

Check Valves



Check Valves SVK, SVKG, SVV

Connection thread from M5 to G1/2"



Suitability for Industry-Specific Applications



Check valves SVK, SVKG, SVV

Applications

- Check valve for applications where some of the suction pads may not be in contact with the workpiece
- Deactivation of unused suction pads, the system vacuum is maintained
- Handling of workpieces with varying sizes and shapes with the same gripper system

Design

- Ball seat valve
- Ball in brass seat, installed in a space-saving manner in an aluminum body
- On the type SVV, the flow rate can be adjusted continuously with an adjusting screw
- Suitable for installation in any orientation

Our Highlights...

- Check valve in the form of a ball seat valve
- Reaction dependent on the volume flow rate
- Wide range of nominal sizes
- Available with male thread at the top (type SVK) or bottom (type SVKG)

Your Benefits...

- > Closing of vacuum lines leading to unused suction pads to maintain the system vacuum
- > Low leakage rate which can be compensated with the aid of a bypass
- > Suitable for use in applications with high nominal flow rates
- > Can be connected to all common suction pads and plates



Designation Code Check Valves SVK, SVKG, SVV

Abbreviated designation	Connection thread
Example SVK M5-IG: SVK	M5-IG
SVK male thread at the top	M5-AG (AG = male (M))
SVKG male thread at the bottom	M5-IG (IG = female (F))
SVV adjusting screw	G1/8-AG G1/8-IG G1/4-AG G1/4-IG G3/8-AG G3/8-IG G1/2-AG G1/2-IG



Ordering Data Check Valves SVK, SVKG, SVV

Check valve SVK, SVKG, SVV is delivered as a ready to connect product.

www.schmalz.com/svk

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Check Valves SVK, SVKG, SVV

Connection thread from M5 to G1/2"

Check Valves SVK, SVKG, SVV

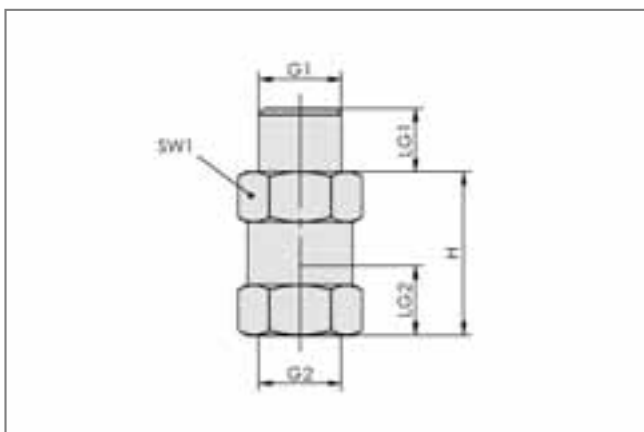
Type	Part Number
SVK M5-IG	10.05.03.00033
SVK G1/8-IG	10.05.03.00034
SVK G1/4-IG	10.05.03.00035
SVK G3/8-IG	10.05.03.00036
SVK G1/2-IG	10.05.03.00037
SVKG M5-AG	10.05.03.00166
SVKG G1/8-AG	10.05.03.00128
SVKG G1/4-AG	10.05.03.00131
SVKG G3/8-AG	10.05.03.00135
SVKG G1/2-AG	10.05.03.00133
SVV G1/4-IG	10.05.03.00003

