Manufacturing more efficiently!

Professional aid for your machine tool

Vacuum suction cup for a flexible range of parts
Intake duct for producing suction power
Introduction of medium via spindle interface
Venturi nozzle for producing negative pressure
Outlet opening for diverting the negative pressure

Maximized system productivity via lean automation
Drive medium in almost every machine as standard
Vacuum functionality can be implemented without an additional vacuum connection
Greater productivity, as wear does not result in downtime

Universal handling unit
The new vacuum gripper for spindle interfaces is ideal for handling flat components. It 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 an additional vacuum connection to generate negative pressure.

The gripper applied for patent does not require moving parts, making it maintenance-free. It can therefore be used as a universal instrument for handling a wide range of parts without further adaptations. The only requirement is that the workpiece must have a suction surface which is at least as large as the suction box itself. With a suction cup diameter of 70 mm, workpieces up to 12 kg in weight can be handled with a retaining force of 900 N. Easy and flexible any of the optional suction cups can be fixed at the thread of the interface.

Description RGG
Clamping diameter [mm] 20
Weight [kg] 0.1

Description GSW-V
Clamping diameter [mm] 20/25/32
Gripping force [N] 20 – 3000

Cleaning Unit rGG for your machine room
Your added value
Automatic cleaning unit
Operation with compressed air or coolant
Reduce non-productive times
Increases safety for the operator
Machine table that is in perfect working order
Not only loading but also automatic cleaning of the workspace can be done by the machine. SCHUNK has developed a special cleaning unit for this purpose, which also fits into the tool mounting with a diameter of 20 mm.
A short control program is enough to quickly clean the workpiece space for inspecting every corner and niche, and to clean the tables and clamping devices from chips. Compared to manual cleaning by the operator, the cleaning work is carried out faster and is more systematic when done by the machine.

Function cross section
Locking screws and throttle inserts for changing the cleaning jet
Center hole, for supply of the cleaning medium
Outlets for generating the cleaning jets
Clamping diam...
When every second counts, SCHUNK has the ideal solution for you. You will be surprised: Your machine is smarter than you think! Let your machine handle the workpieces. Clamping and changing processes are becoming more reliable and much faster.

SCHUNK offers the right solution for every task: for tool or workpiece clamping and changing.

- **Shaft-Mount**
- **Adapter plate with integrated pressure distributor**
- **Multiple-tooth guidance**
- **Base jaws**
- **Kinematics**
- **Housing**

**Handling**

- **Description GSW**
  - Clamping diameter [mm]: 20
  - Gripping force [N]: 70 – 1200
  - Stroke per finger [mm]: 4 – 10

- **Function cross section**
  - Description GSW-AGE
  - Clamping diameter [mm]: 20
  - Gripping force [N]: 70 – 1200
  - Stroke per finger [mm]: 4 – 10
  - Axial compensation [mm]: 3
  - Radial compensation [mm]/[°]: ±1.5/±3

**Clamping**

**Cleaning**

**GSW-V**

**rGG**

**GSW-B**

*also available with Compensation Unit*

**GSW-B**

*also available with Compensation Unit*

Increase in productivity requires a minor investment

Maximized system productivity via lean automation

Drive medium in almost every machine as standard

Minimized investment due to versatility – suitable for many toolholders

Machine self-charging with SCHUNK

The GSW gripper with shaft interface loads and unloads machining centers automatically using its own axis. It can be swapped fast out of the tool rack, just like a normal tool, and moved directly by the machine without requiring a robot or gantry.

A pressure distributor integrated into the adapter plates reduces pressure from the internal coolant feed. This pressurizes the gripper, which is then activated via pistons and wedge hooks. It delivers a continuous supply of cooling lubricant via a side-mounted flow control valve.

