

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

FESTO

Subject to change – 2014/02



-  - Type discontinued DNG-160/-200

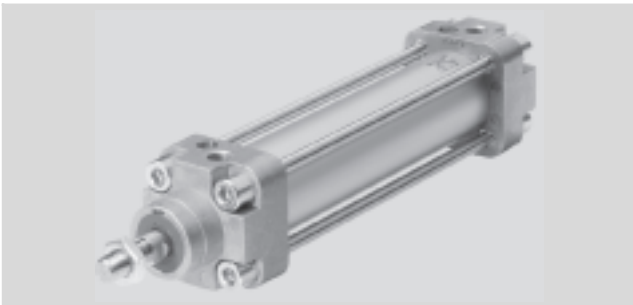
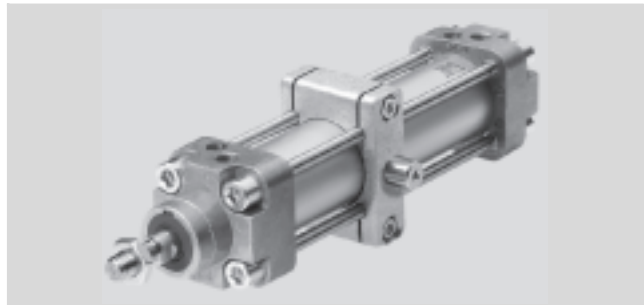
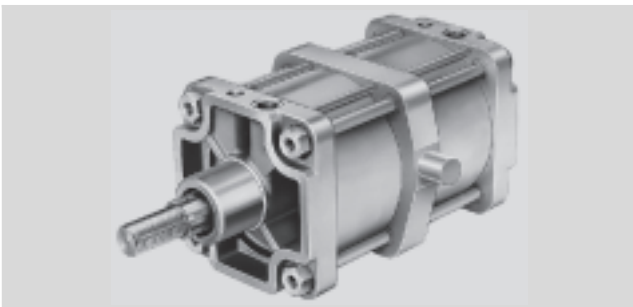
Available up until 2014 !

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

Features

Brief description

- Double-acting
- For contactless position sensing
- With adjustable end-position cushioning at both ends
- Robust tie rod design
- Standards-based cylinders to ISO 15552 (corresponds to the withdrawn standards ISO 6431, DIN ISO 6431, VDMA 24 562, NF E 49 003.1 and UNI 10290)

**DIN****DNG****DNGZK with central trunnion mounting (adjustable)****DNGZS with central trunnion mounting (fixed)**

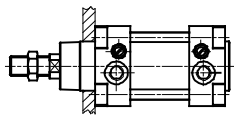
Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

Features

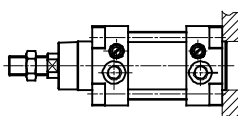
Mounting options

Installation of basic version

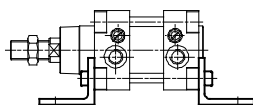
Mounting at front



Mounting at rear

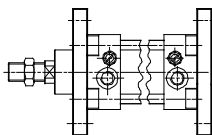
**Installation options using mounting attachments**Foot mounting MS1¹⁾

HNG

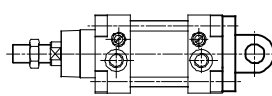
Flange mounting MF1/MF2¹⁾

FNG

at front at rear

Swivel flange MP2¹⁾

SNG/SNGB/SNGL



1) Standard designation to ISO 15552
(ISO 6431)

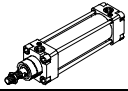
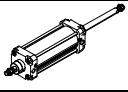
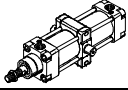
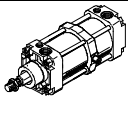
- 1 - Type discontinued DNG-160/-200

Available up until 2014 !

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

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Product range overview

Function	Design	Type	Piston Ø [mm]	Variable stroke ¹⁾ [mm]	Position sensing A	Cushioning Adjustable PPV
Double-acting	Basic version					
		DNG Single-ended piston rod	160, 200, 250, 320	1 ... 2000	■	■
		DNG-...-S2 Through piston rod	160, 200, 250, 320	1 ... 2000	■	■
	With central trunnion mounting					
		DNGZK adjustable	160, 200	1 ... 2000	■	■
		DNGZS fixed	250, 320	1 ... 1100	■	■

