

GSW-V

Special Grippers | Vacuum Gripper with Shaft Interface

Compact. Cost effective. Productive. GSW-V Vacuum Gripper

Vacuum gripper for spindle interfaces are ideal for handling flat components

Field of Application

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



Advantages – Your benefit

Low-price 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 suited for many different workpieces



Suction pad diameter
30 .. 125 mm



Clamping diameter
20 .. 32 mm

m

Weight
0.12 .. 0.39 kg



Gripping force
55 .. 980 N



Workpiece weight
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 taper.

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 by the outlet port.



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

② **Intake duct**
for producing suction power

③ **Introduction of medium**
via spindel interface

④ **Venturi nozzle**
for producing negativ pressure

⑤ **Outlet opening**
for diverting the overpressure

CAD data, operating manuals and other current product documents are available at www.schunk.com

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General Notes about the Series

Operating principle: Venturi nozzle

Housing material: Aluminum

Spindle interface material: Aluminum alloy

Suction pad material: NBR-60

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

Warranty: 24 months (details, general terms and conditions and operating manuals can be downloaded at www.schunk.com)

Scope of delivery: Assembly and operating manual

Suction pad: Perfectly adaptable to smooth surfaces, with dampening effect during attachment and stroke effect during the suction phase. Special suction pads 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 gears in a milling center

① GSW-V Vacuum Gripper

② GSW-M Magnetic Gripper

③ Gripper with shaft diameter GSW-B and PGN-plus

④ Gripper with shaft diameter GSW-B and PZN-plus

⑤ RGG Cleaning Unit

⑥ RSS Radio Sensor System

SCHUNK offers more ...

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



Cleaning Unit



Mechanic Gripper



Toolholder



Magnetic Gripper

① Further information regarding the products can be found on the following product pages or at www.schunk.com. Please contact us for further information: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Please note that applications under extreme conditions (e.g. coolant, casting or abrasive dust) will reduce the service lifetime of this product considerably.

Further shaft diameters on request.

Please note that the product is not suitable for heat shrinking toolholders.

Precondition: If the spindles do not rotate, then machines have to provide compressed air or coolant.

