

## Linear/swivel clamps CLR

**FESTO**

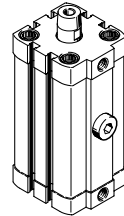
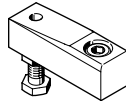


## Key features

### Functional description

The linear/swivel clamp CLR is used for all types of clamping. Through the combination of the linear and swivel motion of the piston rod, workpieces can be inserted and removed even beyond the clamping range. There is a choice between swivelling to the right or left, while the CLR also boasts a linear stroke for diameters of 40 and above.

Clamping finger:  
Can be ordered as an accessory



### Optimal range

- Uncomplicated mechanical system
- Sturdy design
- Long service life
- Low procurement, assembly and maintenance costs
- New: CLR with dust and welding spatter protection

### Flexible

- Swivel direction can be adjusted at a later date
- Compact dimensions for tight installation spaces

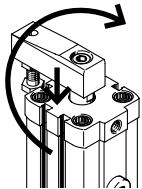
### Easy to mount

- The hole pattern corresponds to ISO 21287, meaning that foot and flange mountings from the standard accessories range can be used
- Female threads in the bearing and end caps make it easy to assemble the cylinder either directly or using mounting accessories

### Practical

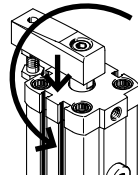
- Clamping finger including plug-on rubber cap to protect sensitive surfaces available as accessory
- Clamping finger can be freely adjusted across a full 360°
- Can be repaired using set of wearing parts
- Corresponding accessories such as tubing, flow control valves and push-in fittings

### Swivel direction



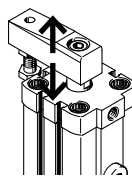
Swivelling to the right

View from above of the piston rod side with the piston rod retracted.  
Clockwise swivel direction.



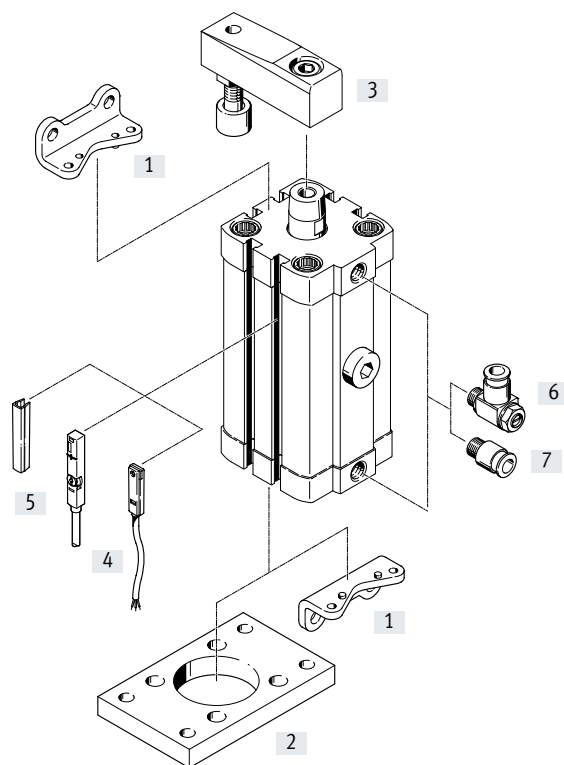
Swivelling to the left

View from above of the piston rod side with the piston rod retracted.  
Anticlockwise swivel direction.



Straight

Peripherals overview



Mounting components and accessories			
	Description	→ Page/Internet	
[1]	Foot mounting HNA	For bearing or end caps	15
[2]	Flange mounting FNC	For end caps	16
[3]	Clamping finger CLR...-FS	Comprising clamping finger, retaining screw, clamp screw, lock nut and dust cap	16
[4]	Proximity switch SME/SMT	Can be integrated in the cylinder profile barrel	18
[5]	Slot cover ABP-5-S	For protecting the sensor cables and the sensor slots from contamination	18
[6]	One-way flow control valve GRLA	For regulating speed	17
[7]	Push-in fitting QS	For connecting tubing with standard O.D.	qs

## Type codes

001	Series	
CLR	Linear swivel clamp, double-acting	

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

003	Stroke	
10	10	
20	20	
50	50	

004	Swivel direction	
R	Right	
L	Left	
G	Straight	


005	Cushioning	
P	Elastic cushioning rings/plates on both sides	

006	Position sensing	
A	For proximity sensor	

007	Piston rod characteristics	
	Standard	
K11	Welding immune	

008	Scraper	
	Standard	
R8	Dust protection	

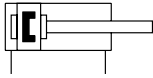
009	Generation	
B	Series B	

 **Note**

Variant G only with piston  $\varnothing$  40 ... 63 mm  
 Variant K11 and R8 only with piston  $\varnothing$  25 ... 63 mm  
 Variant B only with piston  $\varnothing$  32 mm

