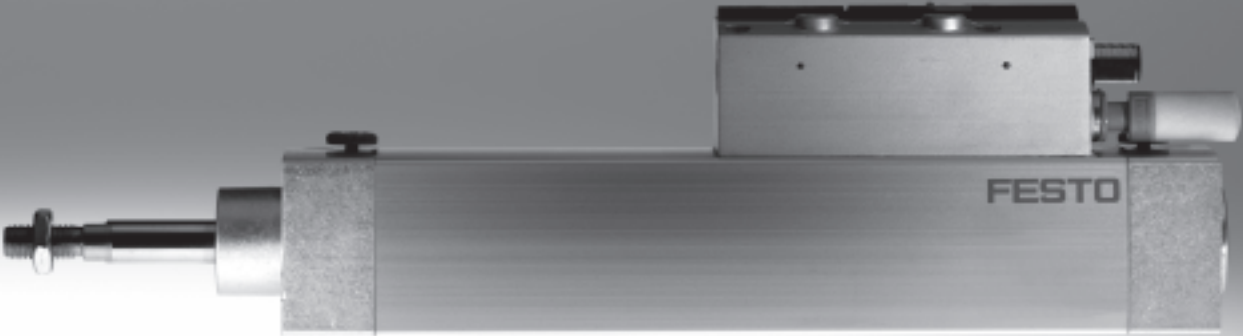


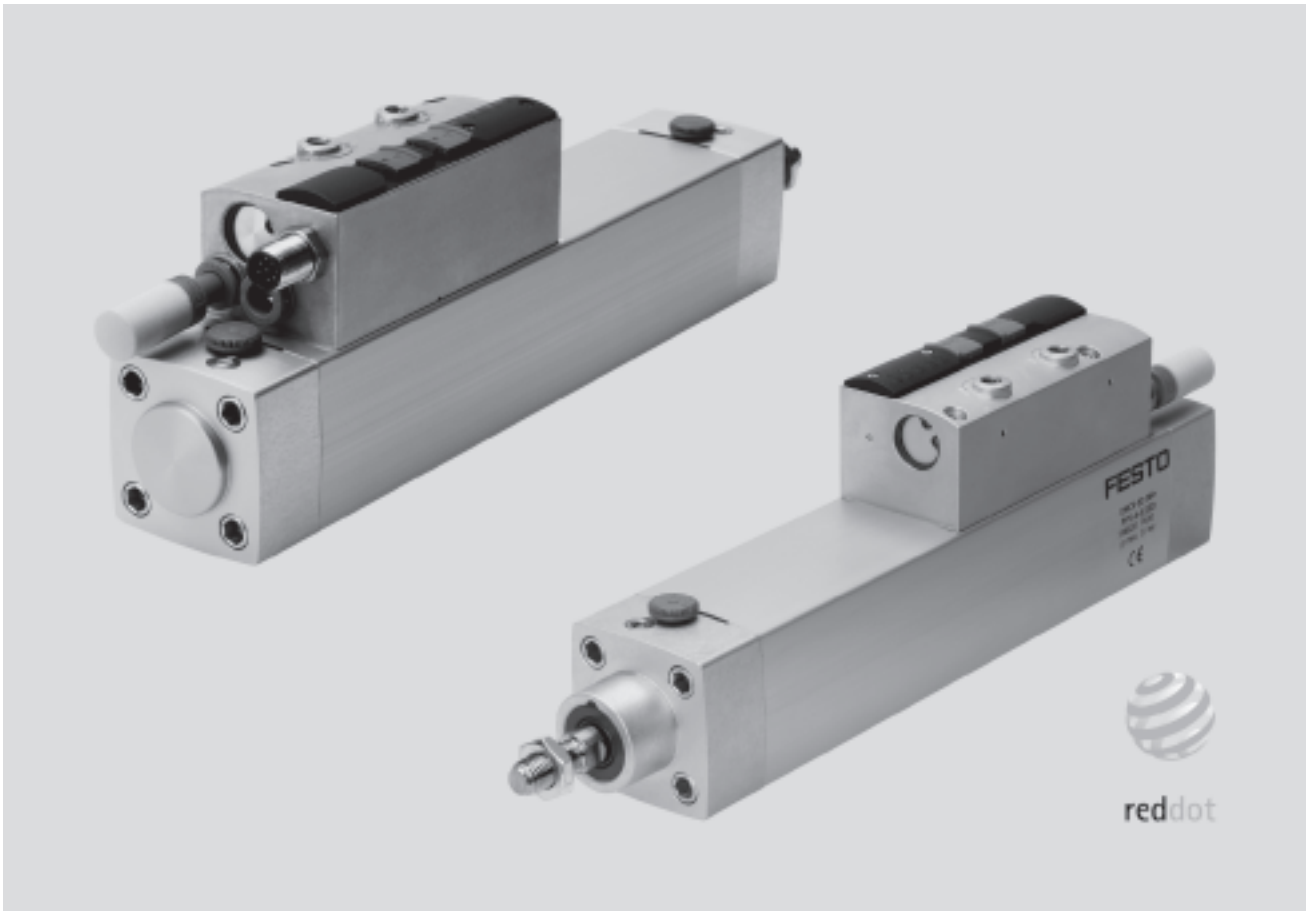
Cylinder/valve combination DNCV, standard port pattern



Cylinder/valve combination DNCV, standard port pattern

Key features

FESTO



Easy to assemble

- Fully assembled and tested drive unit
- Lower costs for ordering, installation and commissioning
- Direct mounting
- Integrated proximity sensors for position sensing
- Integrated exhaust air flow control

Compatible

- Comprehensive range of accessories from the standard cylinder modular system
- Multi-pin connection as interface to PLC, ASi module or CPX terminal (various bus protocols)
- Standards-based cylinders to ISO 15552 (corresponds to the withdrawn standards ISO 6431, DIN ISO 6431, VDMA 24 562, NF E 49 003.1 and UNI 10290)

Flexible

- Integrated 5/2-way or 5/3-way valves
- Optional diagnostic module for monitoring of stroke duration and number of strokes

Reliable

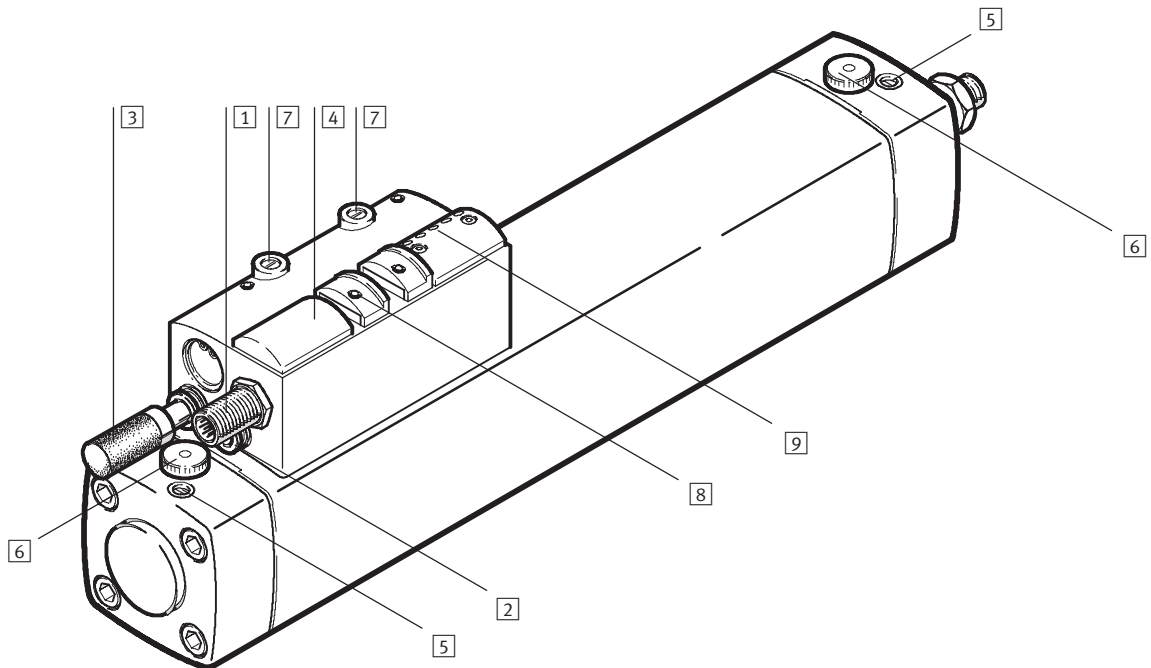
- Status displays for piston position and valve actuation
- Rapid response times through direct connection of the valve and drive
- Adjustable pneumatic end-position cushioning
- Manual override