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

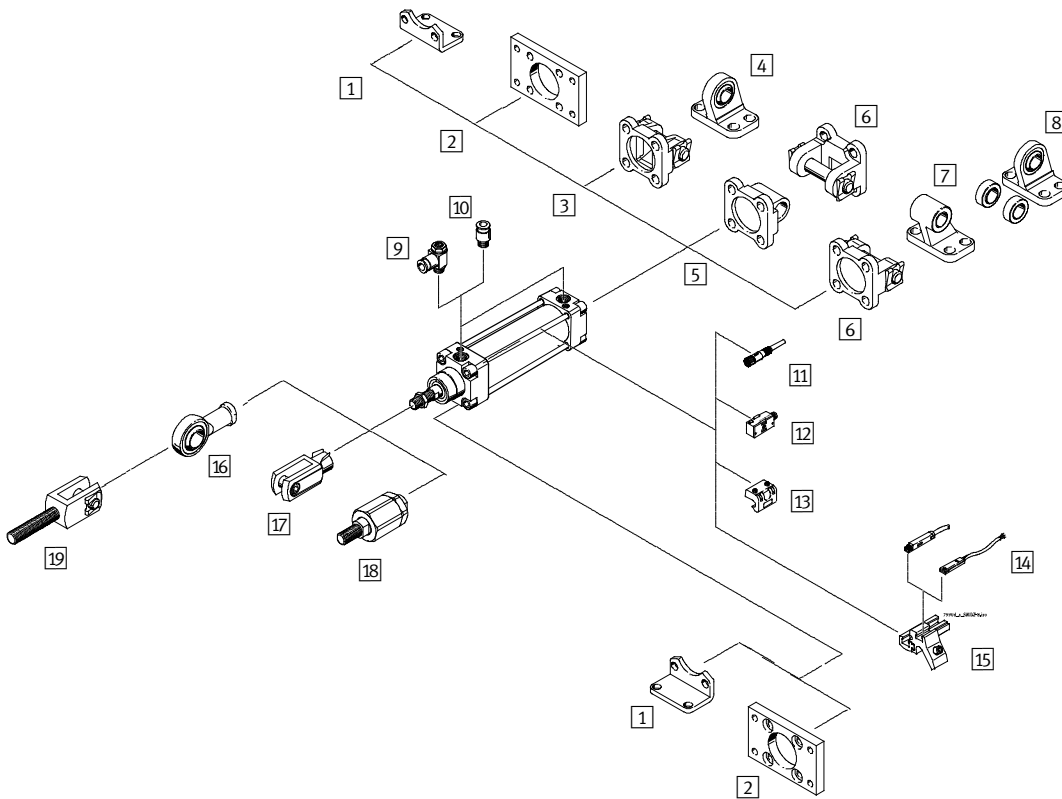
Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

Product range overview

Type	Piston rod		Heat-resistant seal S6	High corrosion protection S8	→ Page/Internet
	Male thread	Stainless steel S3			
Basic version					
DNG Single-ended piston rod	■	■	■	■	9
DNG-...-S2 Through piston rod	■	-	-	-	9
With central trunnion mounting					
DNGZK adjustable	■	■	■	■	9
DNGZS fixed	■	■	■	■	9

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

Peripherals overview



Mounting attachments and accessories		
	Brief description	→ Page/Internet
1	Foot mounting HNG For bearing and end caps corresponds to MS1 to ISO 15552	17
2	Flange mounting FNG For bearing or end caps corresponds to MF1/MF2 to ISO 15552	18
3	Swivel flange SNG For end caps	18
4	Clevis foot mounting LSNG With spherical bearing	20
5	Swivel flange SNGL For end caps corresponds to MP2 to ISO 15552	19

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

Peripherals overview

Mounting attachments and accessories			
	Brief description	→ Page/Internet	
6	Swivel flange SNGB	For end caps corresponds to MP2 to ISO 15552	19
7	Clevis foot mounting LNG	For swivel flange SNGB	20
8	Clevis foot mounting LSN	With spherical bearing	20
9	One-way flow control valve GRLA	For speed regulation	grla
10	Push-in fitting QS	For connecting compressed air tubing with standard O.D.	quick star
11	Connecting cable, straight NEBU	–	21
	Connecting cable, angled NEBU	–	21
12	Proximity sensors SMEO-1/SMT0-1	–	22
13	Sensor mounting kit SMB-1	For proximity sensor SMEO-1/SMT0-1	22
14	Proximity sensors SME/SMT-8	–	21
15	Sensor mounting kit SMBZ-8- ...	For proximity sensor SME/SMT-8	21
16	Rod eye SGS	With spherical bearing	20
17	Rod clevis SG	Permits a swivelling movement of the cylinder in one plane	20
18	Self-aligning rod coupler FK	For compensating radial and angular deviations	20
19	Rod clevis SGA	Suitable for spherical mounting of cylinders in conjunction with rod eye SGS	20

