

Mini slide DGSC

FESTO



Characteristics

At a glance

[Link](#) [dgsc](#)

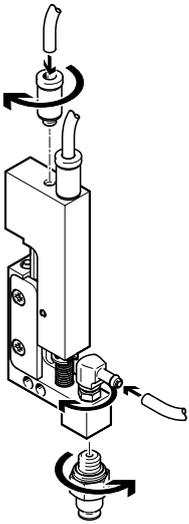
- Smallest guided slide unit, therefore high component density is possible
- Precise ball bearing cage guide enables accurate linearity/parallelism
- Long service life thanks to housing made of high-alloy steel
- Low break-away pressure and uniform movement thanks to minimal friction of guide and seal

Range of applications:

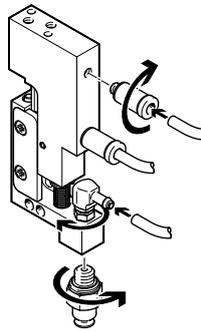
- Chip picking
- Sliding or separating applications
- Pusher or tappet applications

Connection position

[L] In the direction of motion



[P] Perpendicular to direction of movement



Type code

001	Series	
DGSC	Mini slide, double-acting	

002	Size [mm]	
6	6	

003	Stroke [mm]	
10	10	

004	Cushioning	
P	Elastic cushioning rings/plates on both sides	

005	Connection position	
L	In the direction of motion	
P	Perpendicular to direction of movement	

Datasheet

General technical data

Piston diameter	6 mm
Stroke ¹⁾	10 mm
Pneumatic connection	M3
Design	Scotch yoke system
Guide	Ball bearing cage guide
Type of mounting	Via female thread and dowel pin
Cushioning	Elastic cushioning rings/plates at both ends
Position detection	Without
Mounting position	optional
Max. effective load ²⁾	0.03 kg
Repetition accuracy	0.2 mm

1) Valid at 6 bar. The full stroke is not achieved at a lower operating pressure due to the integrated elastomer cushioning elements.

2) For unthrottled operation.

Operating and environmental conditions

Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Operating pressure	1 ... 6 bar
Ambient temperature	10 ... 50°C
Corrosion resistance class CRC ¹⁾	2 - Moderate corrosion stress

1) More information www.festo.com/x/topic/kbk

Weight

Connection position	In the direction of motion [L]	Perpendicular to direction of movement [P]
Series	Mini slide, double-acting	
Product weight	42 g	52 g
Moving mass	17 g	

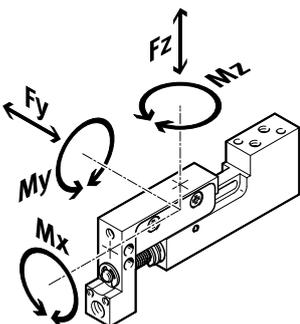
Forces

Theoretical force at 0.6 MPa (6 bar, 87 psi), advance stroke	17 N
Theoretical force at 0.6 MPa (6 bar, 87 psi), return stroke	12.7 N

Materials

Material piston rod	High-alloy stainless steel
Material housing	High-alloy stainless steel
Material seals	NBR
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

Static characteristic load values



The indicated forces and torques refer to the guide. These values must not be exceeded during dynamic operation. Special attention must be paid to the deceleration phase.

Datasheet

Calculating the load comparison factor

$$f_v = \frac{|F_{y1}|}{F_{y2}} + \frac{|F_{z1}|}{F_{z2}} + \frac{|M_{x1}|}{M_{x2}} + \frac{|M_{y1}|}{M_{y2}} + \frac{|M_{z1}|}{M_{z2}} \leq 1$$

If the axis is subjected to several of the indicated forces and torques at the same time, the following equation must be satisfied in addition to the indicated maximum loads.