Technical Data Check Valves SVK, SVKG, SVV

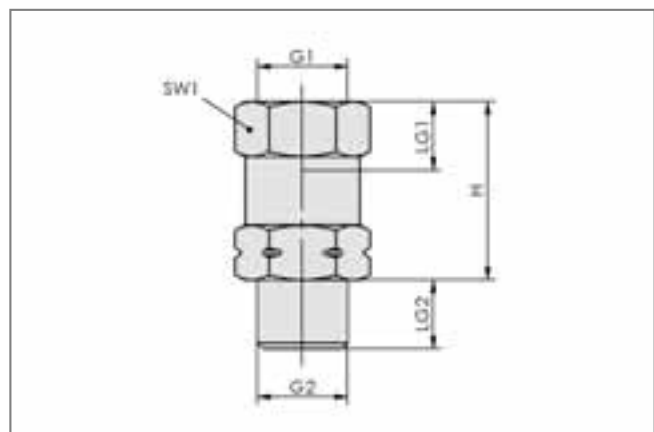
Type	Required evacuation rate for $p_u = -0,3$ bar [m^3/h]	Required evacuation rate for $p_u = -0,3$ bar [l/min]	Required evacuation rate for $p_u = -0,6$ bar [m^3/h]	Required evacuation rate for $p_u = -0,6$ bar [l/min]	Max. flow rate [m^3/h] when blowing off*	Max. flow rate [l/min] when blowing off*	Weight [g]
SVK M5-IG	0.07	1.2	0.08	1.3	4.8	80	2.2
SVK G1/8-IG	0.14	2.3	0.15	2.5	18.6	310	11.2
SVK G1/4-IG	0.17	2.9	0.20	3.4	20.4	340	17.5
SVK G3/8-IG	0.44	7.3	0.48	8.0	35.4	590	30.3
SVK G1/2-IG	0.49	8.1	0.54	9.0	47.4	790	47.4
SVKG M5-AG	0.07	1.2	0.08	1.3	4.8	80	2.2
SVKG G1/8-AG	0.14	2.3	0.15	2.5	18.6	310	11.2
SVKG G1/4-AG	0.17	2.9	0.20	3.4	20.4	340	17.5
SVKG G3/8-AG	0.44	7.3	0.48	8.0	35.4	590	30.3
SVKG G1/2-AG	0.49	8.1	0.54	9.0	47.4	790	47.4
SVV G1/4-IG	1.36	22.6	1.72	28.6	24.0	400	24.7

*Blow-off pressure 5bar

Design Data Check Valves SVK, SVKG, SVV



SVK M5 to G1/2



SVKG M5 to G1/2

Check Valves

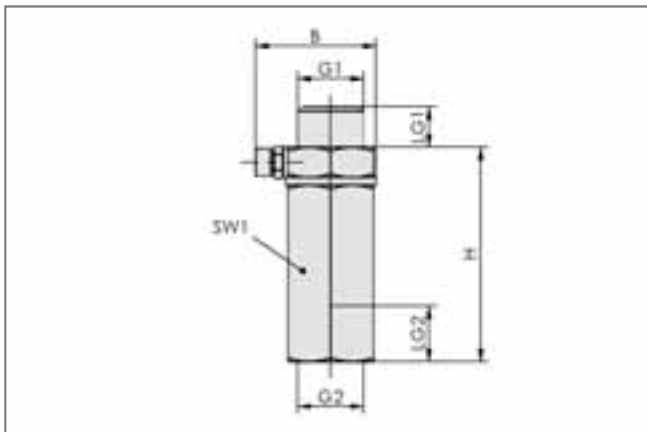


Check Valves SVK, SVKG, SVV

Connection thread from M5 to G1/2"