Cylinder/valve combination DNCV, standard port pattern

Key features

FESTO

High functionality



- 1 Multi-pin connection, M12 plug, 8-pin
- 2 Supply port (QS push-in fitting)
- 3 Silencer (QS push-in fitting for exhaust air)
- 4 Valve
- 5 Regulating screw for pneumatic end-position cushioning PPV
- 6 Adjusting knob for fine adjustment of the position of the integrated proximity sensors (removable to prevent inadvertent resetting)
- 7 Regulating screws for stroke speed, separated for forward and return stroke
- 8 Manual override, non-detenting or detenting
- 9 Diagnostic module (optional) with LEDs for displaying the piston position, valve switching status and for diagnosis of stroke duration and number of strokes

Cylinder/valve combination DNCV, standard port pattern

Key features



Valve		Valve	
Circuit symbol	Description	Circuit symbol	Description
5/2L 	5/2-way valve, single solenoid with spring return: The valve is normally closed, the piston rod retracts.	5/2LA 	5/2-way valve, single solenoid with spring return: The valve is normally open, the piston rod advances.
5/2J 	5/2-way valve, double solenoid (bistable valve): The valve does not have a defined normal position; instead it requires the electrical actuator or manual override for a defined switching status. The piston rod therefore retracts or advances in accordance with the current valve position.	5/3B 	5/3-way valve, pressurised in mid-position: The piston rod advances when the valve is in the normal position due to the differential piston areas.
5/3E 	5/3-way valve, exhausted in mid-position: In the normal valve position, the piston rod is not subjected to any pressure forces; the piston rod can therefore be moved freely.	5/3G 	5/3-way valve, closed in mid-position: The piston rod is subjected to pressure when the valve is in the normal position and therefore remains in the current position. The piston rod may, however, drift when external forces are present; it is particularly important to be aware of this in the case of vertical cylinder configurations.

Manual override		Manual override	
Function diagram	Description	Function diagram	Description
	Non-detenting actuation: The manual override is activated using a pointed object.		Detenting actuation: The manual override is actuated by moving the slide.

Cylinder/valve combination DNCV, standard port pattern

Key features

Basic diagnosis

Proximity switch monitoring:

Display of the piston position (retracted or advanced end position).

The diagnostic LED lights up in the case of double signalling. The error signal is not output to the controller.

Diagnostic module DNCV-...-D (optional, expandable)

Proximity switch monitoring:

In the event of a malfunction or double signalling, apart from the diagnostic LED lighting up, the signal level at the diagnostic output also changes from 24 V to 0 V.

Monitoring of stroke duration:

The motion duration for the forward and return stroke is compared with a limit value that is pre-selected using DIP switches. This limit value can be adjusted in increments from 0.1 s to max. 6.3 s. If the limit value is exceeded, the diagnostic LED lights up and the signal level at the diagnostic output changes from 24 V to 0 V.

Monitoring of number of strokes:

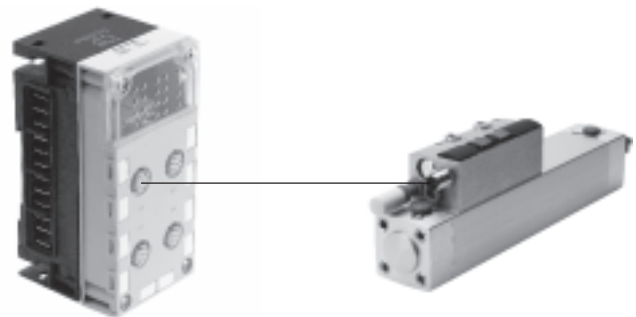
The number of strokes is compared with a limit value that is pre-selected using DIP switches. This limit value can be adjusted in increments from 10,000 strokes to max. 630,000 strokes. If this limit value is exceeded, the diagnostic LED flashes and the signal level at the diagnostic output changes from 24 V to 0 V. This change in signal level can also be deactivated.



CPX connection

Support via a connection block equipped with four M12 sockets means that up to 4 cylinder/valve combinations with integrated proximity sensors can be connected. Two inputs and two outputs per socket are supported for each cylinder/valve combination. It is therefore possible to control max. 2 solenoid coils and

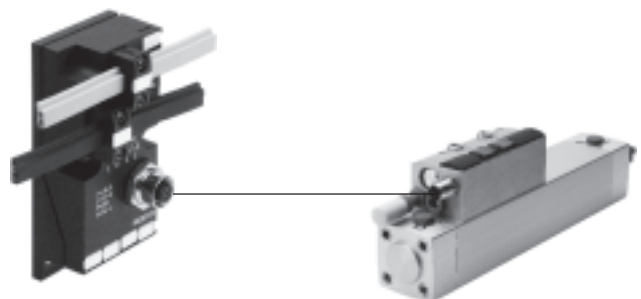
record input signals from 2 proximity sensors with a pre-assembled cable. Two inputs on two sockets are bridged to provide support for the diagnostic module of the cylinder/valve combination so that 2 cylinder/valve combinations with diagnostic modules can be connected.



AS-interface®

Special interface module, configured for the cylinder/valve combination with integrated diagnostic module. This allows easy and flexible connection of the cylinder/valve combination in upstream applications to the AS-interface. Two inputs and

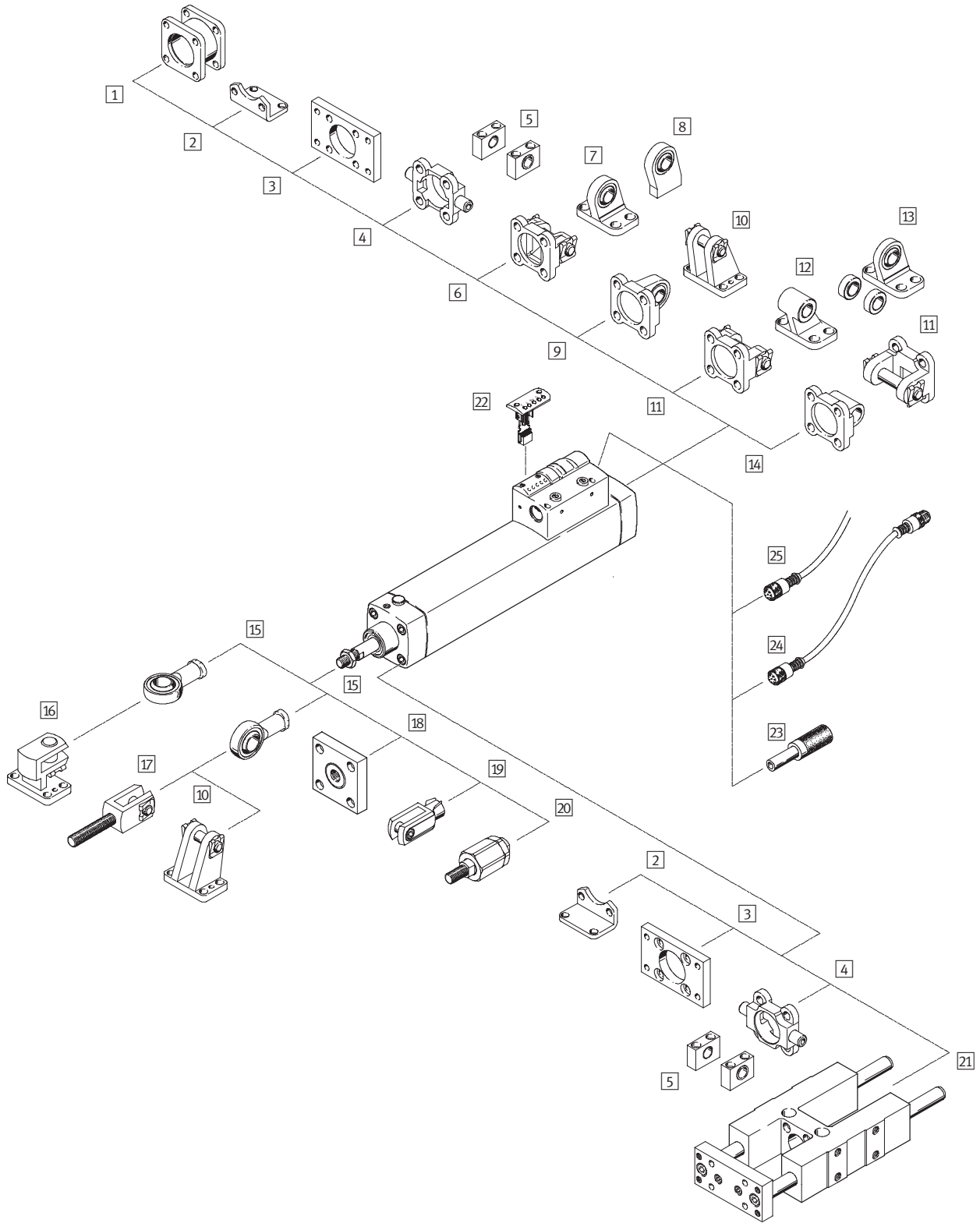
two outputs as well as a diagnostic input on one 8-pin M12 socket. Optimised design for cylinder/valve combination with integrated diagnostic module. Ready-to-connect cable KM12-8GD8GS-2-PU for Festo plug and work™ installation.



