Clamping-unit cylinders, standard port pattern

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Clamping-unit cylinders, standard port pattern

Key features

At a glance

Clamping units are generally used for the friction locking of longitudinally variable rods at any position. The attachment of a clamping unit to a pneumatic cylinder allows the piston rod to be clamped. This clamping unit is designed to lock the piston rod securely so that the application of external force on the piston rod does not produce any relative motion. The locking of the piston rod can take place at any position in the stroke, in the end positions as well as the intermediate positions.

- Clamping force is released when compressed air is fed to the clamping unit
- Static holding force of up to 8000 N
- The cylinders comply with ISO 15552, (DIN ISO 6431), except where length is concerned.

Selection aid

Clamping-unit cylinder DNCKE 6

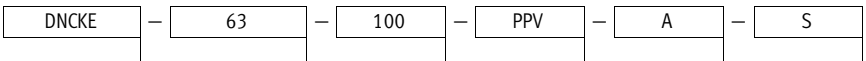
- **For use as holding device (static application):**
  - Holding and clamping in the event of a power failure
  - Protection against pressure failure and pressure drop
  - Securing of the piston rod during intermediate stops for process operations
- Wide selection of mounting options

Cylinder with clamping unit DNCKE-S, for safety-related applications 9

- **Pneumatic braking/holding device for use in safety-related parts of control systems.**
  The clamping unit is not a complete safety solution. It can be used as part of a solution.
- Certified by the Institute for Occupational Safety and Health of the German Social Accident Insurance. Testing and Certification Bodies in DGUV Test. Pneumatic braking/holding device with safety function.
- **Use as a holding device (static application):**
  - Holding and clamping in the event of power failure
  - Protection against pressure failure and pressure drop
  - Holding the piston rod during intermediate stops, for operative procedures in a process
- **For use as a braking device (dynamic application):**
  - Braking or stopping a movement
  - Interrupting a movement if a danger area is entered
- Holding force of the clamp is larger than the cylinder's max. permissible feed force
- Suitable for use in safety-related parts of control systems belonging to category 1 to EN ISO 13849-1 (reliable component). Additional control measures are required for use in higher categories.
- When used as a braking device, the overtravel must be checked regularly
- Products intended for use in safety-related applications must be selected, sized and arranged in accordance with the valid standards and regulations.

Clamping-unit cylinders, standard port pattern

Type codes



Type	
Double-acting	
DNCKE	Clamping-unit cylinder

Piston ∅ [mm]

Stroke [mm]

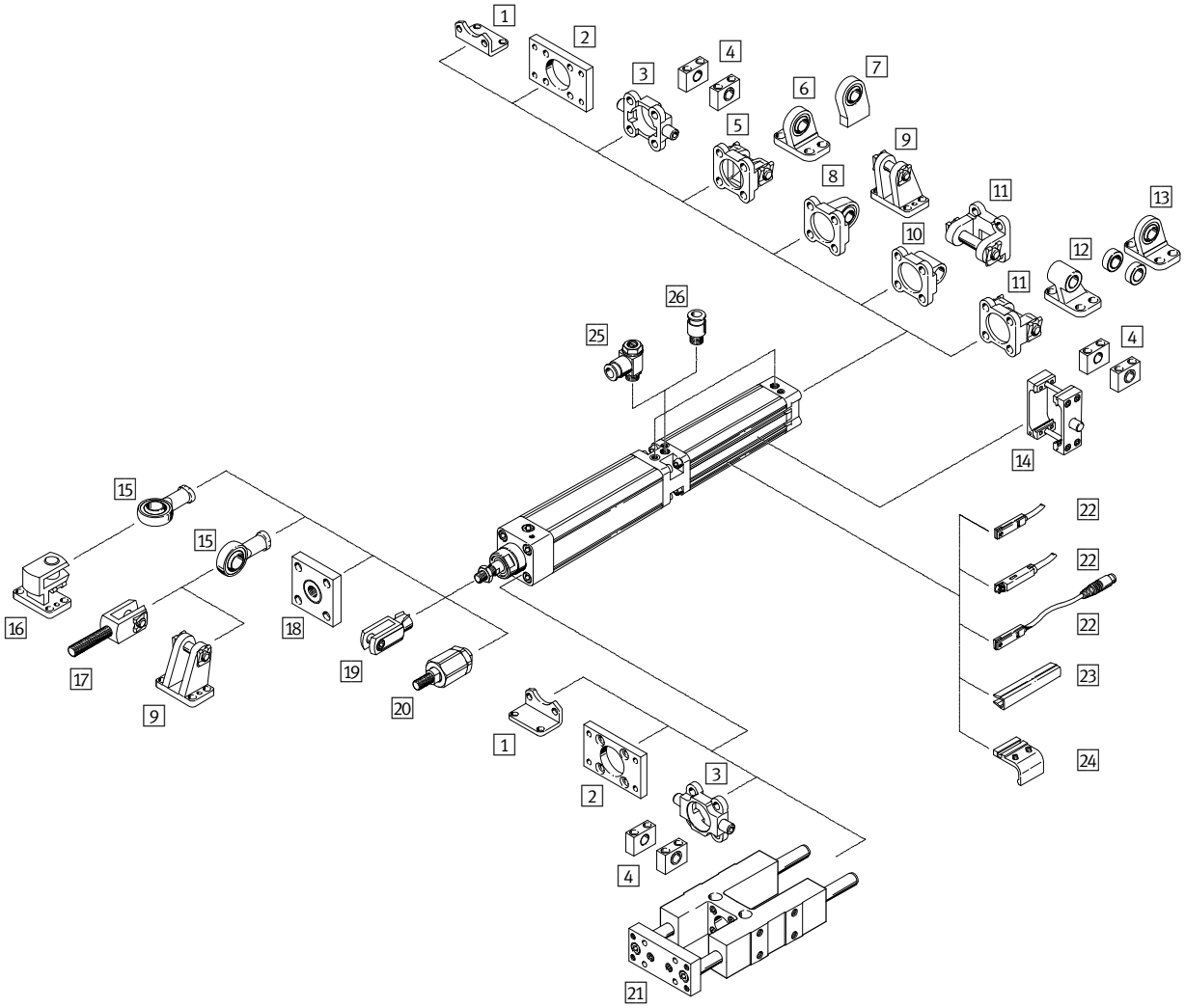
Cushioning	
PPV	Adjustable at both ends

Position sensing	
A	For proximity sensing

Certification	
S	Certified by the Institute for Occupational Safety and Health of the German Social Accident Insurance. Testing and Certification Bodies in DGUV Test. Pneumatic braking/ holding device with safety function.

