

Mini slides DGSC

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Mini slides DGSC

Key features

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At a glance

Properties

- Smallest guided slide unit (width 8 mm), therefore high component density possible
- Precision ball bearing cage guide permits accurate linearity/parallelism
- Long service life thanks to housing made from high-alloy steel
- Low break-away pressure and uniform movement thanks to minimal friction from guide and seal
- Contact resistance < 5 Ω
- Quick and easy assembly and commissioning
- Two variants available to order:
 - Mounting interface on the side, supply ports on the front
 - Mounting interface on the front, supply ports on the side

Range of applications

- Chip picking
- Slide or separating applications
- Pushing or stem applications

Mounting options

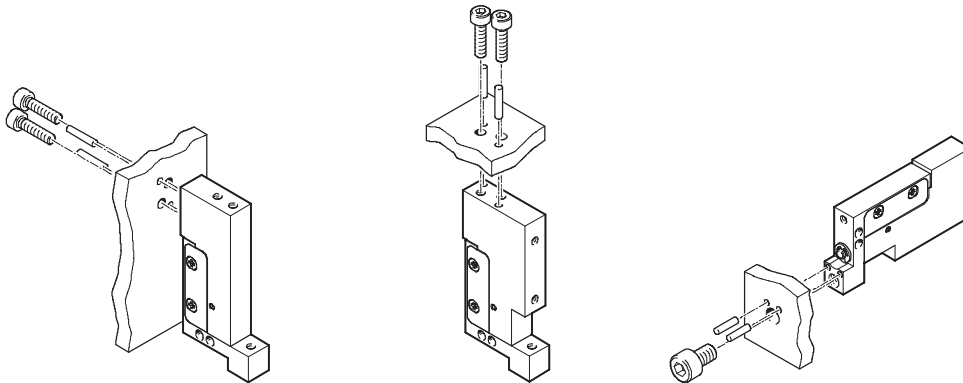
On the housing

DGSC-6-10-P-L

DGSC-6-10-P-P

On the slide

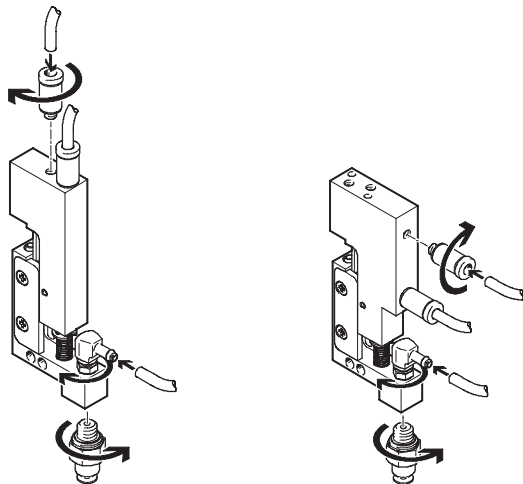
DGSC-6-10-P-...



Pneumatic connection

DGSC-6-10-P-L

DGSC-6-10-P-P



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Type codes and peripherals overview

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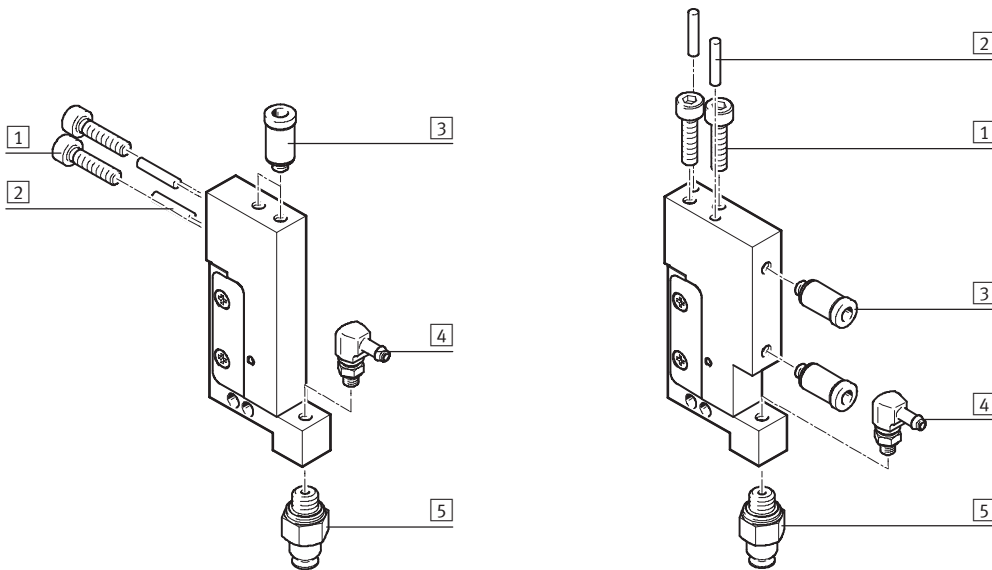
Type codes