Cylinder/valve combination DNCV, standard port pattern

Peripherals overview

FESTO



Cylinder/valve combination DNCV, standard port pattern

Peripherals overview

Mounting attachments and accessories			
	Brief description	→ Page/Internet	
1	Adapter kit DPNC	For connecting two cylinders DNCV with identical piston \varnothing to form a multi-position cylinder	23
2	Foot mounting HNC	For bearing and end cap, corresponds to MS1 to DIN ISO 6431	16
3	Flange mounting FNC	For bearing or end cap, corresponds to MF1/MF2 to DIN ISO 6431	17
4	Trunnion flange ZNCF	For bearing or end cap	21
5	Trunnion supports LNZG	For trunnion flange ZNCF 4	22
6	Swivel flange SNC	For end cap	18
7	Clevis foot LSNG	With spherical bearing for swivel flange SNC 6	24
8	Clevis foot LSNSG	Weld-on, with spherical bearing for swivel flange SNC 6	24
9	Swivel flange SNCS	With spherical bearing for end cap	20
10	Clevis foot LBG	For swivel flange SNCS 9 or rod eye SGS 15	24
11	Swivel flange SNCB	For swivel flange SNCL 14 or for end cap, corresponds to MP2 to DIN ISO 6431	19
12	Clevis foot LNG	For swivel flange SNCB 11	24
13	Clevis foot LSN	With spherical bearing for swivel flange SNCB 11	24
14	Swivel flange SNCL	For end cap, corresponds to MP4 to DIN ISO 6431	20
15	Rod eye SGS	With spherical bearing	25
16	Clevis foot, lateral LQG	For rod eye SGS 15	24
17	Rod clevis SGA	With male thread for rod eye SGS 15	25
18	Coupling piece KSG	For compensating radial deviations	25
19	Rod clevis SG		25
20	Self-aligning rod coupler FK	For compensating radial and angular deviations	25
21	Guide unit FENG	For protecting against torsion at high torque loads	26
22	Diagnostic module DNCV-...-D		14
23	Silencer UC-QS...H		14
24	Connecting cable KM12-8GD8GS-2-PU		15
25	Cable with socket SIM-M12-8GD-...-PU		15

Cylinder/valve combination DNCV, standard port pattern

Type codes



Cylinder/valve combinations

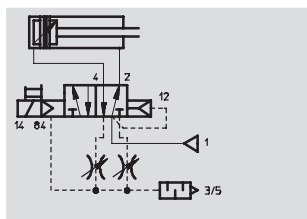
8.1




		DNCV	–	40	–	320	–	PPV	–	A	–	5/2L	D
Type													
Double-acting													
DNCV	Cylinder/valve combination												
Piston Ø [mm]													
Stroke [mm]													
End-position cushioning													
PPV	Adjustable at both ends												
Position sensing													
A	Position sensing												
Valve variant													
5/2L	5/2-way valve, single solenoid, piston rod retracted												
5/2LA	5/2-way valve, single solenoid, piston rod advanced												
5/2J	5/2-way valve, double solenoid												
5/3B	5/3-way valve, mid-position pressurised												
5/3E	5/3-way valve, mid-position exhausted												
5/3G	5/3-way valve, mid-position closed												
Diagnostic module (optional)													
D	With diagnostic module												

Cylinder/valve combination DNCV, standard port pattern

Technical data

Function¹⁾



-  Diameter
32 ... 63 mm
-  Stroke length
70 ... 500 mm
-  www.festo.com



1) E.g. with 5/2-way valve, single solenoid

General technical data				
Piston Ø	32	40	50	63
Cylinder				
Pneumatic connection	→ valve			
Piston rod thread	M10x1.25	M12x1.25	M16x1.5	M16x1.5
Operating medium	Filtered compressed air, lubricated or unlubricated			
Constructional design	Piston			
	Piston rod			
	Smooth profile barrel			
Cushioning	Adjustable at both ends			
Cushioning length [mm]	20	20	22	22
Max. speed ¹⁾ [m/s]	1.5	1.1	1.3	0.8
Position sensing	Via integrated proximity sensors			
Type of mounting	Via female thread			
	Via accessories			
Mounting position	Any			
Valve				
Pneumatic connection	QS-8	QS-8	QS-10	QS-10
Electrical connection	M12 plug, 8-pin			
Constructional design	Piston spool valve			
Operating voltage	24 V DC +10/-15%			
Power consumption	Pull: 1 W; hold: 0.5 W			
Switching position display	By means of integrated control electronics			
Manual override	Non-detenting/detenting			
Exhaust air flow control	Integrated			
Exhaust air	Ducted, common output 3/5 with silencer			
Silencer	UC-8	UC-8	UC-10	UC-10
Proximity sensor				
Mode of operation	Reed contact			
Type of mounting	Integrated in cylinder profile, can be adjusted using external adjusting knob			
Switching function	NO contact			
Electrical connection	Integrated conductive track			
Operating voltage	24 V DC +15/-25%			
Switching current	6 mA ≤ I ≤ 20 mA, short circuit proof			
Adjustment range	±10 mm in both end positions			
Repetition accuracy [mm]	±0.2			

1) retracting, with 5/2-way valve

Cylinder/valve combination DNCV, standard port pattern

Technical data

Operating and environmental conditions				
Piston \varnothing	32	40	50	63
Operating pressure [bar]	3 ... 8			
Ambient temperature [°C]	-5 ... +50			
Corrosion resistance class CRC ¹⁾	2			
Protection class	IP65			
Certification	C tick			

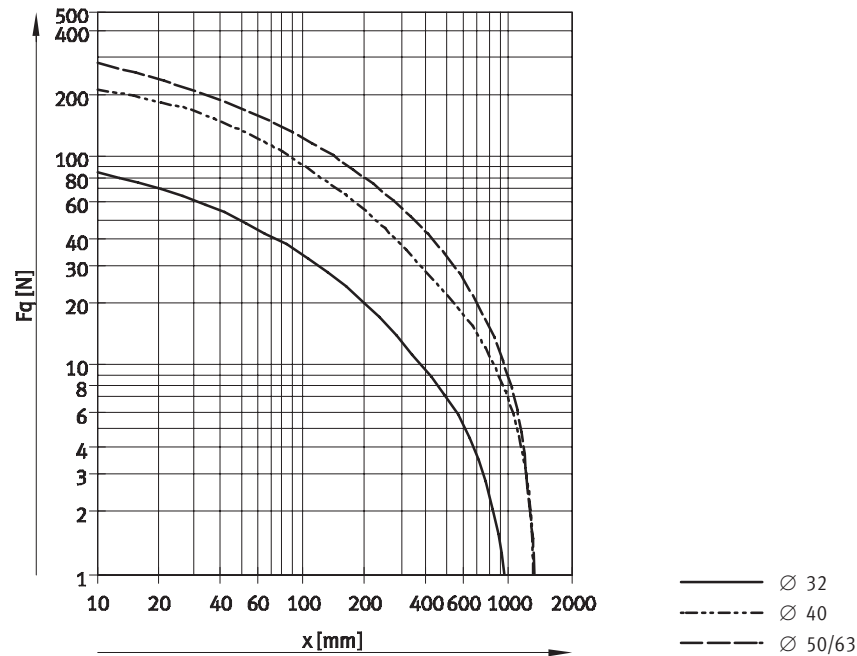
1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating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