## Data sheet

### Function



- Diameter  
12 ... 63 mm
- Clamping stroke  
12, 20, 50 mm

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General technical data																		
Piston Ø	12		16		20		25		32		40		50		63			
Pneumatic connection	M5		M5		M5		M5		G1/8		G1/8		G1/8		G1/8			
Piston rod thread	M3		M4		M6		M6		M8		M8		M10		M10			
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)																	
Design	Piston																	
	Piston rod																	
	Cylinder barrel																	
Cushioning	Elastic cushioning rings/plates at both ends																	
Position sensing	Via proximity switch																	
Type of mounting	With through-hole																	
	With female thread																	
	Via accessories																	
Mounting position	Any																	
Clamping range	≥ 2 mm before the end position is reached																	
Clamping stroke <sup>1)</sup>	[mm]	10	20	10	20	10	20	10	20	10	20	10	20	20	50	20	50	
Total stroke <sup>2)</sup>	[mm]	19	29	20	30	22	32	23	33	28	38	28	38	41	71	43	73	
Swivel direction	Right, left											Right, left, straight						
Swivel angle	[°]	90 ±4				90 ±3				90 ±2								

- 1) The clamping stroke corresponds to the linear stroke used for clamping
- 2) The total stroke comprises the clamping stroke and the swivel stroke

Operating and environmental conditions		
Operating pressure	[bar]	2 ... 10
Ambient temperature <sup>1)</sup>	[°C]	-10 ... +80
Corrosion resistance class CRC <sup>2)</sup>		2

- 1) Note operating range of proximity switches
- 2) Corrosion resistance class 2 to Festo standard 940070  
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

Data sheet

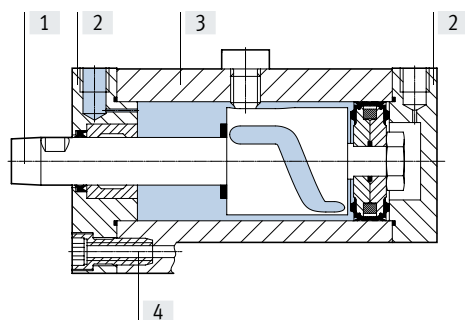
Forces [N] without clamping finger								
Piston ø	12	16	20	25	32	40	50	63
Theoretical clamping force at 6 bar	51	90	121	227	362	633	990	1682

Forces [N] with clamping finger CLR-...-FS, 5 mm before end of stroke									
Piston ø	12	16	20	25	32	40	50	63	
Effective clamping force at	2 bar	12	17	35	63	111	176	271	441
	4 bar	23	36	73	127	216	355	508	823
	6 bar	34	53	109	188	313	536	716	1386

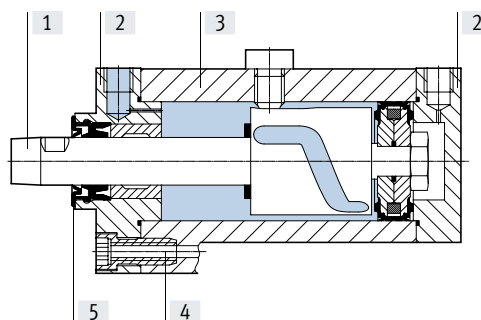
Materials

Sectional view

Basic type



K11-R8 With dust and welding spatter protection

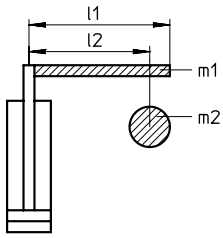


Linear/swivel clamp	Basic type	K11-R8
[1] Piston rod	High-alloy stainless steel	Surface-treated high-alloy stainless steel
[2] Bearing and end caps	Coated wrought aluminium alloy	
[3] Cylinder barrel	Smooth-anodised wrought aluminium alloy	
[4] Flange screws	Galvanised steel	
[5] Hard scraper	-	Polyphenylene sulphide, flame retardant
- Seals	Nitrile rubber, polyurethane	

Weight [g]									
Piston ø	12	16	20	25	32	40	50	63	
Basic type									
Product weight at stroke	10 mm	135	160	335	395	685	880	-	-
	20 mm	160	190	385	455	765	985	1650	2100
	50 mm	-	-	-	-	-	-	2115	2635
Variant K11-R8									
Product weight at stroke	10 mm	-	-	-	410	700	895	-	-
	20 mm	-	-	-	470	785	1010	1690	2100
	50 mm	-	-	-	-	-	-	2155	2625

Data sheet

Maximum permissible mass moment of inertia  $J_0$



- $m_1$  = mass of the clamping finger
- $l_1$  = length of the clamping finger
- $m_2$  = mass of the screw
- $l_2$  = centre distance between screw and piston rod

**Note**

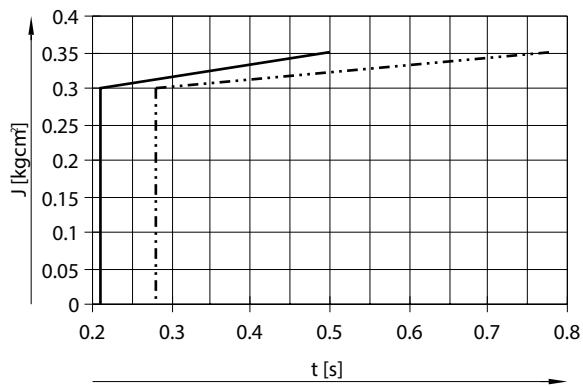
The permissible mass moment of inertia at the piston rod depends on the cylinder's speed. The moment can easily be calculated using this formula. The software program "mass moments of inertia", available on the electronic catalogue, can also be used for calculation purposes.