		DGSC	–	6	–	10	–	P	–	P
Type										
Double-acting										
DGSC	Mini slide									
Size										
Stroke [mm]										
Cushioning										
P	Elastic cushioning without metal end stop, both ends									
Supply ports										
L	In the direction of movement of the slide									
P	On the side of the housing									

Overview of peripherals

Supply ports in the direction of movement of the slide

Supply ports on the side of the housing



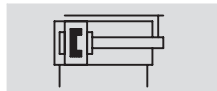
Accessories		Brief description	→ Page/Internet
1	Screw	For mounting the mini slide	–
2	Centring pin Ø 2, to EN ISO 2338	For centring the mini slide during assembly	–
3	Push-in fitting QSM	For connecting compressed air tubing with standard O.D.	8
4	Barbed L-fitting LCN-M3	For connecting compressed air tubing	8
5	Suction cup VAS	–	8

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Technical data

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Function



-  - Size
6

-  - Stroke length
10 mm



General technical data	
Size	6
Stroke [mm]	10
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/pads at both ends
Position sensing	None
Mounting position	Any
Max. effective load ¹⁾ [g]	30
Max. operating frequency [Hz]	< 4
Contact resistance [Ω]	< 5
Repetition accuracy [mm]	±0.1

1) For unthrottled operation.

Operating and environmental conditions	
Operating medium	Dried compressed air, lubricated or unlubricated
Operating pressure [bar]	1 ... 6
Ambient temperature [°C]	10 ... 50
Corrosion resistance class CRC ²⁾	2

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

Weight [g]		
Type	DGSC-6-10-P-L	DGSC-6-10-P-P
Product weight	42	52
Moving load	17	17

Forces [N]	
Theoretical force at 6 bar, advance	17
Theoretical force at 6 bar, retract	12.7
Measured force at 6 bar, advance	15.5

Travel times [ms] at 6 bar	
Advancing	19
Retracting	16.5

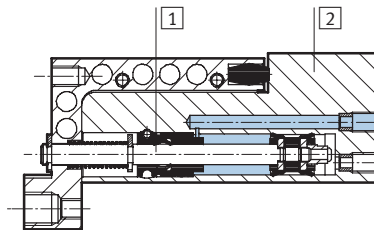
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Technical data

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Materials

Sectional view



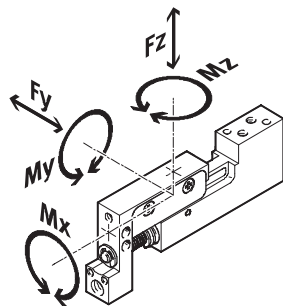
Mini slide

1	Piston rod	High-alloy stainless steel
2	Housing	High-alloy stainless steel
-	Seals	Nitrile rubber
Note on materials		Free of copper and PTFE
		RoHS-compliant

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 cushioning phase.



If the drive is simultaneously subjected to several of the indicated forces and torques, the following equation must be satisfied in addition to the indicated maximum loads:

$$\frac{F_y}{F_{y_{\max}}} + \frac{F_z}{F_{z_{\max}}} + \frac{M_x}{M_{x_{\max}}} + \frac{M_y}{M_{y_{\max}}} + \frac{M_z}{M_{z_{\max}}} \leq 1$$

Permissible forces and torques

$F_{y_{\max}}$	[N]	20
$F_{z_{\max}}$	[N]	20
$M_{x_{\max}}$	[Nm]	0.3
$M_{y_{\max}}$	[Nm]	0.4
$M_{z_{\max}}$	[Nm]	0.4

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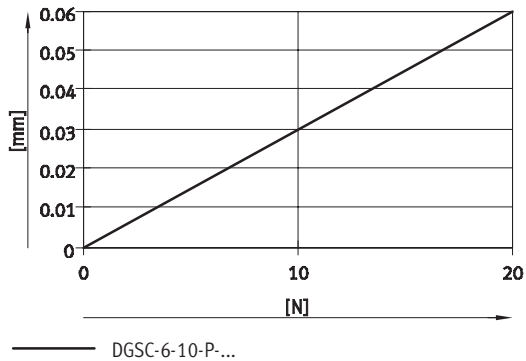
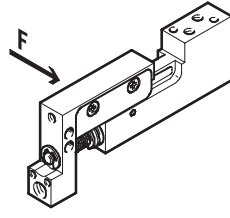
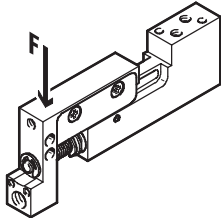
Technical data