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

Type codes

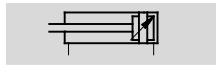
		DNG	-	160	-	80	-	PPV	-	A	-		-	
Type														
Double-acting														
DNG	Standard cylinder													
DNGZK	Standard cylinder with central trunnion mounting (adjustable)													
DNGZS	Standard cylinder with central trunnion mounting (fixed)													
Piston Ø [mm]														
Stroke [mm]														
Cushioning														
PPV	Adjustable at both ends													
Position sensing														
A	For proximity sensing													
Trunnion flange axis distance														
XV	Trunnion flange position													
Variants														
S2	Through piston rod													
S3	Stainless steel piston rod													
S6	Heat resistant seal for temperatures up to 120 °C													
S8	High corrosion protection													

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

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Technical data

Function



- Ø - Diameter
160 ... 320 mm

- | - Stroke length
10 ... 2000 mm

-  - www.festo.com

Variants



S2



S3



S6

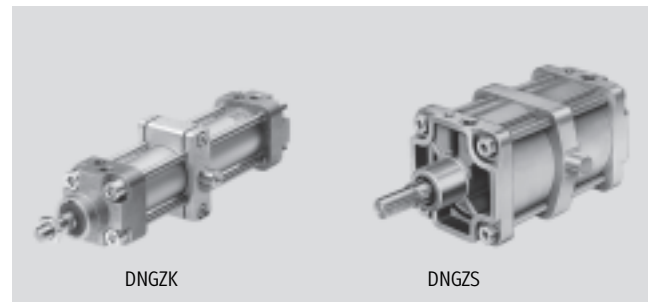


S8

- Standards-based cylinders to ISO 15552 (corresponds to the withdrawn standards ISO 6431, DIN ISO 6431, VDMA 24 562, NF E 49 003.1 and UNI 10290)



DIN



General technical data				
Piston Ø	160	200	250	320
Pneumatic connection	G3/4	G3/4	G1	G1
Piston rod thread	M36x2	M36x2	M42x2	M48x2
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)			
Design	Piston			
	Piston rod			
	Profile barrel			
Cushioning	Adjustable at both ends			
Cushioning length [mm]	40	50	60	66
Position sensing	For proximity sensing			
Type of mounting	Via accessories			
Mounting position	Any			

Operating and environmental conditions	
Operating pressure [bar]	0.6 ... 10
Ambient temperature ¹⁾ [°C]	-20 ... +80
ATEX	Specified types → www.festo.com

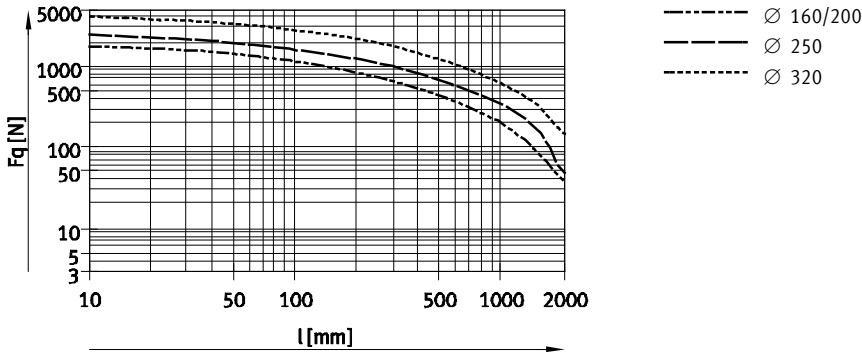
1) Note operating range of proximity sensors

Forces [N]				
Piston Ø	160	200	250	320
Theoretical force at 6 bar, advancing	12,064	18,850	29,450	48,250
Theoretical force at 6 bar, retracting	11,310	18,096	28,270	46,380

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

Technical data

Lateral force F_Q as a function of the stroke length l



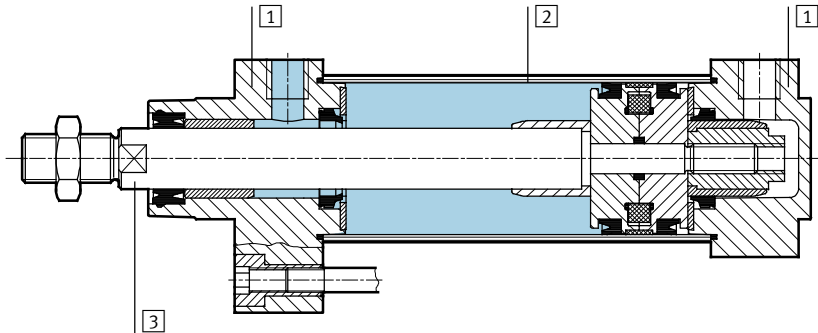
Weights [g]				
Piston Ø	160	200	250	320
DNG				
Product weight at 0 mm stroke	17,265	20,115	30,800	53,200
Additional weight per 10 mm stroke	190	250	360	570
DNGZK				
Product weight at 0 mm stroke	19,510			
Additional weight per 10 mm stroke	190			