GSW-V 20

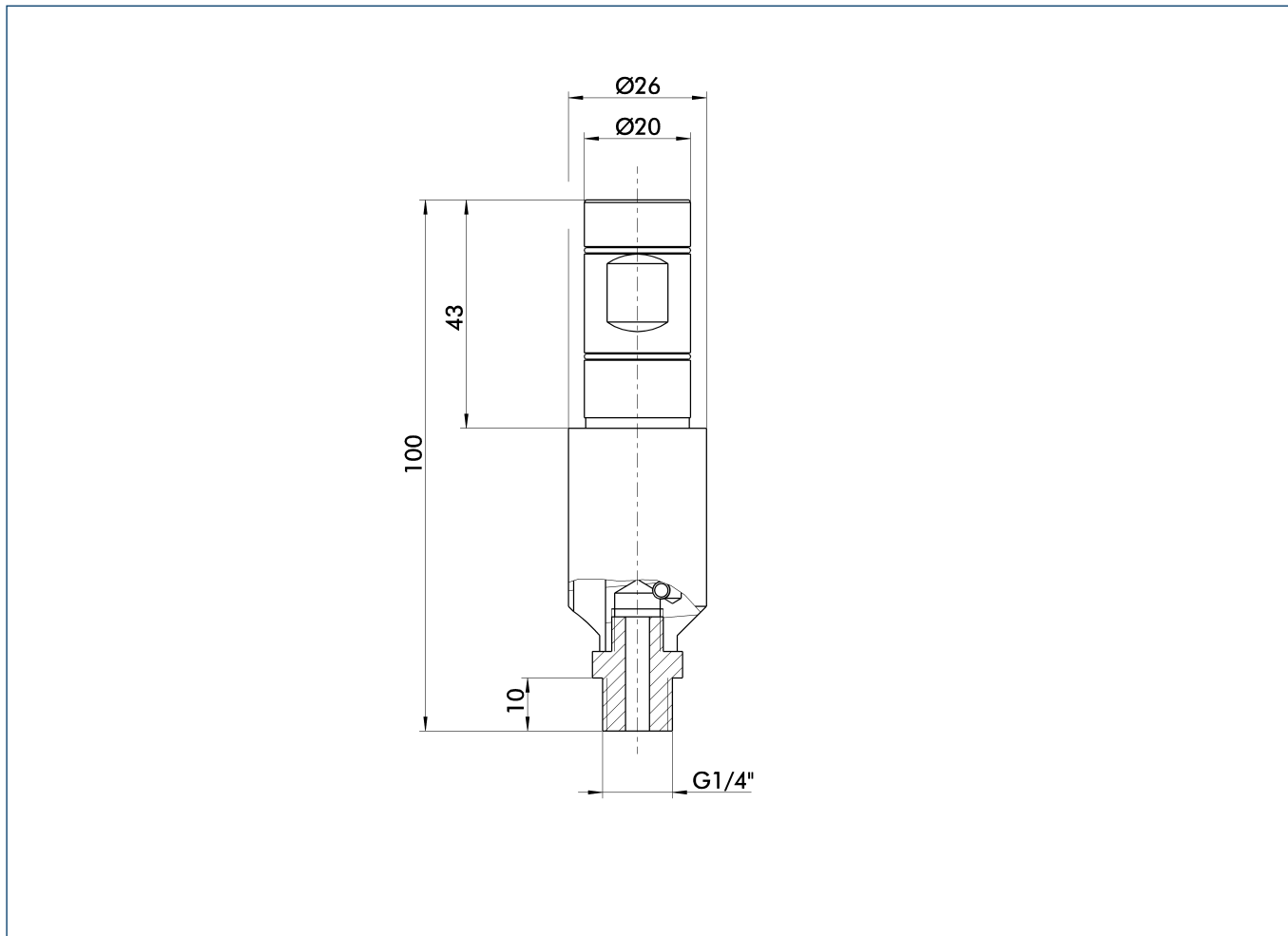
Special Grippers | Vacuum Gripper with Shaft Interface



Technical data

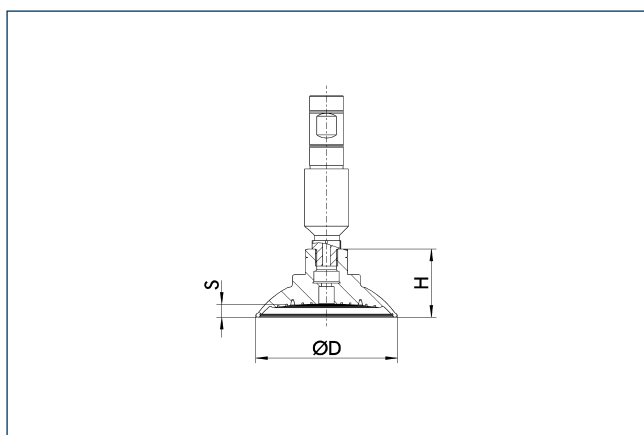
Description		GSW-V20	GSW-V20-SND030	GSW-V20-SND080	GSW-V20-SND125
ID		0309120	0309121	0309122	0309123
Weight	[kg]	0.12	0.14	0.19	0.28
Recommended workpiece weight	[kg]		0.28	2	4.9
Time evacuation	[s]		1	1.1	1.2
Time for putting down	[s]		0.7	0.7	0.7
Suction force	[N]		55	400	980
min. / max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
max. admissible speed	[1/min]	20	20	20	20
Nominal operating pressure	[bar]	6	6	6	6
Nominal flow rate compressed air	[l/min]	300	300	300	300
min. / max. operating pressure	[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. coolant operating pressure	[bar]	20/60	20/60	20/60	20/60
Nominal vacuum	[bar]	-0.8	-0.8	-0.8	-0.8
Minimum vacuum	[bar]	-0.6	-0.6	-0.6	-0.6
Noise pressure level	[dB(A)]	90	90	90	90

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 [mm]	H [mm]	S [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