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Slide displacement at max. stroke

Longitudinal load

Transverse load

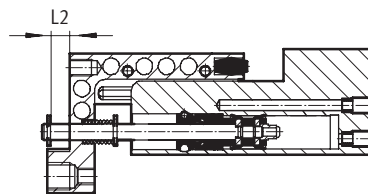
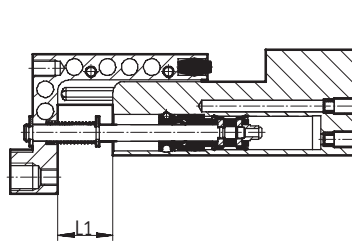


Stroke compensation

The integrated spring enables stroke compensation of 2.5 mm if there is a risk of collision in the advanced state. Only low spring forces then act on the yoke.

This protects the mechanism from overload.

Stroke:
L1 = 10 mm



Stroke compensation (L2)	[mm]	0	2.5
Spring force	[N]	2.0	2.4

Parallelism/perpendicularity/linearity [mm]

Parallelism/perpendicularity:

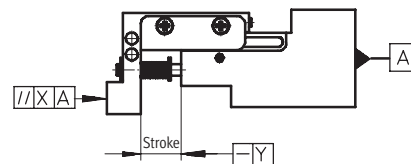
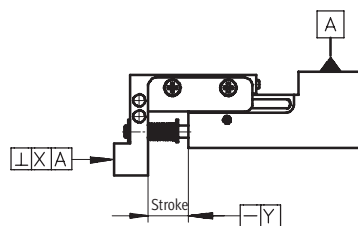
Accuracy of alignment between the housing mounting surface and the mounting interface on the yoke.

DGSC-6-10-P-L

DGSC-6-10-P-P

Linearity:

Maximum distance between individual points on the slide and the housing mounting surface with the drive in retracted and advanced state.



Type		DGSC-6-10-P-L	DGSC-6-10-P-P
Parallelism	[mm]	–	< 0.03
Perpendicularity	[mm]	< 0.03	–
Linearity	[mm]	< 0.01	

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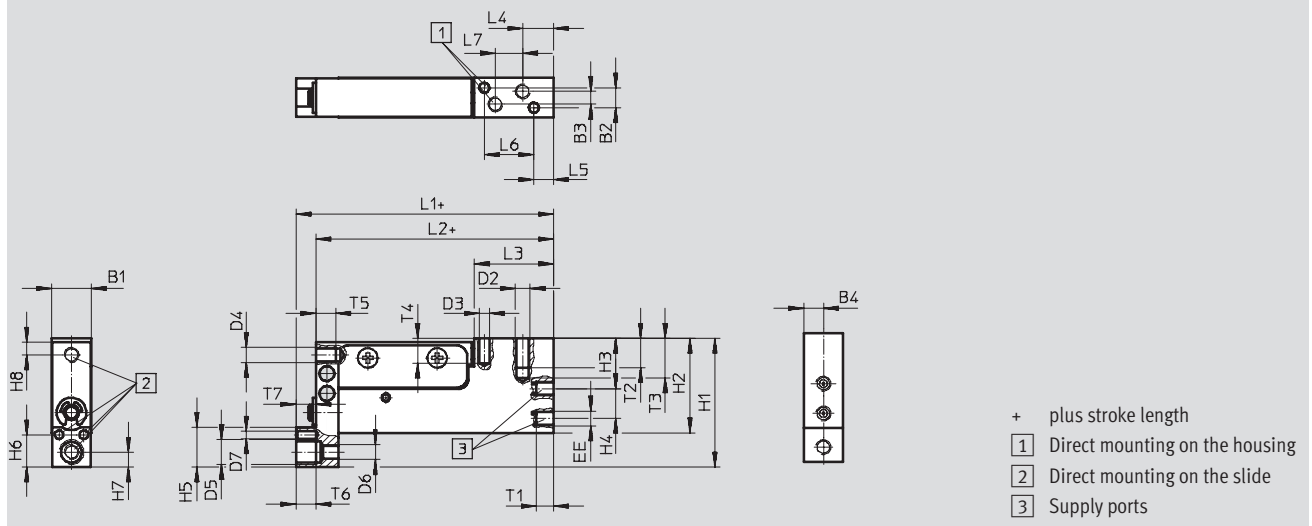
Technical data