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

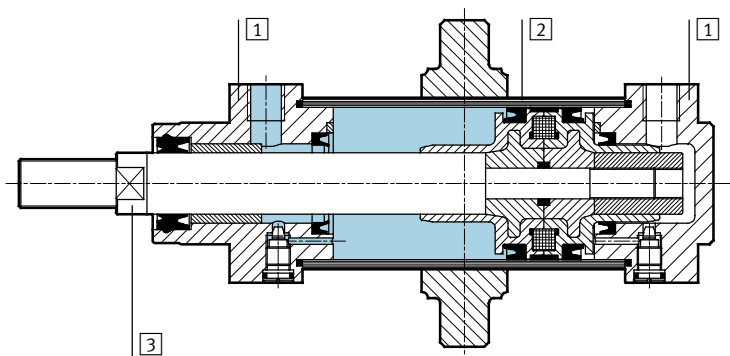
Technical data

Materials

Sectional view DNG



Sectional view DNGZK



Standard cylinder	DNG		DNGZK
Piston Ø	160 ... 200	250 ... 320	
1 Bearing and end caps	Aluminium		Die-cast aluminium
2 Cylinder barrel	Aluminium	High-alloy steel	Brass
3 Piston rod, tie rod	High-alloy steel		
- Seals	NBR, TPE-U (PU)		

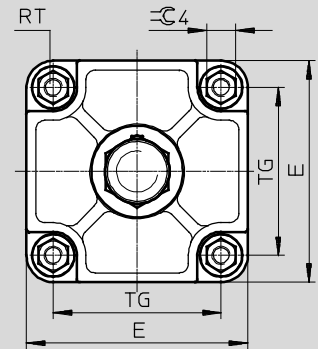
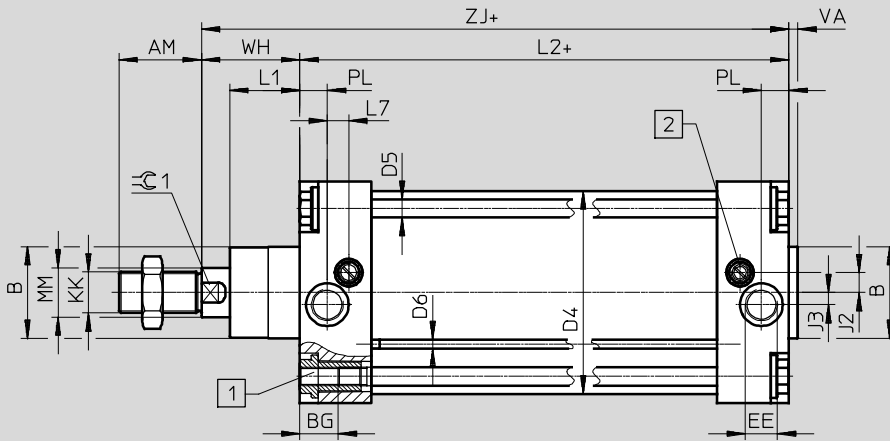
Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

Technical data

Dimensions

Download CAD data → www.festo.com

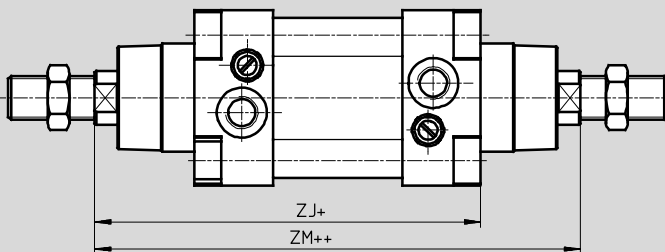
DNG



- 1 Socket head screw with female thread for mounting attachments
- 2 Regulating screw for adjustable end-position cushioning

