

Linear actuators DFPI



# Linear actuators DFPI

Key features

FESTO

## Function

DFPIs are closed-loop controlled linear actuators. They are available with integrated displacement encoder (DFPI-...-E-...) or fully integrated positioner (DFPI-...-C1V-...). In the version DFPI-...-E-..., the potentiometric displacement encoder supplies an analogue voltage signal proportional to the piston position. This can be

used for operation with an external positioner. In the version DFPI-...-C1V-..., the integrated positioner provides the positioning function. This actuator has a factory-defined safety position that is assumed if the operating voltage or the analogue setpoint value fails. The

position is preset via an analogue setpoint signal in the range of 4 ... 20 mA. The position feedback takes place via an analogue feedback signal in the range of 4 ... 20 mA. The feedback signal provides the user with greater reliability and easier diagnostics. The travel speed can be

adjusted using the integrated flow control screws. Variants with a mounting interface to ISO 15552 or DIN EN ISO 5210 are available. The sturdy corrosion-resistant design of the DFPI is ideal for use under harsh ambient conditions.

## Innovative

- Ready-to-install, compact unit for easy installation
- Sturdy and corrosion-resistant, ideal for use under harsh ambient conditions

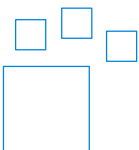
## Flexible

- Wide range of accessories for virtually any installation situation
- Suitable for use in potentially explosive locations
- Additional contactless binary end-position sensing possible with proximity sensors
- Suitable for applications with closed-loop controlled linear and swivel motion

## Design

- Double-acting
- Optionally with integrated displacement encoder or fully integrated positioner
- Sizes  $\varnothing 100$ ,  $\varnothing 125$ ,  $\varnothing 160$ ,  $\varnothing 200$ ,  $\varnothing 250$  and  $\varnothing 320$
- Stroke lengths 40 to 990 mm
- Mounting interfaces to ISO 15552 or DIN EN ISO 5210
- IP65, IP67, IP69K, NEMA4
- ATEX certification

## Ordering data – Product options



**Configurable product**  
This product and all its product options can be ordered using the configurator.

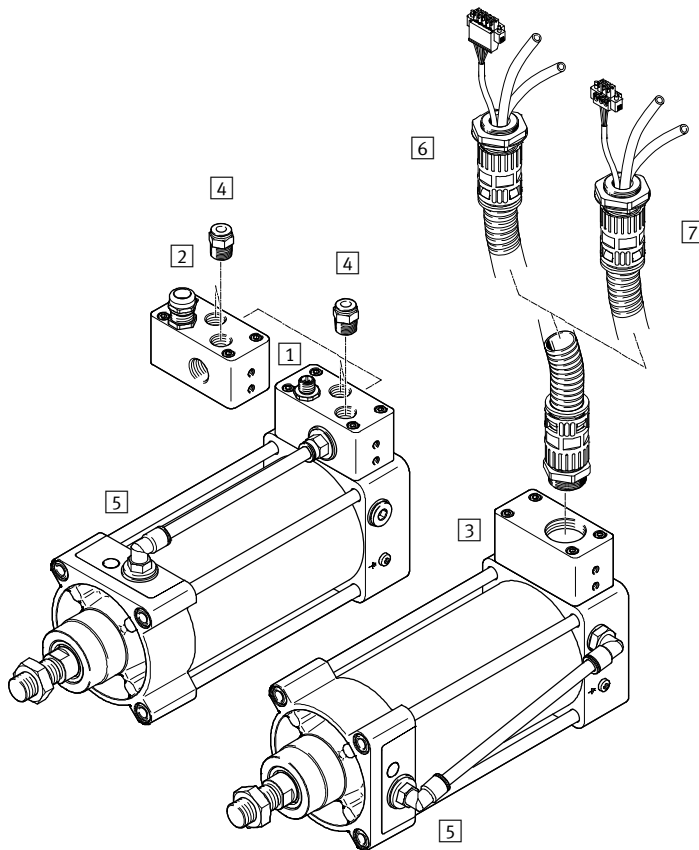
The configurator can be found under Products on the DVD or  
→ [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

Part no.	Type
5078949	DFPI-100
5087658	DFPI-125
5091793	DFPI-160
5092508	DFPI-200
5099770	DFPI-250
5106115	DFPI-320

# Linear actuators DFPI

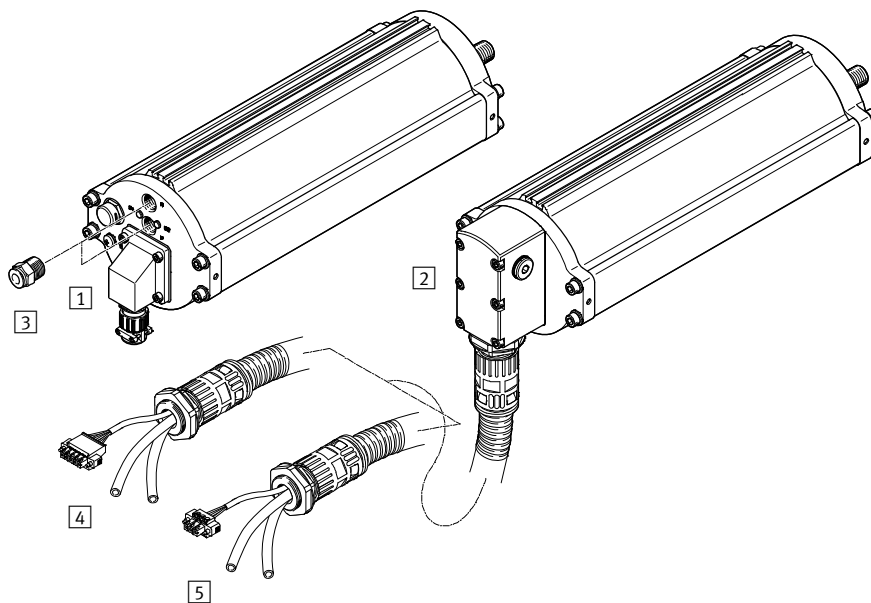
Key features

## Product options for DFPI...-NB3P... based on ISO 15552



- 1 M12x1 plug, 5-pin, A-coded, also available as stainless steel variant
- 2 Cable connector M16x1.5, also available as stainless steel variant
- 3 Metal flanged socket
- 4 Push-in fitting QS<sup>1)</sup>
- 5 Air duct at the actuator, stainless steel pipe or plastic tubing
- 6 Connecting cable NHSB<sup>1)</sup>, 5-wire, for DFPI...-C1V-P-A
- 7 Connecting cable NHSB<sup>1)</sup>, 3-wire, for DFPI...-E-P

## Product options for DFPI...-E... and DFPI...-C1V... based on DIN EN ISO 5210



- 1 Plastic flanged socket
- 2 Metal flanged socket
- 3 Push-in fitting QS<sup>1)</sup>
- 4 Connecting cable NHSB<sup>1)</sup>, 5-wire, for DFPI...-C1V-P-A
- 5 Connecting cable NHSB<sup>1)</sup>, 3-wire, for DFPI...-E-P

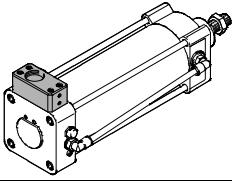
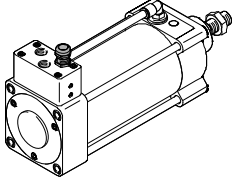
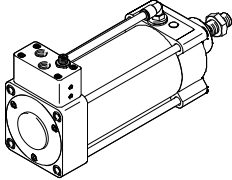
1) Can be ordered separately as an accessory

# Linear actuators DFPI

Product range overview

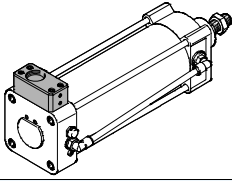
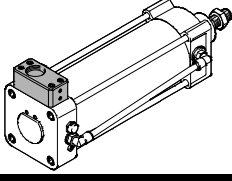
## DFPI-...-E-NB3...

- For operation with an external positioner with analogue voltage input
- Potentiometric displacement encoder integrated into the actuator DFPI
- Sturdy tie rod design
- Double-acting
- Mounting interfaces to ISO 15552 on bearing and end caps

Version		Characteristics	→ Page
DFPI-...-E-NB3...	DFPI-...-E-NB3P-...	 <ul style="list-style-type: none"> <li>• Electrical, pneumatic connection using metal flanged socket, pre-assembled connecting cable NHSB, see Accessories chapter</li> <li>• Air duct on the outside of the actuator via plastic tubing</li> </ul>	11
	DFPI-...-E-NB3P9-...	 <ul style="list-style-type: none"> <li>• Electrical connection using cable connector M16x1.5, screw terminal                             <ul style="list-style-type: none"> <li>– Version P9B2 for brass, nickel-plated</li> <li>– Version P9V2 for stainless steel</li> </ul> </li> <li>• Pneumatic connection G3/8</li> <li>• Air duct on the outside of the actuator, either using a stainless steel pipe for variant DFPI-...-E-NB3P9B2-M or plastic tubing for variant DFPI-...-E-NB3P9B2</li> </ul>	11
	DFPI-...-E-NB3M12-...	 <ul style="list-style-type: none"> <li>• Electrical connection via M12x1 plug, 5-pin                             <ul style="list-style-type: none"> <li>– Version M12B2 for brass, nickel-plated</li> <li>– Version M12V2 for stainless steel</li> </ul> </li> <li>• Pneumatic connection G3/8</li> <li>• Air duct on the outside of the actuator, either using a stainless steel pipe for variant DFPI-...-E-NB3M12B2-M or plastic tubing for variant DFPI-...-E-NB3M12B2</li> </ul>	11

## DFPI-...-C1V-NB3...

- Digital electropneumatic positioner integrated within the drive housing
- Setpoint input 4 ... 20 mA
- Position feedback 4 ... 20 mA
- Safety position either retracting or advancing piston rod depending on the product version
- Sturdy tie rod design
- Double-acting
- Mounting interfaces to ISO 15552 on bearing and end caps

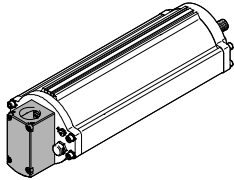
Version		Characteristics	→ Page
DFPI-...-C1V-NB3	DFPI-...-C1V-NB3P-A	 <ul style="list-style-type: none"> <li>• Electrical, pneumatic connection using metal flanged socket, pre-assembled connecting cable NHSB, see Accessories chapter</li> <li>• Air duct on the outside of the actuator via plastic tubing</li> <li>• Safety position if the operating voltage or setpoint signal fails: advancing piston rod</li> </ul>	17
	DFPI-...-C1V-NB3P-R-A	 <ul style="list-style-type: none"> <li>• Electrical, pneumatic connection using metal flanged socket, pre-assembled connecting cable NHSB, see Accessories chapter</li> <li>• Air duct on the outside of the actuator via plastic tubing</li> <li>• Safety position if the operating voltage or setpoint signal fails: retracting piston rod</li> </ul>	17

# Linear actuators DFPI

Product range overview

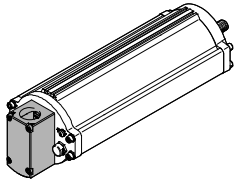
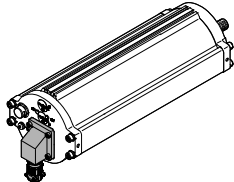
## DFPI-...-E-...

- For operation with an external positioner with analogue voltage input
- Potentiometric displacement encoder integrated into the actuator
- Integrated air duct on the actuator
- Double-acting
- Mounting interfaces for process valves to DIN EN ISO 5210

Version		Characteristics	→ Page
DFPI-...-E-...	DFPI-...-E-P-G2	 <ul style="list-style-type: none"> <li>• Electrical, pneumatic connection using metal flanged socket, pre-assembled connecting cable NHSB, see Accessories chapter</li> </ul>	24

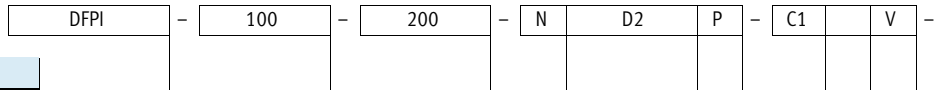
## DFPI-...-C1V-...

- Digital electropneumatic positioner integrated within the drive housing
- Setpoint input 4 ... 20 mA
- Position feedback 4 ... 20 mA
- Advancing piston rod safety position
- Integrated air duct on the actuator
- Double-acting
- Mounting interfaces for process valves to DIN EN ISO 5210

Version		Characteristics	→ Page
DFPI-...-C1V-...	DFPI-...-C1V-P-A	 <ul style="list-style-type: none"> <li>• Electrical, pneumatic connection using metal flanged socket, pre-assembled connecting cable NHSB, see Accessories chapter</li> </ul>	30
	DFPI-...-C1V-A	 <ul style="list-style-type: none"> <li>• Electrical connection using plastic flanged socket, screw terminal</li> <li>• Pneumatic connection G1/4</li> </ul>	30

# Linear actuators DFPI

Type codes



Type	
DFPI	Closed-loop controlled actuator for process automation

Piston diameter	
100	100 mm
125	125 mm
160	160 mm
200	200 mm
250	250 mm
320	320 mm

Stroke	
	x length [40 ... 990 mm]

Cushioning	
N	No cushioning

Displacement encoder	
D2	Analogue

Method of measurement	
P	Potentiometer

Control unit	
-	None
C1	Closed-loop controller 1

Closed-loop controller attachment position	
-	Integrated
E	External

Directional control valve	
-	None
V	Integrated

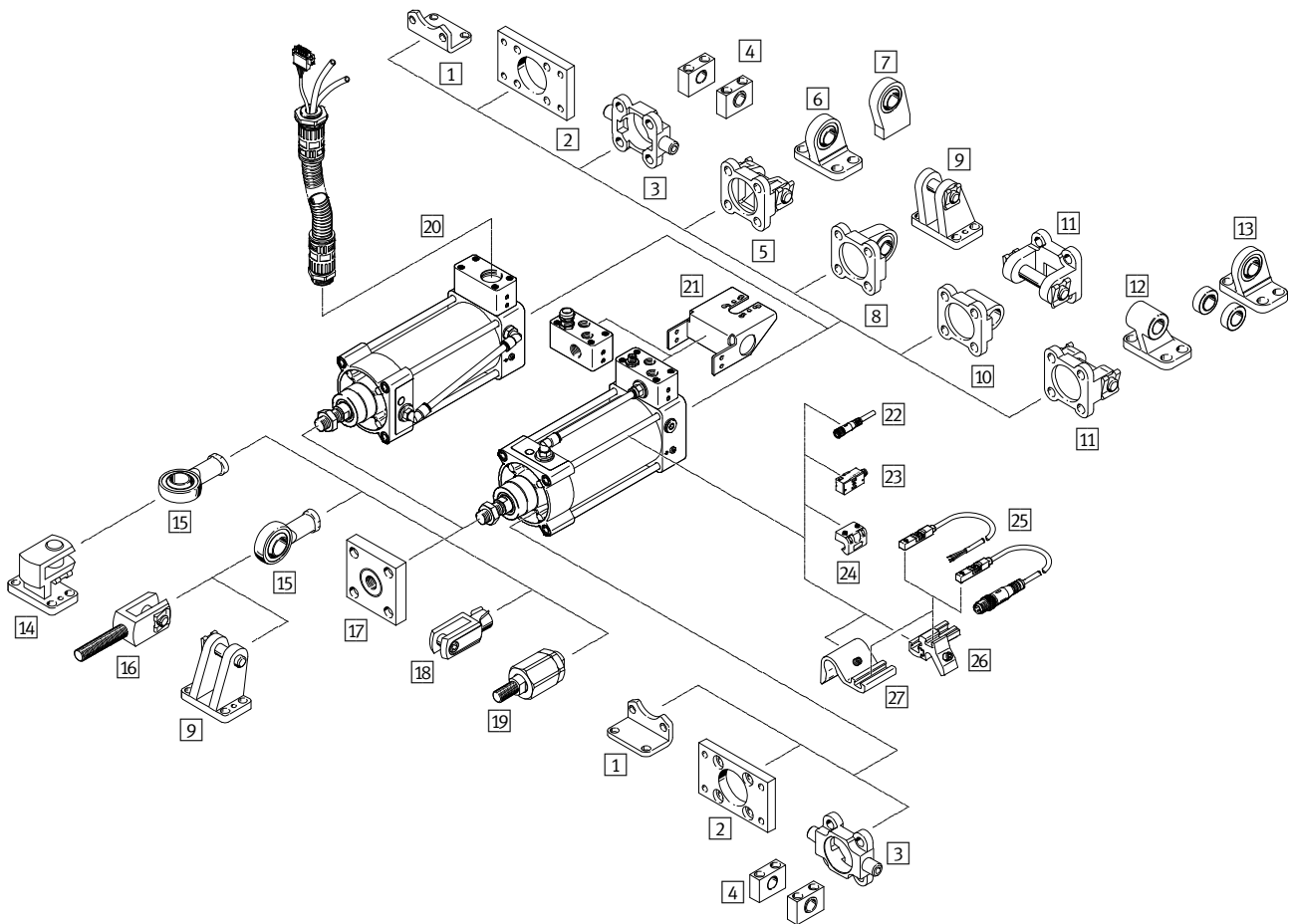
# Linear actuators DFPI

Type codes

		NB3	P	-		-		-	A	-		-	
<b>Standard</b>													
-	Not according to standard												
NB3	Based on ISO 15552												
<b>Connection type</b>													
-	Standard												
P	Protected												
P9	Cable connector												
M12	Plug M12x1, A-coded												
<b>Connection type material</b>													
-	Standard												
B2	Brass, nickel-plated												
V2	Stainless steel (austenitic chrome/nickel/1.4301, 1.4303, 1.4306 (AISI 304L))												
<b>Safety position</b>													
-	Advancing												
R	Retracting												
<b>Additional function</b>													
-	Standard												
A	Position feedback 4 ... 20 mA												
<b>Tubing</b>													
-	Standard												
M	Metal												
<b>Generation</b>													
-	First generation												
G2	Second generation												