Forces [N] and impact energy [J]				
Piston \varnothing	32	40	50	63
Theoretical force at 6 bar, advancing	483	754	1178	1870
Theoretical force at 6 bar, retracting	415	633	990	1682
Max. impact energy at the end positions	0.1	0.2	0.2	0.5

-  - Note

Sizing software
 ProPneu
www.festo.com

Max. lateral force F_q as a function of the projection x



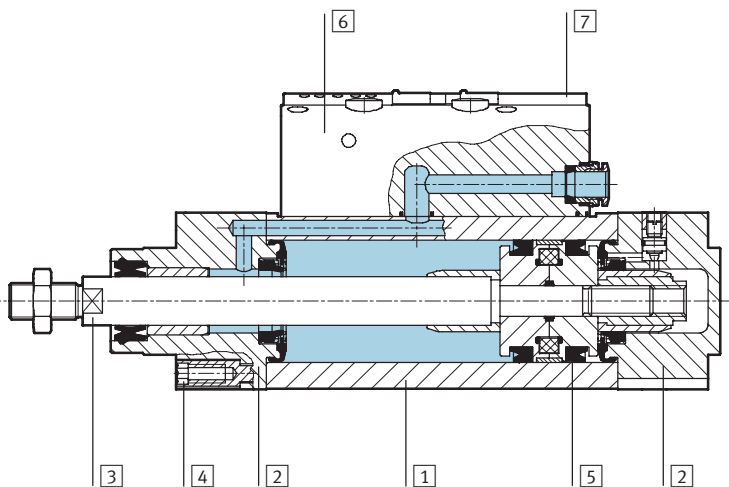
Cylinder/valve combination DNCV, standard port pattern

Technical data

Weights [g]				
Piston Ø	32	40	50	63
Product weight with 0 mm stroke	900	1275	1960	2620
Additional weight per 10 mm stroke	36	49	79	88
Moving load with 0 mm stroke	162	307	538	663
Additional load per 10 mm stroke	9	16	25	25

Materials

Sectional view



Cylinder		
1	Cylinder barrel	Smooth anodised aluminium
2	Bearing/end caps	Anodised aluminium
3	Piston rod	High-alloy steel
4	Flange screws	Galvanised steel
5	Dynamic seals	Polyurethane
-	Static seals	Nitrile rubber
-	Lubricant	Klüberplex BE 31-222
Valve		
6	Housing	Coated aluminium
7	Covers	Polyacetate
-	Plug housing	Nickel-plated brass
-	Plug contacts	Gold-plated brass

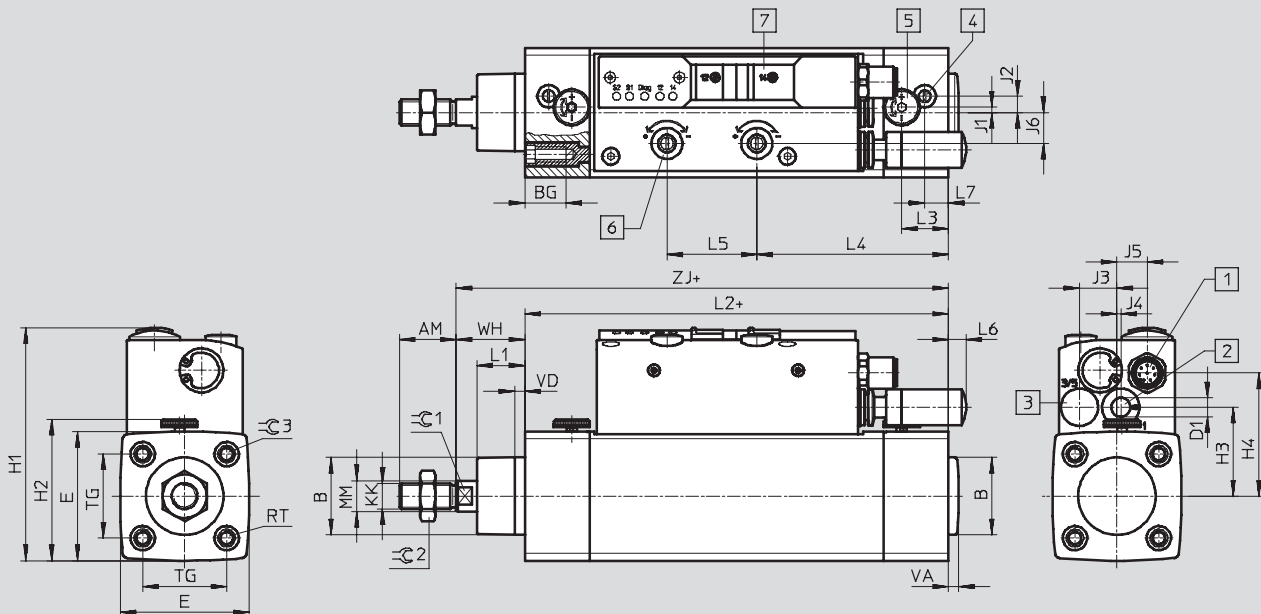
Cylinder/valve combination DNCV, standard port pattern

Technical data

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Dimensions

Download CAD data → www.festo.com



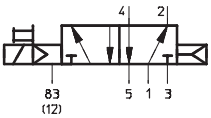
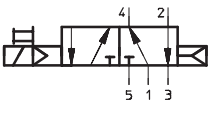
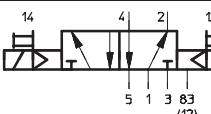
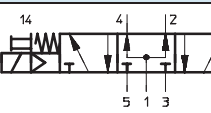
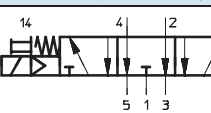
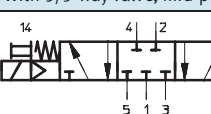
- 1 Multi-pin connection, plug M12, 8-pin
 - 2 Supply port
 - 3 Silencer for exhaust air
 - 4 Regulating screw for pneumatic end-position cushioning PPV
 - 5 Adjusting knob for fine adjustment of the integrated proximity sensors
 - 6 Regulating screw for stroke speed
 - 7 Manual override, non-detenting/detenting
- + = plus stroke length

∅	AM	B	BG	D1	E	H1	H2	H3	H4	J1	J2	J3	J4	J5	J6	KK	L1
[mm]		∅ d11		∅		±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5		
32	22	30	16	8	50	91	58	34	47	6	2	15	2	12	14	M10x1.25	19
40	24	35	16	8	58	99	66	38	85	6	2	15	2	12	14	M12x1.25	21
50	32	40	17	10	70	114	74	44	61	10	9	17	4	15	17	M16x1.5	27
63	32	45	17	10	81	125	85	49	67	10	9	17	4	15	17	M16x1.5	27

∅	L2	L3	L4	L5	L6	L7	MM	RT	TG	VA	VD	WH	ZJ	∅1	∅2	∅3
[mm]		±0.5	±0.5	±0.5	±0.5	±0.5	∅			max.	max.	±1.5				
32	94 ±0.4	18	74	35	7	9	12	M6	32.5 ±0.5	4	4.5	26	120.7	10	17	6
40	104.8 ±0.5	23	75	35	7	14	16	M6	38 ±0.5	4	4	31	135.6	13	19	6
50	105.9 ±0.5	23	79	46	15	12	20	M8	46.5 ±0.6	4	5	38	144	17	24	8
63	120.9 ±0.5	29	81	46	9	15	20	M8	56.5 ±0.7	4	5	39	159.5	17	24	8