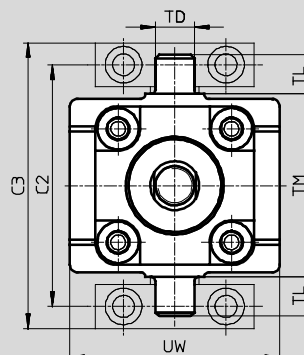
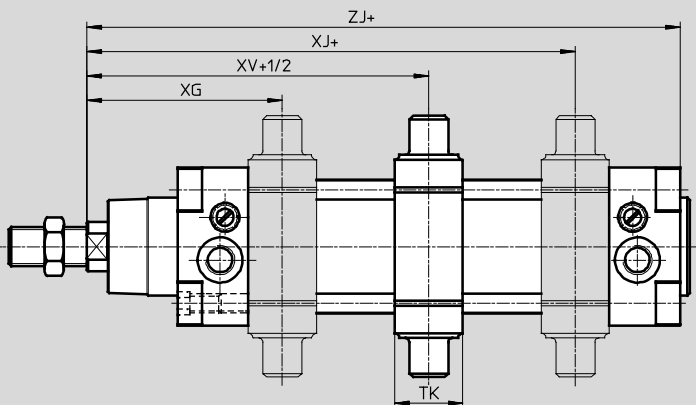
+ = plus stroke length

Variant S2 – Through piston rod



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

DNGZK/DNGZS – with central trunnion mounting adjustable, fixed



- + = plus stroke length
- +1/2 = plus half stroke length

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552
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Technical data

∅ [mm]	AM	B ∅ d11	BG	C2	C3	D4 ∅	D5 ∅	E	EE	J2	J3
160	72	65	24	245	280	167	16	186	G $\frac{3}{4}$	16	22
200	72	75	24	295	330	210	16	230	G $\frac{3}{4}$	22	22
250	84	90	25.5	375	420	254	18.3	270	G1	25	25
320	96	110	28.5	465	520	325	22	340	G1	30	30

∅ [mm]	KK	L1	L2	L7	MM ∅	PL	RT	TD ∅ e9	TG	TK	TL
160	M36x2	55	180 ±1.1	8.5	40	25.5	M16	32	140	48	32
200	M36x2	65	180 ±1.6	-	40	23	M16	32	175	48	32
250	M42x2	67	200 ±2	-	50	31	M20	40	220	60	40
320	M48x2	82	220 ±2	-	63	31	M24	50	270	70	50

∅ [mm]	TM	UW	VA	WH	XG	XJ	XV	ZJ	ZM	⌀C1	⌀C4
160	200	200	6	80	155 ±2.6	185 ±2.6	170 ±2.6	260	340	36	32
200	250	240	6	95	165 ±2.2	205 ±2.2	185 ±2.2	275	370	36	32
250	320	270	10	105	187	223	205	305	410	46	36
320	400	340	10	120	211	249	230	340	460	55	46

 Note

DNGZS-250/-320-...-PPV-A:
The central trunnion mounting is fitted as standard tightly screwed with the tie rods in the cylinder mid-section. As a special design,

mounting is possible between the dimensions XG and XJ.
The required dimension XV must be entered in the order (→ 16).

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

Technical data

Ordering data					
Design	Stroke [mm]	Piston Ø 160 [mm]		Piston Ø 200 [mm]	
		Part No.	Type ¹⁾	Part No.	Type ¹⁾
Basic version					
Variable stroke	1 ... 2,000 ²⁾	33024	DNG-160-...-PPV-A	33025	DNG-200-...-PPV-A
	1 ... 1,100 ²⁾	-		-	
Variant S2	1 ... 2,000 ²⁾	34632	DNG-160-...-PPV-A-S2	34633	DNG-200-...-PPV-A-S2
	1 ... 1,100 ²⁾	-		-	
Variant S3	1 ... 2,000 ²⁾	34980	DNG-160-...-PPV-A-S3	34981	DNG-200-...-PPV-A-S3
	1 ... 1,100 ²⁾	-		-	
Variant S6	1 ... 2,000 ²⁾	34861	DNG-160-...-PPV-A-S6	34862	DNG-200-...-PPV-A-S6
	1 ... 1,100 ²⁾	-		-	
Variant S8	1 ... 2,000 ²⁾	35497	DNG-160-...-PPV-A-S8	35498	DNG-200-...-PPV-A-S8
	1 ... 1,100 ²⁾	-		-	
with adjustable central trunnion mounting					
Variable stroke	1 ... 2,000 ²⁾	34447	DNGZK-160-...-PPV-A	34456	DNGZK-200-...-PPV-A
Variant S3	1 ... 2,000 ²⁾	34945	DNGZK-160-...-PPV-A-S3	34946	DNGZK-200-...-PPV-A-S3
Variant S6	1 ... 2,000 ²⁾	34954	DNGZK-160-...-PPV-A-S6	34955	DNGZK-200-...-PPV-A-S6
Variant S8	1 ... 2,000 ²⁾	35526	DNGZK-160-...-PPV-A-S8	35527	DNGZK-200-...-PPV-A-S8

1) The scope of delivery includes a hex nut for the piston rod thread.

