Superior Clamping and Gripping

Product Information

Vacuum gripper with shank interface GSW-V 20

Compact. Cost-effective. Productive.

Vacuum gripper GSW-V

Vacuum gripper for spindle interfaces for handling flat components

Field of application

Unit for automatic loading and unloading of machining centers by their own axis, which provides compressed air and coolant supply via the tool mounting.

Advantages – Your benefits

Low-cost module for flexible automation in your machine

Fast, automated gripper changeover from the gripper to the storage rack

Fully automated workpiece changeover without robot or gantry system

Universally suitable for many different workpieces

Suction pad diameter	Clamping diameter	Weight	Gripping force	Workpiece weight
30 .. 125 mm	20 .. 32 mm	0.12 .. 0.39 kg	55 .. 980 N	0.28 .. 4.9 kg

Functional description

The gripper can be used in any machine which provides compressed air or lubricating coolants supply via the toolholder mounting.
The vacuum gripper is equipped with an integrated Venturi nozzle, and therefore does not require a vacuum connection to generate negative pressure.
During the gripping operation the gripper continuously supplies coolant or compressed air.

① **Vacuum suction cup**
for a flexible range of parts

② **Intake duct**
for producing suction power

③ **Media supply**
via spindel interface

④ **Venturi nozzle**
for producing negativ pressure

⑤ **Outlet opening**
for diverting the overpressure

GSW-V

Vacuum gripper with shank interface

General notes about the series

Operating principle: Venturi nozzle

Housing material: Aluminum

Spindle interface material: Aluminum alloy

Material of the suction cups: NBR-60

Actuation: hydraulically with machine coolant (filtered, max. particle size of 30 µm) or pneumatically with filtered compressed air in accordance with ISO 8573-1:2010 [7:4:4].

Warranty: 24 months

Scope of delivery: Assembly and operating manual

Suction pad: Perfectly adaptable to smooth surfaces, with damping effect during attachment, and stroke effect during the suction phase. Special suction cups on request.

Times: the indicated times depend on the flow rate and pressure of the drive medium and the therefrom resulting electrical resistances.

Workpiece weight: is calculated for force-fit gripping, specified rated flow rate and pressure, as well as a confidence coefficient of 2 against the gravitational force of the earth's acceleration.

Application example

Handling of pinions in a milling center

1. Vacuum gripper GSW-V
2. Magnetic gripper GSW-M
3. Gripper with shaft interface GSW-B and PGN-plus
4. Gripper with shaft interface GSW-B and PZN-plus
5. Cleaning unit RGG
6. Wireless sensor System RSS

SCHUNK offers more ...

The following components make the product even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.

Gripper with shaft interface

Magnetic gripper

Cleaning Unit

Toolholder

Stationary clamping technology

ⓘ For more information on these products can be found on the following product pages or at schunk.com.

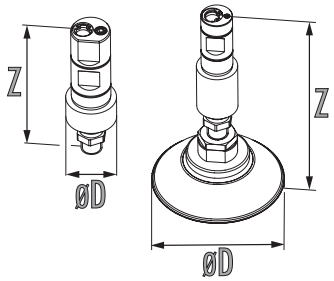
Options and special information

Please note that applications under extreme conditions (e.g. coolant, casting or abrasive dust) will reduce the service life of this product considerably.
Further shaft diameters on request.
Please note that the product is not suitable for heat shrink toolholders.
Precondition: If the spindles do not rotate, then the machines have to provide compressed air or coolant.

GSW-V 20

Vacuum gripper with shank interface

Dimensions

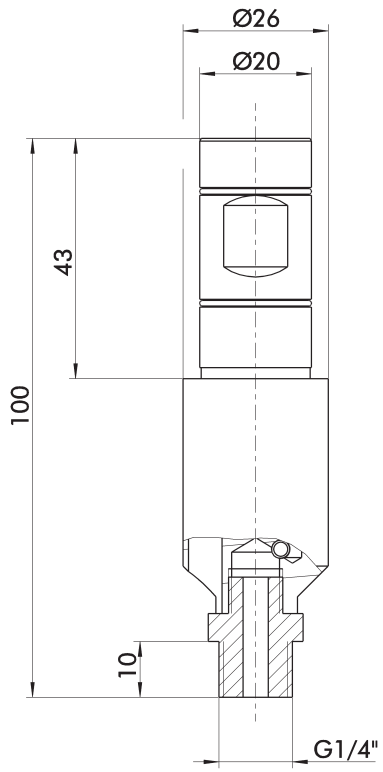


For values see technical data table

Technical data

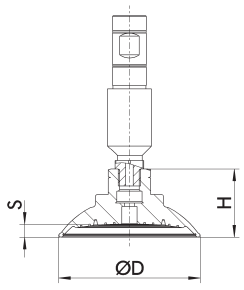
Description		GSW-V20	GSW-V20-SND030	GSW-V20-SND080	GSW-V20-SND125
ID		0309120	0309121	0309122	0309123
Weight	[kg]	0.12	0.14	0.19	0.28
Recommended workpiece weight	[kg]		0.28	2	4.9
Time evacuation	[s]		1	1.1	1.2
Time for putting down	[s]		0.7	0.7	0.7
Suction force	[N]		55	400	980
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Max. permissible speed	[1/min]	20	20	20	20
Nominal operating pressure compressed air	[bar]	6	6	6	6
Nominal flow rate compressed air	[l/min]	300	300	300	300
Min./max. operating pressure, compressed air	[bar]	4/8	4/8	4/8	4/8
Min. flow rate compressed air	[l/min]	220	220	220	220
Nominal operating pressure coolant	[bar]	40	40	40	40
Nominal flow rate coolant	[l/min]	25	25	25	25
Min./max. operating pressure, coolant	[bar]	20/60	20/60	20/60	20/60
Nominal vaccuum	[bar]	-0.8	-0.8	-0.8	-0.8
Min. vacuum	[bar]	-0.6	-0.6	-0.6	-0.6
Noise pressure level	[dB(A)]	90	90	90	90
Dimensions Ø D x Z	[mm]	26 x 100	34 x 110	89 x 130	135 x 138

Main view



The drawing shows the unit in standard design, without considering any dimensions of the options described below.

Suction cup dimensions



Description	ID	D	H	S
		[mm]	[mm]	[mm]
Suction pad				
SND 125-G1/4	0309137	135	48	12.5
SND 30-G1/4	0309135	34	20	3
SND 80-G1/4	0309136	89	40	7.6

SCHUNK GmbH & Co. KG
Spann- und Greiftechnik

Bahnhofstr. 106 - 134
D-74348 Lauffen/Neckar
Tel. +49-7133-103-0
Fax +49-7133-103-2399
info@de.schunk.com
schunk.com

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