Clamping-unit cylinders, standard port pattern

Peripherals overview



Clamping-unit cylinders, standard port pattern

Peripherals overview

Mounting attachments and accessories					
		Brief description	DNCKE	DNCKE-S	➔ Page/Internet
1	Foot mounting HNC	For bearing or end cap	■	■	13
2	Flange mounting FNC	For bearing or end cap	■	■	13
3	Trunnion flange ZNCF	For bearing or end cap	■	–	14
4	Trunnion support LNZG	For trunnion flange ZNCF	■	–	15
5	Swivel flange SNC	For end cap	■	–	15
6	Clevis foot LSNG	With spherical bearing	■	–	17
7	Clevis foot LSNSG	Weld-on, with spherical bearing	■	–	17
8	Swivel flange SNCS	With spherical bearing for end cap	■	–	16
9	Clevis foot LBG	For swivel flange SNCS	■	–	17
10	Swivel flange SNCL	For end cap	■	–	17
11	Swivel flange SNCB	For end cap	■	–	16
12	Clevis foot LNG	For swivel flange SNCB	■	–	17
13	Clevis foot LSN	With spherical bearing	■	–	17
14	Trunnion mounting kit DAMT	For mounting anywhere along the cylinder profile barrel	■	–	14
15	Rod eye SGS	With spherical bearing	■	–	18
16	Right-angle clevis foot LQG	For rod eye SGS	■	–	17
17	Rod clevis SGA	With male thread	■	–	18
18	Coupling piece KSG	For compensating radial deviations	■	–	18
19	Rod clevis SG	Permits a swivelling movement of the cylinder in one plane	■	–	18
20	Self-aligning rod coupler FK	For compensating radial and angular deviations	■	■	18
21	Guide unit FENG	For protecting standard cylinders from torsion at high torque loads	■	■	18
22	Proximity sensor SME/SMT	Can be integrated in the cylinder profile barrel	■	■	19
23	Slot cover ABP-5-S	To protect the sensor cable and keep dirt out of the sensor slots	■	■	20
24	Sensor mounting kit SMB-8-FENG	For proximity sensor SMT-8 when attaching to cylinders in combination with guide unit FENG	■	■	19
25	One-way flow control valve GRLA	For speed regulation	■	■	20
26	Push-in fitting QS	For connecting compressed air tubing with standard external diameters	■	■	qs

Clamping unit cylinders DNCKE, standard port pattern

Technical data

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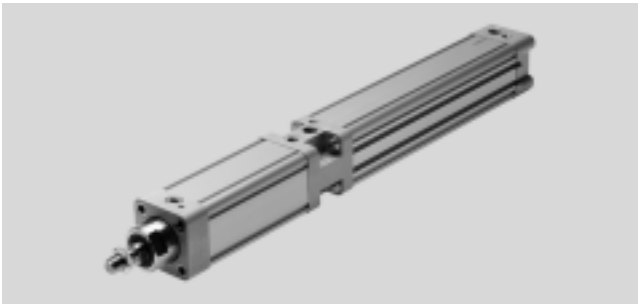
Function

- Ø - Diameter
  40, 63, 100 mm
- I - Stroke length
  10 ... 2000 mm



- Note

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

General technical data					
Piston ∅			40	63	100
Pneumatic connection	Cylinder		G¼	G⅜	G½
	Clamping unit		G⅛	G¼	G⅜
Piston rod thread			M12x1.25	M16x1.5	M20x1.5
Design			Piston		
			Piston rod		
			Cylinder barrel		
Cushioning			Adjustable at both ends		
Cushioning length		[mm]	20	22	32
Position sensing			For proximity sensing		
Type of mounting			Via female thread		
			With accessories		
Clamping type with effective direction			At both ends		
			Clamping via spring force, air to release		
Assembly position			Any		

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Operating and environmental conditions				
Piston ∅		40	63	100
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [7:4:4]		
Note on operating/pilot medium		Operation with lubricated medium possible (in which case lubricated operation will always be required)		
Operating pressure	[bar]	0.6 ... 10		
Min. release pressure	[bar]	3.8		
Ambient temperature[1)]	[°C]	–20 ... +80		
ATEX		Specified types ➔ www.festo.com		

1) Note operating range of proximity sensors

Weights [g]			
Piston ∅	40	63	100
Basic weight with 0 mm stroke	2340	5485	18160
Additional weight per 10 mm stroke	45	73	110
Moving load with 0 mm stroke	500	935	2150
Additional load per 10 mm stroke	16	25	40

Clamping unit cylinders DNCKE, standard port pattern

Technical data

Forces [N]			
Piston ∅	40	63	100
Theoretical force at 6 bar, advancing	754	1870	4712
Theoretical force at 6 bar, retracting	633	1682	4418
Static holding force	1300	3200	8000

Note

The specified holding force refers to a static load. If this value is exceeded, slippage may occur. Dynamic forces occurring during operation must not exceed the static holding force if slippage is to be avoided. The clamping unit is backlash-free in the clamped condition when varying loads are applied to the piston rod. Lateral loads and bending moments on the round material can impair the function. (Make sure that the load on the round material is only in the direction of movement.)

Actuation:
The clamping unit may only be released when the forces on the piston have reached an equilibrium. Otherwise the sudden movement of the piston rod could cause an accident. Blocking off the air supply at both ends (e.g. with a 5/3-way valve) does not provide any safety.