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

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

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Technical data

Ordering data					
Design	Stroke [mm]	Piston Ø 250 [mm]		Piston Ø 320 [mm]	
		Part No.	Type ¹⁾	Part No.	Type ¹⁾
Basic version					
Variable stroke	1 ... 2,000 ²⁾	-		-	
	1 ... 1,100 ²⁾	151892	DNG-250-...-PPV-A	151897	DNG-320-...-PPV-A
Variant S2	1 ... 2,000 ²⁾	-		-	
	1 ... 1,100 ²⁾	151893	DNG-250-...-PPV-A-S2	151898	DNG-320-...-PPV-A-S2
Variant S3	1 ... 2,000 ²⁾	-		-	
	1 ... 1,100 ²⁾	151894	DNG-250-...-PPV-A-S3	151899	DNG-320-...-PPV-A-S3
Variant S6	1 ... 2,000 ²⁾	-		-	
	1 ... 1,100 ²⁾	151895	DNG-250-...-PPV-A-S6	151900	DNG-320-...-PPV-A-S6
Variant S8	1 ... 2,000 ²⁾	-		-	
	1 ... 1,100 ²⁾	151896	DNG-250-...-PPV-A-S8	151901	DNG-320-...-PPV-A-S8
With fixed central trunnion mounting					
Variable stroke	1 ... 1,100 ²⁾	➔ 16			

1) The scope of delivery includes a hex nut for the piston rod thread.

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

Standard cylinders DNG/DNGZK/DNGZS, to ISO 15552

Ordering data – Modular product DNGZS

M Mandatory data						O Options		
Module No.	Function	Piston Ø	Stroke	Cushioning	Position sensing	Trunnion flange position	Temperature-resistant	Corrosion protection
157500 157504	DNGZS	250 320	10 ... 1 100	PPV	A	...XV	S6	S3 S8
Ordering example								
157504	DNGZS	- 320	- 600	- PPV	- A	- 215XV	- S6	- S3

Ordering table						
Size	250	320	Condi- tions	Code	Enter code	
M Module No.	157500	157504				
Function	Standard cylinder, double-acting, with central trunnion mounting to ISO 15552			DNGZS		DNGZS
Piston Ø [mm]	250	320		-...		
Stroke [mm]	10 ... 1 100			-...		
Cushioning	Pneumatic cushioning adjustable at both ends			-PPV		-PPV
Position sensing	For proximity sensing			-A		-A
O Trunnion flange position [mm]	187 ... 1 323	211 ... 1 349	1	-...XV		
Temperature-resistant	Heat-resistant seals up to max. 120 °C			-S6		
Corrosion protection	Stainless steel piston rod			-S3		
	High corrosion protection including piston rod, stainless steel			2	-S8	

1 ...XV Trunnion flange at standard mid-position of cylinder:
Piston Ø 250 mm: $205 \text{ mm} + \frac{\text{Stroke}}{2}$
Piston Ø 320 mm: $230 \text{ mm} + \frac{\text{Stroke}}{2}$

2 S8 Not with S6.

Transfer order code

DNGZS - - - **PPV** - **A** - - -

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

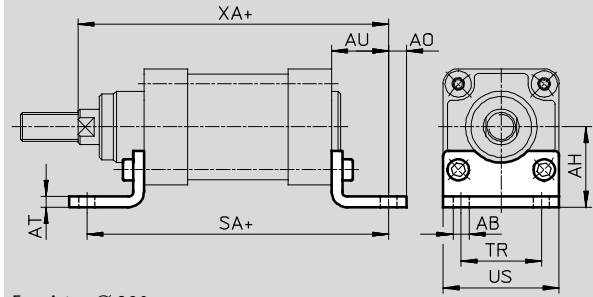
Accessories

Foot mounting HNG

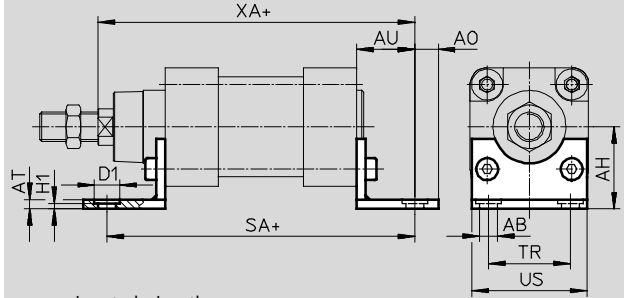
Material:
Galvanised steel
Free of copper and PTFE