Maximum permissible mass moment of inertia:

$$J_0 = \frac{m_1 \cdot l_1^2}{3} + m_2 \cdot l_2^2$$

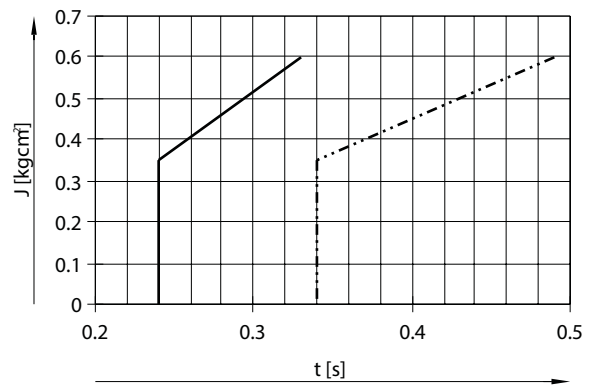
Mass moment of inertia  $J$  as a function of the time  $t$  required for a single stroke

∅ 12

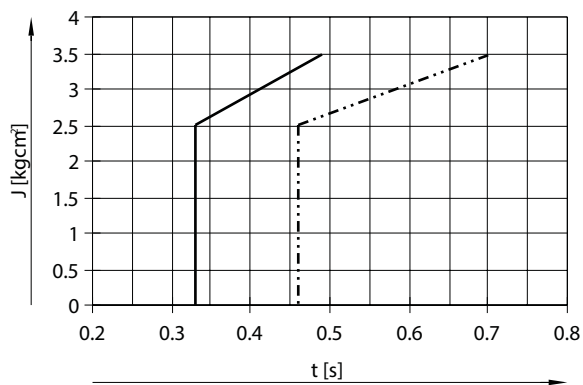


- 10 mm stroke
- - - 20 mm stroke

∅ 16

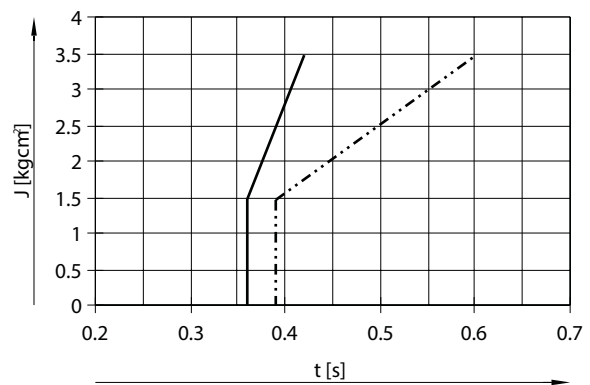


∅ 20



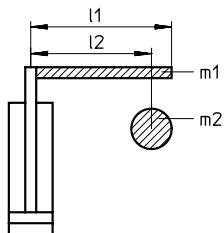
- 10 mm stroke
- - - 20 mm stroke

∅ 25



## Data sheet

### Maximum permissible mass moment of inertia $J_0$



- $m_1$  = mass of the clamping finger
- $l_1$  = length of the clamping finger
- $m_2$  = mass of the screw
- $l_2$  = centre distance between screw and piston rod

#### Note

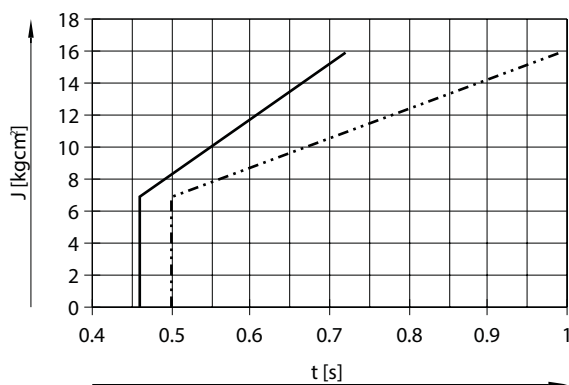
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Maximum permissible mass moment of inertia:

$$J_0 = \frac{m_1 \cdot l_1^2}{3} + m_2 \cdot l_2^2$$

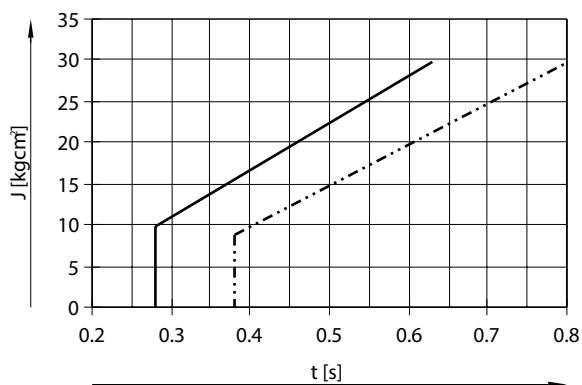
### Mass moment of inertia $J$ as a function of the time $t$ required for a single stroke