Impact energy [J]			
Piston ∅	40	63	100
Max. impact energy at end positions	0.7	1.3	3

Permissible impact velocity:

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

Maximum permissible load:

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

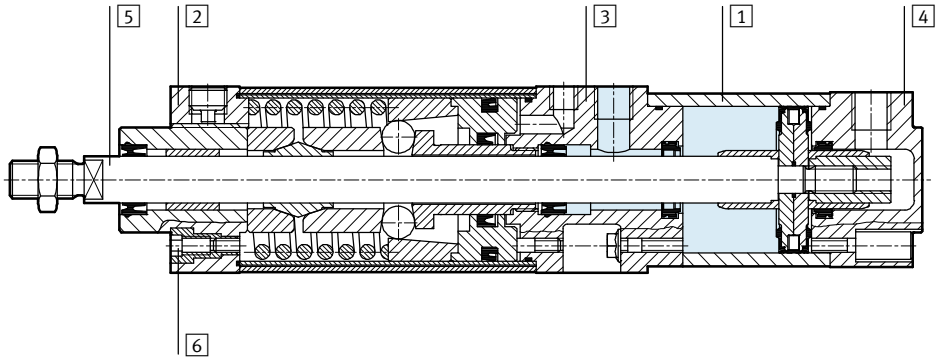
$v_{perm.}$ Permissible impact velocity
$E_{perm.}$ Max. impact energy
m_{dead} Moving load (drive)
m_{load} Moving work load

Note

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

Materials

Sectional view



Cylinder		
1	Housing	Wrought aluminium alloy
2	Bearing cap	Wrought aluminium alloy
3	Connector cap	Wrought aluminium alloy
4	End cap	Die-cast aluminium
5	Piston rod	Tempered steel
6	Flange screws	Tempered steel
–	Seals	TPE-U(PU), NBR

Clamping unit cylinders DNCKE, standard port pattern

Technical data

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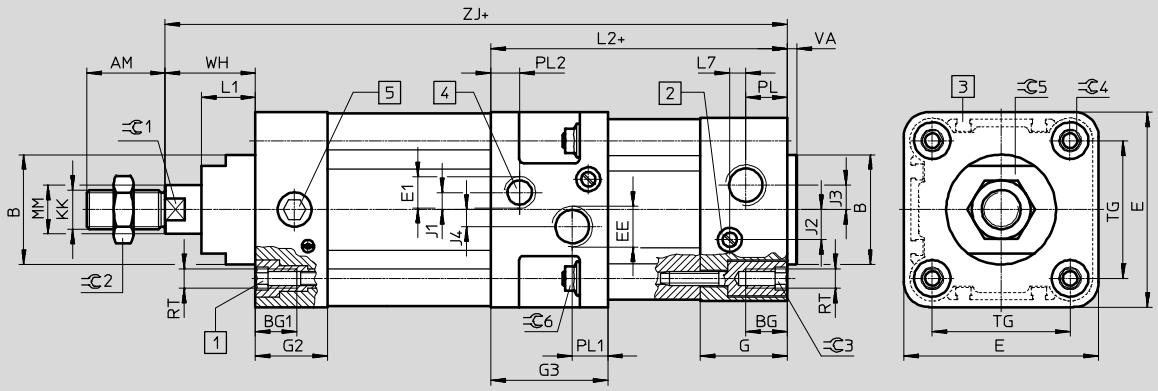
Dimensions Download CAD data ➔ **www.festo.com**



1 Socket head screw with female thread for mounting components
2 Regulating screw for adjustable end-position cushioning
3 Sensor slot for proximity sensor
4 Connection to release clamping function
5 Locking screw
\+ = plus stroke length

∅ [mm]	AM	B ∅ d11	BG	BG1	E	EE	E1	G	G2	G3	J1
40	24	35	16	15	54	G¼	G⅛	28.8	22	49.6	2
63	32	45	17	17	80	G⅜	G¼	34.3	29.5	47.9	7
100	42	55	17	17	126	G½	G⅜	38	32.5	46.7	15

∅ [mm]	J2	J3	J4	KK	L1	L2	L7	MM ∅	PL	PL1	PL2
40	8	6	0	M12x1.25	17.9	114.5	3.6	16	14	21.3	9
63	12.4	10	7	M16x1.5	22.1	121.5	6.6	20	17	14.6	11.8
100	12	10	10	M20x1.5	29.2	131.5	8	25	18.8	16.4	14.4

∅ [mm]	RT	TG	VA	WH	ZJ	⌀1	⌀2	⌀3	⌀4	⌀5	⌀6
40	M6	38	4	30	277	13	19	6	6	30	8
63	M8	56.5	4	37	315	17	24	8	8	36	10
100	M10	89	4	51	408	22	30	6	10	41	13

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Ordering data

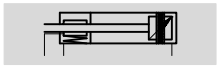
Piston ∅ [mm]	Stroke [mm]	Part No.	Type
40	10 … 2000	**526482**	**DNCKE-40-…-PPV-A**
63	10 … 2000	**526483**	**DNCKE-63-…-PPV-A**
100	10 … 2000	**526484**	**DNCKE-100-…-PPV-A**

Clamping unit cylinders DNCKE-S, standard port pattern

Technical data

FESTO

Function



- Ø - Diameter
  40, 63, 100 mm
- l - Stroke length
  10 ... 2000 mm

General technical data					
Piston ∅			40	63	100
Pneumatic connection	Cylinder		G¼	G⅜	G½
	Clamping unit		G⅛	G¼	G⅜
Piston rod thread			M12x1.25	M16x1.5	M20x1.5
Design			Piston		
			Piston rod		
			Cylinder barrel		
Cushioning			Adjustable at both ends		
Cushioning length		[mm]	20	22	32
Position sensing			For proximity sensing		
Type of mounting			Via female thread		
			With accessories		
Clamping type with effective direction			At both ends		
			Clamping via spring force, air to release		
Assembly position			Any		
Function			Single-channel to EN ISO 13849-1, category 1		
Safety function			Holding and stopping a movement		
Certification			BIA (Berufsgenossenschaftliches Institut für Arbeitsschutz – BG-Institute for Occupational Safety and Health)		

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Operating and environmental conditions				
Piston ∅		40	63	100
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [7:4:4]		
Note on operating/pilot medium		Operation with lubricated medium possible (in which case lubricated operation will always be required)		
Operating pressure	[bar]	0.6 ... 8		
Min. release pressure	[bar]	3.8		
Max. permissible test pressure	[bar]	10		
Ambient temperature[1)]	[°C]	–10 ... +60		

1) Note operating range of proximity sensors

Weights [g]			
Piston ∅	40	63	100
Basic weight with 0 mm stroke	2340	5485	18160
Additional weight per 10 mm stroke	45	73	110
Moving load with 0 mm stroke	500	935	2150
Additional load per 10 mm stroke	16	25	40

Clamping unit cylinders DNCKE-S, standard port pattern

Technical data

Forces [N]			
Piston ∅	40	63	100
Theoretical force at 6 bar, advancing	754	1870	4712
Theoretical force at 6 bar, retracting	633	1682	4418
Static holding force	1300	3200	8000

Note

The specified holding force refers to a static load. If this value is exceeded, slippage may occur. Dynamic forces occurring during operation must not exceed the static holding force if slippage is to be avoided. The clamping unit is backlash-free in the clamped condition when varying loads are applied to the piston rod. Lateral loads and bending moments on the round material can impair the function. (Make sure that the load on the round material is only in the direction of movement.)