# Linear actuators DFPI-NB3...

Overview of peripherals for DFPI based on ISO 15552



Mounting components and accessories		
	Description	→ Page/Internet
1	Foot mounting HNC/CRHNC	38
	Foot mounting HNG	38
2	Flange mounting FNC/CRFNG	40
	Flange mounting FNG	40
3	Trunnion flange ZNCF/CRZNG	41
4	Trunnion support LNZG/CRLNZG	42
5	Swivel flange SNC	43
	Swivel flange SNG	43
6	Clevis foot LSNG	49



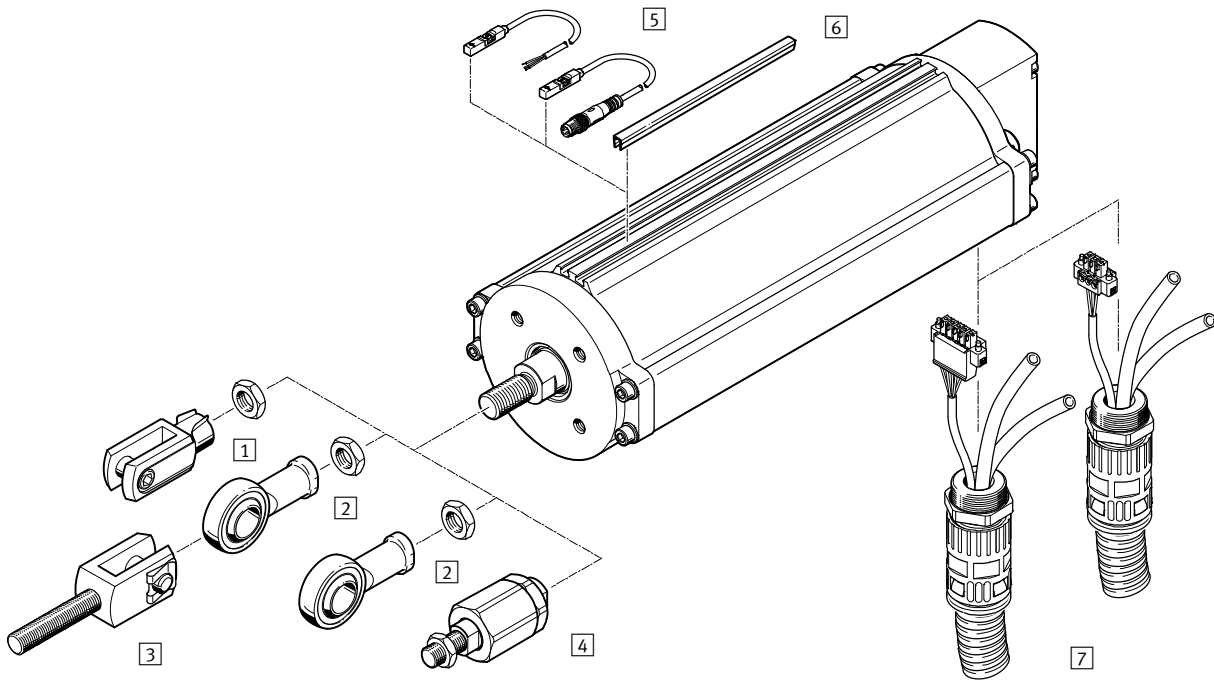
## Linear actuators DFPI-NB3...

Overview of peripherals for DFPI based on ISO 15552

Mounting components and accessories		
	Description	→ Page/Internet
7	Clevis foot LSNSG	Weld-on, with spherical bearing 49
8	Swivel flange SNCS	With spherical bearing for end caps 45
9	Clevis foot LBG	For swivel flange SNCS 49
10	Swivel flange SNCL	For end caps 46
	Swivel flange SNGL	For end caps, corresponds to MP2 to ISO 15552 46
11	Swivel flange SNCB/SNCB:...-R3	For end caps 44
	Swivel flange SNGB	For end caps, corresponds to MP2 to ISO 15552 44
12	Clevis foot LNG/CRLNG	For swivel flange SNCB 49
	Clevis foot LN/LNG	For swivel flange SNGB 49
13	Clevis foot LSN	With spherical bearing 49
14	Right-angle clevis foot LQG	For rod eye SGS 49
15	Rod eye SGS/CRSGS	With spherical bearing 50
16	Rod clevis SGA	With male thread 50
17	Coupling piece KSG	To compensate for radial deviations 50
18	Rod clevis SG/CRSG	Permits a swivel motion of the cylinder in one plane 50
19	Self-aligning rod coupler FK/CRFK	To compensate for radial and angular deviations 50
20	Connecting cable NHSB	For electrical and pneumatic connection of linear actuator DFPI-...-P-... • 3-wire, for DFPI-...-E-P • 5-wire, for DFPI-...-C1V-P-A 36
21	DADG-AK-F6-A2	Mounting bracket for mounting a positioner with interface according to VDI/VDE 3845 or mounting with a hole spacing of 150 mm 47
22	Connecting cable NEBU	For proximity sensor 52
23	Proximity sensor SMPO-1-H-B	For sensing the piston position 52
24	Mounting kit SMBS	For proximity sensor SMPO-1-H-B 41 52
25	Proximity sensor SMT-8M-A	Magneto-resistive, 5 ... 30 V DC, to EU Explosion Protection Directive (ATEX) 51
	Proximity sensor CRSMT-8	Magneto-resistive, corrosion-resistant, to EU Explosion Protection Directive (ATEX) 51
	Proximity sensor SDBT	Magneto-resistive, NAMUR, to EU Explosion Protection Directive (ATEX) 51
26	Mounting kit SMBZ-8- ...	For proximity sensor SME/SMT-8M, for piston diameter 100 51
27	Sensor bracket DASP-M4- ...	For proximity sensor SME/SMT-8M, for piston diameters 125, 160, 200, 250, 320 51

# Linear actuators DFPI-...-E-... and DFPI-...-C1V-...

Overview of peripherals for DFPI based on DIN EN ISO 5210

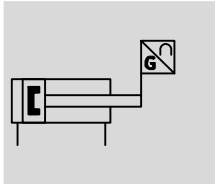





Mounting components and accessories		
	Description	→ Page/Internet
1	Rod clevis SG	Enables a simple connection between the piston rod and slide gate
	Rod clevis, stainless steel CRSG	
2	Rod eye SGS	With spherical bearing
	Rod eye, stainless steel CRSGS	
3	Rod clevis SGA	With male thread
4	Self-aligning rod coupler FK	To compensate for radial and angular deviations
5	Proximity sensor SMT-8M-A	Magneto-resistive, 5 ... 30 V DC, to EU Explosion Protection Directive (ATEX)
	Proximity sensor CRSMT-8	Magneto-resistive, corrosion-resistant, to EU Explosion Protection Directive (ATEX)
	Proximity sensor SDBT	Magneto-resistive, NAMUR, to EU Explosion Protection Directive (ATEX)
6	Slot cover ABP-5-S	To protect the sensor cables and slots from contamination
7	Connecting cable NH5B	For electrical and pneumatic connection of linear actuator DFPI-...-P-... <ul style="list-style-type: none"> <li>• 3-wire, for DFPI-...-E-P</li> <li>• 5-wire, for DFPI-...-C1V-P-A</li> </ul>

# Linear actuators DFPI-...-E-NB3...

Technical data

Function



-  - Piston diameter  
100 ... 320 mm
-  - Stroke  
40 ... 990 mm
-  - Force  
4417 ... 46385 N



General technical data		
Stroke	[mm]	40 ... 990
Mode of operation		Double-acting
Based on standard		ISO 15552
Cushioning		No cushioning
Mounting position		Any
Design		Piston
		Piston rod
		Tie rod
		Cylinder barrel
Position sensing		With integrated displacement encoder
Measuring principle of displacement encoder		Potentiometer
Pneumatic connection		
DFPI-...-E-NB3P...		With specific accessories, for tubing O.D. of 8 mm
DFPI-...-E-NB3M12...		G3/8
DFPI-...-E-NB3P9...		G3/8
Electrical connection		
DFPI-...-E-NB3P...		With specific accessories, 3-pin, straight plug, screw terminal
DFPI-...-E-NB3M12...		M12x1, 5-pin, straight plug, A-coded
DFPI-...-E-NB3P9...		Cable connector M16x1.5, 3-pin, straight plug, screw terminal

General electrical data		
Operating voltage range	[V DC]	0 ... 15
Resistance value of displacement encoder (on the TET) dependent on the stroke length <sup>1)</sup>		
≤ 290 mm	[kΩ]	5
> 290 ... 590 mm	[kΩ]	10
> 590 ... 990 mm	[kΩ]	20
Displacement encoder		
Recommended loop current	[μA]	< 0.1
Max. short-time loop current	[mA]	10
Independent linearity	[%]	±0.04
Repetition accuracy	[mm]	±0.12
Hysteresis	[mm]	0.33

1) TET = theoretical electrical travel

# Linear actuators DFPI-...-E-NB3...

Technical data

Operating and environmental conditions		
Operating pressure [bar]		3 ... 8
Nominal operating pressure [bar]		6
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)
Storage temperature [°C]		-20 ... +80
Ambient temperature [°C]		-20 ... +80
Relative humidity [%]		5 ... 100, condensing
Degree of protection		IP65, IP67, IP69K, NEMA 4
Vibration resistance in accordance with DIN/IEC 68, Part 2-6		Tested to severity level 2
Continuous shock resistance in accordance with DIN/IEC 68, Part 2-82		Tested to severity level 2
CE marking (see declaration of conformity) <sup>1)</sup>		To EU Explosion Protection Directive (ATEX)

1) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

ATEX	
ATEX category for gas	II 2G
Type of ignition protection for gas	c T4
ATEX category for dust	II 2D
Type of ignition protection for dust	c 120°C
Explosion-proof ambient temperature rating	-20 °C ≤ Ta ≤ +60 °C

Forces [N] and impact energy [J]						
Piston diameter	100	125	160	200	250	320
Theoretical force at 6 bar, advancing	4712	7363	12064	18850	29452	48255
Theoretical force at 6 bar, retracting	4417	6881	11581	18080	28274	46385
Max. impact energy in the end positions	1.3	1.0	1.4	1.0	1.9	2.4

Permissible impact velocity: 
$$v_{perm.} = \sqrt{\frac{2 \times E_{perm.}}{m_{intrinsic} + m_{Load}}}$$

Maximum permissible load: 
$$m_{Load} = \frac{2 \times E_{perm.}}{v^2} - m_{intrinsic}$$

$v_{perm.}$  Permissible impact velocity  
 $E_{perm.}$  Maximum impact energy  
 $m_{intrinsic}$  Moving mass (actuator)  
 $m_{Load}$  Moving payload

Air consumption [l]						
Piston diameter	100	125	160	200	250	320
Air consumption, advancing, per 10 mm stroke	0.549	0.859	1.407	2.119	3.436	5.63
Air consumption, retracting, per 10 mm stroke	0.515	0.803	1.351	2.111	3.299	5.412

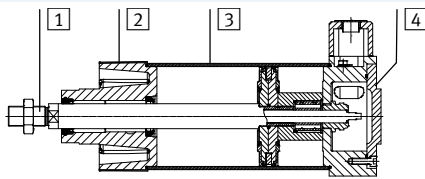
# Linear actuators DFPI-...-E-NB3...

Technical data

Weights [g]						
Piston diameter	100	125	160	200	250	320
Basic weight with 0 mm stroke	4900	7500	12800	18100	31100	57700
Additional weight per 10 mm stroke	90	134	200	238	358	582
Moving mass at 0 mm stroke	1060	1900	3700	4800	9300	16500
Additional moving mass per 10 mm stroke	28	53	89	89	134	227

## Materials

Sectional view



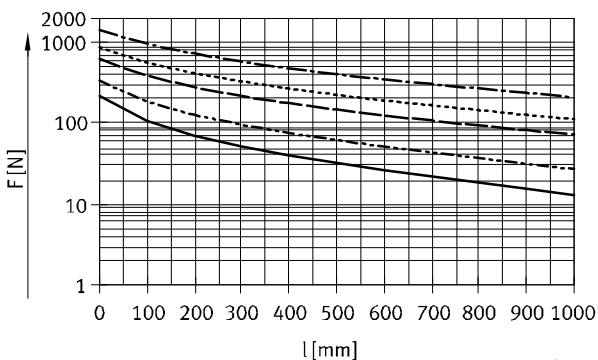
	Piston diameter	
1 Piston rod	100 ... 320	High-alloy stainless steel
2 Bottom cover	100 ... 320	Coated die-cast aluminium
3 Cylinder barrel	100 ... 320	Smooth anodised wrought aluminium alloy
4 End cap	100 ... 320	Coated wrought aluminium alloy
- Tie rod	100 ... 320	High-alloy stainless steel
- Screws	100 ... 320	Coated steel High-alloy stainless steel
- Piston rod wiper seal	100 125 ... 320	TPE-U (PU) NBR
- M12 plug	M12B2 M12V2	100 ... 320 Brass, nickel-plated Stainless steel
- Cable connector	P9B2 P9V2	100 ... 320 Brass, nickel-plated Stainless steel
- Air duct for characteristic value M	100 ... 320	Stainless steel pipe or plastic tubing
- Static seals	100 ... 320	NBR
- Note on materials	100 ... 320	RoHS-compliant Contains PWIS (paint-wetting impairment substances)

## Max. lateral force as a function of stroke length l

The maximum lateral force (horizontal/vertical) applies to the static application. In closed-loop operation, the maximum lateral force needs to be adjusted to the

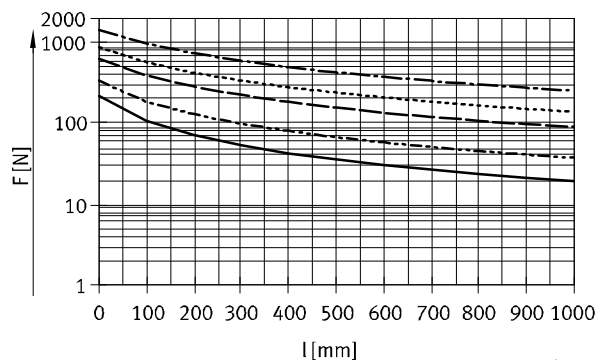
type of control. If necessary, the piston rod must be guided to avoid system vibration.