For piston Ø 160 ... 250



For piston Ø 320



+ = plus stroke length

Dimensions and ordering data															
For Ø [mm]	AB Ø H14	AH	AO	AT	AU	D1	H1	SA	TR	US	XA	CRC ¹⁾	Weight [g]	Part No.	Type
160	18.5	115	20	10	60	-	-	300	115	169	320	2	2,200	34476	HNG-160
200	24	135	30	12	70	-	-	320	135	214	345	2	3,795	34477	HNG-200
250	28	165	35	20	75	-	-	350	165	270	380	2	8,000	157510	HNG-250
320	35	200	40	25	85	60	23	390	200	340	425	2	13,000	157511	HNG-320

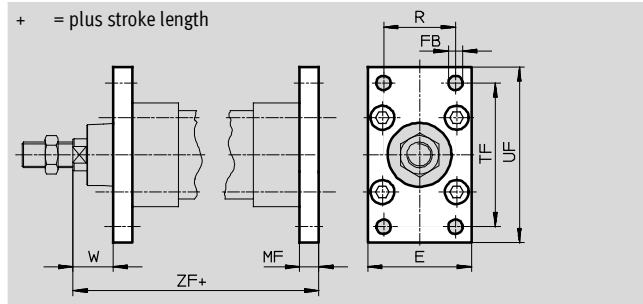
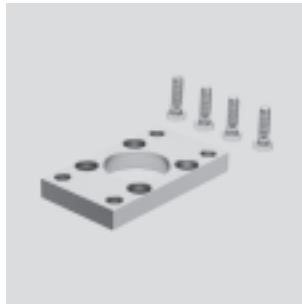
1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

Accessories

Flange mounting FNG

Material:
Painted nodular graphite cast iron
Free of copper and PTFE



Dimensions and ordering data												
For Ø	E	FB	MF	R	TF	UF	W	ZF	CRC ¹⁾	Weight	Part No.	Type
[mm]		Ø								[g]		
160	180	18	20	115	230	280	60	280	1	3,550	34478	FNG-160
200	220	22	25	135	270	320	70	300	1	5,321	34479	FNG-200
250	270	26	25	165	330	390	80	330	1	8,657	157508	FNG-250
320	340	33	30	200	400	470	90	370	1	15,109	157509	FNG-320

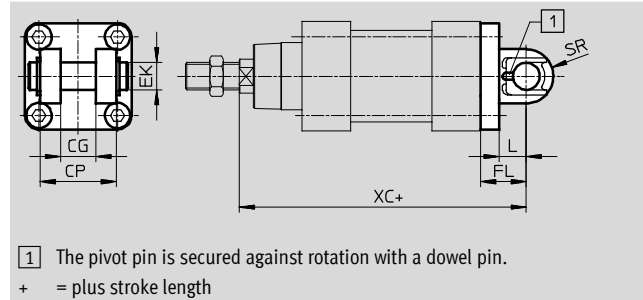
1) Corrosion resistance class 1 according to Festo standard 940 070
Components with light corrosion exposure. Protection for transport and storage. Components without significant decorative function or surface, e.g. installed out of sight internally or behind covers.

Swivel flange SNG

for clevis foot LSNG

Material:
Die-cast aluminium

RoHS-compliant
Free of copper and PTFE



Dimensions and ordering data												
For Ø	CG	CP	EK	FL	L	SR	XC	CRC ¹⁾	Weight	Part No.	Type	
[mm]	H14	d12	Ø						[g]			
160	43	122	35	55	35	32	315	2	3,285	152597	SNG-160	
200	43	122	35	60	35	32	335	2	4,600	152598	SNG-200	

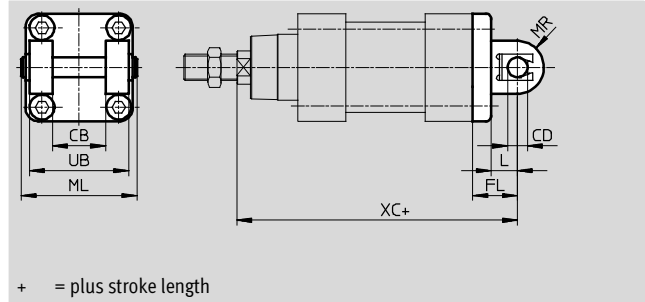
1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