Actuation:
The clamping unit may only be released when the forces on the piston have reached an equilibrium. Otherwise the sudden movement of the piston rod could cause an accident. Blocking off the air supply at both ends (e.g. with a 5/3-way valve) does not provide any safety.

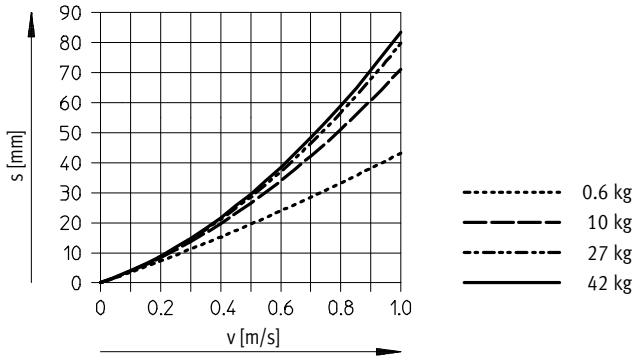
Theoretical overtravel s as a function of the piston speed v in a vertical assembly position

The overtravel is the distance that the piston rod covers between exhausting of the clamping unit and coming to a standstill. It must be determined by the customer when the machine is set up. When the clamping unit is used as a braking device, an increase in the overtravel as a function of the load and the frequency of braking (wear) must be expected.
The clamping unit DNCKE-S can be used in safety-related parts of control systems belonging to category 1 (reliable component) as defined by EN ISO 13849-1. For use in higher categories than category 1 to EN ISO 13849-1, the overtravel must be achieved even in the event of faults. It is dependent on the environmental conditions and stress, e.g.:

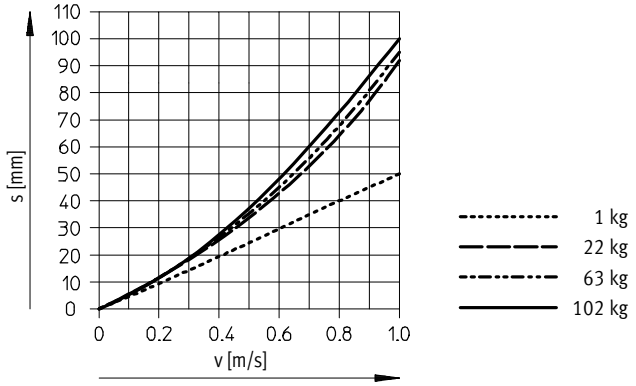
- Operating pressure
- Nominal size of switching valve
- Cable length
- Diameter of the connecting cable to the clamping unit
- Load and speed

The overtravel can be reduced by attaching a quick exhaust valve to the supply port of the clamping unit.

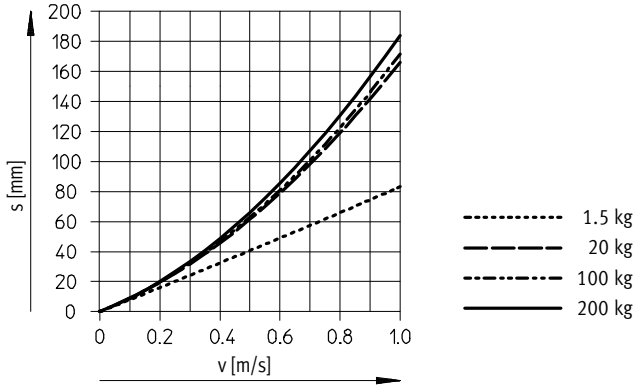
∅ 40



∅ 63



∅ 100



Clamping unit cylinders DNCKE-S, standard port pattern

Technical data

Impact energy [J]			
Piston ∅	40	63	100
Max. impact energy at end positions	0.7	1.3	3

Permissible impact velocity:

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

Maximum permissible load:

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

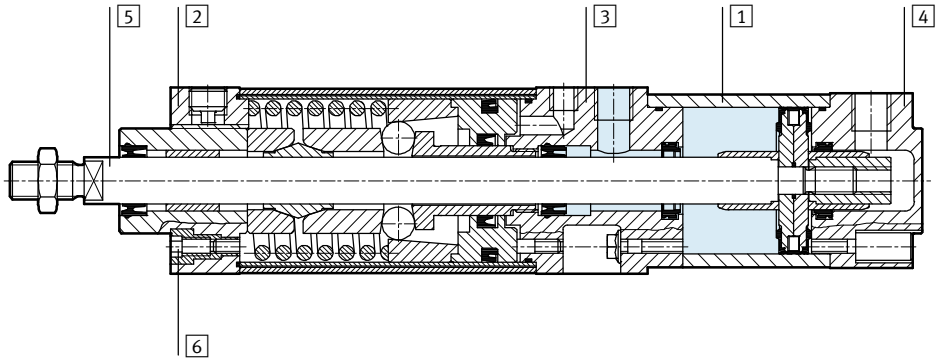
$v_{perm.}$ Permissible impact velocity
$E_{perm.}$ Max. impact energy
m_{dead} Moving load (drive)
m_{load} Moving work load

- Note

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

Materials

Sectional view

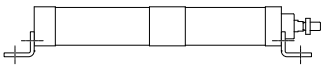


Cylinder	
1 Body	Wrought aluminium alloy
2 Bearing cap	Wrought aluminium alloy
3 Connector cap	Wrought aluminium alloy
4 End cap	Die-cast aluminium
5 Piston rod	Tempered steel
6 Flange screws	Tempered steel
– Seals	TPE-U(PU), NBR