GSW-V 25

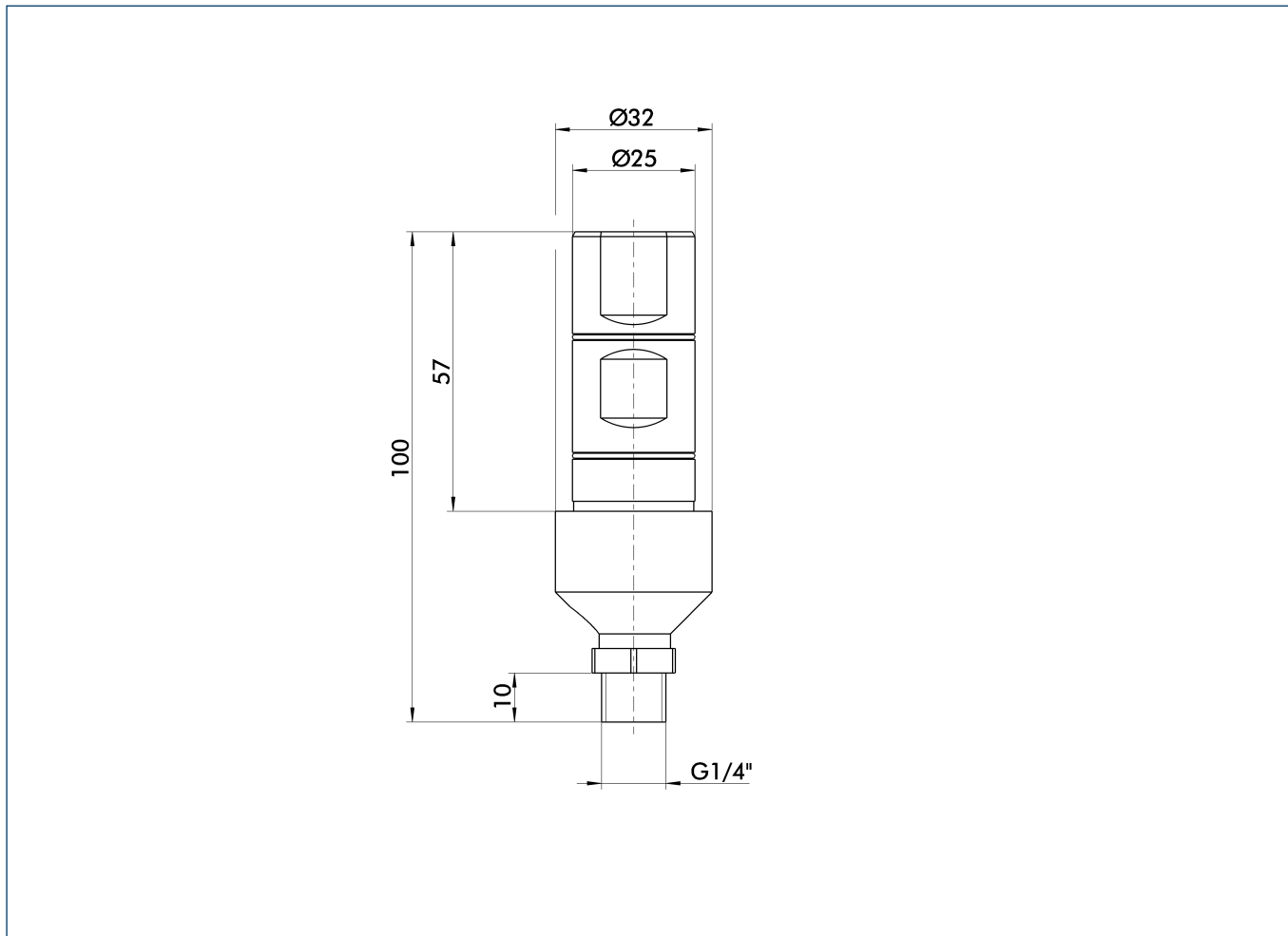
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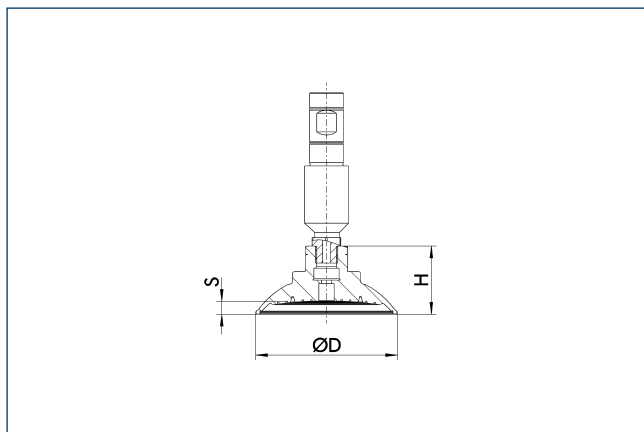
Description		GSW-V25	GSW-V25-SND030	GSW-V25-SND080	GSW-V25-SND125
ID		0309125	0309126	0309127	0309128
Weight	[kg]	0.15	0.17	0.22	0.31
Recommended workpiece weight	[kg]		0.28	2	4.9
Time evacuation	[s]		1	1.1	1.2
Time for putting down	[s]		0.7	0.7	0.7
Suction force	[N]		55	400	980
min. / max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
max. admissible speed	[l/min]	20	20	20	20
Nominal operating pressure	[bar]	6	6	6	6
Nominal flow rate compressed air	[l/min]	300	300	300	300
min. / max. operating pressure	[bar]	4/8	4/8	4/8	4/8
min. flow rate compressed air	[l/min]	200	200	200	200
Nominal operating pressure coolant	[bar]	40	40	40	40
Nominal flow rate coolant	[l/min]	25	25	25	25
min. / max. coolant operating pressure	[bar]	20/60	20/60	20/60	20/60
Nominal vacuum	[bar]	-0.8	-0.8	-0.8	-0.8
Minimum vacuum	[bar]	-0.6	-0.6	-0.6	-0.6
Noise pressure level	[dB(A)]	94	94	94	94