Even shorter cycle times are possible when the gripper is activated using compressed air instead of cooling lubricant.
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Handling

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Machine self-charging with SCHUNK

The GSW gripper with shaft interface loads and unloads machining centers automatically using its own axis. It can be removed fast out of the tool rack, just like a normal tool, and moved directly by the machine without requiring a robot or gantry.

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Technical Data

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### Handling and preventing the spindle

**Gripping with flexible Compensation Unit GSW-AGE**

Your added value
- Greater machine service life thanks to lower spindle loading
- Maximized system productivity via lean automation
- New machine concepts every year made as standard
- Minimized investment due to versatility - suitable for many toolholders.

**Avoiding high forces**

The connection module GSW-AGE is equipped with a gripper interface on one side, and a 20 mm shaft on the other, and can be clamped in many conventional toolholders.

If high forces occur at the spindle or gripper during automated loading, the module GSW-AGE adjusts them with a compensation unit. It balances tolerances and compensates all six degrees of freedom. The part that moves the automatic changeover process for workpieces, which are fixed by a bolt or pin. Moreover, the gripper combined with a compensation unit can press a workpiece against a fixed jaw of a clamping force block, until the complete clamping process is finished.

The same gripper can be used flexibly as a suction head, independently from the toolholder spindle interface. It can be driven by vacuum or, in order to achieve shorter cycle times, with compressed air, which is fed by the shaft interface of the connection module.

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**Function cross section**

- Clamping chuck
- Adapter plate with integrated pressure distributors
- Kinematics
- Housing

- Clamping shank
- Adapter plate with integrated pressure distributors
- Axial compensation
- Planar compensation
- Angular compensation
- Gripper Kinematics
Gripping under pressure
Vacuum gripper GSW-V solves your time and cost goals

Year edited value
- Maximised system productivity via lean automation
- Drive modules in almost every machine as standard
- Vacuum functionality can be incorporated without an additional vacuum connection
- Greater productivity, no need to recoat in downtime

Universal handling unit
The new vacuum gripper for spindle interfaces is ideal for handling flat components. It fits into your existing machine which provides compressed air to lubricating medium supply via the toolholder taper. The vacuum gripper is equipped with an integrated Venturi nozzle, and therefore does not require an additional vacuum connection to generate negative pressure.

The gripper supplied for vacuum does not require moving parts, making it maintenance-free. It can therefore be used as a universal tool for handling a wide range of parts without further adaptation. The only requirement that the workpiece must have a vacuum surface in which a vacuum is generated by means of a Venturi nozzle. This can be achieved by vacuuming the parts from the inside or by quickly blowing out the workpiece.

Function cross section
1. Vacuum suction cup for a flexible range of parts
2. Locking screws and throttle inserts for changing the cleaning jet
3. Center hole, for supply of the cleaning medium
4. Outlets for generating the cleaning jets
5. Venturi nozzle for producing negative pressure
6. Outlet opening for diverting the negative pressure
7. Locking screws and throttle inserts
8. Vacuum suction cup for a flexible range of parts
9. Venturi nozzle for producing negative pressure
10. Outlet opening for diverting the negative pressure

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Gripping under pressure
Vacuum gripper GSW-V solves your time and cost goals

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In perfect order
Cleaning Unit RGG for your machine room

Your added value

- Automatic cleaning unit
- Operations with compressed air or coolant
- Reduced non-productive times
- Increased safety for the operator

Machine table that is in perfect working order

Not only cleaning but also automatic cleaning of the workpiece can be done by the machine. SCHUNK has developed a special cleaning unit for this purpose, which also fits into the tool mounting with a diameter of 20 mm.

A short control program is enough to quickly clean the workspace for inspecting every corner and niche, and to clean the tables and clamping devices from chips. Compared to manual cleaning by the operator, the cleaning work is carried out faster and is more systematic when done by the machine.

Copy fax reply, complete and fax to +49-7133-103-2189

Please contact me

☐ for a consultation by phone
☐ for a personal consultation from the SCHUNK area sales manager

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