Recommendation for mounting

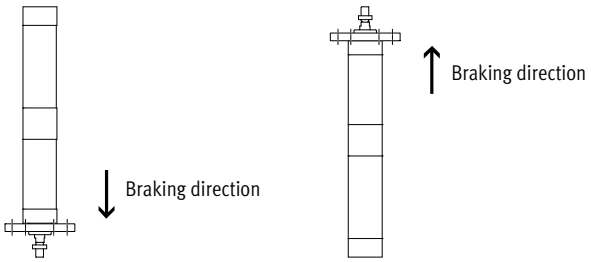
As holding device, horizontal installation

With foot mounting HNC



As braking device, vertical installation

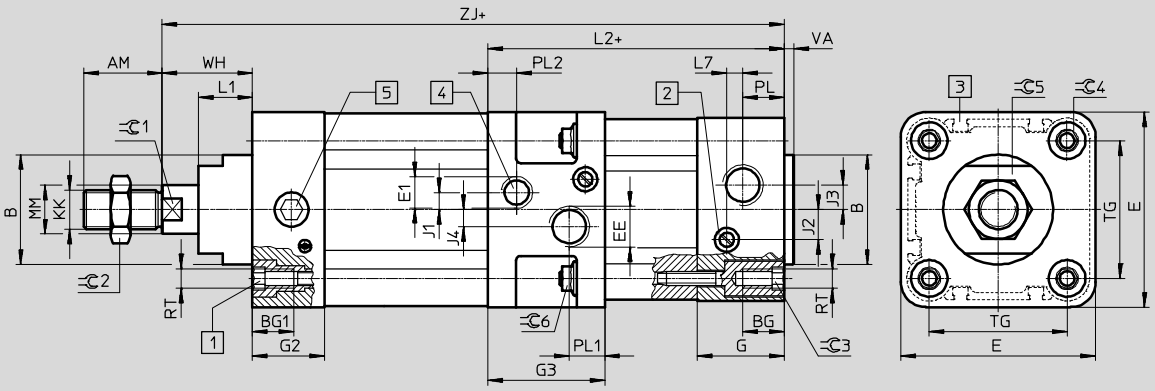
With flange mounting FNC (note braking direction)



Clamping unit cylinders DNCKE-S, standard port pattern

Technical data

Dimensions Download CAD data ➔ **www.festo.com**



1 Socket head screw with female thread for mounting components
2 Regulating screw for adjustable end-position cushioning
3 Sensor slot for proximity sensor
4 Connection to release clamping function
5 Locking screw
\+ = plus stroke length

∅ [mm]	AM	B ∅ d11	BG	BG1	E	EE	E1	G	G2	G3	J1
40	24	35	16	15	54	G¼	G⅛	28.8	22	49.6	2
63	32	45	17	17	80	G⅜	G¼	34.3	29.5	47.9	7
100	42	55	17	17	126	G½	G⅜	38	32.5	46.7	15

∅ [mm]	J2	J3	J4	KK	L1	L2	L7	MM ∅	PL	PL1	PL2
40	8	6	0	M12x1.25	17.9	114.5	3.6	16	14	21.3	9
63	12.4	10	7	M16x1.5	22.1	121.5	6.6	20	17	14.6	11.8
100	12	10	10	M20x1.5	29.2	131.5	8	25	18.8	16.4	14.4

∅ [mm]	RT	TG	VA	WH	ZJ	⌀C1	⌀C2	⌀C3	⌀C4	⌀C5	⌀C6
40	M6	38	4	30	277	13	19	6	6	30	8
63	M8	56.5	4	37	315	17	24	8	8	36	10
100	M10	89	4	51	408	22	30	6	10	41	13

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Ordering data

Piston ∅ [mm]	Stroke [mm]	Part No.	Type
40	10 … 2000	**538239**	**DNCKE-40-…-PPV-A-S**
63	10 … 2000	**538240**	**DNCKE-63-…-PPV-A-S**
100	10 … 2000	**538241**	**DNCKE-100-…-PPV-A-S**

Clamping-unit cylinders, standard port pattern

Accessories

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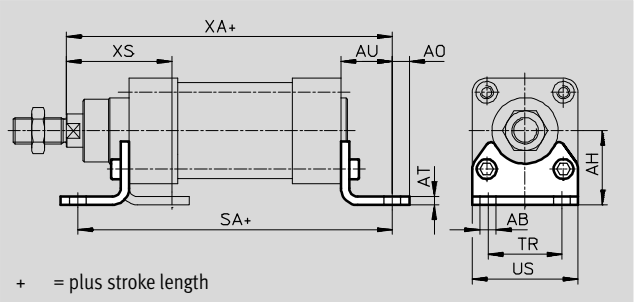
Foot mounting HNC

Material:
Galvanised steel
Free of copper and PTFE



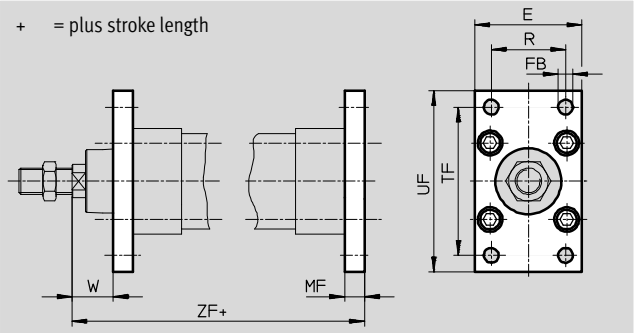
Dimensions and ordering data

For ∅ [mm]	AB ∅	AH	AO	AT	AU	SA	TR	US	XA	XS	CRC[1]	Weight [g]	Part No.	Type
40	10	36	9	4	28	303	36	54	305	53	2	193	**174370**	**HNC-40**
63	10	50	12.5	5	32	342	50	75	347	63	2	436	**174372**	**HNC-63**
100	14.5	71	17.5	6	41	439	75	110	449	86	2	1009	**174374**	**HNC-100**

