150	48	**553403**	**DADB-S1-16-S101-150**
	151 ... 200	59	**553405**	**DADB-S1-16-S151-200**
20	10 ... 50	22	**553407**	**DADB-S1-20-S10-50**
	51 ... 100	34	**553409**	**DADB-S1-20-S51-100**
	101 ... 150	47	**553411**	**DADB-S1-20-S101-150**
	151 ... 200	60	**553413**	**DADB-S1-20-S151-200**
	201 ... 250	75	**553415**	**DADB-S1-20-S201-250**
	251 ... 300	86	**553417**	**DADB-S1-20-S251-300**
	301 ... 320	101	**553419**	**DADB-S1-20-S301-350**
25	10 ... 50	22	**553421**	**DADB-S1-25-S10-50**
	51 ... 100	34	**553423**	**DADB-S1-25-S51-100**
	101 ... 150	47	**553425**	**DADB-S1-25-S101-150**
	151 ... 200	60	**553427**	**DADB-S1-25-S151-200**
	201 ... 250	75	**553429**	**DADB-S1-25-S201-250**
	251 ... 300	86	**553431**	**DADB-S1-25-S251-300**
	301 ... 350	101	**553433**	**DADB-S1-25-S301-350**
	351 ... 400	112	**553435**	**DADB-S1-25-S351-400**
	401 ... 450	127	**553437**	**DADB-S1-25-S401-450**
	451 ... 500	138	**553439**	**DADB-S1-25-S451-500**
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**
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**
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**
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**

Accessories

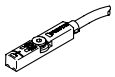
Ordering data – Proximity switch for T-slot, magneto-resistive

Datasheets → Internet: smt

	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
N/O						
	Inserted in the slot from above, flush with the cylinder profile, short design	PNP	Cable, 3-wire	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
			Cable, 2-wire	5	★ 8165237	SMT-8M-A-ZS-24V-E-5,0-OE
			Plug M8x1, 3-pin	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		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

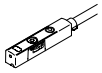
Ordering data – Proximity switch for T-slot, magneto-resistive

Datasheets → Internet: crsmt

	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
N/O						
	Inserted in the slot from above, flush with the cylinder profile	PNP	Cable, 3-wire	5.0	574380	CRSMT-8M-PS-24V-K-5,0-OE
			Cable, 3-wire	10.0	574381	CRSMT-8M-PS-24V-K-10,0-OE
			Plug M8x1, 3-pin	0.3	574383	CRSMT-8M-PS-24V-K-0,3-M8D
			Plug M12x1, 3-pin	0.3	574382	CRSMT-8M-PS-24V-K-0,3-M12

Ordering data – Proximity switch for T-slot, Magnetic Hall

Datasheets → Internet: sdbt

	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
N/O or N/C contact, switchable						
	Inserted in the slot from above, flush with the cylinder profile, short design	PNP, switchable to NPN	Plug M8x1, 3-pin	0.3	★ 8059120	SDBT-MSX-1L-PU-E-0.3-N-M8
			Cable, 3-wire	2.5	★ 8059121	SDBT-MSX-1L-PU-E-2.5-N-LE
		NPN, switchable to NPN	Plug M8x1, 3-pin	0.3	★ 8059123	SDBT-MSX-1L-NU-E-0.3-N-M8
			Cable, 3-wire	2.5	★ 8059124	SDBT-MSX-1L-NU-E-2.5-N-LE

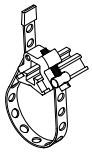
Ordering data – Mounting kits for proximity switch

Datasheets → Internet: smbr

Designation	For Ø	Part no.	Type
Mounting kit SMBR-8			
	8	175091	SMBR-8-8
	10	175092	SMBR-8-10
	12	★ 175093	SMBR-8-12
	16	★ 175094	SMBR-8-16
	20	★ 175095	SMBR-8-20
	25	★ 175096	SMBR-8-25
	32	175097	SMBR-8-32
	40	175098	SMBR-8-40
	50	175099	SMBR-8-50
	63	175100	SMBR-8-63

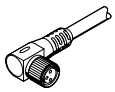
Ordering data – Mounting kits for proximity switch, temperature range S6

Datasheets → Internet: smbr

Designation	For Ø	Part no.	Type
Mounting kit SMBR-8			
	8 ... 63	538937	SMBR-8-8/100-S6

Accessories

Ordering data – Connecting cables Datasheets → Internet: nebu

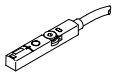
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5	★ 541334	NEBU-M8G3-K-5-LE3
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3
			5	★ 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

Position transmitter

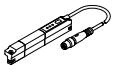
The position transmitter continuously senses the position of the piston.

It has an analogue output with an output signal relative to the piston position.