Cylinder/valve combination DNCV, standard port pattern

Technical data

Ordering data – Cylinder/valve combination							
Piston Ø [mm]	Stroke [mm]	Basic version		With diagnostic module			
		Part No.	Type	Part No.	Type		
With 5/2-way single solenoid valve, piston rod retracted in normal position							
	32	70 ... 500	196 796	DNCV-32-...-PPV-A-5/2L	196 816	DNCV-32-...-PPV-A-5/2LD	
	40	70 ... 500	196 797	DNCV-40-...-PPV-A-5/2L	196 817	DNCV-40-...-PPV-A-5/2LD	
	50	85 ... 500	196 798	DNCV-50-...-PPV-A-5/2L	196 818	DNCV-50-...-PPV-A-5/2LD	
	63	85 ... 500	196 799	DNCV-63-...-PPV-A-5/2L	196 819	DNCV-63-...-PPV-A-5/2LD	
With 5/2-way single solenoid valve, piston rod advanced in normal position							
	32	70 ... 500	536 424	DNCV-32-...-PPV-A-5/2LA	536 428	DNCV-32-...-PPV-A-5/2LAD	
	40	70 ... 500	536 425	DNCV-40-...-PPV-A-5/2LA	536 429	DNCV-40-...-PPV-A-5/2LAD	
	50	85 ... 500	536 426	DNCV-50-...-PPV-A-5/2LA	536 430	DNCV-50-...-PPV-A-5/2LAD	
	63	85 ... 500	536 427	DNCV-63-...-PPV-A-5/2LA	536 431	DNCV-63-...-PPV-A-5/2LAD	
With 5/2-way double solenoid valve							
	32	70 ... 500	196 800	DNCV-32-...-PPV-A-5/2J	196 820	DNCV-32-...-PPV-A-5/2JD	
	40	70 ... 500	196 801	DNCV-40-...-PPV-A-5/2J	196 821	DNCV-40-...-PPV-A-5/2JD	
	50	85 ... 500	196 802	DNCV-50-...-PPV-A-5/2J	196 822	DNCV-50-...-PPV-A-5/2JD	
	63	85 ... 500	196 803	DNCV-63-...-PPV-A-5/2J	196 823	DNCV-63-...-PPV-A-5/2JD	
With 5/3-way valve, mid-position pressurised							
	32	70 ... 500	196 804	DNCV-32-...-PPV-A-5/3B	196 824	DNCV-32-...-PPV-A-5/3BD	
	40	70 ... 500	196 805	DNCV-40-...-PPV-A-5/3B	196 825	DNCV-40-...-PPV-A-5/3BD	
	50	85 ... 500	196 806	DNCV-50-...-PPV-A-5/3B	196 826	DNCV-50-...-PPV-A-5/3BD	
	63	85 ... 500	196 807	DNCV-63-...-PPV-A-5/3B	196 827	DNCV-63-...-PPV-A-5/3BD	
With 5/3-way valve, mid-position exhausted							
	32	70 ... 500	196 808	DNCV-32-...-PPV-A-5/3E	196 828	DNCV-32-...-PPV-A-5/3ED	
	40	70 ... 500	196 809	DNCV-40-...-PPV-A-5/3E	196 829	DNCV-40-...-PPV-A-5/3ED	
	50	85 ... 500	196 810	DNCV-50-...-PPV-A-5/3E	196 830	DNCV-50-...-PPV-A-5/3ED	
	63	85 ... 500	196 811	DNCV-63-...-PPV-A-5/3E	196 831	DNCV-63-...-PPV-A-5/3ED	
With 5/3-way valve, mid-position closed							
	32	70 ... 500	196 812	DNCV-32-...-PPV-A-5/3G	196 832	DNCV-32-...-PPV-A-5/3GD	
	40	70 ... 500	196 813	DNCV-40-...-PPV-A-5/3G	196 833	DNCV-40-...-PPV-A-5/3GD	
	50	85 ... 500	196 814	DNCV-50-...-PPV-A-5/3G	196 834	DNCV-50-...-PPV-A-5/3GD	
	63	85 ... 500	196 815	DNCV-63-...-PPV-A-5/3G	196 835	DNCV-63-...-PPV-A-5/3GD	

Ordering data – Spare valves							
Piston Ø [mm]	Function	Part No.	Type	Piston Ø [mm]	Function	Part No.	Type
32/40	5/2L	647 106	DNCV-32/40,5/2L	50/63	5/2L	647 111	DNCV-50/63,5/2L
	5/2LA	672 235	DNCV-32/40,5/2LA		5/2LA	672 236	DNCV-50/63,5/2LA
	5/2J	647 107	DNCV-32/40,5/2J		5/2J	647 112	DNCV-50/63,5/2J
	5/3B	647 108	DNCV-32/40,5/3B		5/3B	647 113	DNCV-50/63,5/3B
	5/3E	647 109	DNCV-32/40,5/3E		5/3E	647 114	DNCV-50/63,5/3E
	5/3G	647 110	DNCV-32/40,5/3G		5/3G	647 115	DNCV-50/63,5/3G

Ordering data – Wearing parts kits		
Piston Ø [mm]	Part No.	Type
32	365 195	DNCV-32-PPV-A ¹⁾
40	365 196	DNCV-40-PPV-A ¹⁾
50	365 197	DNCV-50-PPV-A ¹⁾
63	365 198	DNCV-63-PPV-A ¹⁾

1) Assembly grease included in scope of delivery.

Cylinder/valve combination DNCV, standard port pattern

Accessories

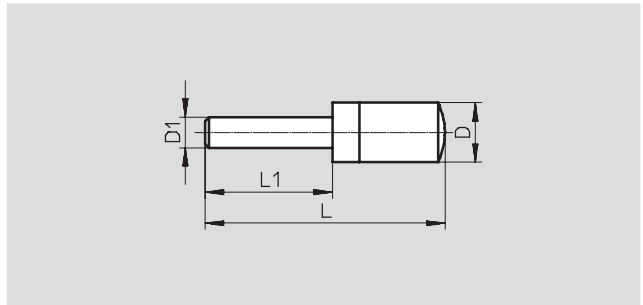
Diagnostic module DNCV-...-D



Ordering data						
For Ø	Certification	Weight	Part No.	Type		
[mm]		[g]				
32 ... 63	C tick	62.4	536 945	DNCV-...-D		

Silencer UC-QS

Material:
Polyurethane



Dimensions and ordering data						
For Ø	D	D1	L	L1	Weight	Part No. Type
[mm]	Ø	Ø			[g]	
32/40	13.8	8	54.4	23.4	2.5	175 611 UC-QS-8H
50/63	17.8	10	68.7	26.7	5.2	526 475 UC-QS-10H

Cylinder/valve combination DNCV, standard port pattern

Accessories

Cable with socket SIM

Material:
Housing: Polyurethane
Cable sheath: Polyurethane



Ordering data			Technical data → Internet: sim	
For Ø	Cable length	Weight	Part No.	Type
[mm]	[m]	[g]		
32 ... 63	2	147.9	525 616	SIM-M12-8GD-2-PU
	5	343.7	525 618	SIM-M12-8GD-5-PU

Connecting cable KM12

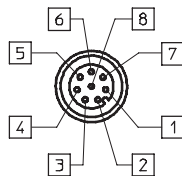
Material:
Housing: Polyurethane
Cable sheath: Polyurethane



Ordering data			Technical data → Internet: km12	
For Ø	Cable length	Weight	Part No.	Type
[mm]	[m]	[g]		
32 ... 63	2	156.3	525 617	KM12-8GD8GS-2-PU

Terminal allocation

M12 plug socket



- | | |
|----------------------------|------------------------|
| 1 24 V sensor (white, WH) | 5 Coil 14 (grey, GY) |
| 2 Sensor 2 (brown, BN) | 6 Coil 12 (pink, PK) |
| 3 Sensor 1 (green, GN) | 7 Diagnosis (blue, BU) |
| 4 0 V sensors (yellow, YE) | 8 0 V coils (red, RD) |