Horizontal lateral force



- Ø 100
- - - Ø 125
- · - · Ø 160, 200
- · · · Ø 250
- - - - Ø 320

Vertical lateral force



- Ø 100
- - - Ø 125
- · - · Ø 160, 200
- · · · Ø 250
- - - - Ø 320

# Linear actuators DFPI-...-E-NB3...

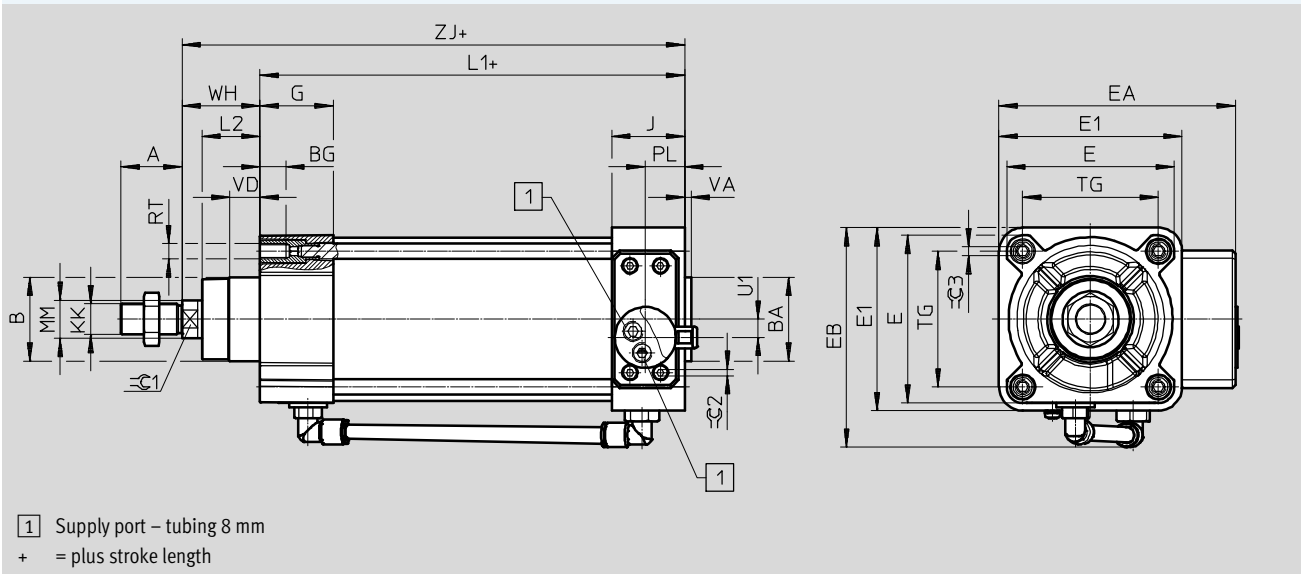
Technical data



## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Piston diameters 100, 125



Piston diameter [mm]	A	B ∅	BA ∅ d11	BG	E	E1	EA	EB	G	J	KK	L1
DFPI-100	40	55	55	17	110	120	155	146	48	48	M20x1.5	179
DFPI-125	54	60	60	20	136	145	180	173	44.7		M27x2	200

Piston diameter [mm]	L2	MM ∅	PL	RT	TG	U1	VD	VA	WH	ZJ	C1	C2	C3
DFPI-100	38	25	26	M10	89	12	19.2	4	51±1.8	229.7	22	4	6
DFPI-125	45.5	32		M12	110	22	20.5	6	65±2.2	264.7	27		8

# Linear actuators DFPI-...-E-NB3...

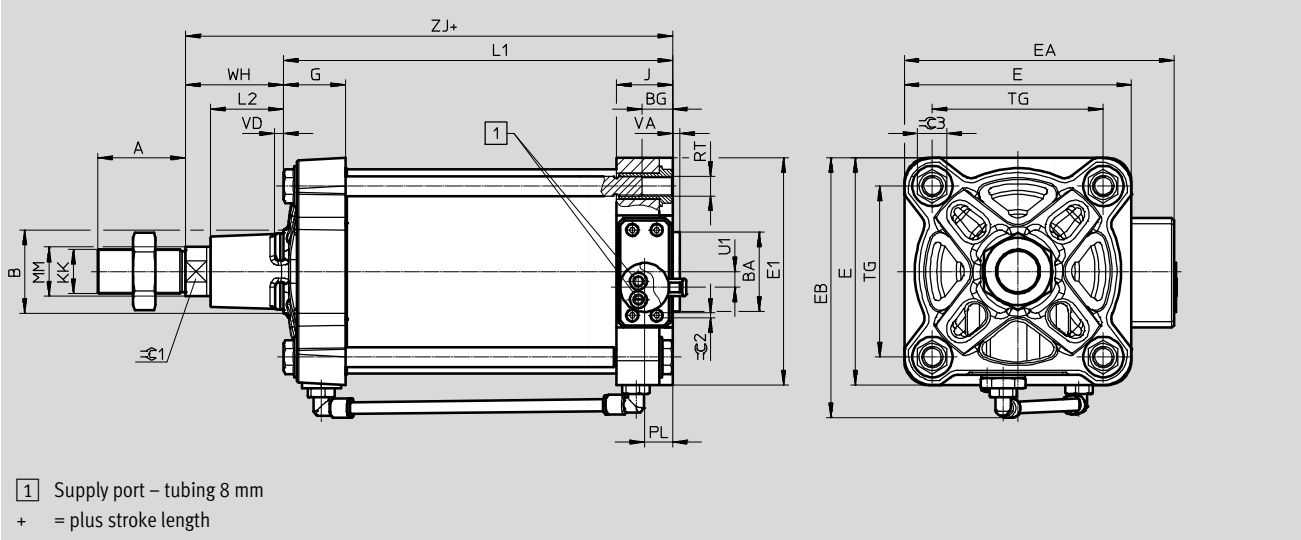
Technical data



## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Piston diameters 160, 200, 250, 320



Piston diameter [mm]	A	B ∅	BA ∅ d11	BG	E	E1	EA	EB	G	J	KK	L1
DFPI-160	72	65	65	24	186	186	221	212	51	46	M36x2	219
DFPI-200		75	75		230	230	265		256			47.2
DFPI-250	84	90	90	25	284	270	312	312	52	51.5	M42x2	254
DFPI-320	96	110	110	28	347	342	378.5	379	56	58	M48x2	281.2

Piston diameter [mm]	L2	MM ∅	PL	RT	TG	U1	VD	VA	WH	ZJ	⌀C1	⌀C2	⌀C3
DFPI-160	60	40	23	M16	140	13	7.5	6	80	298.6	36	4	24
DFPI-200	70				175	32							
DFPI-250	80	50	M20	220	47	13.7	10	105	359	46	42		
DFPI-320	90	63	M24	270	62	10.7		120	401.2	55			

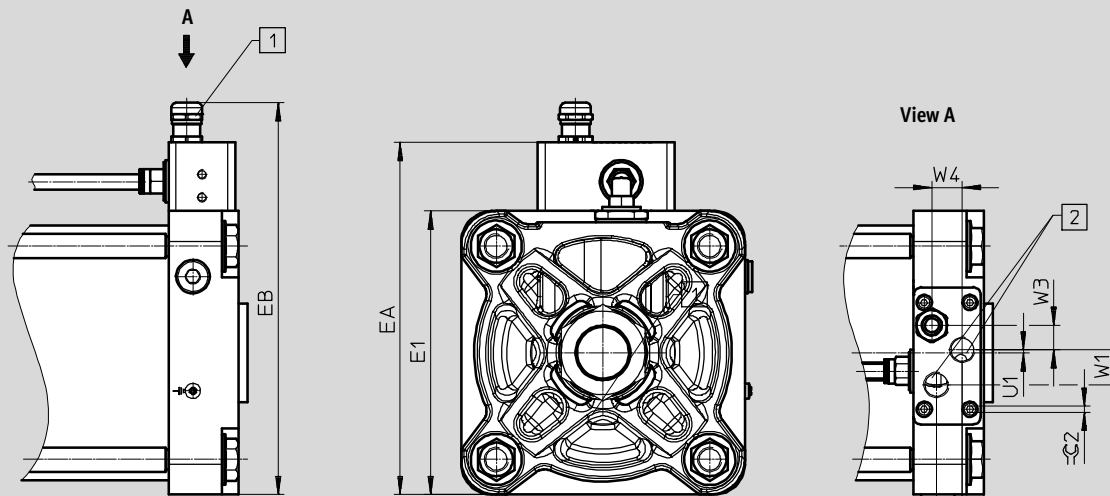
# Linear actuators DFPI-...-E-NB3...

Technical data

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

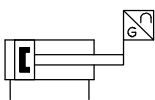
Variants DFPI-...-E-NB3P9B2-... and DFPI-...-E-NB3M12B2-...



- 1 DFPI-...-P9B2-...: electrical connection: cable connector M16x1.5, 3-pin, straight plug, screw terminal  
DFPI-...-M12B2-...: electrical connection: M12x1, 5-pin, straight plug, A-coded
- 2 Pneumatic connection: G3/8

Type	E1	EA	EB	PL	U1	W1	W2	W3	W4	⌀ 2
DFPI-100-...-P9	110	157	183.5	16	4					
DFPI-100-...-M12			170							
DFPI-125-...-P9	136	183	209.5		6					
DFPI-125-...-M12			196							
DFPI-160-...-P9	186	231	275.5	14	2	23	17	16	20	4
DFPI-160-...-M12			244							
DFPI-200-...-P9	230	272	298.5							
DFPI-200-...-M12			285							
DFPI-250-...-P9	270	322.6	349.1	19.5	11					
DFPI-250-...-M12			335.6							
DFPI-320-...-P9	340	393.5	420	26						
DFPI-320-...-M12			406.5							

## Ordering data

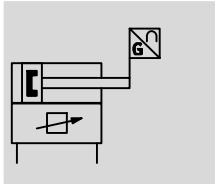
		Piston diameter [mm]	Part no.	Type
 <ul style="list-style-type: none"> <li>• Linear actuators with integrated displacement encoder</li> <li>• Based on ISO 15552</li> </ul>		100	2185733	DFPI-100- ... -ND2P-E-NB3P
		125	2207685	DFPI-125- ... -ND2P-E-NB3P
		160	2208573	DFPI-160- ... -ND2P-E-NB3P
		200	2209613	DFPI-200- ... -ND2P-E-NB3P
		250	2210666	DFPI-250- ... -ND2P-E-NB3P
		320	2186271	DFPI-320- ... -ND2P-E-NB3P






# Linear actuators DFPI-...-C1V-NB3...

Technical data

Function



-  - Piston diameter  
100 ... 320 mm
-  - Stroke  
40 ... 990 mm
-  - Force  
4417 ... 46385 N



General technical data		
Stroke	[mm]	40 ... 990
Mode of operation		Double-acting
Based on standard		ISO 15552
Cushioning		No cushioning
Mounting position		Any
Design		Piston
		Piston rod
		Tie rod
		Cylinder barrel
Position sensing		With integrated displacement encoder
Measuring principle of displacement encoder		Potentiometer
Pneumatic connection		With specific accessories
		For tubing O.D. 8 mm
		For tubing O.D. 10 mm
Electrical connection		With specific accessories
		5-pin
		Straight plug
		Screw terminal

General electrical data		
Operating voltage range	[V DC]	21.6 ... 26.4
Nominal operating voltage	[V DC]	24
Setpoint input	[mA]	4 ... 20
Analogue output	[mA]	4 ... 20
Accuracy of analogue output	[%FS]	1
Max. current consumption	[mA]	220
Reverse polarity protection		For operating voltage
		For setpoint value
		Initialisation connection
Positioning accuracy	[%FS]	1
Repetition accuracy	[%FS]	±1
Size of dead space	[%FS]	1
Hysteresis	[%FS]	±1

# Linear actuators DFPI-...-C1V-NB3...

Technical data

Operating and environmental conditions		
Operating pressure	[bar]	3 ... 8
Nominal operating pressure	[bar]	6
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)
Temperature of medium	[°C]	-5 ... +40
Ambient temperature	[°C]	-5 ... +50
Storage temperature	[°C]	-5 ... +50
Relative humidity	[%]	5 ... 100, condensing
Degree of protection		IP65, IP67, IP69K, NEMA 4
Vibration resistance in accordance with DIN/IEC 68, Part 2-6		Tested to severity level 2
Continuous shock resistance in accordance with DIN/IEC 68, Part 2-82		Tested to severity level 2
Certification		RCM compliance mark
CE marking (see declaration of conformity) <sup>1)</sup>		To EU EMC Directive
		To EU Explosion Protection Directive (ATEX)

1) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

ATEX	
ATEX category for gas	II 3G
Type of ignition protection for gas	Ex nA IIC T4 Gc
ATEX category for dust	II 3D
Type of ignition protection for dust	Ex tc IIIC T120°C Dc
Explosion-proof ambient temperature rating	-5°C ≤ Ta ≤ +50°C

# Linear actuators DFPI-...-C1V-NB3...

Technical data

Forces [N]						
Piston diameter	100	125	160	200	250	320
Theoretical force at 6 bar, advancing	4712	7363	12064	18850	29452	48255
Theoretical force at 6 bar, retracting	4417	6881	11581	18080	28274	46385

Maximum permissible load: 
$$m_{Load} = \frac{2 \times E_{perm.}}{v^2} - m_{Intrinsic}$$

$m_{Intrinsic}$  Moving mass (actuator)  
 $m_{Load}$  Moving payload

Air consumption [l]						
Piston diameter	100	125	160	200	250	320
Air consumption, advancing, per 10 mm stroke	0.549	0.859	1.407	2.199	3.436	5.63
Air consumption, retracting, per 10 mm stroke	0.515	0.803	1.351	2.111	3.299	5.412

Weights [g]						
Piston diameter	100	125	160	200	250	320
Basic weight with 0 mm stroke	5280	7950	14330	20410	35370	57550
Additional weight per 10 mm stroke	90	134	200	238	358	582
Moving mass with 0 mm stroke	1060	1900	3700	4800	9300	16500
Additional moving mass per 10 mm stroke	28	53	89	89	134	227

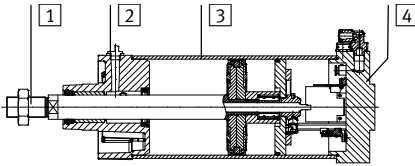
# Linear actuators DFPI-...-C1V-NB3...

Technical data



## Materials

Sectional view



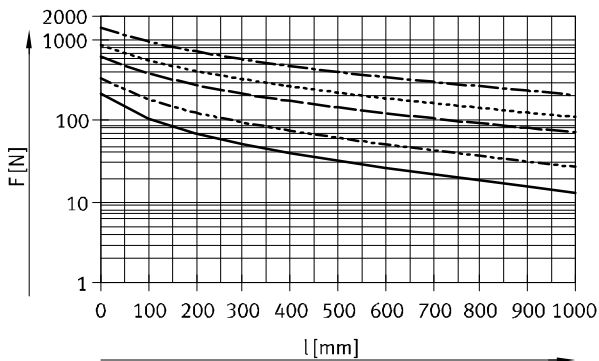
	Piston diameter	
1	100 ... 320	High-alloy stainless steel
2	100 ... 320	Coated die-cast aluminium
3	100 ... 320	Smooth anodised wrought aluminium alloy
4	100 ... 320	Coated wrought aluminium alloy
- Tie rod	100 ... 200	High-alloy stainless steel
- Screws	100 ... 320	Coated steel
- Piston rod wiper seal	100	TPE-U (PU)
	125 ... 320	NBR
- Static seals	100 ... 320	NBR
- Note on materials	100 ... 320	RoHS-compliant
		Contains PWIS (paint-wetting impairment substances)

## Max. lateral force as a function of stroke length l

The maximum lateral force (horizontal/vertical) applies to the static application. In closed-loop operation, the maximum lateral force needs to be adjusted to the

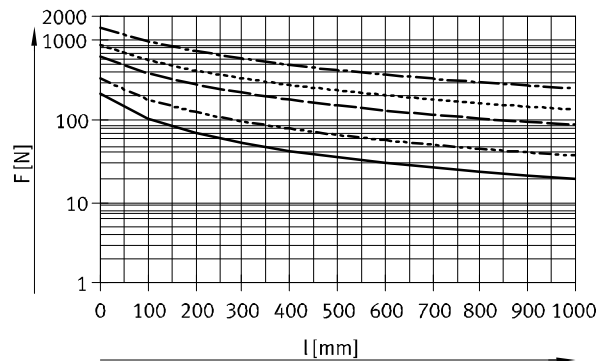
type of control. If necessary, the piston rod must be guided to avoid system vibration.