∅ 32

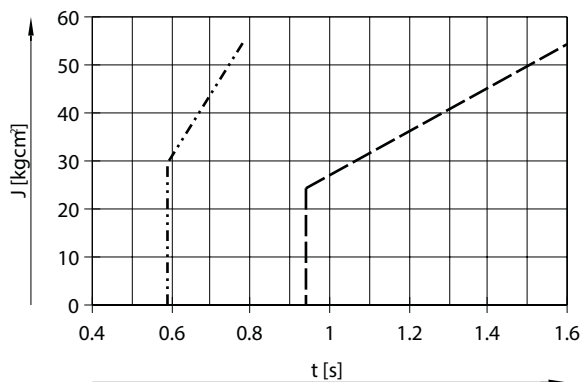


- 10 mm stroke
- - - 20 mm stroke

∅ 40

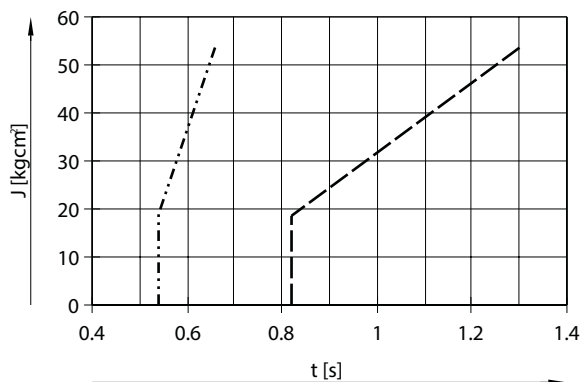


∅ 50



- 20 mm stroke
- - - 50 mm stroke

∅ 63



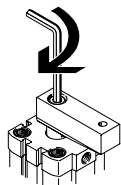


## Data sheet

### Assembling a clamping finger

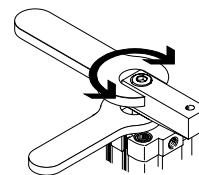
#### Step 1

- Place the clamping finger on the cone of the piston rod
- Screw the retaining screw into the threaded hole of the piston rod until the clamping finger can still just be turned



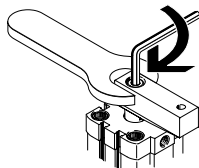
#### Step 2

- Hold the piston rod in place at the spanner flat using an open-ended spanner
- Turn the clamping finger with a second spanner until the alignment corresponds to the application



#### Step 3

- Tighten the retaining screw using the tightening torque below



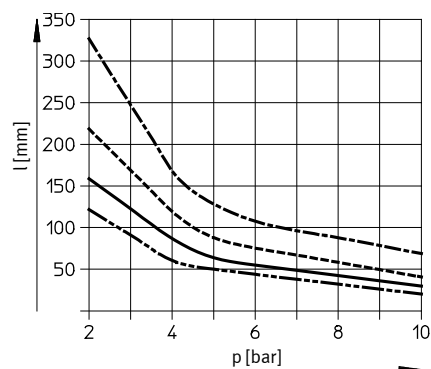
#### Tightening torques [Nm]

Piston $\varnothing$	12	16	20	25	32	40	50	63
Max. tightening torque clamping finger screw	1.2	3	12	12	24	24	47	47

#### Note

No calculations are required when using the Festo clamping finger. The accessory matches the cylinder and can be operated without flow control at the maximum permissible pressure. When manufacturing the clamping finger in-house, the following values must be checked and calculations performed.

#### Maximum permissible clamping arm length $l$ as a function of the operating pressure $p$



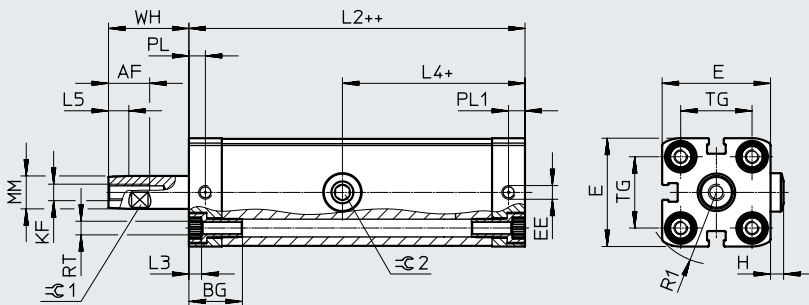
- ⋯⋯⋯  $\varnothing$  12/16
- $\varnothing$  20/25
- - -  $\varnothing$  32/40
- · - ·  $\varnothing$  50/63