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

Flange mounting FNC

Material:
Galvanised steel
Free of copper and PTFE
RoHS-compliant



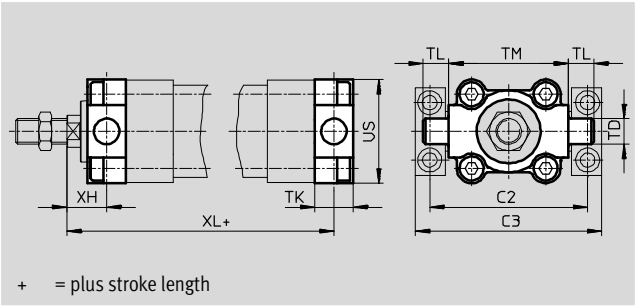
Dimensions and ordering data

For ∅ [mm]	E	FB ∅ H13	MF	R	TF	UF	W	ZF	CRC[1]	Weight [g]	Part No.	Type
40	54	9	10	36	72	90	20	287	1	291	**174377**	**FNC-40**
63	75	9	12	50	100	120	25	327	1	679	**174379**	**FNC-63**
100	110	14	16	75	150	175	35	424	1	2041	**174381**	**FNC-100**

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

Trunnion flange ZNCF

Material:
Special steel casting
Free of copper and PTFE
RoHS-compliant



\+ = plus stroke length

Dimensions and ordering data

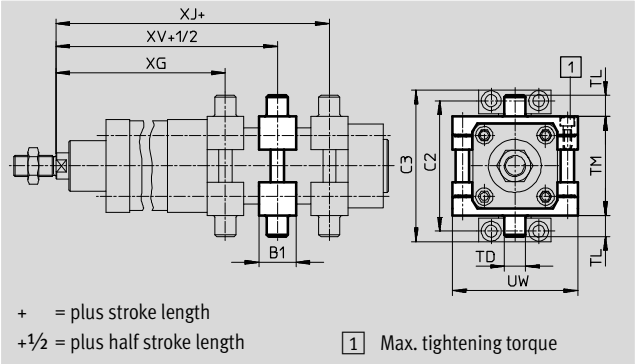
For ∅ [mm]	C2	C3	TD ∅ e9	TK	TL	TM	US	XH	XL	CRC[1]	Weight [g]	Part No.	Type
40	87	105	16	20	16	63	54	20	287	2	285	**174412**	**ZNCF-40**
63	116	136	20	24	20	90	75	25	327	2	687	**174414**	**ZNCF-63**
100	164	189	25	38	25	132	110	32	427	2	2254	**174416**	**ZNCF-100**

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

Trunnion mounting kit DAMT

The mounting kit can be attached at any position along the profile barrel of a cylinder.

Material:
Tempered steel
Free of copper and PTFE
RoHS-compliant



\+ = plus stroke length
+½ = plus half stroke length
1 Max. tightening torque

Dimensions and ordering data

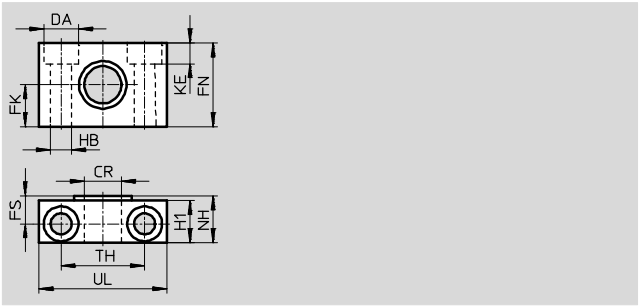
For ∅ [mm]	B1	C2	C3	TD ∅ e9	TL	TM	UW
40	32	87	105	16	16	63	75
63	41	116	136	20	20	90	105
100	48	164	189	25	25	132	145

For ∅ [mm]	XG	XJ	XV	Max. tightening torque [Nm]	CRC[1]	Weight [g]	Part No.	Type
40	228.1	232.2	230.2	8+1	2	388	**2214899**	**DAMT-V1-40-A**
63	261.9	260.2	261	18+2	2	911	**2214971**	**DAMT-V1-63-A**
100	347.2	346	346.6	28+2	2	2095	**163530**	**DAMT-V1-100-A**

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

Trunnion support LNZG

Material:
Trunnion support:
Anodised aluminium
Plain bearing:
Plastic
Free of copper and PTFE
RoHS-compliant



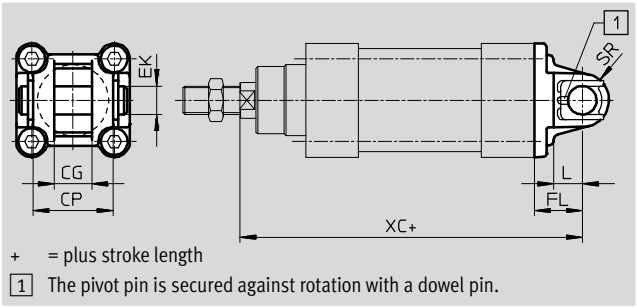
Dimensions and ordering data

For ∅ [mm]	CR ∅ D11	DA ∅ H13	FK ∅ ±0.1	FN	FS	H1	HB ∅ H13	KE	NH	TH ±0.2	UL	CRC[1]	Weight [g]	Part No.	Type
40	16	15	18	36	12	18	9	9	21	36	55	2	129	**32960**	**LNZG-40/50**
63	20	18	20	40	13	20	11	11	23	42	65	2	178	**32961**	**LNZG-63/80**
100	25	20	25	50	16	24.5	14	13	28.5	50	75	2	306	**32962**	**LNZG-100/125**

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

Swivel flange SNC

Material:
Die-cast aluminium
Free of copper and PTFE
RoHS-compliant



\+ = plus stroke length
1 The pivot pin is secured against rotation with a dowel pin.