### Horizontal lateral force



- Ø 100
- - - Ø 125
- · - · Ø 160, 200
- · · · Ø 250
- - - - Ø 320

### Vertical lateral force



- Ø 100
- - - Ø 125
- · - · Ø 160, 200
- · · · Ø 250
- - - - Ø 320

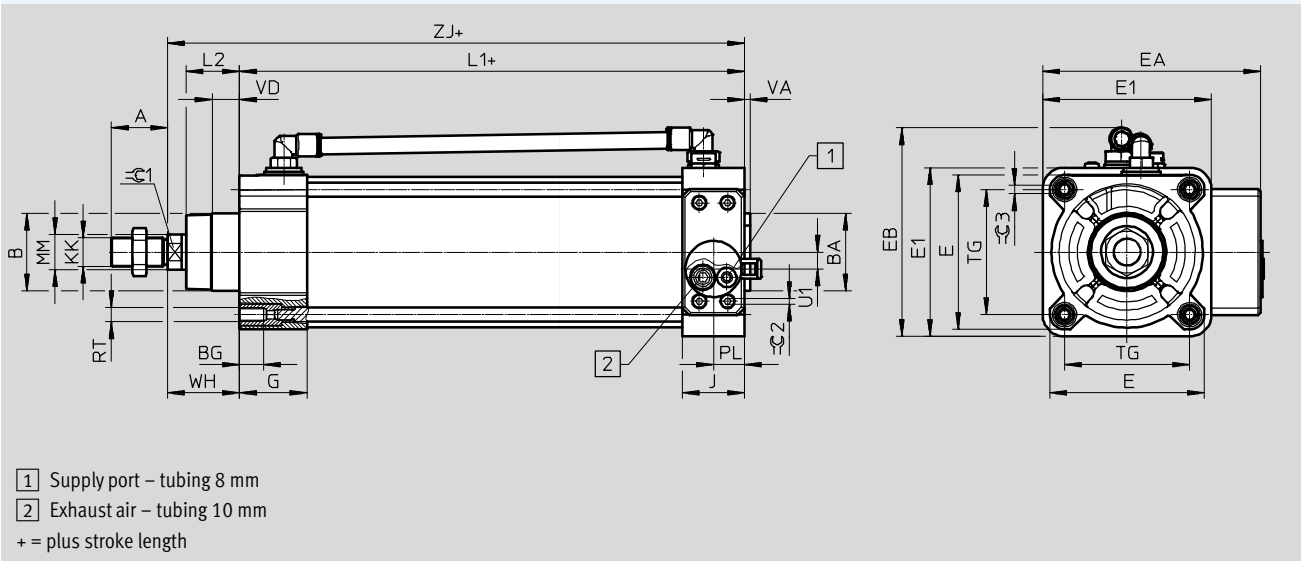
# Linear actuators DFPI-...-C1V-NB3...

Technical data

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Piston diameters 100, 125



Piston diameter [mm]	A	B ∅	BA ∅ d11	BG	E	E1	EA	EB	G	J	KK	L1
DFPI-100	40	55	55	17	110	120	155	146	48	44	M20x1.5	258.9
DFPI-125	54	60	60	20	136	145	180	173	44.7		M27x2	254.4

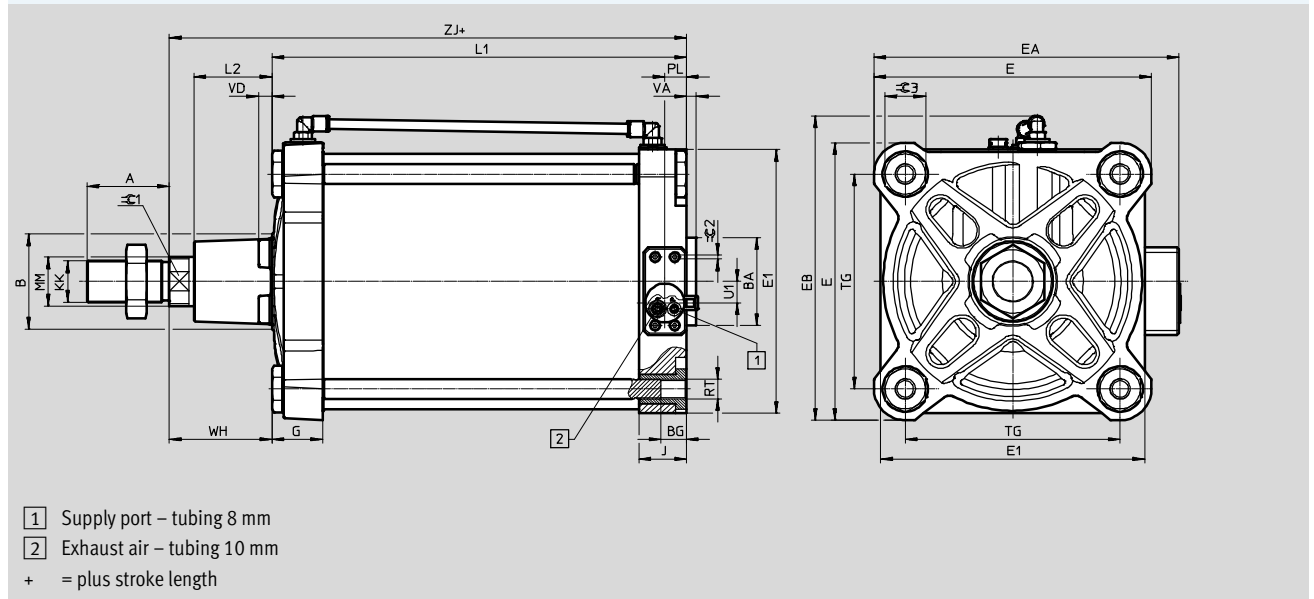
Piston diameter [mm]	L2	MM ∅	PL	RT	TG	U1	VD	VA	WH	ZJ	≅C1	≅C2	≅C3
DFPI-100	38	25	22	M10	89	12	19.2	4	51±1.8	309.9	22	4	6
DFPI-125	45.5	32		M12	110	2	20.5	6	65±2.2	319.4	27		8

# Linear actuators DFPI-...-C1V-NB3...

Technical data

Dimensions Download CAD data → [www.festo.com](http://www.festo.com)

Piston diameters 160, 200, 250, 320

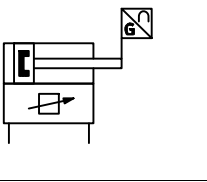
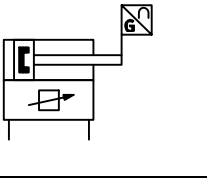


Piston diameter [mm]	A	B ∅	BA ∅ d11	BG	E	E1	EA	EB	G	J	KK	L1
DFPI-160	72	65	65	24	186	186	221	212	51	46	M36x2	291.8
DFPI-200		75	75		230	230	265	256	47.2			297
DFPI-250	84	90	90	25	284	270	312	312	52	48.5	M42x2	324.4
DFPI-320	96	110	110	28	347	342	378.5	379	56	46	M48x2	351.4

Piston diameter [mm]	L2	MM ∅	PL	RT	TG	U1	VD	VA	WH	ZJ	∅C1	∅C2	∅C3		
DFPI-160	60	40	22	M16	140	12	7.5	6	80	371.8	36	4	24		
DFPI-200	70				175	32			95	392				42	
DFPI-250	80				220	22			105	429.2				46	42
DFPI-320	90				270	52			120	471.4				55	50

# Linear actuators DFPI-...-C1V-NB3...

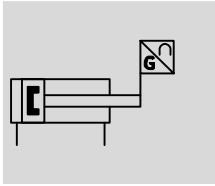
Technical data




Ordering data			
	Piston diameter [mm]	Part no.	Type
<b>Safety position advancing</b>			
 <ul style="list-style-type: none"> <li>• Linear actuators with integrated positioner</li> <li>• Based on ISO 15552</li> </ul>	100	<b>2184841</b>	<b>DFPI-100-...-ND2P-C1V-NB3P-A</b>
	125	<b>2180905</b>	<b>DFPI-125-...-ND2P-C1V-NB3P-A</b>
	160	<b>2201101</b>	<b>DFPI-160-...-ND2P-C1V-NB3P-A</b>
	200	<b>2206373</b>	<b>DFPI-200-...-ND2P-C1V-NB3P-A</b>
	250	<b>2200311</b>	<b>DFPI-250-...-ND2P-C1V-NB3P-A</b>
	320	<b>2185309</b>	<b>DFPI-320-...-ND2P-C1V-NB3P-A</b>
<b>Safety position retracting</b>			
 <ul style="list-style-type: none"> <li>• Linear actuators with integrated positioner</li> <li>• Based on ISO 15552</li> </ul>	100	<b>4588304</b>	<b>DFPI-100-...-ND2P-C1V-NB3P-R-A</b>
	125	<b>4588636</b>	<b>DFPI-125-...-ND2P-C1V-NB3P-R-A</b>
	160	<b>4588972</b>	<b>DFPI-160-...-ND2P-C1V-NB3P-R-A</b>
	200	<b>4587974</b>	<b>DFPI-200-...-ND2P-C1V-NB3P-R-A</b>
	250	<b>4591209</b>	<b>DFPI-250-...-ND2P-C1V-NB3P-R-A</b>
	320	<b>4591205</b>	<b>DFPI-320-...-ND2P-C1V-NB3P-R-A</b>

# Linear actuators DFPI-...-E-...-G2

## Technical data

### Function



-  - Piston diameter  
100 ... 320 mm
-  - Stroke  
40 ... 990 mm
-  - Force  
4417 ... 48255 N



General technical data						
Piston diameter	100	125	160	200	250	320
Stroke [mm]	40 ... 990					
Stroke reserve [mm]	3			4		
Mode of operation	Double-acting					
Connection to process valve to standard	DIN EN ISO 5210					
Flange hole pattern	F07	F10	F10, F14			
Cushioning	No cushioning					
Mounting position	Any					
Design	Piston					
	Piston rod					
	Profile barrel			Tie rod, cylinder barrel		
Position sensing	With integrated displacement encoder					
Measuring principle of displacement encoder	Potentiometer					
Pneumatic connection	With specific accessories					
	For tubing O.D. of 8 mm					
Electrical connection	With specific accessories					
	3-pin					
	Straight plug					
	Screw terminal					

General electrical data		
Operating voltage range [V DC]	0 ... 15	
Resistance value of displacement encoder (on the TET) dependent on the stroke length <sup>1)</sup>		
≤ 290 mm [kΩ]	5	
> 290 ... 590 mm [kΩ]	10	
> 590 ... 990 mm [kΩ]	20	
Displacement encoder		
Recommended loop current [μA]	< 0.1	
Max. short-time loop current [mA]	10	
Independent linearity [%]	±0.04	
Repetition accuracy [mm]	±0.12	
Hysteresis [mm]	0.33	

1) TET = theoretical electrical travel



# Linear actuators DFPI-...-E-...-G2

Technical data

Operating and environmental conditions	
Operating pressure [bar]	3 ... 8
Nominal operating pressure [bar]	6
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Ambient temperature [°C]	-20 ... +60
Storage temperature [°C]	-20 ... +60
Relative humidity [%]	5 ... 100, condensing
Degree of protection	IP65, IP67, IP69K, NEMA 4
Continuous shock resistance to DIN/IEC 68 Part 2-82	Tested to severity level 2
Vibration resistance to DIN/IEC 68 Part 2-6	Tested to severity level 2
CE marking (see declaration of conformity) <sup>1)</sup>	To EU Explosion Protection Directive (ATEX)

1) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

ATEX	
ATEX category for gas	II 2G
Type of ignition protection for gas	c T4 X
ATEX category for dust	II 2D
Type of ignition protection for dust	c 120°C X
Explosion-proof ambient temperature rating	-20 °C ≤ Ta ≤ +60 °C

# Linear actuators DFPI-...-E-...-G2

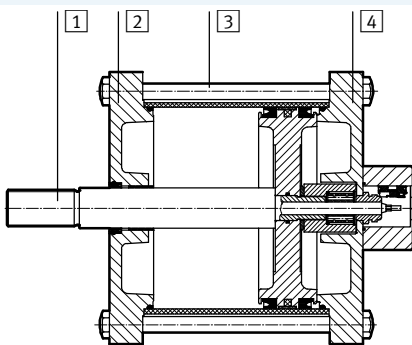
Technical data

Forces [N] and air consumption [l]						
Piston diameter	100	125	160	200	250	320
Theoretical force at 6 bar, advancing	4712	7363	12064	18850	29452	48255
Theoretical force at 6 bar, retracting	4417	6881	11581	18080	28698	47501
Air consumption, advancing, per 10 mm stroke	0.5498	0.859	1.4074	2.119	3.4361	5.6297
Air consumption, retracting, per 10 mm stroke	0.5153	0.8027	1.3511	2.111	3.3482	5.5418

Weights						
Piston diameter	100	125	160	200	250	320
Basic weight with 0 mm stroke [g]	3476	5530	6529	13946	22569	35359
Additional moving mass per 10 mm stroke [g]	27	52	52	87	87	87
Moving mass with 0 mm stroke [g]	1228	1944	2250	4722	7059	11417
Additional weight per 10 mm stroke [g]	80	145	159	187	325	399
Additional weight of displacement encoder per 10 mm [g]	2					

## Materials

Sectional view



	Piston diameter	
1 Piston rod	100 ... 320	High-alloy stainless steel
2 Bottom cover	100, 125, 250, 320	Anodised wrought aluminium alloy
	160, 200	Coated die-cast aluminium
3 Cylinder barrel	100 ... 200	Smooth anodised wrought aluminium alloy
	250 ... 320	High-alloy stainless steel
4 End cap	100, 125, 250, 320	Anodised wrought aluminium alloy
	160, 200	Coated die-cast aluminium
- Tie rod	200 ... 320	High-alloy stainless steel
- Screws	100 ... 320	High-alloy stainless steel
- Piston rod wiper seal	100	TPE-U (PU)
	125 ... 320	NBR
- Static seals	100 ... 320	NBR
- Note on materials	100 ... 320	RoHS-compliant
		Contains PWIS (paint-wetting impairment substances)

# Linear actuators DFPI-...-E-...-G2

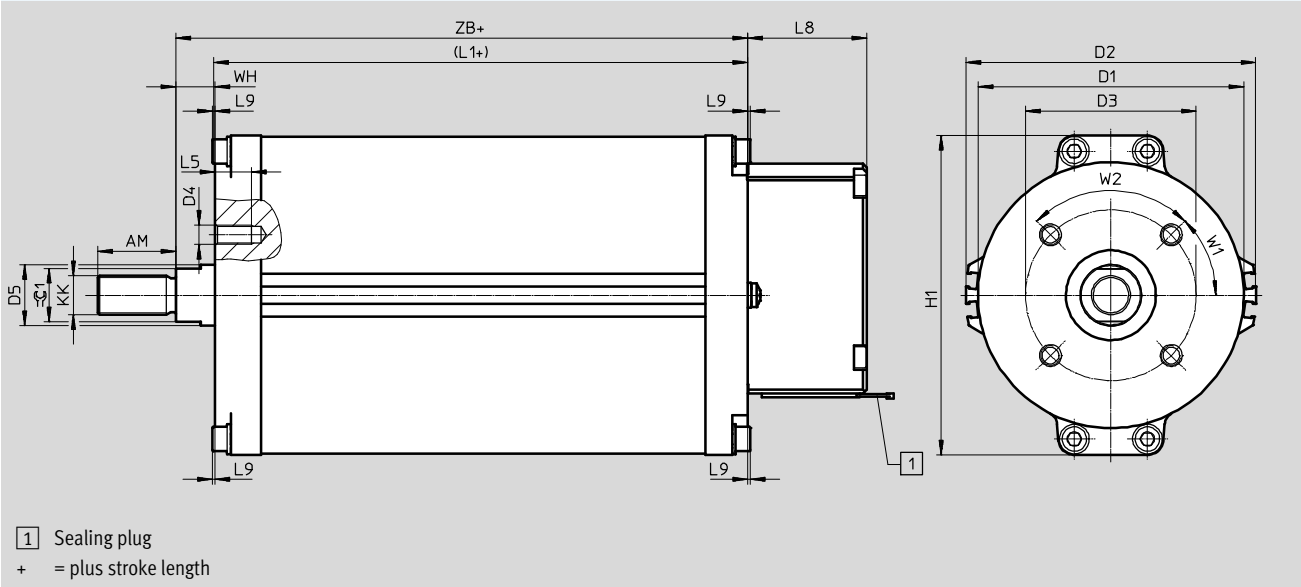
Technical data

FESTO

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Piston diameter 100 ... 160



Piston diameter [mm]	AM	D1	D2	D3	D4	D5	H1	KK	L1+
DFPI-100	32	109	119	70	M8	25	131	M16x1.5	118.5
DFPI-125	54	135	147	102	M10	32	163	M27x2	119
DFPI-160		170	182				199		126.5

Piston diameter [mm]	L5	L8	L9	W1	W2	WH	ZB+	∠1
DFPI-100	15	48.8	1	45°	90°	16	134.5	22
DFPI-125	18	48.8	-	45°	90°	24	143	27
DFPI-160							150.5	