Data sheet

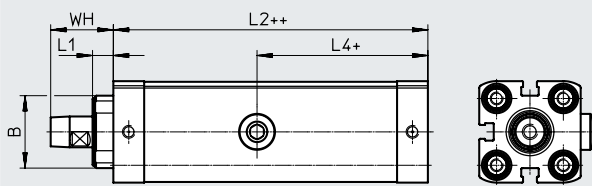
Dimensions

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

Basic type  $\varnothing 12 \dots 25$



Variant K11-R8  $\varnothing 25$



+ = plus clamping stroke length  
 ++ = plus 2x clamping stroke length

$\varnothing$	AF	BG	B	E	EE	H	KF	L1	L2	L3	L4
[mm]											
12	10	17	-	27.5	M5	3.25	M3	-	60.6	3.5	21.8
16	12			29			M4		62.5		23.5
20	15	19.5	28.4	35.5		4.75	M6		8.1	79.5	4.6
25				39.5	82.5			46.55			

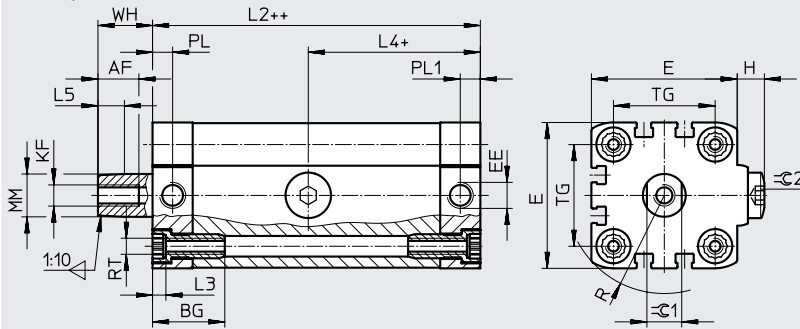
$\varnothing$	L5	MM $\varnothing$	PL	PL1	R	RT	TG	WH		$\approx \varnothing 1$	$\approx \varnothing 2$
									K11-R8		
[mm]											
12	4.9	6	6	15.1	18.2	M4	16	10.9	-	5	3
16		8	6.5	15	19.3		18			7	
20	7.4	12	6	6	23.7	M5	22	16.4	24.5	10	5
25							26.3				

Data sheet

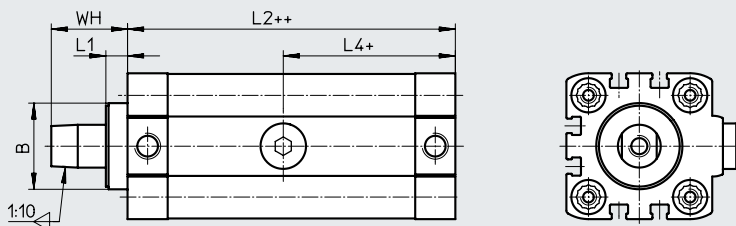
Dimensions

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

Basic type  $\varnothing 32 \dots 63$



Variant K11-R8  $\varnothing 32 \dots 63$



+ = plus clamping stroke length  
 ++ = plus 2x clamping stroke length

$\varnothing$	AF	BG	B	E	EE	H	KF	L1	L2	L3	L4
[mm]											
32	15	26	32.2	47	G1/8	8.9	M8	8.1	101	4.6	53.05
40			38.2	54.5		10.15			102.5		54.3
50		27	65.5	12.7		117.9	58.8				
63				75.5		14.2	M10	7.65	124.9		62.75

$\varnothing$	L5	MM $\varnothing$	PL	PL1	R	RT	TG	WH		$\approx C1$	$\approx C2$
[mm]									K11-R8		
32	9.9	16	7.5	7.5	31.5	M6	32.5	20.4	28.5	13	6
40					36.7		38				
50	10.3	20			44.3	M8	46.5	20.8			
63			51.5	56.5							

Data sheet

<b>Ordering data – Swivel direction right</b>			
Piston ø [mm]	Stroke [mm]	Part no.	Type
12	10	535431	CLR-12-10-R-P-A
	20	535433	CLR-12-20-R-P-A
16	10	535435	CLR-16-10-R-P-A
	20	535437	CLR-16-20-R-P-A
20	10	535439	CLR-20-10-R-P-A
	20	535441	CLR-20-20-R-P-A
25	10	535443	CLR-25-10-R-P-A
	20	535445	CLR-25-20-R-P-A
32	10	543177	CLR-32-10-R-P-A-B
	20	543179	CLR-32-20-R-P-A-B
40	10	535453	CLR-40-10-R-P-A
	20	535456	CLR-40-20-R-P-A
50	20	535459	CLR-50-20-R-P-A
	50	535462	CLR-50-50-R-P-A
63	20	535465	CLR-63-20-R-P-A
	50	535468	CLR-63-50-R-P-A