F1 / M1 = dynamic value

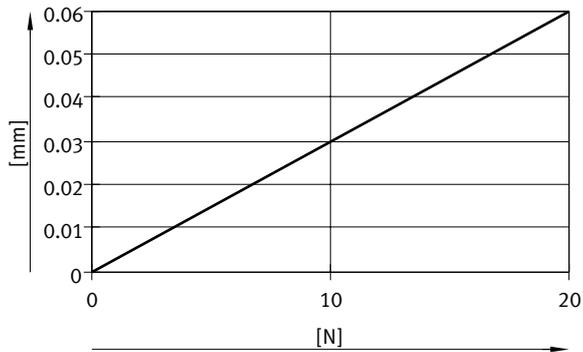
F2 / M2 = maximum value

Permissible forces and torques

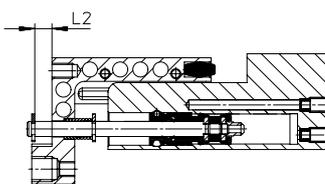
Max. force F _y	20 N
Max. force F _z	20 N
Max. moment M _x	0.3 Nm
Max. moment M _y	0.4 Nm
Max. moment M _z	0.4 Nm

Slide deflection at max. stroke

DGSC-6-10-P-...



Stroke compensation



If there is a risk of collision when advanced, the built-in spring allows a stroke compensation of 2.5 mm. In this case, only low spring forces act on the yoke. This protects the mechanics from overloading.

Stroke compensation / spring force:

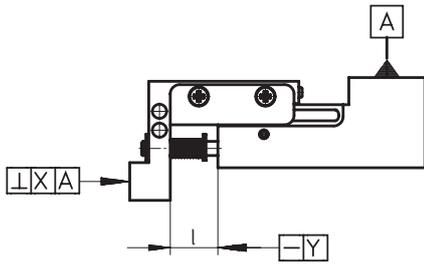
0 mm / 2.0 N

2.5 mm / 2.4 N

Datasheet

Parallelism/perpendicularity/linearity

1



Parallelism/perpendicularity:

Accuracy between the housing mounting surface and the mounting interface on the yoke

Linearity:

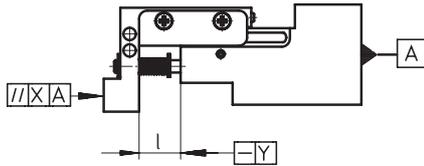
Maximum distance of individual points on the slide between a retracted and advanced drive, in relation to the housing mounting surface

