

Bernoulli grippers OGGB

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Key features

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General		
Purpose	Benefits	Applications
The Bernoulli gripper OGGB is ideally suited to transporting thin, extremely delicate and brittle workpieces.	- Minimised workpiece contact, gentle workpiece handling - Low energy costs thanks to minimised air consumption - Maximum workpiece loads thanks to high suction forces - Low-noise - Reliable separation of porous and air-permeable materials - Minimal assembly and installation	- Photovoltaics (solar cell and wafer transport) - Thin film solutions - Film transport - Flat panel - Thin glass panes - Electronic circuit boards - Flexible parts with large surface areas - Air-permeable workpieces - Separation of thin and porous materials - Workpieces with textured surface



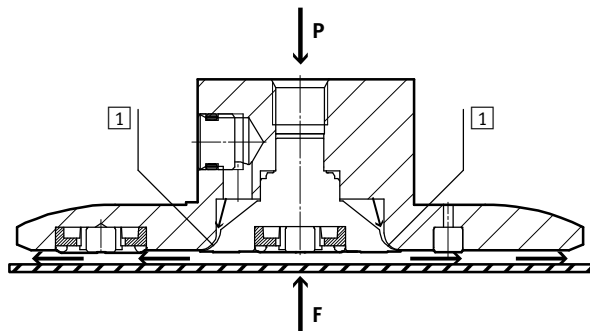
Note

Complete coverage with the gripper is recommended when using thin, delicate workpieces (e.g. films).

Functional principle

The incoming compressed air is deflected radially in the gripper and flows back out between the workpiece and gripper surface. The air is routed through a very thin gap [1] between the gripper body and the core in the gripper, which greatly accelerates its speed. The high outflow speeds generate a vacuum between the gripper and

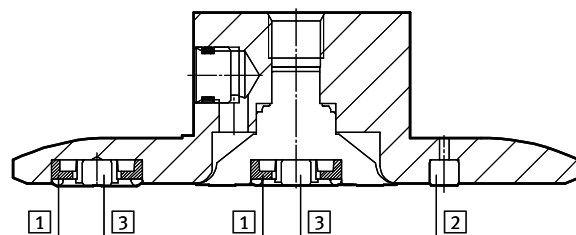
the workpiece. Spacers hold the workpiece at a distance to ensure that the air can flow off smoothly. Vacuum generation according to the Bernoulli principle enables a wide range of workpieces to be gripped gently and with very little contact.



Variants

The gripper is available in three sizes. Two different materials can be chosen for the spacers for each size. With the first variant, all the spacers (ring shape [1] and knobs [2]) are made from POM. The second variant has ring-shaped spacers [1] made from POM and knobs ([2] and [3]) made from NBR. This second variant can absorb higher lateral forces than the

POM variant and the NBR spacers can be replaced if they become worn. Each gripper has two connection options for compressed air: one connection on the top and one alternative connection on the side. The blanking screw included is used to seal unused connections and is pre-assembled on the side as standard.



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Type codes

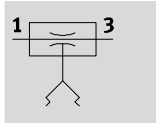
		OGGB	–	100	–	G18	–	2	–	Q
Type										
OGGB	Bernoulli gripper									
Gripper Ø [mm]										
60	60									
100	100									
140	140									
Pneumatic connection										
G18	G $\frac{1}{8}$ thread									
Number of connections										
2	2 connections									
Spacer										
	Standard									
Q	For high lateral forces									

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Technical data

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Function



-  Diameter
60, 100, 140 mm
-  Temperature range
0 ... +60 °C



OGGB with push-in fitting QS (not included in the scope of delivery)

General technical data				
Gripper Ø	[mm]	60	100	140
Pneumatic connection		G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$
Alternative connections		G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$
Connection position		On top/at side		
Type of mounting		Via female thread		
Mounting position		Any		

Operating and environmental conditions		
Operating pressure	[bar]	0 ... 6
Nominal operating pressure	[bar]	1
Operating medium		Compressed air according to ISO 8573-1:2010 [7:4:4]
Note about the operating/pilot medium		Operation with lubricated medium not possible
Ambient temperature	[°C]	0 ... +60
Temperature of medium	[°C]	0 ... +60
Corrosion resistance class CRC ¹⁾		2

1) 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.