# Linear actuators DFPI-...-E-...-G2

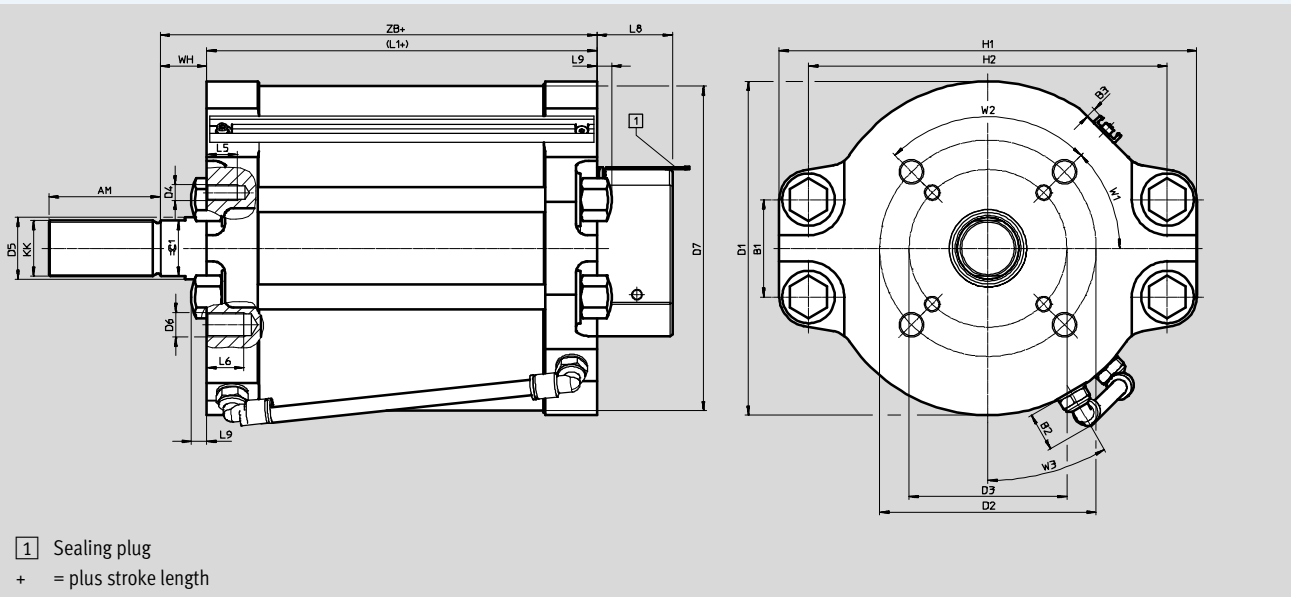
Technical data



## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Piston diameter 200 ... 320

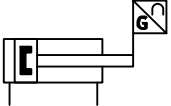


Piston diameter [mm]	AM	B1	B2	B3	D1 ∅	D2 ∅	D3 ∅	D4	D5 ∅	D6	D7 ∅ min.	H1	H2
DFPI-200	72	63	25.6	6.5	216	140	102	M10	40	M16	210	270	232
DFPI-250	72	82	25.6	6.5	260	140	102	M10	40	M16	254	308	268
DFPI-320		126			332						325		

Piston diameter [mm]	KK	L1+	L5	L6 min.	L8	L9	WH	W1	W2	W3	ZB+	≈C1
DFPI-200	M36x2	152.5	20	24	48.8	10	30	45	90	30	182.5	36
DFPI-250	M36x2	152.2	20	25	48.8	25	30	45	90	30	182.2	36
DFPI-320		160		24							190	

# Linear actuators DFPI-...-E-...-G2

Technical data

Ordering data		Piston diameter [mm]	Part no.	Type
 <ul style="list-style-type: none"> <li>• Linear actuators with integrated displacement encoder</li> <li>• Based on DIN EN ISO 5210</li> </ul>	100	<b>1808236</b>	<b>DFPI-100-...-ND2P-E-P-G2</b>	
	125	<b>1808239</b>	<b>DFPI-125-...-ND2P-E-P-G2</b>	
	160	<b>1808242</b>	<b>DFPI-160-...-ND2P-E-P-G2</b>	
	200	<b>1808245</b>	<b>DFPI-200-...-ND2P-E-P-G2</b>	
	250	<b>1808253</b>	<b>DFPI-250-...-ND2P-E-P-G2</b>	
	320	<b>1808263</b>	<b>DFPI-320-...-ND2P-E-P-G2</b>	

-  - Note

**Stroke length of the actuator**

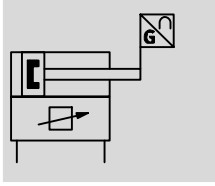
The stroke length of the actuator should generally at least correspond to the nominal diameter of the process valve so that the process valve can be fully opened and closed. The system tolerances can lead to a greater stroke range than the specified nominal stroke range of the linear actuator. The adjustable rod clevis enables adjustment of the system.




# Linear actuators DFPI-...-C1V-...

FESTO

Technical data

Function



-  - Piston diameter  
100 ... 320 mm
-  - Stroke  
40 ... 990 mm
-  - Force  
4417 ... 48255 N



General technical data						
Piston diameter		100	125	160	200	250   320
Stroke	[mm]	40 ... 990				
Stroke reserve	[mm]	3			4	
Mode of operation	Double-acting					
Connection to process valve to standard	DIN EN ISO 5210					
Flange hole pattern		F07	F10	F10, F14		
Cushioning	No cushioning					
Mounting position	Any					
Design	Piston					
	Piston rod					
	Profile barrel				Tie rod, cylinder barrel	
Position sensing	With integrated displacement encoder					
Measuring principle of displacement encoder	Potentiometer					
Pneumatic connection						
DFPI-...-ND2P-C1V-A	G1/4					
DFPI-...-ND2P-C1V-P-A	With specific accessories, for tubing O.D. of 8 mm and 10 mm					
Electrical connection						
	5-pin					
	Straight plug					
	Screw terminal					
DFPI-...-ND2P-C1V-A	G1/4					
DFPI-...-ND2P-C1V-P-A	With specific accessories, for tubing O.D. of 8 mm and 10 mm					

General electrical data		
Operating voltage range	[V DC]	21.6 ... 26.4
Nominal operating voltage	[V DC]	24
Setpoint input	[mA]	4 ... 20
Analogue output	[mA]	4 ... 20
Accuracy of analogue output	[%FS]	1
Max. current consumption	[mA]	220
Reverse polarity protection	For operating voltage	
	For setpoint value	
	Initialisation connection	
Positioning accuracy	[%FS]	1
Repetition accuracy	[%FS]	±1
Size of dead space	[%FS]	1
Hysteresis	[%FS]	±1

# Linear actuators DFPI-...-C1V-...

Technical data

Operating and environmental conditions	
Operating pressure [bar]	3 ... 8
Nominal operating pressure [bar]	6
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Temperature of medium [°C]	-5 ... +40
Storage temperature [°C]	-5 ... +50
Ambient temperature [°C]	-5 ... +50
Relative humidity [%]	5 ... 100, condensing
Degree of protection	IP65, IP67, IP69K, NEMA 4
Continuous shock resistance to DIN/IEC 68 Part 2-82	Tested to severity level 2
Vibration resistance to DIN/IEC 68 Part 2-6	Tested to severity level 2
Certification	RCM compliance mark
CE marking (see declaration of conformity) <sup>1)</sup>	To EU EMC Directive <sup>2)</sup>
	To EU Explosion Protection Directive (ATEX)

1) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

2) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

ATEX	
ATEX category for gas	II 3G
Type of ignition protection for gas	Ex nA IIC T4 X Gc
ATEX category for dust	II 3D
Type of ignition protection for dust	Ex tc IIIC T120°C X Dc
Explosion-proof ambient temperature rating	-5°C ≤ Ta ≤ +50°C

Forces [N] and air consumption [l]						
Piston diameter	100	125	160	200	250	320
Theoretical force at 6 bar, advancing	4712	7363	12064	18850	29452	48255
Theoretical force at 6 bar, retracting	4417	6881	11581	18080	28698	47501
Air consumption, retracting, per 10 mm stroke	0.5153	0.8027	1.3511	2.111	3.3482	5.5418
Air consumption, advancing, per 10 mm stroke	0.5498	0.859	1.4074	2.119	3.4361	5.6297

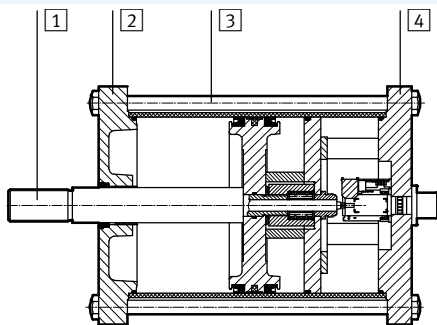
# Linear actuators DFPI-...-C1V-...

Technical data

Weights						
Piston diameter	100	125	160	200	250	320
Basic weight with 0 mm stroke						
DFPI-...-...-ND2P-C1V-A [g]	4671	7693	9099	18358	29956	45200
DFPI-...-...-ND2P-C1V-P-A [g]	5237	8259	9665	18924	30522	45766
Moving mass with 0 mm stroke [g]	1228	1944	2250	4722	7059	11417
Additional weight per 10 mm stroke [g]	80	145	159	187	325	399
Additional weight of moving mass per 10 mm stroke [g]	27	52		87		
Additional weight of displacement encoder per 10 mm [g]	2					

## Materials

Sectional view



	Piston diameter	
1 Piston rod	100 ... 320	High-alloy stainless steel
2 Bottom cover	100, 125, 250, 320	Anodised wrought aluminium alloy
	160, 200	Coated die-cast aluminium
3 Cylinder barrel	100 ... 200	Smooth anodised wrought aluminium alloy
	250 ... 320	High-alloy stainless steel
4 End cap	100 ... 320	Anodised wrought aluminium alloy
- Tie rod	200 ... 320	High-alloy stainless steel
- Screws	100 ... 320	High-alloy stainless steel
- Piston rod wiper seal	100	TPE-U (PU)
	125 ... 320	NBR
- Static seals	100 ... 320	NBR
- Note on materials	100 ... 320	RoHS-compliant
		Contains PWIS (paint-wetting impairment substances)



# Linear actuators DFPI-...-C1V-...

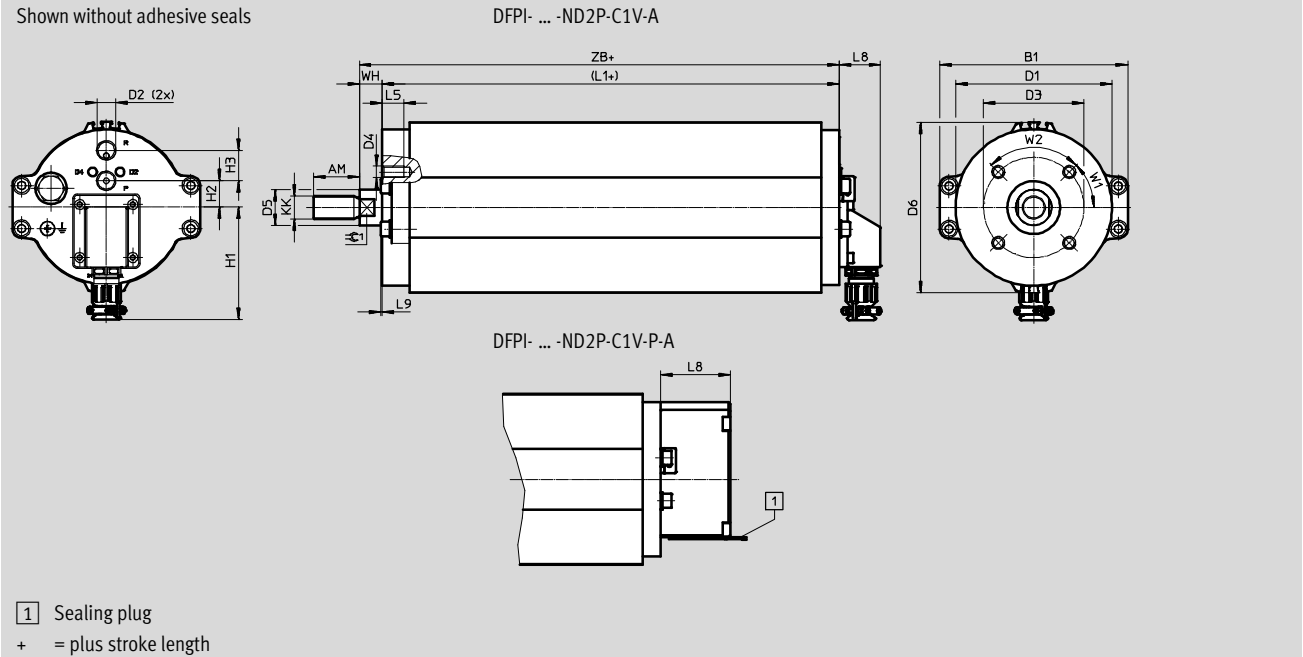
Technical data

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Piston diameter 100 ... 160

Shown without adhesive seals



Piston diameter	AM	B1	D1	D2	D3	D4	D5	D6	H1	H2
[mm]	-2		∅	∅	∅		∅	∅	±2	
DFPI-100- ... -C1V-A	32	131	109	G1/4	70	M8	25	119	79	18.3
DFPI-125- ... -C1V-A	54	163	135	G1/4	102	M10	32	147	79	18.3
DFPI-160- ... -C1V-A		199	170					182		

Piston diameter	H3	KK	L1+	L5	L8	L9	WH	ZB+	∅C1
[mm]									
DFPI-100- ... -C1V-A	21.2	M16x1.5	218.5	15	28.8	1	16	234.5	22
DFPI-125- ... -C1V-A	21.2	M27x2	221	18	28.8	-	24	245	27
DFPI-160- ... -C1V-A			227.5					251.5	

Piston diameter	AM	B1	D1	D2	D3	D4	D5	D6	H1	H2
[mm]	-2		∅	∅	∅		∅	∅		
DFPI-100- ... -C1V-P-A	32	131	109	G1/4	70	M8	25	119	-	18.3
DFPI-125- ... -C1V-P-A	54	163	135	G1/4	102	M10	32	147	-	18.3
DFPI-160- ... -C1V-P-A		199	170					182		

Piston diameter	H3	KK	L1+	L5	L8	L9	WH	ZB+	∅C1
[mm]									
DFPI-100- ... -C1V-P-A	21.2	M16x1.5	218.5	15	48.8	1	16	234.5	22
DFPI-125- ... -C1V-P-A	21.2	M27x2	221	18	48.8	-	24	245	27
DFPI-160- ... -C1V-P-A			227.5					251.5	

# Linear actuators DFPI-...-C1V-...

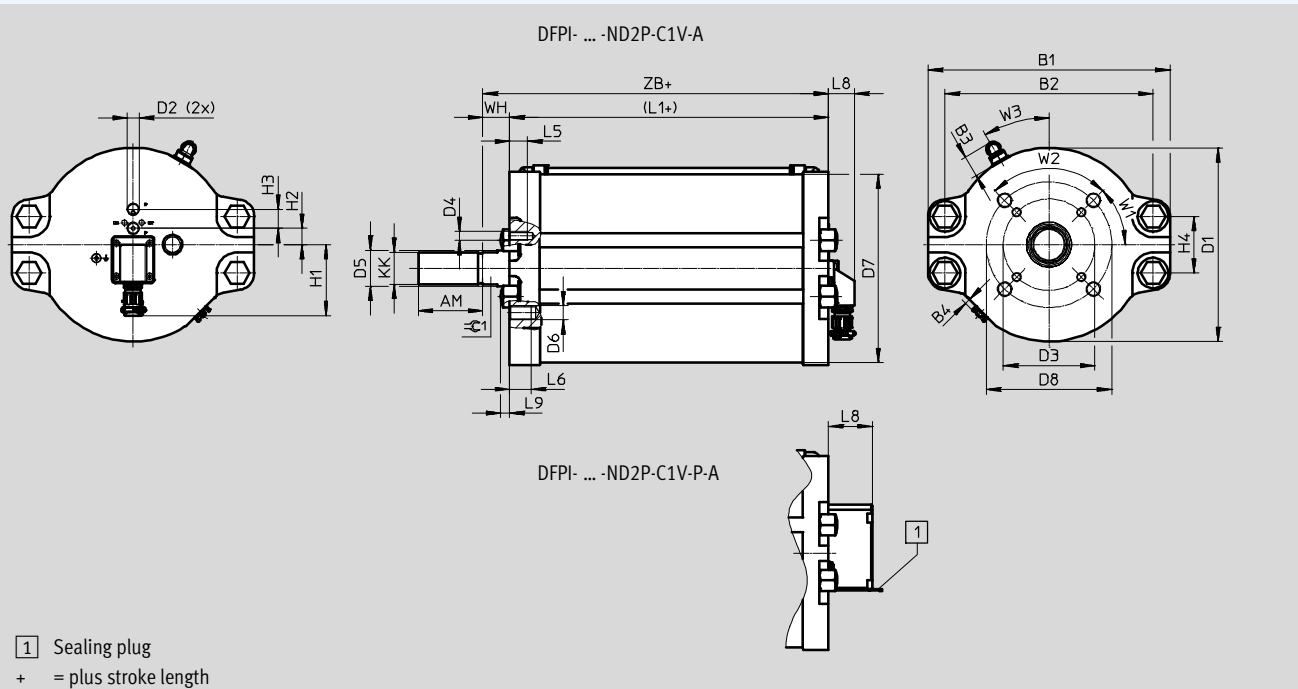
Technical data



## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Piston diameter 200 ... 320