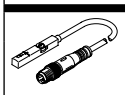
Ordering data – Position transmitter for T-slot Datasheets → Internet: sdas

	Position measuring range	Description	Type of mounting	Electrical connection	Cable length [m]	Part no.	Type
	≤ 52	Choice of two operating modes: • two adjustable switching outputs • IO-Link	Inserted in the slot from above	Plug M8x1, 4-pin, lengthwise	0.3	8063974	SDAS-MHS-M40-1L-PNLK-PN-E-0.3-M8

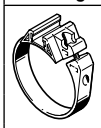
Ordering data – Position transmitter for T-slot Datasheets → Internet: sdat

	Position measuring range	Analogue output [V]	Analogue output [mA]	Type of mounting	Electrical connection	Cable length [m]	Part no.	Type
	0 ... 50	–	4 ... 20	Inserted in the slot from above	Plug M8x1, 4-pin, lengthwise	0.3	1531265	SDAT-MHS-M50-1L-SA-E-0.3-M8
	0 ... 80						1531266	SDAT-MHS-M80-1L-SA-E-0.3-M8
	0 ... 100						1531267	SDAT-MHS-M100-1L-SA-E-0.3-M8
	0 ... 125						1531268	SDAT-MHS-M125-1L-SA-E-0.3-M8
	0 ... 160						1531269	SDAT-MHS-M160-1L-SA-E-0.3-M8

Ordering data – Position transmitter for T-slot Datasheets → Internet: smat

	Position measuring range	Analogue output [V]	Analogue output [mA]	Type of mounting	Electrical connection	Cable length [m]	Part no.	Type
	0 ... 40	0 ... 10	–	Inserted in the slot from above	Plug M8x1, 4-pin, lengthwise	0.3	553744	SMAT-8M-U-E-0,3-M8D

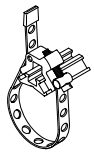
Ordering data – Mounting kits for position transmitter Datasheets → Internet: smbr

Designation	For Ø	Part no.	Type
Mounting kit SMBR-8			
	8	175091	SMBR-8-8
	10	175092	SMBR-8-10
	12	★ 175093	SMBR-8-12
	16	★ 175094	SMBR-8-16
	20	★ 175095	SMBR-8-20
	25	★ 175096	SMBR-8-25
	32	175097	SMBR-8-32
	40	175098	SMBR-8-40
	50	175099	SMBR-8-50
	63	175100	SMBR-8-63

Accessories

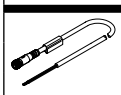
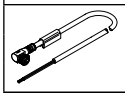
Ordering data – Mounting kits for position transmitter, temperature range S6

Datasheets → Internet: smbr

Designation	For ⌀	Part no.	Type
Mounting kit SMBR-8			
	8 ... 63	**538937**	**SMBR-8-8/100-S6**

Ordering data – Connecting cables

Datasheets → Internet: nebu

	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 4-wire	2.5	**541342**	**NEBU-M8G4-K-2.5-LE4**
			5	**541343**	**NEBU-M8G4-K-5-LE4**
	Angled socket, M8x1, 3-pin	Cable, open end, 4-wire	2.5	**541344**	**NEBU-M8W4-K-2.5-LE4**
			5	**541345**	**NEBU-M8W4-K-5-LE4**

Ordering data – One-way flow control valves

Datasheets → Internet: grl

	Connection Thread	For tubing O.D.	Material	Part no.	Type
For exhaust air					
	M5	3	Metal design	★ **193137**	**GRLA-M5-QS-3-D**
		4		★ **193138**	**GRLA-M5-QS-4-D**
		6		★ **193139**	**GRLA-M5-QS-6-D**
	G1/8	3		★ **193142**	**GRLA-1/8-QS-3-D**
		4		★ **193143**	**GRLA-1/8-QS-4-D**
		6		★ **193144**	**GRLA-1/8-QS-6-D**
		8		★ **193145**	**GRLA-1/8-QS-8-D**
	G1/4	6		★ **193146**	**GRLA-1/4-QS-6-D**
		8		★ **193147**	**GRLA-1/4-QS-8-D**
		10		★ **193148**	**GRLA-1/4-QS-10-D**
	G3/8	6		★ **193149**	**GRLA-3/8-QS-6-D**
		8		★ **193150**	**GRLA-3/8-QS-8-D**
		10		★ **193151**	**GRLA-3/8-QS-10-D**
For supply air					
	M5	3	Metal design	★ **193153**	**GRLZ-M5-QS-3-D**
		4		★ **193154**	**GRLZ-M5-QS-4-D**
		6		★ **193155**	**GRLZ-M5-QS-6-D**
	G1/8	3		★ **193156**	**GRLZ-1/8-QS-3-D**
		4		★ **193157**	**GRLZ-1/8-QS-4-D**
		6		★ **193158**	**GRLZ-1/8-QS-6-D**
		8		★ **193159**	**GRLZ-1/8-QS-8-D**