Performance data							
Spacer		Standard			For high lateral forces		
Gripper Ø	[mm]	60	100	140	60	100	140
Air consumption at nominal operating pressure 1 bar	[l/min]	110					
Holding force at nominal operating pressure 1 bar	[N]	10	7	7	7	6	6
Lateral force at nominal operating pressure 1 bar	[N]	1	1	1	15	12	12
Noise level at nominal operating pressure 1 bar	[dB (A)]	65					
Sound power level at nominal operating pressure 1 bar	[dB (A)]	78					

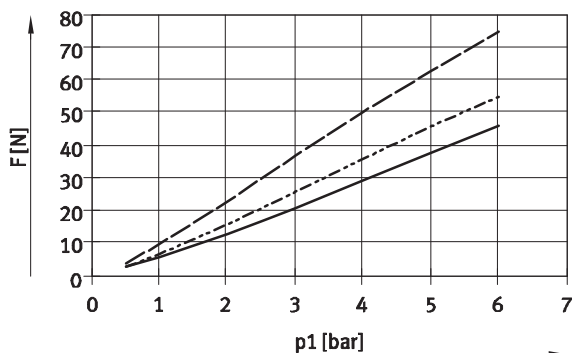
Materials		
Spacer		For high lateral forces
Housing	Anodised wrought aluminium alloy	
Spacer	POM	
	-	Nitrile rubber
Note on materials	RoHS-compliant	

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Technical data

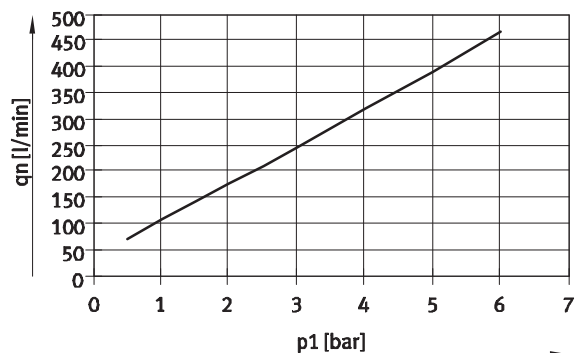
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Holding F as a function of operating pressure p1



- - - - - OGGB-60-G18-2
 OGGB-60-G18-2-Q, OGGB-100/140-G18-2
 ——— OGGB-100/140-G18-2-Q

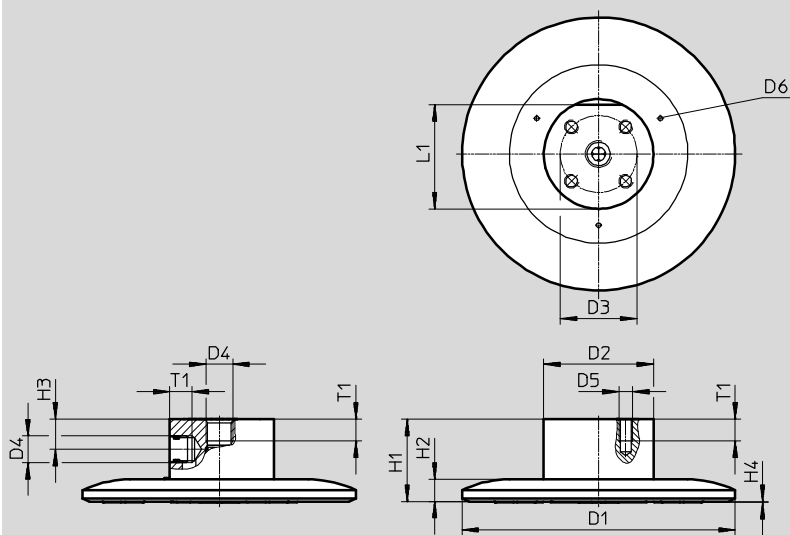
Air consumption qn as a function of operating pressure p1



————— OGGB-60/100/140

Dimensions

Download CAD data → www.festo.com



Type	D1 Ø	D2 Ø	D3 Ø	D4 Ø	D5	D6 Ø	H1	H2	H3	H4	L1	T1
OGGB-60	59.5	40	28	G1/8	M5	1.7	30	8	11	0.4	38	8
OGGB-100	99.5											
OGGB-140	139.5											

Ordering data

Gripper Ø [mm]	Pneumatic connection	Weight [g]	Part No.	Type
Standard				
60	G1/8	119	574563	OGGB-60-G18-2
100	G1/8	210	574565	OGGB-100-G18-2
140	G1/8	348	574567	OGGB-140-G18-2
For high lateral forces				
60	G1/8	119	574564	OGGB-60-G18-2-Q
100	G1/8	210	574566	OGGB-100-G18-2-Q
140	G1/8	348	574568	OGGB-140-G18-2-Q

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Subject to change

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