Cylinder/valve combination DNCV, standard port pattern

Accessories

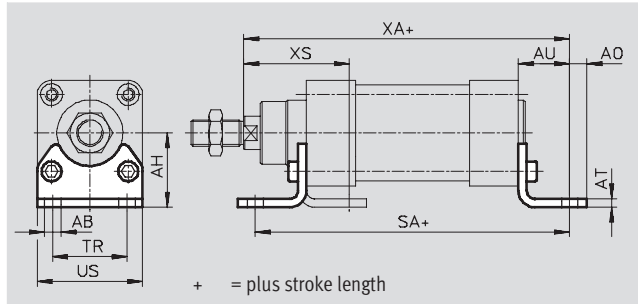
Foot mounting HNC/CRHNC

Material:

HNC: Galvanised steel

CRHNC: High-alloy steel

Free of copper, PTFE and silicone



Dimensions and ordering data										
For \varnothing	AB \varnothing	AH	AO	AT	AU	SA	TR	US	XA	XS
[mm]										
32	7	32	6.5	4	24	142	32	45	144	45
40	10	36	9	4	28	161	36	54	163	53
50	10	45	9.5	5	31	170	45	64	175	62
63	10	50	12.5	5	32	185	50	75	190	63

For \varnothing	Basic version				High corrosion protection			
	CRC ¹⁾	Weight [g]	Part No.	Type	CRC ¹⁾	Weight [g]	Part No.	Type
32	2	135	174 369	HNC-32	4	135	176 937	CRHNC-32
40	2	180	174 370	HNC-40	4	180	176 938	CRHNC-40
50	2	325	174 371	HNC-50	4	325	176 939	CRHNC-50
63	2	405	174 372	HNC-63	4	405	176 940	CRHNC-63

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Corrosion resistance class 4 according to Festo standard 940 070

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

Cylinder/valve combination DNCV, standard port pattern

Accessories

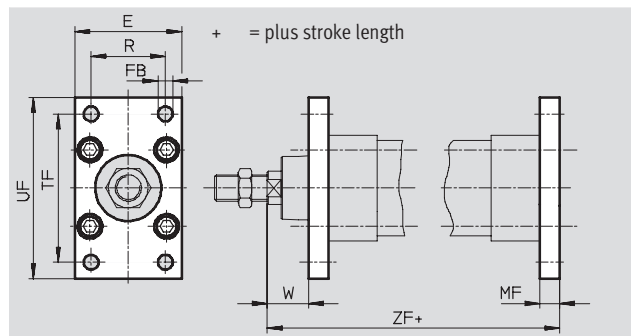
Flange mounting FNC/CRFNG

Material:

FNC: Galvanised steel

CRFNG: High-alloy steel

Free of copper, PTFE and silicone



Dimensions and ordering data								
For \varnothing	E	FB	MF	R	TF	UF	W	ZF
[mm]		\varnothing H13						
32	45	7	10	32	64	80	16	130.7
40	54	9	10	36	72	90	21	145.6
50	65	9	12	45	90	110	26	156
63	75	9	12	50	100	120	27	171.5

For \varnothing	Basic version				High corrosion protection			
	CRC ¹⁾	Weight [g]	Part No.	Type	CRC ¹⁾	Weight [g]	Part No.	Type
32	2	240	174 376	FNC-32	4	240	161 846	CRFNG-32
40	2	280	174 377	FNC-40	4	300	161 847	CRFNG-40
50	2	520	174 378	FNC-50	4	550	161 848	CRFNG-50
63	2	690	174 379	FNC-63	4	710	161 849	CRFNG-63

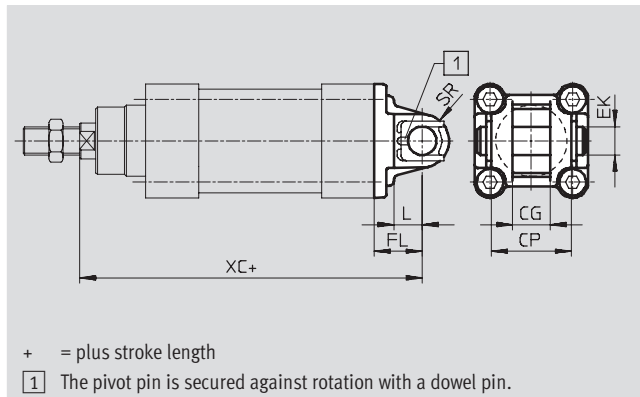
1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.
 Corrosion resistance class 4 according to Festo standard 940 070
 Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

Cylinder/valve combination DNCV, standard port pattern

Accessories

Swivel flange SNC

Material:
die-cast aluminium



Dimensions and ordering data											
For Ø	CG	CP	EK	FL	L	SR	XC	CRC ¹⁾	Weight	Part No.	Type
[mm]	H14	h14	Ø h9	±0.2					[g]		
32	14	34	10	22	13	10	142.7	2	90	174 383	SNC-32
40	16	40	12	25	16	12	160.6	2	120	174 384	SNC-40
50	21	45	16	27	16	12	171	2	240	174 385	SNC-50
63	21	51	16	32	21	16	191.5	2	320	174 386	SNC-63

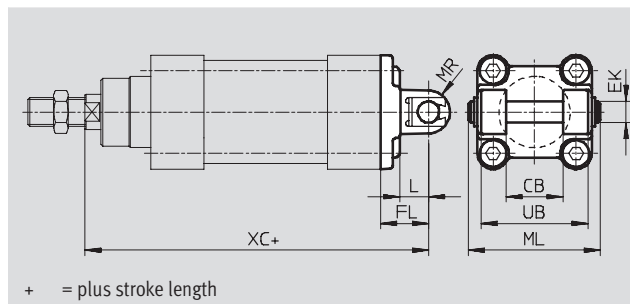
1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating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

Cylinder/valve combination DNCV, standard port pattern

Accessories

Swivel flange SNCB/SNCB-...-R3

Material:
 SNCB: Die-cast aluminium
 SNCB-...-R3: Die-cast aluminium,
 protective coating, high corrosion
 protection
 Free of copper, PTFE and silicone



Dimensions and ordering data								
For Ø	CB	EK	FL	L	ML	MR	UB	XC
[mm]	H14	Ø e8	±0.2				h14	
32	26	10	22	13	55	8.5	45	142.7
40	28	12	25	16	63	12	52	160.6
50	32	12	27	16	71	12	60	171
63	40	16	32	21	83	16	70	191.5

For Ø	Weight	Basic version		Variant R3 – High corrosion protection		
		Part No.	Type	CRC ¹⁾	Part No.	Type
[mm]	[g]					
32	100	174 390	SNCB-32	3	176 944	SNCB-32-R3
40	150	174 391	SNCB-40	3	176 945	SNCB-40-R3
50	225	174 392	SNCB-50	3	176 946	SNCB-50-R3
63	365	174 393	SNCB-63	3	176 947	SNCB-63-R3

1) Corrosion resistance class 3 according to Festo standard 940 070
 Components requiring higher corrosion resistance. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

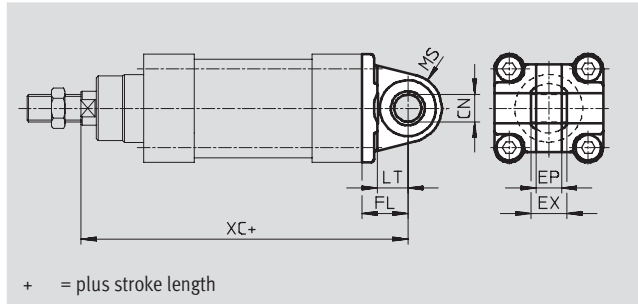
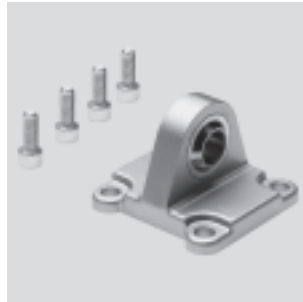
Cylinder/valve combination DNCV, standard port pattern