Accessories

Swivel flange SNGB for clevis foot LN/LSN

Material:
Die-cast aluminium
Ø 200: Steel



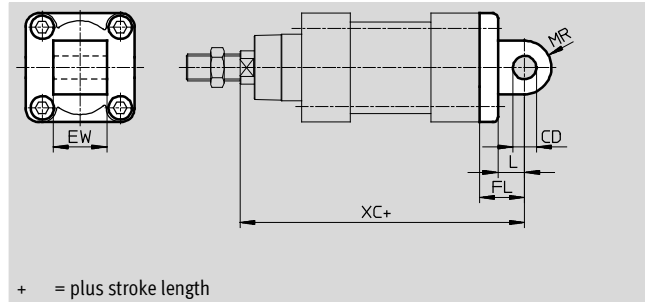
Dimensions and ordering data												
For Ø	CB	CD	FL	L	ML	MR	UB	XC	CRC ¹⁾	Weight	Part No.	Type
[mm]	Ø	Ø					h14			[g]		
160	90	30	55	37	191	30	170	315	2	7,000	34547	SNGB-160
200	90	30	60	35	191	36	170	335	2	11 000	562455	SNGB-200-B
250	110	40	70	47	231	40	200	375	2	15 200	157512	SNGB-250
320	120	45	80	52	253	45	220	420	2	26 450	157513	SNGB-320

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents

Swivel flange SNGL

Material:
Die-cast aluminium

Variant CT:
Free of copper and PTFE










Dimensions and ordering data											
For Ø	CD	EW	FL	L	MR	XC	CRC ¹⁾	Weight	Part No.	Type	
[mm]	Ø							[g]			
160	30	90	55	35	25	315	2	2,252	151534	SNGL-160	
200	30	90	60	35	25	335	2	3,306	151535	SNGL-200	

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents

Standard cylinders DNG/DNGZK/DNGZS, ISO 15552



Accessories

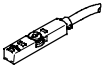
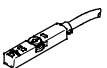
Ordering data – Mounting attachments				Technical data → Internet: clevis foot			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Clevis foot LSNG				Clevis foot LNG			
	160	152599	LSNG-160		160	–	
	200	152600	LSNG-200		200	33898	LNG-200
Clevis foot LSN							
	160	6988	LSN-160				
	200	6989	LSN-200				
	250	6990	LSN-250				
	320	6991	LSN-320				

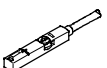


Ordering data – Piston rod attachments				Technical data → Internet: piston-rod attachment			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Rod eye SGS				Rod clevis SGA			
	160	10775	SGS-M36x2		160	10775	SGA-M36x2
	200				200		
	250	10776	SGS-M42x2		–	–	
	320	10777	SGS-M48x2		–	–	
Rod clevis SG				Self-aligning rod coupler FK			
	160	9581	SG-M36x2		160	10746	FK-M36x2
	200				200		
	250	9582	SG-M42x2		250	–	
	320	9583	SG-M48x2		320	–	


Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

Accessories

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
	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

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 – Mounting kits for proximity sensors SME/SMT-8			Technical data → Internet: smbz	
	For Ø	Materials	Part No.	Type
	160 ... 320 mm	Rail: Wrought aluminium alloy, anodised Screws: High-alloy steel Free of copper and PTFE	537808	SMBZ-8-125/320


Standard cylinders DNG/DNGZK/DNGZS, ISO 15552

Accessories

FESTO

Ordering data – Rectangular proximity sensors, magneto-resistive						Technical data → Internet: smto	
	Mounting	Switch output	Electrical connection		Cable length [m]	Part No.	Type
			Cables	M8 plug			
NO contact							
	Via accessories	PNP	3-wire	–	2.5	151683	SMTO-1-PS-K-LED-24-C
			–	3-pin	–	151685	SMTO-1-PS-S-LED-24-C
		NPN	3-wire	–	2.5	151684	SMTO-1-NS-K-LED-24-C
			–	3-pin	–	151686	SMTO-1-NS-S-LED-24-C

Ordering data – Rectangular proximity sensors, magnetic reed						Technical data → Internet: smeo	
	Mounting	Electrical connection		Cable length [m]	Part No.	Type	
		Cables	M8 plug				
NO contact							
	Via accessories	3-wire	–	2.5	30459	SMEO-1-LED-24-B	
		3-wire	–	5.0	151672	SMEO-1-LED-24-K5-B	
		–	3-pin	–	150848	SMEO-1-S-LED-24-B	

Ordering data – Mounting kits for proximity sensors SMEO/SMTO-1					Technical data → Internet: smb	
	For Ø	Mounting		Part No.	Type	
	160 ... 320 mm	Directly on the mounting or tie rod		11886	SMB-1	