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 [mm]	H [mm]	S [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

GSW-V 32

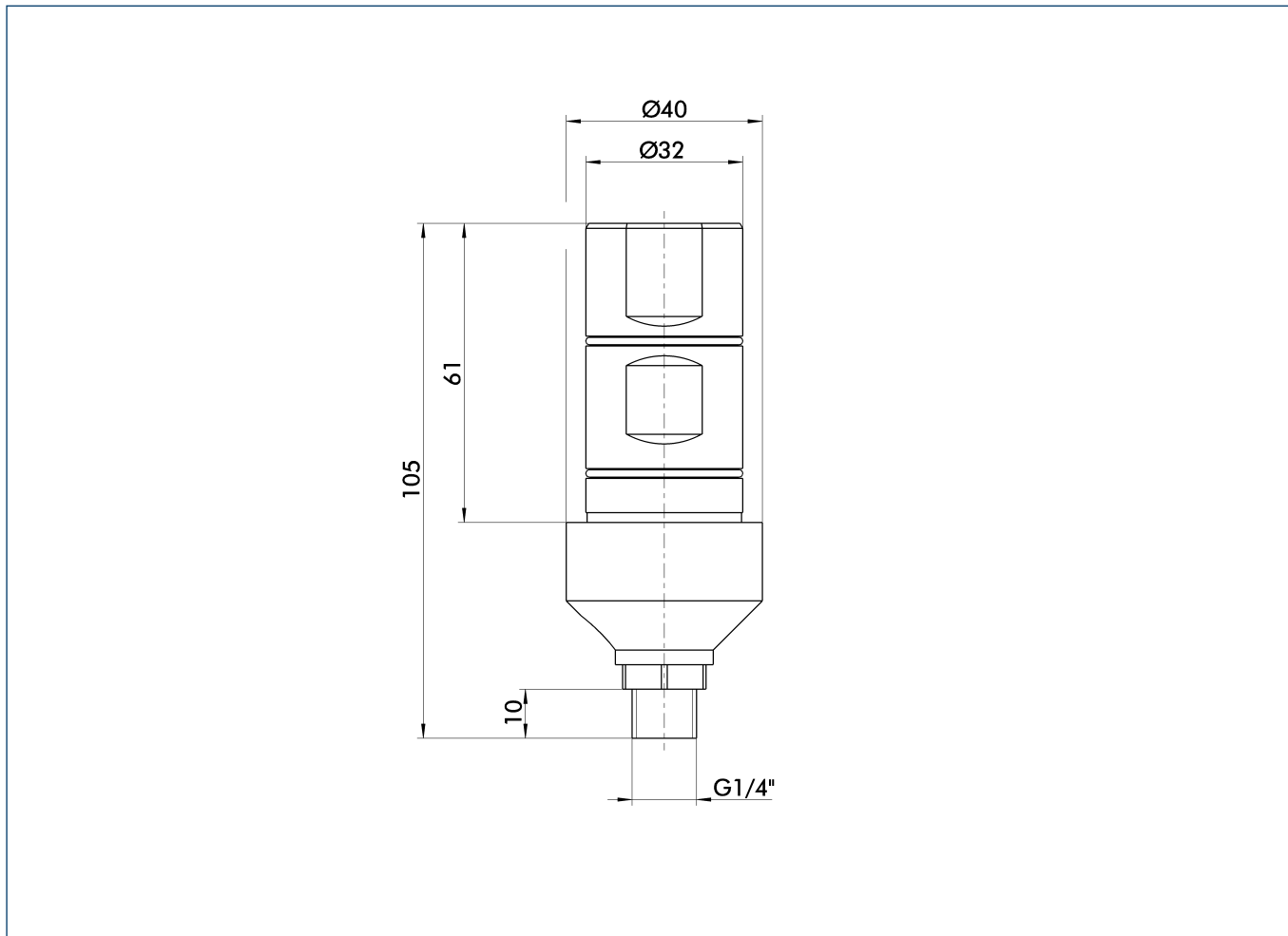
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Technical data