FESTO

Accessories

Swivel flange SNCS

Material:
Die-cast aluminium

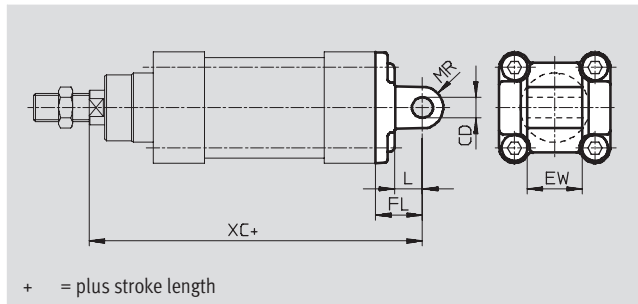
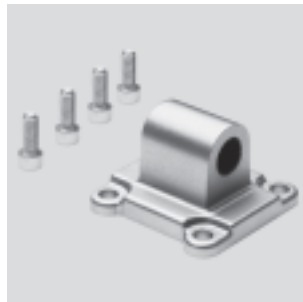


+ = plus stroke length

Dimensions and ordering data										
For \varnothing	CN	EP	EX	FL	LT	MS	XC	Weight	Part No.	Type
[mm]	\varnothing H7	± 0.2		± 0.2				[g]		
32	10	10.5	14	22	13	15	142.7	85	174 397	SNCS-32
40	12	12	16	25	16	17	160.6	125	174 398	SNCS-40
50	16	15	21	27	16	20	171	210	174 399	SNCS-50
63	16	15	21	32	21	22	191.5	280	174 400	SNCS-63

Swivel flange SNCL

Material:
Die-cast aluminium



+ = plus stroke length

Dimensions and ordering data										
For \varnothing	CD	EW	FL	L	MR	XC	Weight	Part No.	Type	
[mm]	\varnothing H9	$-0.2/-0.6$	± 0.2				[g]			
32	10	26	22	13	10	142.7	75	174 404	SNCL-32	
40	12	28	25	16	12	160.6	100	174 405	SNCL-40	
50	12	32	27	16	12	171	160	174 406	SNCL-50	
63	16	40	32	21	16	191.5	250	174 407	SNCL-63	

Cylinder/valve combination DNCV, standard port pattern

Accessories

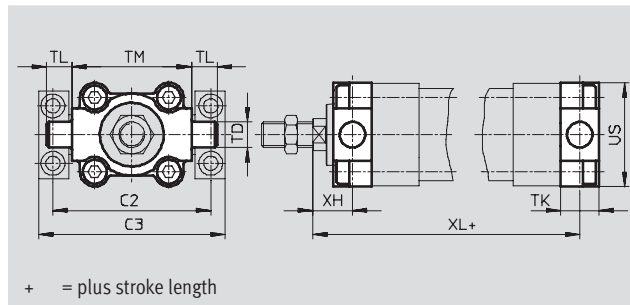
Trunnion flange ZNCF/CRZNG

Material:

ZNCF: High-alloy stainless steel

CRZNG: Electrolytically polished high-alloy stainless steel

Free of copper, PTFE and silicone



+ = plus stroke length

Dimensions and ordering data									
For Ø	C2	C3	TD	TK	TL	TM	US	XH	XL
[mm]			Ø e9						
32	71	86	12	16	12	50	45	18	128.7
40	87	105	16	20	16	63	54	21	145.6
50	99	117	16	24	16	75	64	26	156
63	116	136	20	24	20	90	75	27	171.5

For Ø	Basic version				High corrosion protection			
	CRC ¹⁾	Weight [g]	Part No.	Type	CRC ¹⁾	Weight [g]	Part No.	Type
32	2	130	174 411	ZNCF-32	4	150	161 852	CRZNG-32
40	2	240	174 412	ZNCF-40	4	260	161 853	CRZNG-40
50	2	390	174 413	ZNCF-50	4	430	161 854	CRZNG-50
63	2	600	174 414	ZNCF-63	4	640	161 855	CRZNG-63

1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.
 Corrosion resistance class 4 according to Festo standard 940 070
 Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

Cylinder/valve combination DNCV, standard port pattern

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Accessories

Trunnion support LNZZ

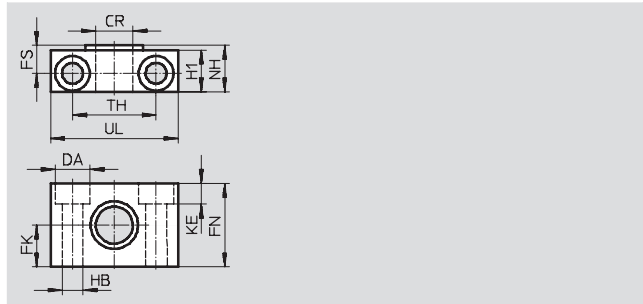
Material:

Trunnion support:

Anodised aluminium

Plain bearing: Plastic

Free of copper, PTFE and silicone



Dimensions and ordering data											
For \varnothing	CR	DA	FK	FN	FS	H1	HB	KE	NH	TH	UL
[mm]	\varnothing	\varnothing	± 0.1				\varnothing			± 0.2	
32	12	11	15	30	10.5	15	6.6	6.8	18	32	46
40, 50	16	15	18	36	12	18	9	9	21	36	55
63	20	18	20	40	13	20	11	11	23	42	65

For \varnothing	Basic version				Variant CT – Free of copper, PTFE and silicone			
	CRC ¹⁾	Weight [g]	Part No.	Type	CRC ¹⁾	Weight [g]	Part No.	Type
32	2	125	32 959	LNZZ-32	2	125	183 463	LNZZ-32-CT
40, 50	2	400	32 960	LNZZ-40/50	2	400	183 464	LNZZ-40/50-CT
63	2	480	32 961	LNZZ-63/80	2	480	183 465	LNZZ-63/80-CT

1) Corrosion resistance class 2 according to Festo standard 940 070

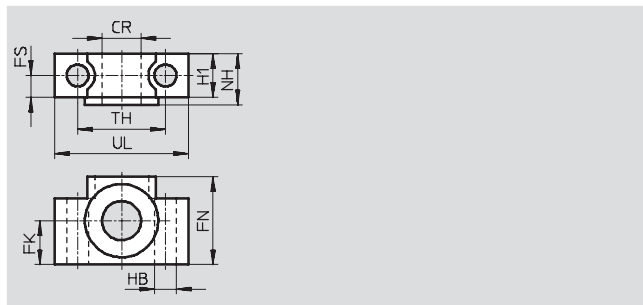
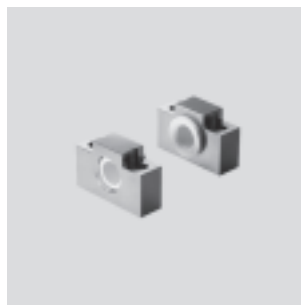
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Trunnion support CRLNZZ

Material:

High-alloy steel

Free of copper, PTFE and silicone



Dimensions and ordering data													
For \varnothing	CR	FK	FN	FS	H1	HB	NH	TH	UL	CRC ¹⁾	Weight	Part No.	Type
[mm]	\varnothing	\varnothing				\varnothing		± 0.2			[g]		
32	12	15	30	10.5	15	6.6	18	32	46	4	200	161 874	CRLNZZ-32
40, 50	16	18	36	12	18	9	21	36	55	4	330	161 875	CRLNZZ-40/50
63	20	20	40	13	20	11	23	42	65	4	440	161 876	CRLNZZ-63/80

1) Corrosion resistance class 4 according to Festo standard 940 070

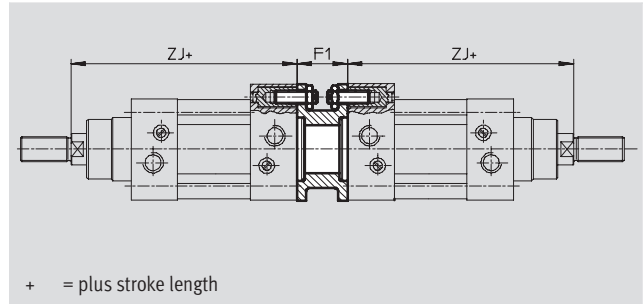
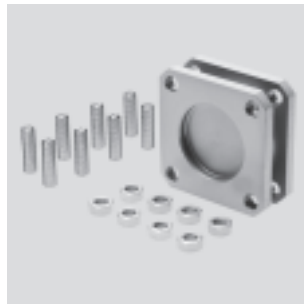
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

Cylinder/valve combination DNCV, standard port pattern


Accessories

Adapter kit DPNC

Material:
 Flange: Wrought aluminium alloy
 Threaded pins, hex nuts: Galvanised steel



Dimensions and ordering data						
For \varnothing [mm]	F1	ZJ	Max. overall stroke length [mm]	Weight [g]	Part No.	Type
32	27	120.7	1000	85	174 418	DPNC-32
40	27	135.6	1000	115	174 419	DPNC-40
50	32	144	1000	210	174 420	DPNC-50
63	28	159.5	1000	360	174 421	DPNC-63

 Note
 The maximum overall stroke length may not be exceeded when combining cylinders and multi-position kits.