Piston diameter	AM	B1	B2	B3	B4	D1	D2	D3	D4	D5	D6	D7	D8	H1	H2
[mm]	-2					∅		∅		∅		∅ min.	∅	±2	
DFPI-200- ... -C1V-A	72	270	232	24.5	6.5	216	G1/4	102	M10	40	M16	210	140	79	18.3
DFPI-250- ... -C1V-A	72	308	268	24.5	6.5	260	G1/4	102	M10	40	M16	254	140	79	18.3
DFPI-320- ... -C1V-A		378	338			332						325			

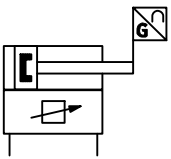
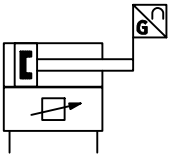
Piston diameter	H3	H4	KK	L1+	L5	L6	L8	L9	∅C1	WH	W1	W2	W3	ZB+
[mm]						min.								
DFPI-200- ... -C1V-A	21.2	63	M36x2	255.5	20	24	28.8	10	36	30	45°	90°	30°	285.5
DFPI-250- ... -C1V-A	21.2	82	M36x2	255	20	25	28.8	25	36	30	45°	90°	30°	285
DFPI-320- ... -C1V-A		126		262				-						


Piston diameter	AM	B1	B2	B3	B4	D1	D2	D3	D4	D5	D6	D7	D8	H2	H3
[mm]	-2					∅		∅		∅		∅ min.	∅		
DFPI-200- ... -C1V-P-A	72	270	232	24.5	6.5	216	G1/4	102	M10	40	M16	210	140	18.3	21.2
DFPI-250- ... -C1V-P-A	72	308	268	24.5	6.5	260	G1/4	102	M10	40	M16	254	140	18.3	21.2
DFPI-320- ... -C1V-P-A		378	338			332						325			

Piston diameter	H4	KK	L1+	L5	L6	L8	L9	∅C1	WH	W1	W2	W3	ZB+
[mm]					min.								
DFPI-200- ... -C1V-P-A	63	M36x2	255.5	20	24	48.8	10	36	30	45°	90°	30°	285.5
DFPI-250- ... -C1V-P-A	82	M36x2	255	20	25	48.8	25	36	30	45°	90°	30°	285
DFPI-320- ... -C1V-P-A	126		262				-						

# Linear actuators DFPI-...-C1V-...

Technical data

Ordering data		Piston diameter [mm]	Part no.	Type
 <ul style="list-style-type: none"> <li>Linear actuators with integrated positioner</li> <li>Based on DIN EN ISO 5210</li> </ul>	100	1548004	DFPI-100-...-ND2P-C1V-A	
	125	1548020	DFPI-125-...-ND2P-C1V-A	
	160	1548026	DFPI-160-...-ND2P-C1V-A	
	200	1548030	DFPI-200-...-ND2P-C1V-A	
	250	1548037	DFPI-250-...-ND2P-C1V-A	
	320	1548041	DFPI-320-...-ND2P-C1V-A	
Variant with protected pneumatic and electrical connections				
 <ul style="list-style-type: none"> <li>Linear actuators with integrated positioner</li> <li>Based on DIN EN ISO 5210</li> </ul>	100	1548005	DFPI-100-...-ND2P-C1V-P-A	
	125	1548021	DFPI-125-...-ND2P-C1V-P-A	
	160	1548028	DFPI-160-...-ND2P-C1V-P-A	
	200	1548032	DFPI-200-...-ND2P-C1V-P-A	
	250	1548039	DFPI-250-...-ND2P-C1V-P-A	
	320	1548044	DFPI-320-...-ND2P-C1V-P-A	

 Note

**Stroke length of the actuator**

The stroke length of the actuator should generally at least correspond to the nominal diameter of the process valve so that the process valve can be fully opened and closed. The system tolerances can lead to a greater stroke range than the specified nominal stroke range of the linear actuator. During initialisation, the integrated positioner learns the stroke length used and ensures that the slide gate moves to the required positions in a controlled way – at most to the end positions learned during initialisation.

# Linear actuators DFPI

Accessories

FESTO

## Connecting cable NHSB

- Pre-assembled connecting cable
- Suitable for linear actuators  
DFPI-...-E-P-... and DFPI-...-C1V-P-...
- Cable lengths 5, 10 and 15 m



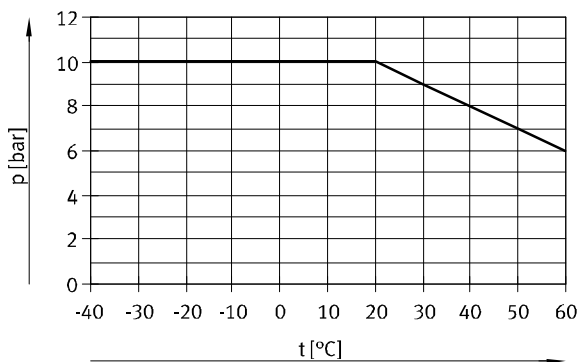
General technical data		
Connecting cable	[mm <sup>2</sup> ]	3x 0.75
		5x 0.75
Mounting position		Any
Electrical connection 1		Straight plug connector, 3-pin
Electrical connection 2		Open end, 3-wire
		Open end, 5-wire
Min. cable bending radius	[mm]	100
Pneumatic connection		For tubing O.D. 8 mm
		–
		For tubing O.D. 10 mm

Operating and environmental conditions		
Ambient temperature	[°C]	–20 ... +60
Ambient temperature with flexible cable installation	[°C]	–5 ... +60
Operating voltage range	[V DC]	0 ... 30
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium		Lubricated operation possible
Degree of protection		IP65, IP67, IP69K, NEMA 4
Relative humidity	[%]	5 ... 100, condensing

Materials	
Protective conduit	PA
Protective conduit fitting	PA
Cable sheath	PVC
Seals	TPE
Note on materials	RoHS-compliant

## Operating pressure [bar] as a function of operating temperature [°C]

NHSB-A1-...



# Linear actuators DFPI

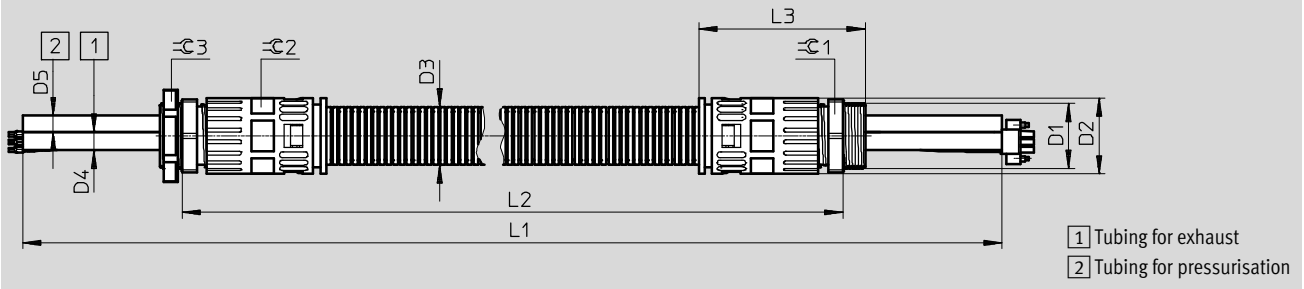
Accessories

FESTO

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

3-wire

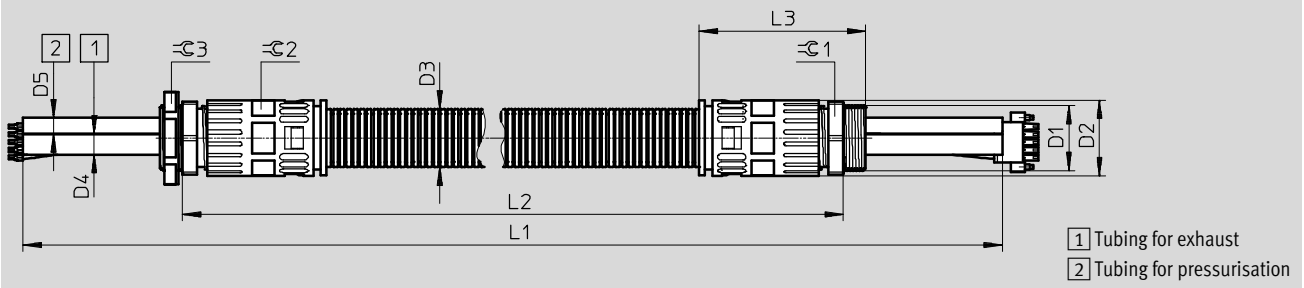


Type	D1	D2	D3	D4	D5	L1	L2	L3	∅ 1	∅ 2	∅ 3
NHSB-A1-0.6-BLG3-LE3-PU8-2xBB	M32x1.5	37	28.5	8	8	1400	600	82	36	34	41
NHSB-A1-5-BLG3-LE3-PU8-2xBB						6100	5000				
NHSB-A1-10-BLG3-LE3-PU8-2xBB						11100	10000				
NHSB-A1-15-BLG3-LE3-PU8-2xBB						16100	15000				

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

5-wire



Type	D1	D2	D3	D4	D5	L1	L2	L3	∅ 1	∅ 2	∅ 3
NHSB-A1-5-BLG5-LE5-PU8-2xBB	M32x1.5	37	28.5	10	8	6100	5000	82	36	34	41
NHSB-A1-10-BLG5-LE5-PU8-2xBB						11100	10000				
NHSB-A1-15-BLG5-LE5-PU8-2xBB						16100	15000				

## Ordering data – Connecting cable

Technical data → Internet: [nhsb](http://nhsb)

	Electrical connection 1	Electrical connection 2	Length [m]	Cable composition [mm <sup>2</sup> ]	Weight [g]	Part no.	Type
3-wire, for DFPI- ... -E-P-...							
	Straight plug, 3-pin	Open end, 3-wire	0.6	3x 0.75	280	3673475	NHSB-A1-0.6-BLG3-LE3-PU8-2XBB
			5		1250	1686608	NHSB-A1-5-BLG3-LE3-PU8-2XBB
			10		2500	1686609	NHSB-A1-10-BLG3-LE3-PU8-2XBB
			15		3750	1686610	NHSB-A1-15-BLG3-LE3-PU8-2XBB
5-wire, for DFPI- ... -C1V-P-...							
	Straight plug, 5-pin	Open end, 5-wire	5	5x 0.75	1250	1585793	NHSB-A1-5-BLG5-LE5-PU8-2XBB
			10		2500	1585794	NHSB-A1-10-BLG5-LE5-PU8-2XBB
			15		3750	1585795	NHSB-A1-15-BLG5-LE5-PU8-2XBB

# Linear actuators DFPI

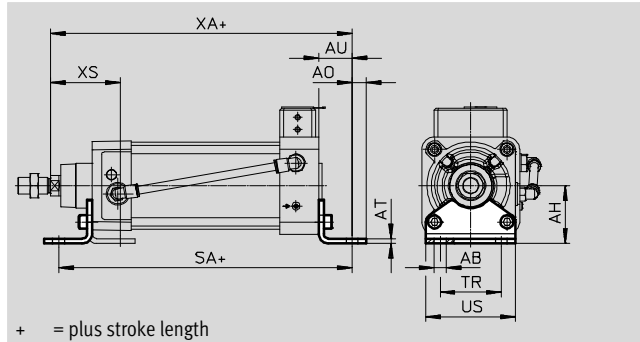
Accessories



## Foot mounting HNC/CRHNC

Material:

HNC: Galvanised steel  
CRHNC: High-alloy steel  
Free of copper and PTFE



Dimensions										
For $\varnothing$	AB $\varnothing$	AH	AO	AT	AU	SA	TR	US	XA	XS
[mm]										
100	14.5	71	17.5	6	41	261	75	110	270.7	86
125	16.5	90	22	8	45	290	90	131	309.7	102

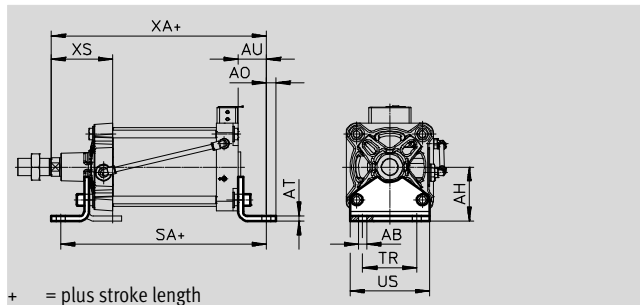
Ordering data										
For $\varnothing$	Basic design				High corrosion protection					
	CRC <sup>1)</sup>	Weight [g]	Part no.	Type <sup>2)</sup>	CRC <sup>1)</sup>	Weight [g]	Part no.	Type <sup>2)</sup>		
[mm]										
100	2	1009	<b>174374</b>	<b>HNC-100</b>	4	990	<b>176942</b>	<b>CRHNC-100</b>		
125	2	1902	<b>174375</b>	<b>HNC-125</b>	4	1920	<b>176943</b>	<b>CRHNC-125</b>		

- 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.  
Corrosion resistance class CRC 4 to Festo standard FN 940070  
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (➔ also FN 940082) using appropriate media.
- 2) Suitable for ATEX

## Foot mounting HNG

Material:

Galvanised steel  
Free of copper and PTFE



Dimensions and ordering data														
For $\varnothing$	AB $\varnothing$	AH	AO	AT	AU	SA	TR	US	XA	XS	CRC <sup>1)</sup>	Weight [g]	Part no.	Type
[mm]														
160	18.5	115	20	10	60	339	115	169	358.6	130	2	3931	<b>34476</b>	<b>HNG-160</b>
200	24	135	30	12	70	365	135	214	390	153	2	6896	<b>34477</b>	<b>HNG-200</b>

- 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.

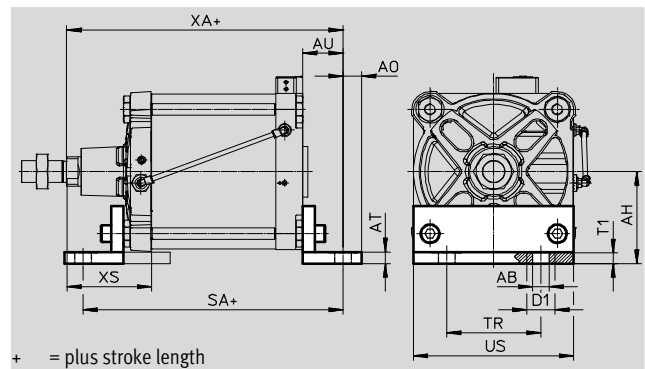
# Linear actuators DFPI

Accessories

FESTO

## Foot mounting HNG

Material:  
Galvanised steel  
Free of copper and PTFE



Dimensions and ordering data																
For $\varnothing$	AB	AH	A0	AT	AU	D1	SA	T1	TR	US	XA	XS	CRC <sup>1)</sup>	Weight	Part no.	Type
[mm]	$\varnothing$					$\varnothing$								[g]		
250	28	165	35	20	75	–	404	–	165	270	434	160	2	17084	<b>157510</b>	<b>HNG-250</b>
320	35	200	40	25	85	60	451.2	23	200	340	486.2	180	2	29968	<b>157511</b>	<b>HNG-320</b>

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.