<b>Ordering data – Swivel direction right, with dust and welding spatter protection</b>			
Piston ø [mm]	Stroke [mm]	Part no.	Type
25	10	535483	CLR-25-10-R-P-A-K11-R8
	20	535485	CLR-25-20-R-P-A-K11-R8
32	10	535487	CLR-32-10-R-P-A-B-K11-R8
	20	535490	CLR-32-20-R-P-A-B-K11-R8
40	10	535493	CLR-40-10-R-P-A-K11-R8
	20	535496	CLR-40-20-R-P-A-K11-R8
50	20	535499	CLR-50-20-R-P-A-K11-R8
	50	535502	CLR-50-50-R-P-A-K11-R8
63	20	535505	CLR-63-20-R-P-A-K11-R8
	50	535508	CLR-63-50-R-P-A-K11-R8

## Data sheet

Ordering data – Swivel direction left			
Piston ø [mm]	Stroke [mm]	Part no.	Type
12	10	535432	CLR-12-10-L-P-A
	20	535434	CLR-12-20-L-P-A
16	10	535436	CLR-16-10-L-P-A
	20	535438	CLR-16-20-L-P-A
20	10	535440	CLR-20-10-L-P-A
	20	535442	CLR-20-20-L-P-A
25	10	535444	CLR-25-10-L-P-A
	20	535446	CLR-25-20-L-P-A
32	10	543178	CLR-32-10-L-P-A-B
	20	543180	CLR-32-20-L-P-A-B
40	10	535454	CLR-40-10-L-P-A
	20	535457	CLR-40-20-L-P-A
50	20	535460	CLR-50-20-L-P-A
	50	535463	CLR-50-50-L-P-A
63	20	535466	CLR-63-20-L-P-A
	50	535469	CLR-63-50-L-P-A

Ordering data – Swivel direction left, with dust and welding spatter protection			
Piston ø [mm]	Stroke [mm]	Part no.	Type
25	10	535484	CLR-25-10-L-P-A-K11-R8
	20	535486	CLR-25-20-L-P-A-K11-R8
32	10	535488	CLR-32-10-L-P-A-B-K11-R8
	20	535491	CLR-32-20-L-P-A-B-K11-R8
40	10	535494	CLR-40-10-L-P-A-K11-R8
	20	535497	CLR-40-20-L-P-A-K11-R8
50	20	535500	CLR-50-20-L-P-A-K11-R8
	50	535503	CLR-50-50-L-P-A-K11-R8
63	20	535506	CLR-63-20-L-P-A-K11-R8
	50	535509	CLR-63-50-L-P-A-K11-R8

## Data sheet

Ordering data – Swivel direction straight			
Piston ø [mm]	Stroke [mm]	Part no.	Type
40	10	535455	CLR-40-10-G-P-A
	20	535458	CLR-40-20-G-P-A
50	20	535461	CLR-50-20-G-P-A
	50	535464	CLR-50-50-G-P-A
63	20	535467	CLR-63-20-G-P-A
	50	535470	CLR-63-50-G-P-A

Ordering data – Swivel direction straight, with dust and welding spatter protection			
Piston ø [mm]	Stroke [mm]	Part no.	Type
40	10	535495	CLR-40-10-G-P-A-K11-R8
	20	535498	CLR-40-20-G-P-A-K11-R8
50	20	535501	CLR-50-20-G-P-A-K11-R8
	50	535504	CLR-50-50-G-P-A-K11-R8
63	20	535507	CLR-63-20-G-P-A-K11-R8
	50	535510	CLR-63-50-G-P-A-K11-R8

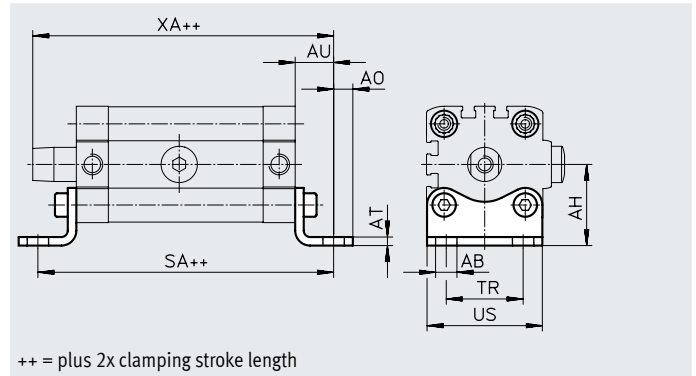
 **Note**

The swivel direction can easily be adjusted at a later date.  
 E.g.: A CLR-12-10-R-P-A with right-hand swivel can be converted to the left-hand swivel variant CLR-12-10-L-P-A by loosening the guide pin and rotating the slotted guide plate.

