

Valve Technology

Schmalz –
The Company

Vacuum
Knowledge

Vacuum
Suction Pads

Special
Grippers

Mounting
Elements

Vacuum
Generators

**Valve
Technology**

Switches and
Monitoring

Filters and
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Valve Technology

Everything at a Glance

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Solenoid Valves		
	Inline Valves IV <ul style="list-style-type: none"> Nominal diameter: 3 mm Nominal flow rate: 2 m³/h Voltage: 24 V 	 <p>519</p> <p>Inline valve in compact design for control of the vacuum directly on the suction pad.</p>
	Solenoid Valves EMV <ul style="list-style-type: none"> Nominal diameter: 2 to 25 mm Nominal flow rate: 1 to 88 m³/h Voltages =/~ 24/230 V 	 <p>522</p> <p>Directly controlled solenoid valve with short opening and closing times, control of suction, venting and blow-off of the suction pad possible.</p>
	Solenoid Valves EMVO <ul style="list-style-type: none"> Nominal diameter: 12 to 25 mm Nominal flow rate: 21 to 101 m³/h Voltages =/~ 24/230 V 	 <p>526</p> <p>Directly controlled solenoid valve with large nominal diameter for high flow rates, control of suction and venting of the suction pad possible.</p>
	Solenoid Valves EMVP <ul style="list-style-type: none"> Nominal diameter: 5 to 50 mm Nominal flow rate: 3 to 310 m³/h Voltages =/~ 24/230 V 	 <p>528</p> <p>Pneumatically controlled solenoid valve with extremely short opening and closing times, as well as high nominal flow rates; control of suction and venting of the suction pad possible.</p>
Check Valves		
	Check Valves SVK, SVKG, SVV <ul style="list-style-type: none"> Max. blow-off flow rate: 4.8 to 47.4 m³/h Connection thread: M5 to G1/2" 	 <p>533</p> <p>Check valve for sealing the vacuum line as well as for reduction of the volume flow and maintenance of the vacuum if not all suction pads are covered.</p>

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Check Valves SVN



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- Max. blow-off flow rate: 27 m³/h
- Connection thread: G1/4"

Check valve with shaped nipple for direct connection to the suction pad, reduction of the volume flow and maintenance of the vacuum if not all suction pads are covered.



Flow Resistors SW



539

- Nozzle diameter: 0.25 to 2.0 mm

Flow resistance without moving parts, in minimum model size for reduction of the volume flow and maintenance of the vacuum if not all suction pads are covered.

Sensing Valves



Sensing Valves TV / TVN



542

- Flow rate: 0.7 to 9.6 m³/h
- Connection thread: G1/8" to G1/2"

Sensing valve as spring-loaded sensing plunger for mechanically checking the coverage of the suction pad.

Non-Return Valves



Non-Return Valves RSV



545

- Nominal diameter: 6 to 54 mm
- Nominal flow rate: 5 to 350 m³/h
- Connection thread: G1/4" to G2"

Non-return valve with spring return safeguards the system in case of power failure or failure of the vacuum generator.

Manually Actuated Valves



Two-Way Ball Valves KVZ



548

- Nominal diameter: 8 to 50 mm
- Nominal flow rate: 5 to 310 m³/h

Manual two-way ball valve for switching entire vacuum/pressure circuits or individual suction pads on or off.



Three-Way Ball Valves KVD



550

- Nominal diameter: 6 to 25 mm
- Nominal flow rate: 5 to 55 m³/h

Manual three-way ball valve for switching entire vacuum or pressure circuits or individual suction pads on or off.

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Manual Slide Valves HSV

- Nominal diameter: 7 to 24 mm
- Nominal flow rate: 6 to 50 m³/h



Manual sliding valve for manually switching entire vacuum or pressure circuits or individual suction pads on or off.

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Overview Valves

Application	Check Valves	Flow Resistors	Sensing Valves
Handling of porous workpieces such as chipboards and MDF panels	● (If type SVN is used)	●	
Handling of air-tight workpieces such as sheets of metal of varying sizes	●		●
Handling of cardboard sheets and boxes of varying sizes		●	
Handling operations with very short cycle times	●		●
Cases where some of the suction pads are not fully in contact with the workpiece	●	●	
Cases where the workpiece is to be blown off for faster release	●	Restricted by the reduced cross-section	

Checklist for Selection of Valves

Which functions are required?	We can supply solenoid valves (3/2-way, 2/2-way), manually actuated vacuum and compressed-air valves, check valves, sensing valves and flow resistors.
Which volume flow rate needs to be controlled?	This determines the nominal flow rate and the size of the valve.
What are the requirements with respect to size, weight and cycle times?	Further information can be found in the design data and/or technical data of the valves.
Which type of energy is available?	See the notes in the design data or the technical data (solenoid valve EMVP also needs a compressed-air supply).
Does the workpiece need to be released very quickly (blown off)?	With type EMV, compressed-air for blowing off can be connected directly. Otherwise, additional valves are needed for this function.