[1] DGSC-6-10-P-L

Perpendicularity: ≤ 0.03 mm

Linearity: ≤ 0.01 mm

2



[2] DGSC-6-10-P-P

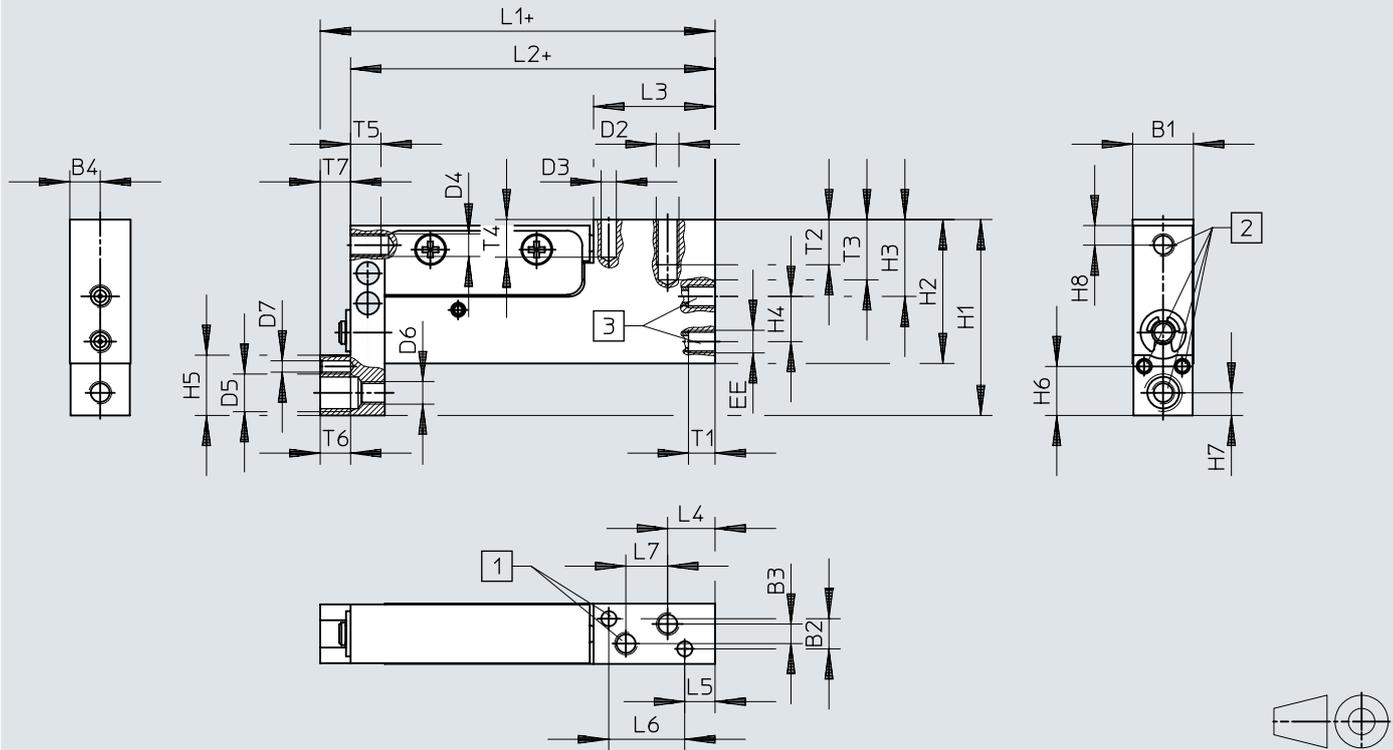
Parallelism: ≤ 0.03 mm

Linearity: ≤ 0.01 mm

Dimensions

Dimensions – DGSC-6-10-P-L

Download CAD data www.festo.com



- [1] Direct mounting on the housing