Connecting two cylinders with identical piston \varnothing as a 3 or 4-position cylinder

A 3 or 4-position cylinder consists of two separate cylinders whose piston rods advance in opposing directions.

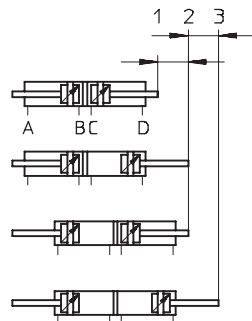
Depending upon actuation and stroke pattern, this type of cylinder can assume up to four positions. In each

case the cylinder is driven precisely against a stop. If one end of the piston rod is fixed, the cylinder barrel

executes the movement. The cylinder must be connected with flexible line connections.

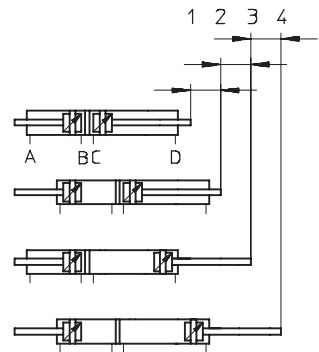
Implementing 3 positions

Two cylinders with identical stroke length must be connected to this end.



Implementing 4 positions

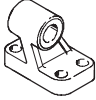
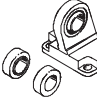
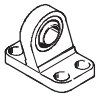

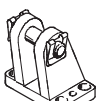
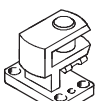
Two cylinders with different stroke lengths must be connected to this end.




Cylinder/valve combination DNCV, standard port pattern

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


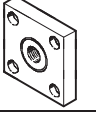
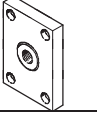

Accessories



Ordering data – Mounting attachments				Technical data → Internet: mounting attachment			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Clevis foot LNG				Clevis foot LSN			
	32	33 890	LNG-32		32	5 561	LSN-32
	40	33 891	LNG-40		40	5 562	LSN-40
	50	33 892	LNG-50		50	5 563	LSN-50
	63	33 893	LNG-63		63	5 564	LSN-63
Clevis foot LSNG				Clevis foot LSNSG			
	32	31 740	LSNG-32		32	31 747	LSNSG-32
	40	31 741	LSNG-40		40	31 748	LSNSG-40
	50	31 742	LSNG-50		50	31 749	LSNSG-50
	63	31 743	LSNG-63		63	31 750	LSNSG-63
Clevis foot LBG				Clevis foot, lateral LQG			
	32	31 761	LBG-32		32	31 768	LQG-32
	40	31 762	LBG-40		40	31 769	LQG-40
	50	31 763	LBG-50		50	31 770	LQG-50
	63	31 764	LBG-63		63	31 771	LQG-63

Ordering data – Corrosion resistant mounting attachments				Technical data → Internet: crlng	
Designation	For Ø	Part No.	Type		
Clevis foot CRLNG					
	32	161 840	CRLNG-32		
	40	161 841	CRLNG-40		
	50	161 842	CRLNG-50		
	63	161 843	CRLNG-63		

Cylinder/valve combination DNCV, standard port pattern

Accessories

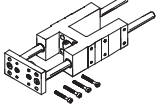
Ordering data – Piston rod attachments				Technical data → Internet: piston rod attachment			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Rod eye SGS				Rod clevis SGA			
	32	9 261	SGS-M10x1,25		32	32 954	SGA-M10x1,25
	40	9 262	SGS-M12x1,25		40	10 767	SGA-M12x1,25
	50	9 263	SGS-M16x1,5		50	10 768	SGA-M16x1,5
	63						
Rod clevis SG				Self-aligning rod coupler FK			
	32	6 144	SG-M10x1,25		32	6 140	FK-M10x1,25
	40	6 145	SG-M12x1,25		40	6 141	FK-M12x1,25
	50	6 146	SG-M16x1,5		50	6 142	FK-M16x1,5
	63						
Coupling piece KSG				Coupling piece KSZ			
	32	32 963	KSG-M10x1,25		32	36 125	KSZ-M10x1,25
	40	32 964	KSG-M12x1,25		40	36 126	KSZ-M12x1,25
	50	32 965	KSG-M16x1,5		50	36 127	KSZ-M16x1,5
	63						
Adapter AD							
	32	157 333	AD-M10x1,25-1/8				
		157 334	AD-M10x1,25-1/4				
	40	160 256	AD-M12x1,25-1/4				
		160 257	AD-M12x1,25-3/8				

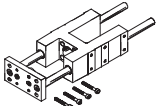
Ordering data – Corrosion resistant piston rod attachments				Technical data → Internet: crsg			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Rod eye CRSGS				Rod clevis CRSG			
	32	195 582	CRSGS-M10x1,25		32	13 569	CRSG-M10x1,25
	40	195 583	CRSGS-M12x1,25		40	13 570	CRSG-M12x1,25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

Cylinder/valve combination DNCV, standard port pattern

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Accessories

Ordering data – Guide units for variable strokes					Technical data → Internet: feng	
	For Ø	Stroke	With recirculating ball bearing guide		With plain-bearing guide	
	[mm]	[mm]	Part No.	Type	Part No.	Type
	32	10 ... 500	34 487	FENG-32-...-KF	34 481	FENG-32-...
	40	10 ... 500	34 488	FENG-40-...-KF	34 482	FENG-40-...
	50	10 ... 500	34 489	FENG-50-...-KF	34 483	FENG-50-...
	63	10 ... 500	34 490	FENG-63-...-KF	34 484	FENG-63-...

Ordering data – Guide units for fixed strokes (recirculating ball bearing guide only)					Technical data → Internet: feng	
	Stroke	Part No.	Type	Stroke	Part No.	Type
	[mm]			[mm]		
	For Ø 32 mm			For Ø 40 mm		
	10 ... 50	34 493	FENG-32-50-KF	10 ... 50	34 499	FENG-40-50-KF
	10 ... 100	34 494	FENG-32-100-KF	10 ... 100	34 500	FENG-40-100-KF
	10 ... 160	34 495	FENG-32-160-KF	10 ... 160	34 501	FENG-40-160-KF
	10 ... 200	34 496	FENG-32-200-KF	10 ... 200	34 502	FENG-40-200-KF
	10 ... 250	150 289	FENG-32-250-KF	10 ... 250	34 503	FENG-40-250-KF
	10 ... 320	34 497	FENG-32-320-KF	10 ... 320	34 504	FENG-40-320-KF
	10 ... 400	150 290	FENG-32-400-KF	10 ... 400	150 291	FENG-40-400-KF
	10 ... 500	34 498	FENG-32-500-KF	10 ... 500	34 505	FENG-40-500-KF
	For Ø 50 mm			For Ø 63 mm		
	10 ... 50	34 506	FENG-50-50-KF	10 ... 50	34 513	FENG-63-50-KF
	10 ... 100	34 507	FENG-50-100-KF	10 ... 100	34 514	FENG-63-100-KF
	10 ... 160	34 508	FENG-50-160-KF	10 ... 160	34 515	FENG-63-160-KF
	10 ... 200	34 509	FENG-50-200-KF	10 ... 200	34 516	FENG-63-200-KF
	10 ... 250	34 510	FENG-50-250-KF	10 ... 250	34 517	FENG-63-250-KF
	10 ... 320	34 511	FENG-50-320-KF	10 ... 320	34 518	FENG-63-320-KF
	10 ... 400	150 292	FENG-50-400-KF	10 ... 400	34 519	FENG-63-400-KF
	10 ... 500	34 512	FENG-50-500-KF	10 ... 500	34 520	FENG-63-500-KF

Product Range and Company Overview

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Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



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Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

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