# Linear actuators DFPI

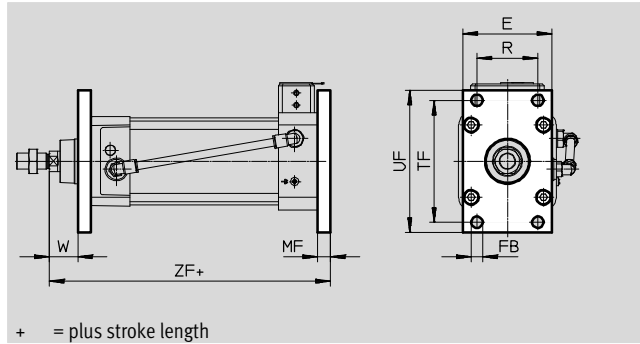
Accessories



## Flange mounting FNC/CRFNG

Material:

- FNC: Galvanised steel
- CRFNG: High-alloy steel
- Free of copper and PTFE
- RoHS-compliant



Dimensions								
For Ø	E	FB Ø	MF	R	TF	UF	W	ZF
[mm]								
100	110	14	16	75	150	175	35	245.7
125	132	16	20	90	180	210	45	284.7

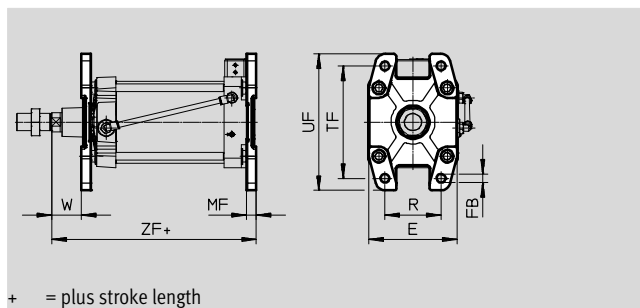
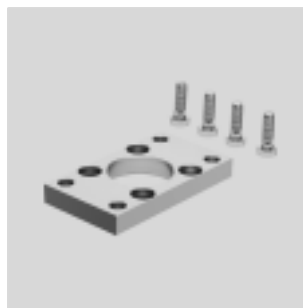
Ordering data									
For Ø	Basic design				High corrosion protection				Type <sup>2)</sup>
	CRC <sup>1)</sup>	Weight [g]	Part no.	Type <sup>2)</sup>	CRC <sup>1)</sup>	Weight [g]	Part no.		
[mm]									
100	1	2041	<b>174381</b>	<b>FNC-100</b>	4	2054	<b>161851</b>	<b>CRFNG-100</b>	
125	1	3775	<b>174382</b>	<b>FNC-125</b>	4	3787	<b>185363</b>	<b>CRFNG-125</b>	

- 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).  
Corrosion resistance class CRC 4 to Festo standard FN 940070  
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (➔ also FN 940082) using appropriate media.
- 2) Suitable for ATEX

## Flange mounting FNG

Material:

- Painted spheroidal graphite cast iron
- Free of copper and PTFE



Dimensions and ordering data												
For Ø	E	FB Ø	MF	R	TF	UF	W	ZF	CRC <sup>1)</sup>	Weight [g]	Part no.	Type
[mm]												
160	180	18	20	115	230	280	60	318.6	1	3550	<b>34478</b>	<b>FNG-160</b>
200	220	22	25	135	270	320	70	345	1	5321	<b>34479</b>	<b>FNG-200</b>
250	270	26	25	165	330	390	80	384	1	8657	<b>157508</b>	<b>FNG-250</b>
320	340	33	30	200	400	470	90	431.2	1	15109	<b>157509</b>	<b>FNG-320</b>

- 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).



# Linear actuators DFPI

Accessories

## Trunnion flange ZNCF/CRZNG

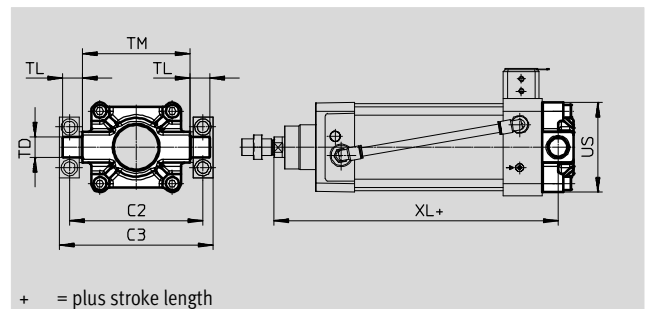
Material:

ZNCF: Stainless steel casting

CRZNG: Electropolished stainless steel casting

Free of copper and PTFE

RoHS-compliant



+ = plus stroke length

Dimensions							
For Ø	C2	C3	TD	TL	TM	US	XL
[mm]			Ø				
100	164	189	25	24.5	132	110	248.7
125	192	217					160

Ordering data								
For Ø	Basic design				High corrosion protection			
	CRC <sup>1)</sup>	Weight [g]	Part no.	Type <sup>2)</sup>	CRC <sup>1)</sup>	Weight [g]	Part no.	Type <sup>2)</sup>
[mm]								
100	2	2254	<b>174416</b>	<b>ZNCF-100</b>	4	2254	<b>161857</b>	<b>CRZNG-100</b>
125	2	3484	<b>174417</b>	<b>ZNCF-125</b>	4	3484	<b>185362</b>	<b>CRZNG-125</b>

- 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.  
 Corrosion resistance class CRC 4 to Festo standard FN 940070  
 Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.
- 2) Suitable for ATEX

# Linear actuators DFPI

Accessories



## Trunnion support LNZG

Mounting material:

Diameter 100, 125: Anodised wrought aluminium alloy

Diameter 160 ... 320: Galvanised steel

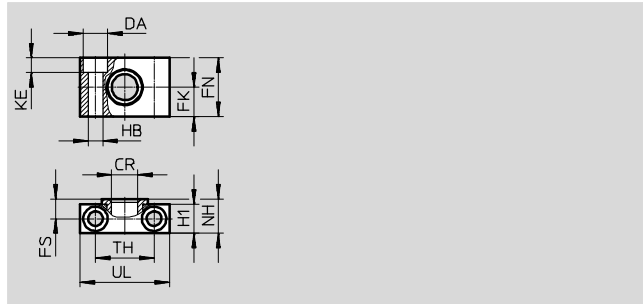
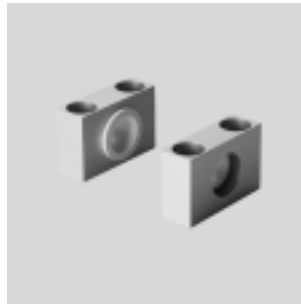
Material of bearing:

Diameter 100 ... 200: Plastic

Diameter 250, 320: Bronze

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data														Weight [g]	Part no.	Type
For $\varnothing$ [mm]	CR $\varnothing$	DA $\varnothing$ H13	FK	FN	FS	H1	HB $\varnothing$ H13	KE	NH	TH	UL	CRC <sup>1)</sup>				
100, 125	25D11	20	25 $\pm$ 0.1	50	16	24.5	14	13	28.5	50 $\pm$ 0.2	75	2	306	<b>32962</b>	<b>LNZG-100/125</b>	
160, 200	32D11	26	30 $\pm$ 0.2	60	22.5	36	18	17	40	60 $\pm$ 0.3	92	2	659	<b>35780</b>	<b>LNZG-160/200</b>	
250	40G7	33	35 $\pm$ 0.2	70	27.5	45	22	21.5	50	90 $\pm$ 0.3	140	2	2218	<b>157516</b>	<b>LNZG-250</b>	
320	50G7	40	40 $\pm$ 0.2	80	32.5	55	26	25.5	60	100 $\pm$ 0.3	150	2	2934	<b>157517</b>	<b>LNZG-320</b>	

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.

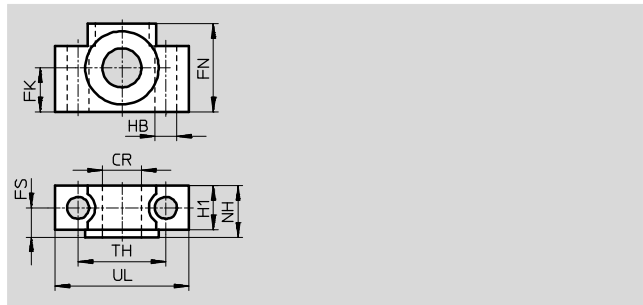
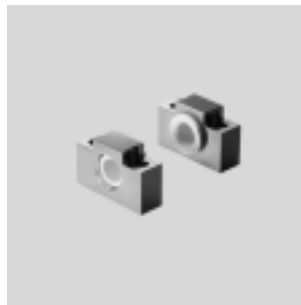
## Trunnion support CRLNZG

Material:

High-alloy steel

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data											Weight [g]	Part no.	Type
For $\varnothing$ [mm]	CR $\varnothing$ D11	FK $\pm$ 0.1	FN	FS	H1	HB $\varnothing$ H13	NH	TH $\pm$ 0.2	UL	CRC <sup>1)</sup>			
100, 125	25	25	50	16	24.5	14	28.5	50	75	4	739	<b>161877</b>	<b>CRLNZG-100/125</b>

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

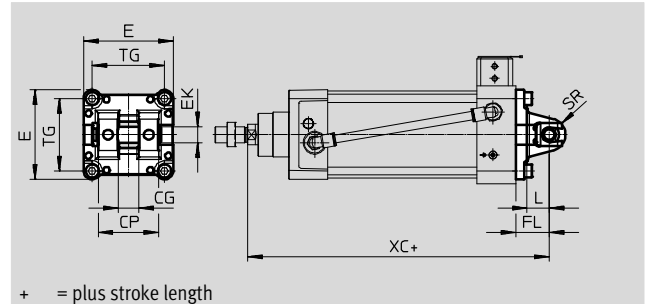
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

# Linear actuators DFPI

Accessories

## Swivel flange SNC

Material:  
Die-cast aluminium  
RoHS-compliant

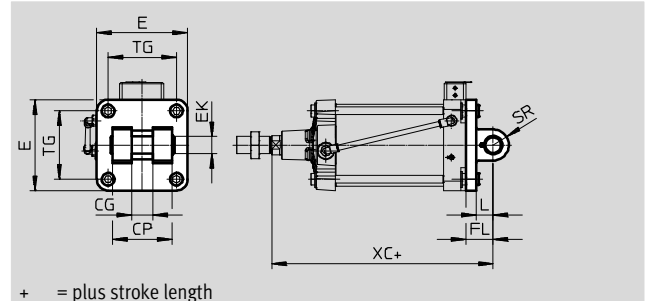


Dimensions and ordering data													
For $\varnothing$	CG	CP	E	EK	FL	L	SR	TG	XC	CRC <sup>1)</sup>	Weight	Part no.	Type <sup>2)</sup>
[mm]	H14	h14		$\varnothing$ H9	$\pm 0.2$						[g]		
100	25	75	110 $+0.3/-0.8$	20	41	27	20	89	270.7	1	895	<b>174388</b>	<b>SNC-100</b>
125	37	97	131 $-0.8$	30	50	30	25	110	334.7	1	1740	<b>174389</b>	<b>SNC-125</b>

- 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).
- 2) Suitable for ATEX

## Swivel flange SNG

Material:  
Die-cast aluminium  
RoHS-compliant



Dimensions and ordering data													
For $\varnothing$	CG	CP	E	EK	FL	L	SR	TG	XC	CRC <sup>1)</sup>	Weight	Part no.	Type <sup>2)</sup>
[mm]	H14	d12	max.	$\varnothing$ F7/h9	$\pm 0.2$	min.	max.	$\pm 0.3$			[g]		
160	43	122	186	35	55	35	32	140	353.6	2	3577	<b>152597</b>	<b>SNG-160</b>
200			230		60			175					

- 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.
- 2) Suitable for ATEX

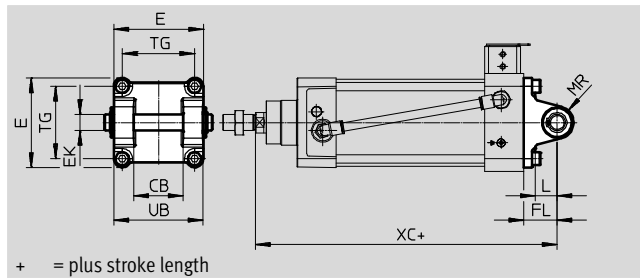
# Linear actuators DFPI

Accessories



## Swivel flange SNCB/SNCB-...-R3

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



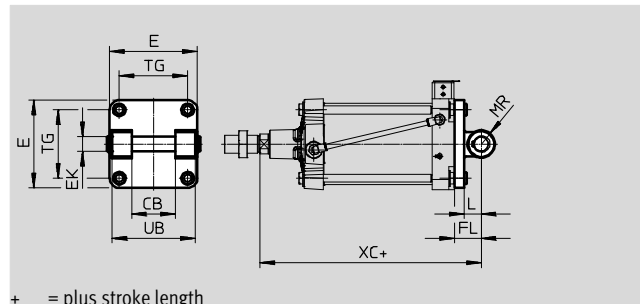
Dimensions									
For $\varnothing$	CB	E	EK	FL	L	MR	TG	UB	XC
[mm]	H14		$\varnothing$ H9/e8	$\pm 0.2$		-0.5			
100	60	110 $+0.3/-0.8$	20	41	27	20	89	110	270.7
125	70	131 $-0.8$	25	50	30	25	110	130	314.7

Ordering data									
For $\varnothing$	Basic design				Variant R3 – High corrosion protection				
	CRC <sup>1)</sup>	Weight [g]	Part no.	Type	CRC <sup>1)</sup>	Weight [g]	Part no.	Type	
[mm]									
100	1	1035	<b>174395</b>	<b>SNCB-100</b>	3	986	<b>176949</b>	<b>SNCB-100-R3</b>	
125	1	1860	<b>174396</b>	<b>SNCB-125</b>	3	1776	<b>176950</b>	<b>SNCB-125-R3</b>	

- 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).  
Corrosion resistance class CRC 3 to Festo standard FN 940070  
High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

## Swivel flange SNGB for clevis foot LN/LSN

Material:  
Die-cast aluminium



Dimensions and ordering data													
For $\varnothing$	CB	E	EK	FL	L	MR	TG	UB	XC	CRC <sup>1)</sup>	Weight	Part no.	Type
[mm]	H14		$\varnothing$	$\pm 0.2$			$\pm 0.2$	h14			[g]		
160	90	183.5	30 H9	55	37	30	140	170	353.6	2	3445	<b>34547</b>	<b>SNGB-160</b>
200		220		60	40	25	175		380	2	10020	<b>562455</b>	<b>SNGB-200-B</b>
250	110	268	40 E10	70	47	40	220	200	426	1	16141	<b>157512</b>	<b>SNGB-250</b>
320	120	338	45 H9	80	52	45	270	220	481.2	1	26636	<b>157513</b>	<b>SNGB-320</b>

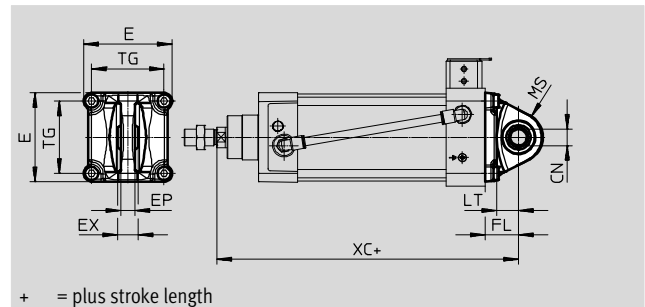
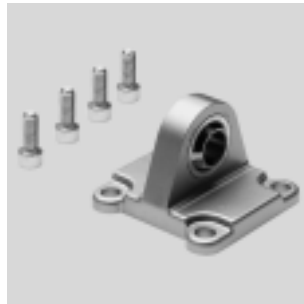
- 1) Corrosion resistance class CRC 1 to Festo standard FN 940070  
Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).  
Corrosion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

# Linear actuators DFPI

Accessories

## Swivel flange SNCS

Material:  
Wrought aluminium alloy  
Free of copper and PTFE  
RoHS-compliant



Dimensions and ordering data													
For $\varnothing$	CN	E	EP	EX	FL	LT	MS	TG	XC	CRC <sup>1)</sup>	Weight	Part no.	Type
[mm]	$\varnothing$	+1/-0.7	$\pm 0.2$								[g]		
100	20	109	18	25	41	27	30	89	270.7	2	683	<b>174402</b>	<b>SNCS-100</b>
125	30	132	25	37	50	30	39	110	314.7	2	1369	<b>174403</b>	<b>SNCS-125</b>

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.