- [2] Direct mounting on the slide
- [3] Compressed air ports
- [4] + = plus stroke length

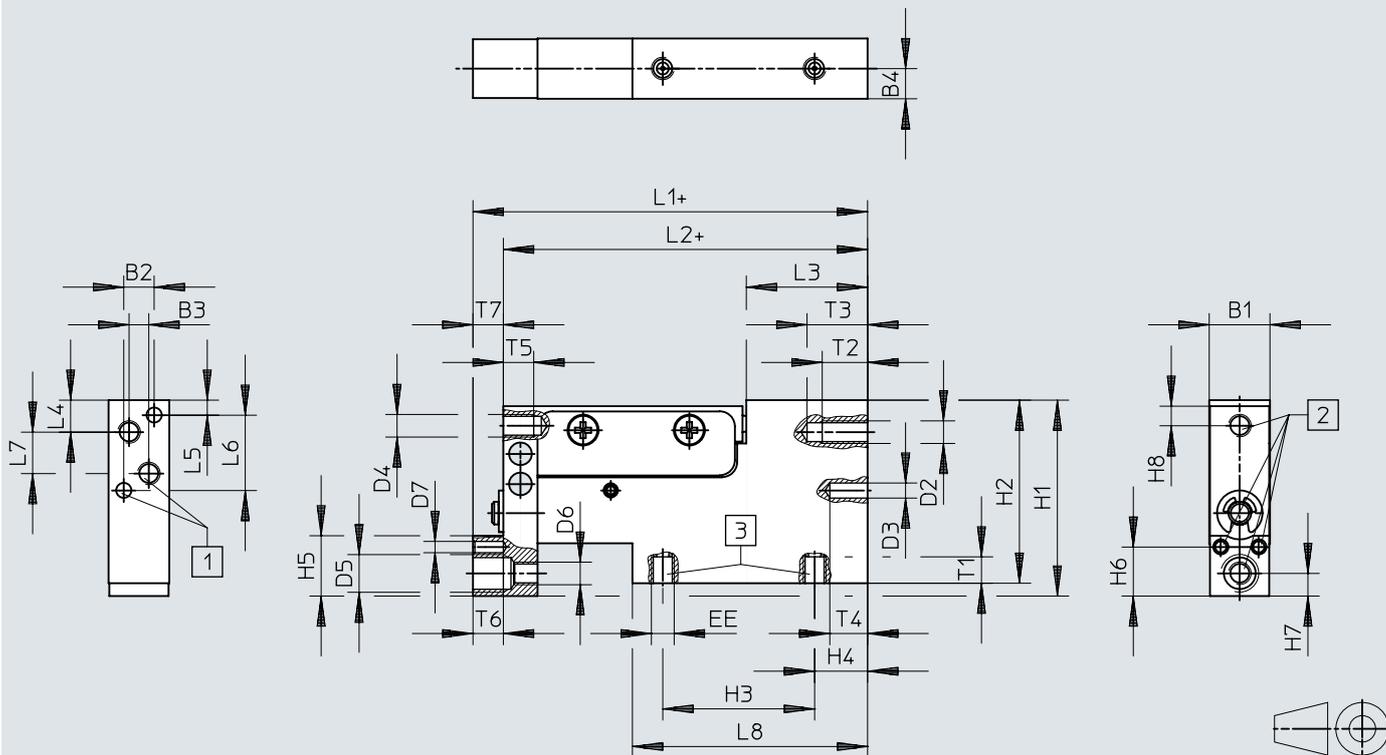
	B1	B2	B3	B4	D2	D3 ∅ H8	D4	D5	D6	D7 ∅ H8	EE	H1	H2	H3	H4	H5
DGSC-6-10-P-L	-0,05/-0,15	±0,02	2,6±0,1	4	M3	2	M3	M5	M3	1,5	M3	26	19,1	10,2	6	8