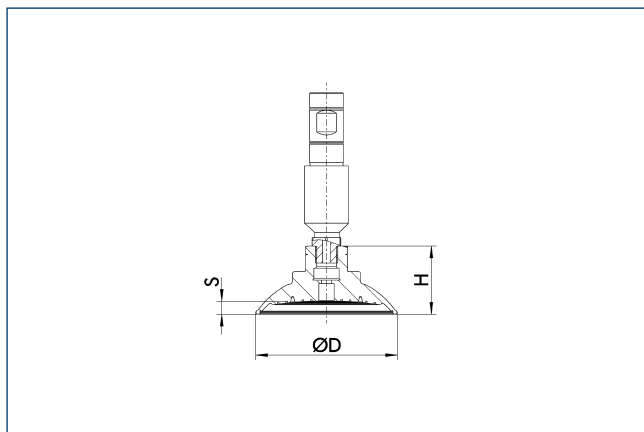
Description		GSW-V32	GSW-V32-SND030	GSW-V32-SND080	GSW-V32-SND125
ID		0309130	0309131	0309132	0309133
Weight	[kg]	0.23	0.24	0.3	0.39
Recommended workpiece weight	[kg]		0.28	2	4.9
Time evacuation	[s]		1	1.1	1.2
Time for putting down	[s]		0.7	0.7	0.7
Suction force	[N]		55	400	980
min. / max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
max. admissible speed	[1/min]	20	20	20	20
Nominal operating pressure	[bar]	6	6	6	6
Nominal flow rate compressed air	[l/min]	350	350	350	350
min. / max. operating pressure	[bar]	4/8	4/8	4/8	4/8
min. flow rate compressed air	[l/min]	250	250	250	250
Nominal operating pressure coolant	[bar]	40	40	40	40
Nominal flow rate coolant	[l/min]	25	25	25	25
min. / max. coolant operating pressure	[bar]	20/60	20/60	20/60	20/60
Nominal vacuum	[bar]	-0.8	-0.8	-0.8	-0.8
Minimum vacuum	[bar]	-0.6	-0.6	-0.6	-0.6
Noise pressure level	[dB(A)]	98	98	98	98

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 [mm]	H [mm]	S [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