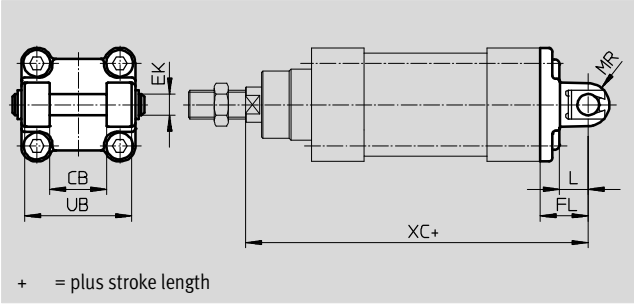
Dimensions and ordering data

For ∅ [mm]	CG H14	CP d12	EK ∅	FL ±0.2	L	SR	XC	CRC[1]	Weight [g]	Part No.	Type
40	16	40	12	25	16	12	302	2	140	**174384**	**SNC-40**
63	21	51	16	32	21	16	347	2	331	**174386**	**SNC-63**
100	25	75	20	41	27	20	449	2	865	**174388**	**SNC-100**

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

Swivel flange SNCB

Material:
Die-cast aluminium
Free of copper and PTFE
RoHS-compliant



\+ = plus stroke length

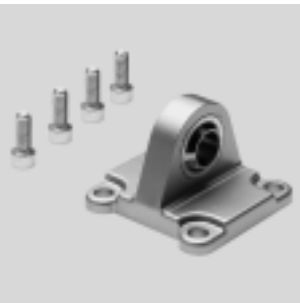
Dimensions and ordering data

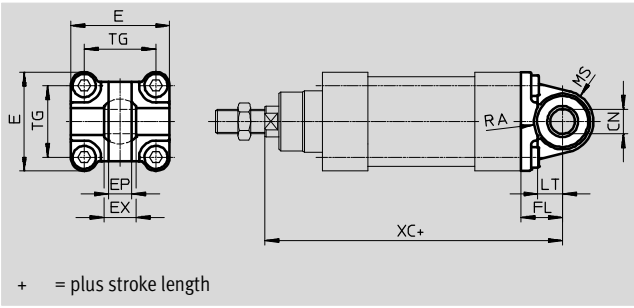
For ∅ [mm]	CB H14	EK ∅ e8	FL ±0.2	L	ML	MR	UB h14	XC	CRC[1]	Weight [g]	Part No.	Type
40	28	12	25	16	63	12	52	302	2	155	**174391**	**SNCB-40**
63	40	16	32	21	83	16	70	347	2	375	**174393**	**SNCB-63**
100	60	20	41	27	127	20	110	449	2	1035	**174395**	**SNCB-100**

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

Swivel flange SNCS

Material:
SNCS 40 ... 63:
Die-cast aluminium
SNCS 100:
Wrought aluminium alloy
Free of copper and PTFE
RoHS-compliant





\+ = plus stroke length

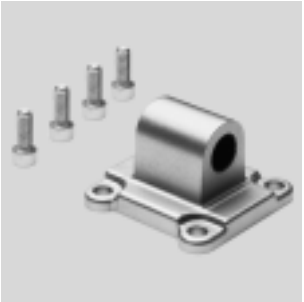
Dimensions and ordering data

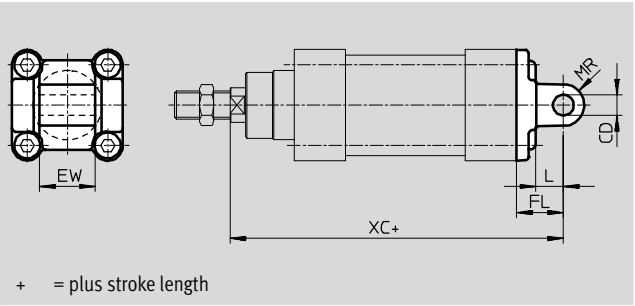
For ∅ [mm]	CN ∅	E	EP ±0.2	EX	FL ±0.2	LT	MS	RA +1	TG	XC	CRC[1]	Weight [g]	Part No.	Type
40	$12^{+0.015}$	$54_{-0.5}$	12	16	25	16	$17^{+0.5}$	17.5	38	160	2	122	**174398**	**SNCS-40**
63	$16^{+0.015}$	$75_{-0.6}$	15	21	32	21	$23_{-0.5}$	23	56.5	190	2	281	**174400**	**SNCS-63**
100	$20^{+0.018}$	$109^{+1}_{-0.7}$	18	25	41	27	30 ± 0.5	95	89	230	2	683	**174402**	**SNCS-100**

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

Swivel flange SNCL

Material:
Die-cast aluminium
Free of copper and PTFE
RoHS-compliant





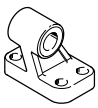
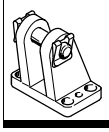
\+ = plus stroke length

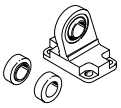
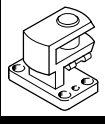
Dimensions and ordering data

For ∅	CD ∅	EW	FL	L	MR	XC	CRC[1]	Weight	Part No.	Type
[mm]	H9	–0.2/–0.6	±0.2					[g]		
40	12	28	25	16	12	302	2	95	**174405**	**SNCL-40**
63	16	40	32	21	16	347	2	225	**174407**	**SNCL-63**
100	20	60	41	27	20	449	2	606	**174409**	**SNCL-100**

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

Ordering data – Mounting attachments Technical data ➔ Internet: mounting attachment

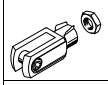
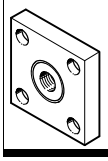
Designation	For ∅	Part No.	Type
Clevis foot LNG			
	40	**33891**	**LNG-40**
	63	**33893**	**LNG-63**
	100	**33895**	**LNG-100**
Clevis foot LSNG			
	40	**31741**	**LSNG-40**
	63	**31743**	**LSNG-63**
	100	**31745**	**LSNG-100**
Clevis foot LBG			
	40	**31762**	**LBG-40**
	63	**31764**	**LBG-63**
	100	**31766**	**LBG-100**

Designation	For ∅	Part No.	Type
Clevis foot LSN			
	40	**5562**	**LSN-40**
	63	**5564**	**LSN-63**
	100	**5566**	**LSN-100**
Clevis foot LSNSG			
	40	**31748**	**LSNSG-40**
	63	**31750**	**LSNSG-63**
	100	**31752**	**LSNSG-100**
Clevis foot, right-angled LQG			
	40	**31769**	**LQG-40**
	63	**31771**	**LQG-63**
	100	**31773**	**LQG-100**

Clamping-unit cylinders, standard port pattern

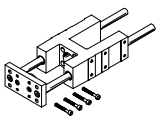
Accessories

Ordering data – Piston rod attachments — Technical data ➔ Internet: piston rod attachment