	H6	H7	H8	L1	L2	L3	L4	L5	L6	L7	T1	T2	T3	T4	T5	T6	T7
DGSC-6-10-P-L	±0,02		2,6	52,1	48,1	16,1	6,35	4,1	±0,02	±0,1	max.	min.	+1	+1	min.	min.	+1

Dimensions

Dimensions – DGSC-6-10-P-P

Download CAD data www.festo.com



- [1] Direct mounting on the housing
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- [4] + = plus stroke length

	B1	B2	B3	B4	D2	D3 ∅ H8	D4	D5	D6	D7 ∅ H8	EE	H1	H2	H3	H4	H5
DGSC-6-10-P-P	8 -0,05/-0,15	4 ±0,02	2,6	4	M3	2	M3	M5	M3	1,5	M3	26	24,3	20	7	8

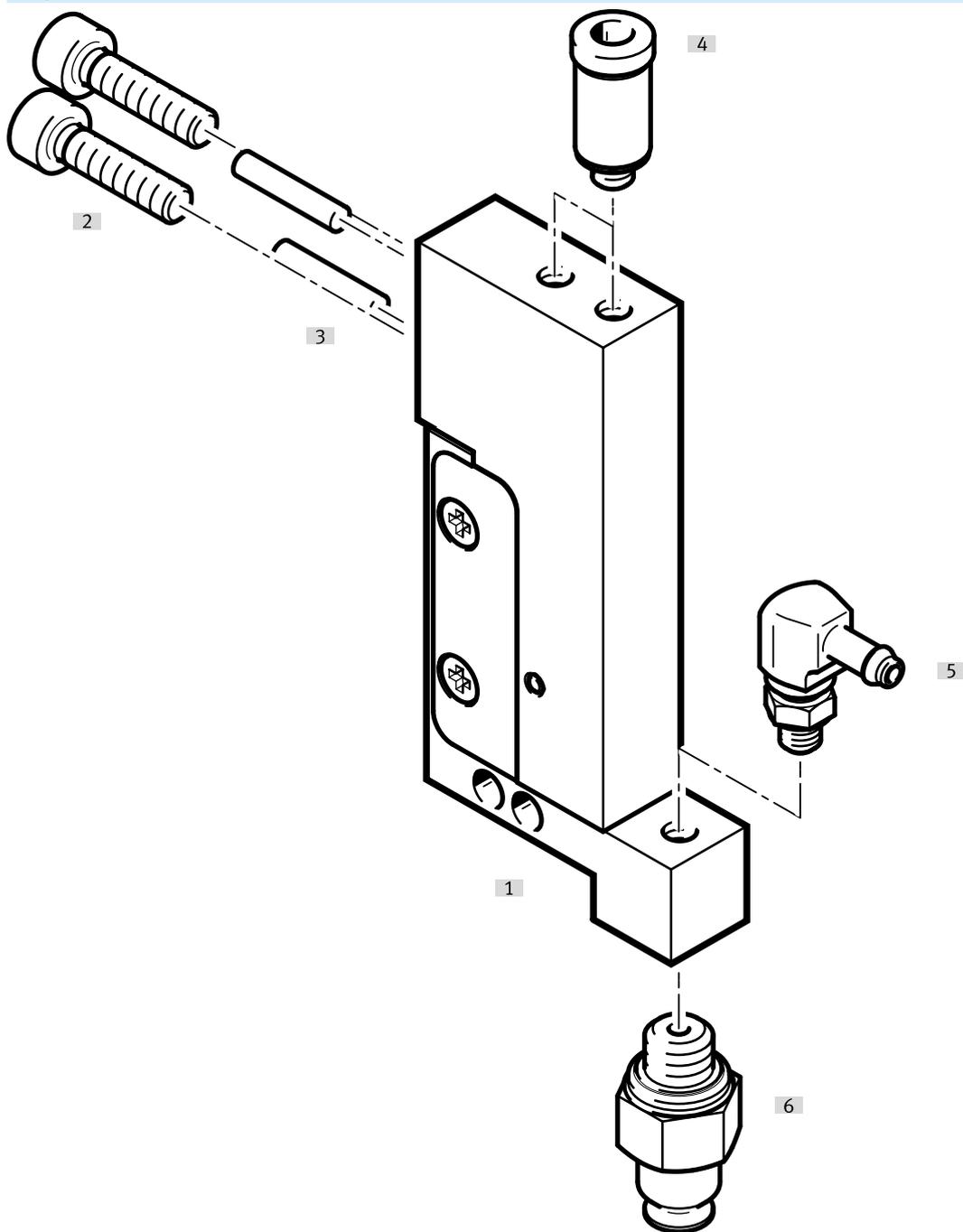
	H6	H7	H8	L1	L2	L3	L4	L5	L6	L7	L8	T1	T2	T3	T4	T5	T6	T7
DGSC-6-10-P-P	6,5 ±0,02	3	2,6	52	48	16	4,25	2	10 ±0,02	5,5 ±0,1	31	3,5 max.	6 min.	8 +1	5 +1	4 min.	4 min.	4 +1