## Accessories


### Foot mounting HNA

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



Dimensions and ordering data													
For $\varnothing$	AB $\varnothing$ H14	AH	AO	AT	AU	SA	TR	US	XA	CRC <sup>1)</sup>	Weight [g]	Part no.	Type
12	5.8	21	5	3	13	86.6	16	26	84.5	1	39	537237	HNA-12
16		22	4.75			88.5	18	27.5	86.4	1	42	537238	HNA-16
20	7	27	6.25	4	16	111.5	22	34.5	111.9	1	84	537239	HNA-20
25		29				114.5	26	38.5	114.9	1	90	537240	HNA-25
32		33.5				7	133	32	46	137.4	1	123	537241
40	10	38	9	5	21	138.5	36	54	140.9	1	157	537242	HNA-40
50		45	8			159.5	45	64	159.7	1	278	537243	HNA-50
63		50				166.9	50	75	166.7	1	328	537244	HNA-63

1) Corrosion resistance class 1 to Festo standard 940 070  
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

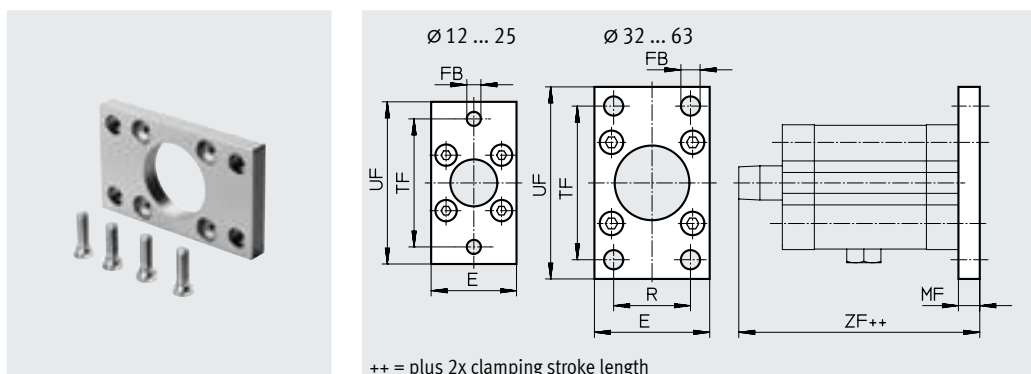
 **Note**

The foot mounting HNA can only be used for the variant K11-R8 with a diameter of 40 or above.

## Accessories

### Flange mounting FNC

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



++ = plus 2x clamping stroke length

#### Dimensions and ordering data

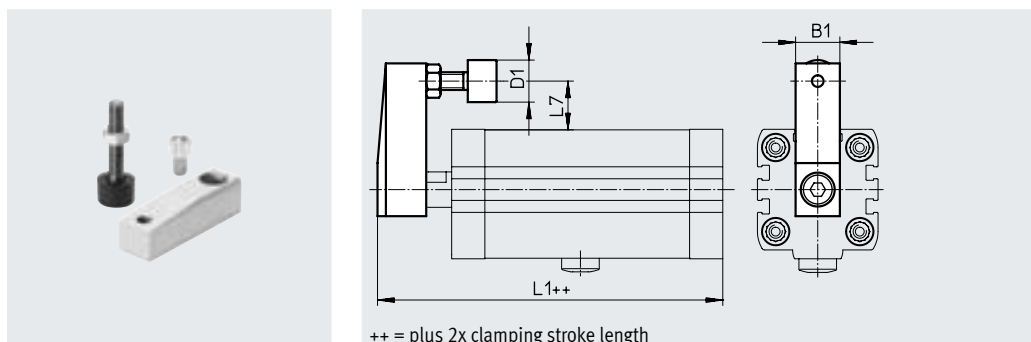
For $\varnothing$ [mm]	E	FB $\varnothing$ H13	MF	R	TF	UF	ZF	CRC <sup>1)</sup>	Weight [g]	Part no.	Type
12	28	5.5	8	-	40	50	79.5	1	79	537245	FNC-12
16	29				43	55	81.4	1	88	537246	FNC-16
20	36	55			70	103.9	1	141	537247	FNC-20	
25	40	60			76	106.9	1	165	537248	FNC-25	
32	45	7	10	32	64	80	131.4	1	221	174376	FNC-32
40	54	36		72	90	132.9	1	291	174377	FNC-40	
50	65	45		90	110	150.7	1	536	174378	FNC-50	
63	75	9	12	50	100	120	157.7	1	679	174379	FNC-63

1) Corrosion resistance class 1 to Festo standard 940070

Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

### Clamping finger CLR-...-FS

Materials: Clamping finger:  
12 ... 40: Anodised aluminium  
50 ... 63: High-alloy stainless steel  
Retaining screw,  
clamp screw, lock nut:  
Galvanised steel  
Dust cap: Neoprene






++ = plus 2x clamping stroke length


For $\varnothing$ [mm]	B1	D1 $\varnothing$	L1 +1.1/-1.2		L7	Part no.	Type
			Basic type	K11-R8			
12	10	11	76.5	-	11.8	535551	CLR-12-FS
16	11		79.4		12.25	535552	CLR-16-FS
20	16		104.4		17.5	535553	CLR-20/25-FS
25		107.4	15.5	535554	CLR-20/25-FS		
32	20	19	133.3	115.5	25.75	535554	CLR-32/40-FS
40			134.8	141.4	22		
50	25	24	153.2	142.9	32.5	535555	CLR-50/63-FS
63			160.2	160.85	27.5		
			160.2	167.85			