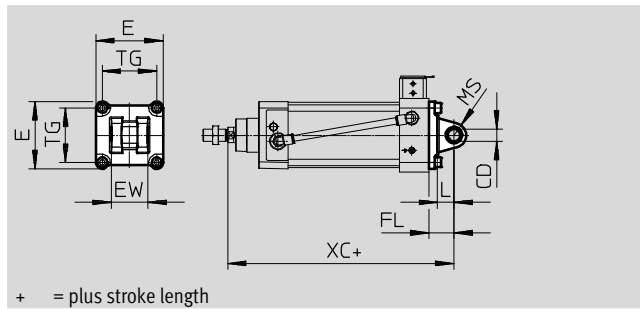
# Linear actuators DFPI

Accessories



## Swivel flange SNCL

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



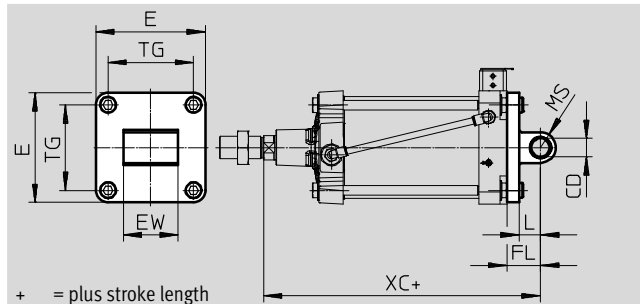
+ = plus stroke length

Dimensions and ordering data												
For $\varnothing$	CD	E	EW	FL	L	MS	TG	XC	CRC <sup>1)</sup>	Weight	Part no.	Type
[mm]	$\varnothing$ H9		-0.2/-0.6	+0.2						[g]		
100	20	110 <sup>+0.3/-0.8</sup>	60	41	27	20	72	270.7	1	606	<b>174409</b>	<b>SNCL-100</b>
125	25	131 <sup>-0.8</sup>	70	50	30	25	89	314.7	1	1135	<b>174410</b>	<b>SNCL-125</b>

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).

## Swivel flange SNGL

Material:  
Die-cast aluminium  
Free of copper and PTFE



+ = plus stroke length

Dimensions and ordering data												
For $\varnothing$	CD	E	EW	FL	L	MS	TG	XC	CRC <sup>1)</sup>	Weight	Part no.	Type
[mm]	$\varnothing$ H9	$\pm 0.5$	-0.5/-1.2	+0.2						[g]		
160	30	179.5	90	55	35	25	140	353.6	2	2358	<b>151534</b>	<b>SNGL-160</b>
200		219.5		60			175	380	2	3713	<b>151535</b>	<b>SNGL-200</b>

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.

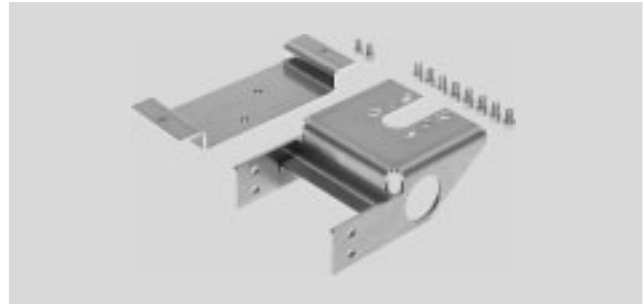
# Linear actuators DFPI

Accessories

FESTO

## Adapter kit DADG-AK-F6-A2

For direct mounting of a positioner on the linear actuator DFPI-ND2P-E-NB3P



### General technical data

Ambient temperature <sup>1)</sup>	[°C]	-20 ... +80
Corrosion resistance class CRC <sup>2)</sup>		3

1) Note operating range of proximity sensors and cylinder

2) Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

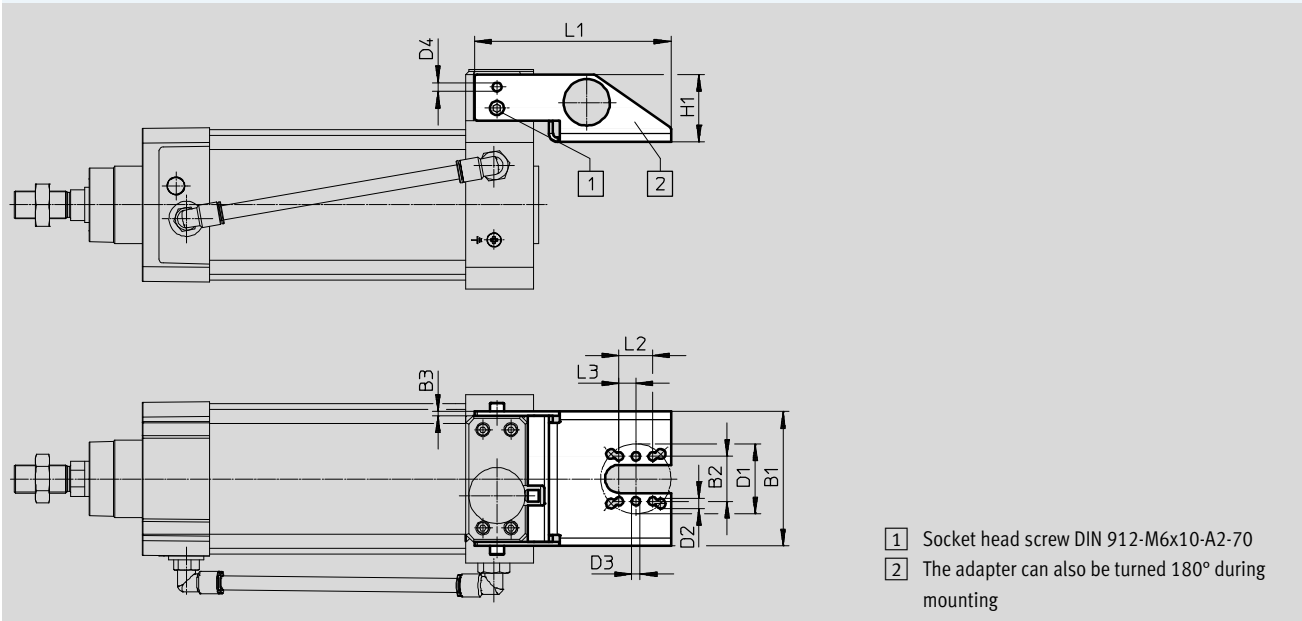
### Materials

Mounting bracket	High-alloy stainless steel
Screws	High-alloy stainless steel
Note on materials	Contains PWIS (paint-wetting impairment substances)
	RoHS-compliant

### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Mounting bracket for mounting a positioner with interface according to VDI/VDE 3845 sheet 1:2010-09



### Dimensions

Type	B1	B2	B3	D1	D2	D3	D4	H1	L1	L2	L3
DADG-1	96	32	3	50	7	6	6.3	48	140	24	12

# Linear actuators DFPI

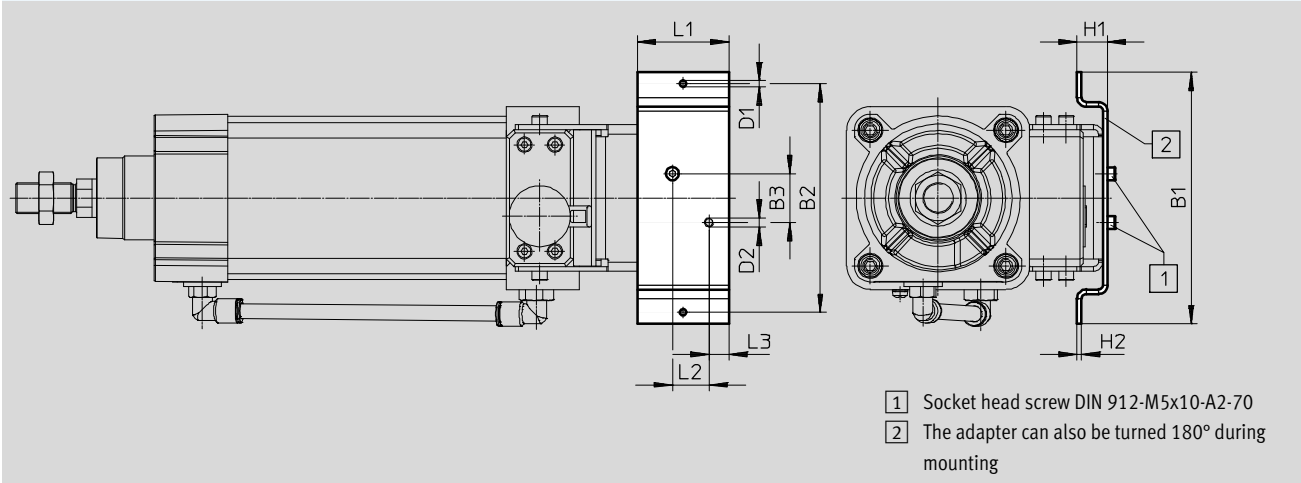
Accessories

FESTO

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Mounting bracket for mounting a positioner with hole spacing of 150 mm



## Dimensions

Type	B1	B2	B3	D1 Ø	D2 Ø	H1	H2	L1	L2	L3
DADG-2	165	150	32	M5	M6	20	3	60	24	13

## Ordering data – Adapter kit

Technical data → Internet: smbs

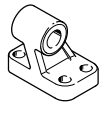
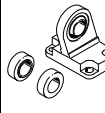
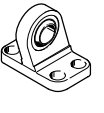

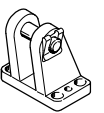
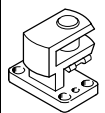
	For Ø	Description	Part no.	Type
	100 ... 320 mm	For direct mounting of an external positioner on the actuator	<b>3179433</b>	<b>DADG-AK-F6-A2</b>



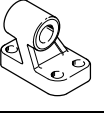
# Linear actuators DFPI

Accessories

**FESTO**

Ordering data – Mounting components				Technical data → Internet: clevis foot			
Designation	For Ø	Part no.	Type	Designation	For Ø	Part no.	Type
<b>Clevis foot LN/LNG</b>				<b>Clevis foot LSN</b>			
	100	<b>33895</b>	<b>LNG-100</b>		100	<b>5566</b>	<b>LSN-100</b>
	125	<b>33896</b>	<b>LNG-125</b>		125	<b>6987</b>	<b>LSN-125</b>
	160	<b>9037</b>	<b>LN-160</b>		160	<b>6988</b>	<b>LSN-160</b>
	200	<b>33898</b>	<b>LNG-200</b>		200	<b>6989</b>	<b>LSN-200</b>
	250	<b>9039</b>	<b>LN-250</b>		250	<b>6990</b>	<b>LSN-250</b>
	320	<b>9040</b>	<b>LN-320</b>		320	<b>6991</b>	<b>LSN-320</b>
<b>Clevis foot LSNG</b>				<b>Clevis foot LSNSG</b>			
	100	<b>31745</b>	<b>LSNG-100</b>		100	<b>31752</b>	<b>LSNSG-100</b>
	125	<b>31746</b>	<b>LSNG-125</b>		125	<b>31753</b>	<b>LSNSG-125</b>
	160	<b>152599</b>	<b>LSNG-160</b>				
	200	<b>152600</b>	<b>LSNG-200</b>				
<b>Clevis foot LBG<sup>1)</sup></b>				<b>Right-angle clevis foot LQG<sup>1)</sup></b>			
	100	<b>31766</b>	<b>LBG-100</b>		100	<b>31773</b>	<b>LQG-100</b>
	125	<b>31767</b>	<b>LBG-125</b>		125	<b>31774</b>	<b>LQG-125</b>






1) Suitable for ATEX

Ordering data – Mounting components, corrosion-resistant				Technical data → Internet: crlng	
Designation	For Ø	Part no.	Type		
<b>Clevis foot CRLNG</b>					
	100	<b>161845</b>	<b>CRLNG-100</b>		
	125	<b>176951</b>	<b>CRLNG-125</b>		




# Linear actuators DFPI

Accessories

FESTO

Ordering data – Piston-rod attachments				Technical data → Internet: piston-rod attachment			
Designation	For Ø	Part no.	Type	Designation	For Ø	Part no.	Type
<b>Rod eye SGS</b>				<b>Rod clevis SGA<sup>1)</sup></b>			
	100	9264	SGS-M20x1,5		100	10769	SGA-M20x1,5
	125	10774	SGS-M27x2		125	10770	SGA-M27x2
	160, 200	10775	SGS-M36x2		160, 200	10771	SGA-M36x2
	250	10776	SGS-M42x2	<b>Self-aligning rod coupler FK<sup>1)</sup></b>			
	320	10777	SGS-M48x2		100	6143	FK-M20x1,5
<b>Rod clevis SG<sup>1)</sup></b>					125	10485	FK-M27x2
	100	6147	SG-M20x1,5		160, 200	10746	FK-M36x2
	125	14987	SG-M27x2-B	<b>Coupling piece KSG<sup>1)</sup></b>			
	160, 200	9581	SG-M36x2		100	32966	KSG-M20x1,5
	250	9582	SG-M42x2		125	32967	KSG-M27x2
320	9583	SG-M48x2					

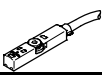
1) Suitable for ATEX

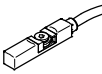
Ordering data – Piston-rod attachments, corrosion-resistant				Technical data → Internet: piston-rod attachment			
Designation	For Ø	Part no.	Type	Designation	For Ø	Part no.	Type
<b>Rod eye CRSGS</b>				<b>Rod clevis CRSG<sup>1)</sup></b>			
	100	195585	CRSGS-M20x1,5		100	13572	CRSG-M20x1,5
	125	195586	CRSGS-M27x2		125	185361	CRSG-M27x2
<b>Self-aligning rod coupler CRFK</b>							
	100	2545677	CRFK-M20x1,5				

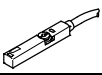
1) Suitable for ATEX


# Linear actuators DFPI



Accessories

Ordering data – Proximity sensor for T-slot, magnetoresistive					Technical data → Internet: smt-8	
Switching output	Electrical connection		Cable length [m]	Part no.	Type	
	Cable	Plug M8x1				
N/O contact						
	Contactless	2-wire	–	5	574341	SMT-8M-A-ZS-24V-E-5,0-OE-EX2
	PNP	–	3-pin	0.3	574342	SMT-8M-A-PS-24V-E-0,3-M8D-EX2

Ordering data – Proximity sensor for T-slot, corrosion-resistant					Technical data → Internet: crsmt	
Switching output	Electrical connection		Cable length [m]	Part no.	Type	
	Cable	Plug M8x1				
N/O contact						
	PNP	Cable, 3-wire	–	5	574380	CRSMT-8M-PS-24V-K-5,0-OE

Ordering data – Proximity sensor for T-slot, NAMUR					Technical data → Internet: sdbt	
Switching output	Electrical connection		Cable length [m]	Part no.	Type	
	Cable	Plug M8x1				
N/O contact						
	NAMUR	Cable, 2-wire	–	5	579071	SDBT-MS-20NL-ZN-E-5-LE-EX6
				10	579072	SDBT-MS-20NL-ZN-E-10-LE-EX6



Ordering data – Slot cover for T-slot				Technical data → Internet: abp	
Assembly	Length [m]			Part no.	Type
	Insertable	2x 0.5		151680	ABP-5-S


Ordering data – Mounting kits for proximity sensors SMT/CRSMT/SDBT				Technical data → Internet: smbz, dasp	
For Ø	Materials		Part no.	Type	
	100	Rail: anodised wrought aluminium alloy Screws: high-alloy stainless steel Free of copper and PTFE	537806	SMBZ-8-32/100	
		125		1451483	DASP-M4-125-A
160, 200			1553813	DASP-M4-160-A	
250			1456781	DASP-M4-250-A	
320			3015256	DASP-M4-320-A	

# Linear actuators DFPI

Accessories

**FESTO**

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	<b>541333</b>	<b>NEBU-M8G3-K-2.5-LE3</b>
			5	<b>541334</b>	<b>NEBU-M8G3-K-5-LE3</b>
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	<b>541363</b>	<b>NEBU-M12G5-K-2.5-LE3</b>
			5	<b>541364</b>	<b>NEBU-M12G5-K-5-LE3</b>
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	<b>541338</b>	<b>NEBU-M8W3-K-2.5-LE3</b>
			5	<b>541341</b>	<b>NEBU-M8W3-K-5-LE3</b>
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	<b>541367</b>	<b>NEBU-M12W5-K-2.5-LE3</b>
			5	<b>541370</b>	<b>NEBU-M12W5-K-5-LE3</b>

Ordering data – Rectangular proximity sensor, pneumatic			Technical data → Internet: smpo	
	Assembly	Pneumatic connection	Part no.	Type
3/2-way valve, normally closed				
	With accessories	Barbed fitting for tubing I.D. 3 mm	<b>31008</b>	<b>SMPO-1-H-B</b>

Ordering data – Mounting kit for proximity sensor SMPO-1			Technical data → Internet: smbs	
	For Ø	Assembly	Part no.	Type
	32 ... 100 mm	On the cylinder barrel using clamping strap	<b>151226</b>	<b>SMBS-2</b>