Ordering data

Ordering data				
	Stroke	Connection position	Part no.	Type
	10 mm	In the direction of motion	569793	DGSC-6-10-P-L
		Perpendicular to direction of movement	569792	DGSC-6-10-P-P

Peripherals

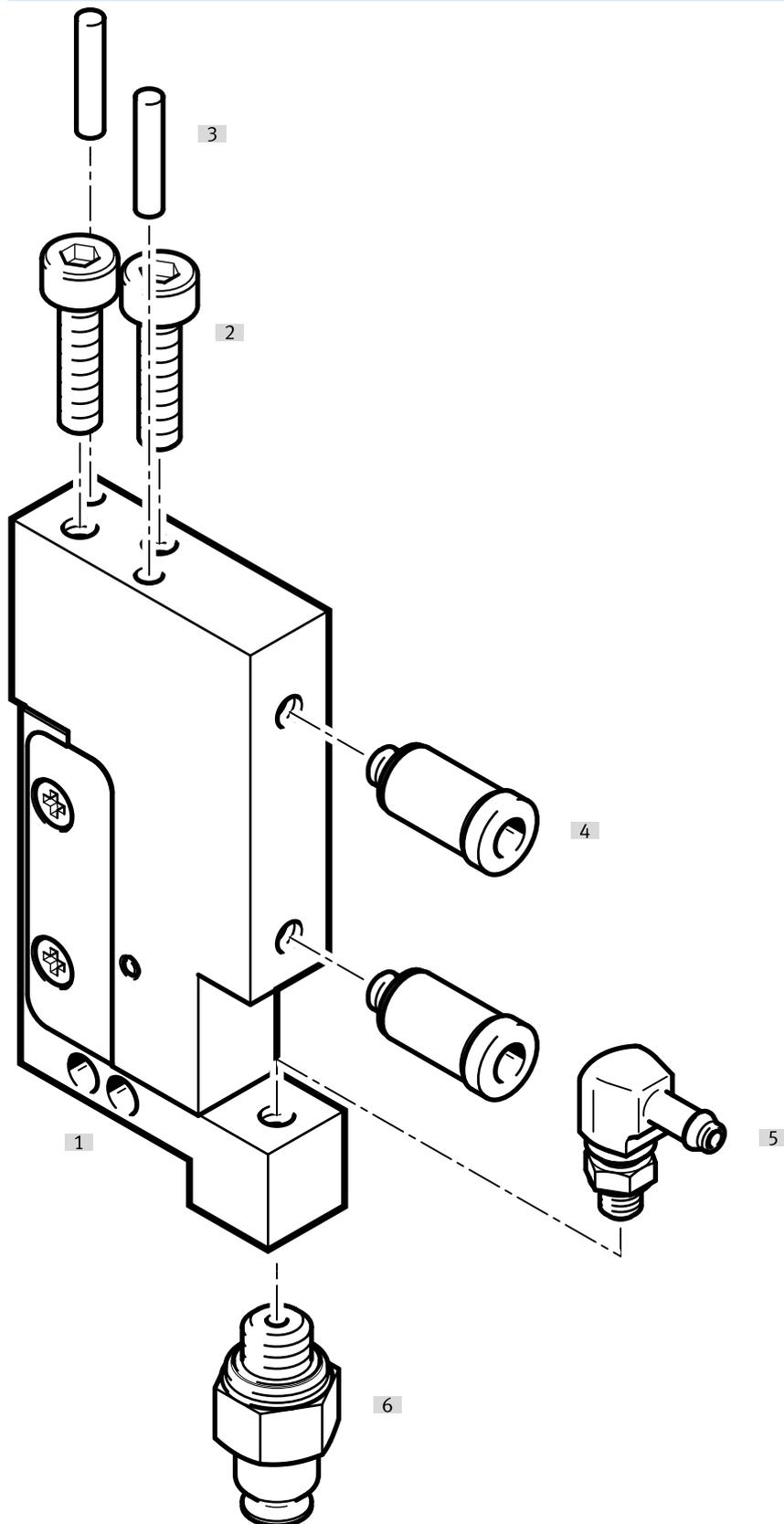
Peripherals overview connection slide



Accessories		→ Link
Type/order code	Description	
[1] Mini slide DGSC	Pneumatic drive	dgsc
[2] Screw	For attaching the mini slide	dgsc
[3] Centring pin	<ul style="list-style-type: none"> For centring the mini slide when mounting Diameter 2 mm according to EN ISO 2338 	dgsc
[4] Push-in fitting QSM	For supplying compressed air to the mini slide	13
[5] Push-in L-fitting QSML	For connecting vacuum or compressed air supply to the slide	13
[6] Suction cup with connection VAS	-	13

Peripherals

Peripherals overview connection housing



Peripherals

Accessories		→ Link
Type/order code	Description	
[1] Mini slide DGSC	Pneumatic drive	↗ dgsc
[2] Screw	For attaching the mini slide	↗ dgsc
[3] Centring pin	<ul style="list-style-type: none"> • For centring the mini slide when mounting • Diameter 2 mm according to EN ISO 2338 	↗ dgsc
[4] Push-in fitting QSM	For supplying compressed air to the mini slide	13
[5] Push-in L-fitting QSML	For connecting vacuum or compressed air supply to the slide	13
[6] Suction cup with connection VAS	-	13

Accessories

Suction cup with connection VAS					
	Suction cup diameter	Material suction cup	Product weight	Part no.	Type
	8 mm	NBR	4 g	34588	VAS-8-M5-NBR
		PUR		1396086	VAS-8-M5-PUR-B
		VMQ (silicone)	2 g	1377781	VAS-8-M5-SI-B

Push-in fitting QSM					
	Pneumatic connection, port 2	Material housing	Product weight	Part no.	Type
	For tubing outside diameter of 2 mm	PBT	0.8 g	133026	QSM-M3-2-I
	For tubing outer diameter of 3 mm	Nickel-plated steel	2.3 g	133001	QSM-M3-3-I-R

Push-in L-fitting					
	Pneumatic connection, port 2	Material housing	Product weight	Part no.	Type
	For tubing outside diameter of 2 mm	PBT	1.4 g	133030	QSML-M3-2
				153330	QSML-M3-3
				130768	QSML-M3-3-100
	For tubing outer diameter of 3 mm				