Designation	For ∅	Part No.	Type
Rod eye SGS			
	40	**9262**	**SGS-M12x1,25**
	63	**9263**	**SGS-M16x1,5**
	100	**9264**	**SGS-M20x1,5**
Rod clevis SG			
	40	**6145**	**SG-M12x1,25**
	63	**6146**	**SG-M16x1,5**
	100	**6147**	**SG-M20x1,5**
Coupling piece KSG			
	40	**32964**	**KSG-M12x1,25**
	63	**32965**	**KSG-M16x1,5**
	100	**32966**	**KSG-M20x1,5**

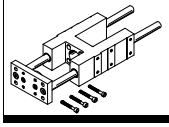
Designation	For ∅	Part No.	Type
Rod clevis SGA			
	40	**10767**	**SGA-M12x1,25**
	63	**10768**	**SGA-M16x1,5**
	100	**10769**	**SGA-M20x1,5**
Self-aligning rod coupler FK			
	40	**6141**	**FK-M12x1,25**
	63	**6142**	**FK-M16x1,5**
	100	**6143**	**FK-M20x1,5**

Ordering data – Guide units for fixed strokes (recirculating ball bearing guide only) — Technical data ➔ Internet: feng

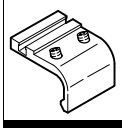
	Stroke [mm]	Part No.	Type
	For ∅ 40 mm		
	10 … 50	**34499**	**FENG-40-50-KF**
	10 … 100	**34500**	**FENG-40-100-KF**
	10 … 160	**34501**	**FENG-40-160-KF**
	10 … 200	**34502**	**FENG-40-200-KF**
	10 … 250	**34503**	**FENG-40-250-KF**
	10 … 320	**34504**	**FENG-40-320-KF**
	10 … 400	**150291**	**FENG-40-400-KF**
	10 … 500	**34505**	**FENG-40-500-KF**
	For ∅ 100 mm		
	10 … 50	**34529**	**FENG-100-50-KF**
	10 … 100	**34530**	**FENG-100-100-KF**
	10 … 160	**34531**	**FENG-100-160-KF**
	10 … 200	**34532**	**FENG-100-200-KF**
	10 … 250	**34533**	**FENG-100-250-KF**
	10 … 320	**34534**	**FENG-100-320-KF**
	10 … 400	**34535**	**FENG-100-400-KF**
	10 … 500	**34536**	**FENG-100-500-KF**

Stroke [mm]	Part No.	Type
For ∅ 63 mm		
10 … 50	**34513**	**FENG-63-50-KF**
10 … 100	**34514**	**FENG-63-100-KF**
10 … 160	**34515**	**FENG-63-160-KF**
10 … 200	**34516**	**FENG-63-200-KF**
10 … 250	**34517**	**FENG-63-250-KF**
10 … 320	**34518**	**FENG-63-320-KF**
10 … 400	**34519**	**FENG-63-400-KF**
10 … 500	**34520**	**FENG-63-500-KF**

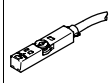
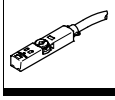
Ordering data – Guide units for variable strokes — Technical data ➔ Internet: feng

	For ∅ [mm]	Stroke [mm]	with recirculating ball bearing guide Part No.	Type	with plain bearing guide Part No.	Type
	40	10 … 500	**34488**	**FENG-40-…-KF**	**34482**	**FENG-40-…-GF**
	63	10 … 500	**34490**	**FENG-63-…-KF**	**34484**	**FENG-63-…-GF**
	100	10 … 500	**34492**	**FENG-100-…-KF**	**34486**	**FENG-100-…-GF**

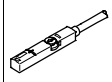
Ordering data – Mounting kits for proximity sensors SMT-8 — Technical data ➔ Internet: smb

	For ∅ [mm]	Part No.	Type
	40	**175705**	**SMB-8-FENG-32/40**
	63	**175706**	**SMB-8-FENG-50/63**
	100	**175707**	**SMB-8-FENG-80/100**

Ordering data – Proximity sensors for T-slot, magneto-resistive — Technical data ➔ Internet: smt

	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile, short design	PNP	Cable, 3-wire	2.5	**574335**	**SMT-8M-A-PS-24V-E-2,5-OE**
			Plug M8x1, 3-pin	0.3	**574334**	**SMT-8M-A-PS-24V-E-0,3-M8D**
			Plug M12x1, 3-pin	0.3	**574337**	**SMT-8M-A-PS-24V-E-0,3-M12**
		NPN	Cable, 3-wire	2.5	**574338**	**SMT-8M-A-NS-24V-E-2,5-OE**
			Plug M8x1, 3-pin	0.3	**574339**	**SMT-8M-A-NS-24V-E-0,3-M8D**
N/C contact						
	Insertable in the slot from above, flush with cylinder profile, short design	PNP	Cable, 3-wire	7.5	**574340**	**SMT-8M-A-PO-24V-E-7,5-OE**

Ordering data – Proximity sensors for T-slot, magnetic reed — Technical data ➔ Internet: sme

	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	Contacting	Cable, 3-wire	2.5	**543862**	**SME-8M-DS-24V-K-2,5-OE**
				5.0	**543863**	**SME-8M-DS-24V-K-5,0-OE**
			Cable, 2-wire	2.5	**543872**	**SME-8M-ZS-24V-K-2,5-OE**
			Plug M8x1, 3-pin	0.3	**543861**	**SME-8M-DS-24V-K-0,3-M8D**
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	**150855**	**SME-8-K-LED-24**
			Plug M8x1, 3-pin	0.3	**150857**	**SME-8-S-LED-24**
N/C contact						
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	**160251**	**SME-8-O-K-LED-24**

Ordering data – Connecting cables — Technical data ➔ Internet: nebu

	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	**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**

Ordering data – Slot cover for T-slot

	Assembly	Length [m]	Part No.	Type
	Insertable from above	2x 0.5	**151680**	**ABP-5-S**

Ordering data – One-way flow control valves — Technical data ➔ Internet: grla

	Connection		Material	Part No.	Type
	Thread	For tubing OD			
	G1/8	3	Metal design	**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**
	G1/2	12		**193152**	**GRLA-1/2-QS-12-D**