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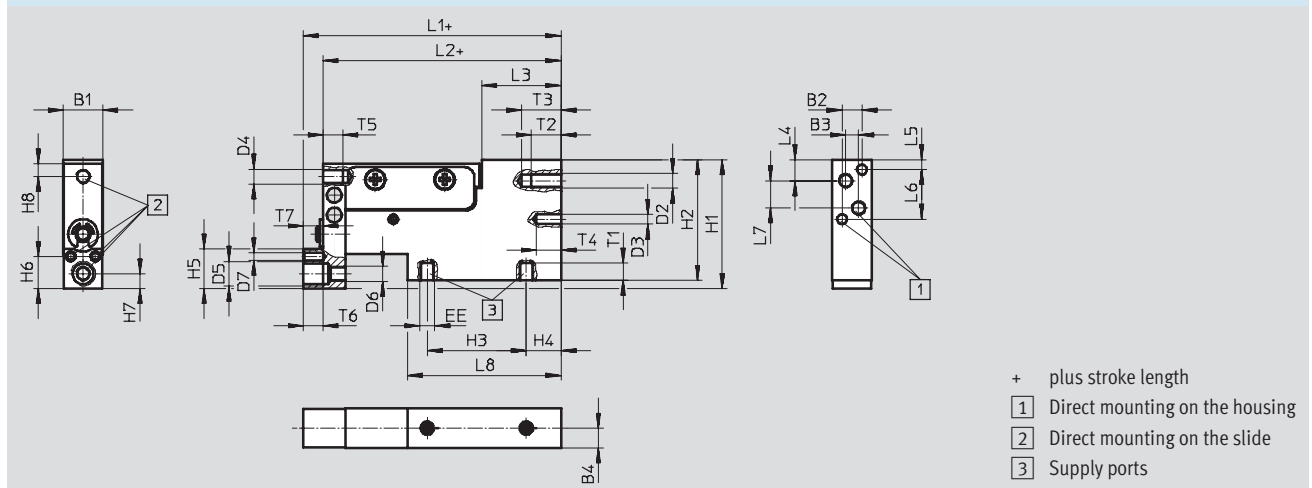
Dimensions

Download CAD Data → www.festo.com/us/cad

DGSC-6-10-P-L



DGSC-6-10-P-P



Type	B1	B2	B3	B4	D2	D3 Ø	D4	D5	D6	D7 Ø	EE
	-0.05/-0.15	±0.02	±0.1			H8				H8	
DGSC-6-10-P-L	8	4	2.6	4	M3	2	M3	M5	M3	1.5	M3
DGSC-6-10-P-P	8	4	2.6	4	M3	2	M3	M5	M3	1.5	M3

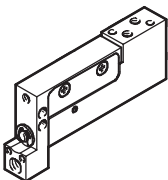
Type	H1	H2	H3	H4	H5	H6 ±0.02	H7	H8	L1	L2	L3
DGSC-6-10-P-L	26	19.1	10.2	6	8	6.5	3	2.6	52	48	16
DGSC-6-10-P-P	26	24.3	20	7	8	6.5	3	2.6	52	48	16

Type	L4	L5	L6 ±0.02	L7 ±0.1	L8	T1 max.	T2 min.	T3 +1	T4 +1	T5 min.	T6 min.	T7 +1
DGSC-6-10-P-L	6.25	4	10	5.5	–	3.5	6	8	5	4	4	4
DGSC-6-10-P-P	4.25	2	10	5.5	31	3.5	6	8	5	4	4	4

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Ordering data					
	Type	Brief description	Part No.	Type	
	DGSC-6-10-P-L	Supply ports in the direction of movement of the slide	569793	DGSC-6-10-P-L	
	DGSC-6-10-P-P	Supply ports on the side of the housing	569792	DGSC-6-10-P-P	

Accessories

Ordering data – Fittings						
Type	Connection		Weight [g]	Part No.	Type	PU ¹⁾
	Thread	For tubing Ø [mm]				
Push-in fitting QSM				Technical data ➔ Internet: qsm		
	M3	3 (external)	3	153312	QSM-M3-3-I	10
	M3	4 (external)	3	153314	QSM-M3-4-I	
Barbed L-fitting LCN				Technical data ➔ Internet: lcn		
	M3	2 (internal)	2	30491	LCN-M3-PK-2-B	10
	M3	3 (internal)	2	30982	LCN-M3-PK-3	

Ordering data – Suction cup					Technical data → Internet: suction cup		
Type	Connection		Material	Weight	Part No.	Type	PU ¹⁾
	Thread	For suction cup Ø [mm]					
	M5	8	Nitrile rubber	4	34588	VAS-8-M5-NBR	1
	M5	8	Polyurethane	4	36135	VAS-8-M5-PUR	
	M5	8	Silicone	2	160988	VAS-8-M5-SI	

1) Packaging unit quantity

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A Complete Suite of Automation Services

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



Custom Automation Components
Complete custom engineered solutions



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The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



Electromechanical
Electromechanical actuators, motors, controllers & drives



Pneumatics
Pneumatic linear and rotary actuators, valves, and air supply



PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!

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

Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



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