Accessories

Ordering data – One-way flow control valves				Data sheets → Internet: grl	
	Connection Thread	For tubing O.D. [mm]	Material	Part no.	Type


For exhaust air					
	M5	3	Metal design	193137	GRLA-M5-QS-3-D
		4		193138	GRLA-M5-QS-4-D
		6		193139	GRLA-M5-QS-6-D
	G1/8	3		193142	GRLA-1/8-QS-3-D
		4		193143	GRLA-1/8-QS-4-D
		6		193144	GRLA-1/8-QS-6-D
		8		193145	GRLA-1/8-QS-8-D
				G1/8	4
6	578798		VFOH-LE-A-G18-Q6		
8	578799		VFOH-LE-A-G18-Q8		
	G1/8	6	Metal design	162965	GRLA-1/8-QS-6-RS-B
		8		162966	GRLA-1/8-QS-8-RS-B

For supply air					
	M5	3	Metal design	193153	GRLZ-M5-QS-3-D
		4		193154	GRLZ-M5-QS-4-D
		6		193155	GRLZ-M5-QS-6-D
	G1/8	3		193156	GRLZ-1/8-QS-3-D
		4		193157	GRLZ-1/8-QS-4-D
		6		193158	GRLZ-1/8-QS-6-D
		8		193159	GRLZ-1/8-QS-8-D

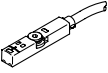
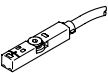
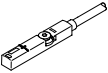
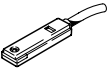
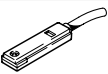

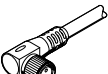

Ordering data – One-way flow control valves				Data sheets → Internet: grla	
	Connection Thread <sup>1)</sup>	For tubing I.D. [mm]	Material	Part no.	Type

For exhaust air					
	M5	3	Metal design	151161	GRLA-M5-PK-3-B
		4		151162	GRLA-M5-PK-4-B
		6		151166	GRLA-1/8-PK-3-B
	G1/8	3		151167	GRLA-1/8-PK-4-B
		4		151168	GRLA-1/8-PK-6-B
		6			

1) Union nut for barbed fitting only with screw-in thread G1/8

Ordering data – Compressed air tubing			Data sheets → Internet: pun	
	Standard O.D. tubing	Flame-retardant	Material	Type
		For use in the immediate vicinity of welding applications	Polyurethane	PUN-VO

## Accessories

Ordering data – Proximity switch for T-slot, magneto-resistive						Data sheets → Internet: smt
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
<b>N/O contact</b>						
	Inserted in the slot from above, flush with the cylinder profile, short design	PNP	Cable, 3-wire	2.5	574335	SMT-8M-A-PS-24V-E-2.5-OE
			Plug M8x1, 3-pin	0.3	574334	SMT-8M-A-PS-24V-E-0.3-M8D
			Plug M12x1, 3-pin	0.3	574337	SMT-8M-A-PS-24V-E-0.3-M12
		NPN	Cable, 3-wire	2.5	574338	SMT-8M-A-NS-24V-E-2.5-OE
			Plug M8x1, 3-pin	0.3	574339	SMT-8M-A-NS-24V-E-0.3-M8D
<b>N/C contact</b>						
	Inserted in the slot from above, flush with the cylinder profile, short design	PNP	Cable, 3-wire	7.5	574340	SMT-8M-A-PO-24V-E-7.5-OE
Ordering data – Proximity switch for T-slot, magnetic reed						Data sheets → Internet: sme
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
<b>N/O contact</b>						
	Inserted in the slot from above, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	543862	SME-8M-DS-24V-K-2.5-OE
			5.0	543863	SME-8M-DS-24V-K-5.0-OE	
			Cable, 2-wire	2.5	543872	SME-8M-ZS-24V-K-2.5-OE
			Plug M8x1, 3-pin	0.3	543861	SME-8M-DS-24V-K-0.3-M8D
	Inserted in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	150855	SME-8-K-LED-24
			Plug M8x1, 3-pin	0.3	150857	SME-8-S-LED-24
<b>N/C contact</b>						
	Inserted in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	160251	SME-8-O-K-LED-24
Ordering data – Connecting cables						Data sheets → Internet: nebu
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type	
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541333	NEBU-M8G3-K-2.5-LE3	
			5	541334	NEBU-M8G3-K-5-LE3	
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541363	NEBU-M12G5-K-2.5-LE3	
			5	541364	NEBU-M12G5-K-5-LE3	
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541338	NEBU-M8W3-K-2.5-LE3	
			5	541341	NEBU-M8W3-K-5-LE3	
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541367	NEBU-M12W5-K-2.5-LE3	
			5	541370	NEBU-M12W5-K-5-LE3	
Ordering data – Slot cover for T-slot						
	Mounting	Length [m]	Part no.	Type		
	Insertable	2x 0.5	151680	ABP-5-S		