Design Data Check Valves SVK, SVKG, SVV

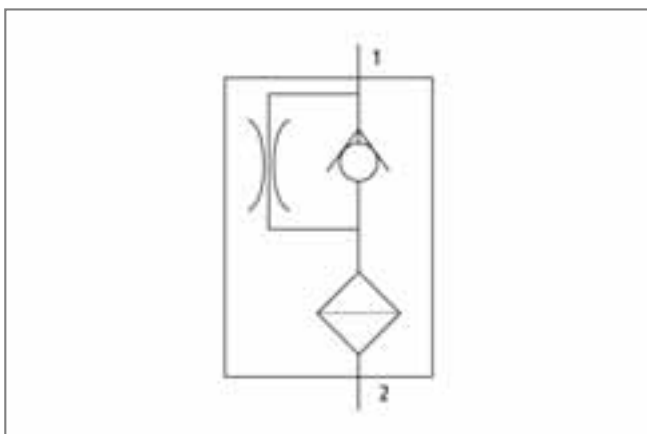


SVV G1/4

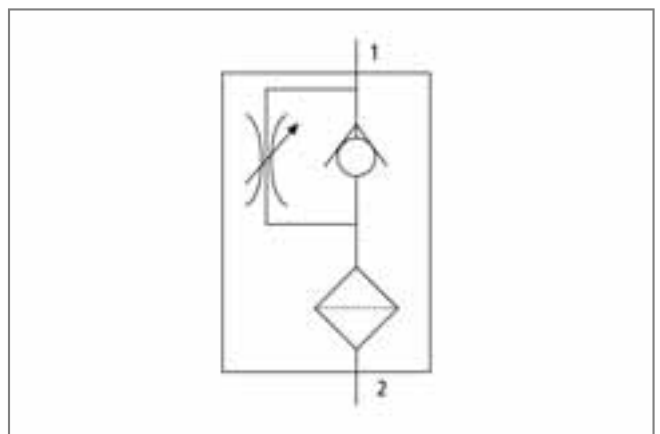
Type	Dimensions in mm						
	B	G1	G2	H	LG1	LG2	SW1
SVK M5-IG	-	M5-M	M5-F	15.5	4.5	4.5	8
SVK G1/8-IG	-	G1/8"-M	G1/8"-F	26.0	8.0	8.5	14
SVK G1/4-IG	-	G1/4"-M	G1/4"-F	26.0	10.0	11.0	17
SVK G3/8-IG	-	G3/8"-M	G3/8"-F	29.0	10.0	12.0	22
SVK G1/2-IG	-	G1/2"-M	G1/2"-F	29.0	12.0	14.0	27
SVKG M5-AG	-	M5-F	M5-M	20.0	4.5	4.5	8
SVKG G1/8-AG	-	G1/8"-F	G1/8"-M	26.0	8.5	8.0	14
SVKG G1/4-AG	-	G1/4"-F	G1/4"-M	26.0	11.0	10.0	17
SVKG G3/8-AG	-	G3/8"-F	G3/8"-M	29.0	12.0	10.0	22
SVKG G1/2-AG	-	G1/2"-F	G1/2"-M	29.0	14.0	12.0	27
SVV G1/4-IG	23.9	G1/4"-M	G1/4"-F	42.5	8.0	11.0	17



Functional Circuit Diagram Check Valves SVK, SVKG, SVV



Circuit diagram SVK/SVKG (1 = vacuum generator; 2 = suction pad)



Circuit diagram SVV (1 = vacuum generator; 2 = suction pad)

Check Valves



Check Valves SVN

Connection thread G1/4"



Suitability for Industry-Specific Applications



Check valves SVN

Applications

- Check valves for handling porous workpieces
- Deactivation of unused suction pads, the system vacuum is maintained

Design

- Flying-ball valve mounted in a space-saving manner in an aluminum body
- Blow-off function provides self-cleaning effect for use in dusty surroundings
- Molded-on nipple for various types of suction pads (size identical to that of a standard nipple)

Our Highlights...

- Special check valve with flying ball
- Integrated nipple for connection of a suction pad
- Check valve with self-cleaning effect
- Reaction dependent on the volume flow rate
- Minimum size

Your Benefits...

- > Reduction of the cross-section of the vacuum line leading to an unused suction pad; special version for porous workpieces
- > No additional nipple needed for many different types of suction pad
- > Special version for use in dusty surroundings
- > Not triggered by the normal leakage encountered when handling porous workpieces
- > Also suitable for use in restricted spaces

Designation Code Check Valves SVN

Abbreviated designation	Connection thread	Nipple family
Example SVN G1/4-AG N011: SVN	G1/4-AG	N011
SVN	G1/4-AG M10x1.25 (AG = male (M))	N009 to N019
SVN	G1/4-AG	

Ordering Data Check Valves SVN

Check valve SVN is delivered as a ready to connect product.

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Check Valves



Check Valves SVN

Connection thread G1/4"

Check Valves SVN

Type	Part Number
SVN G1/4-AG N011	10.05.03.00068
SVN G1/4-AG N012	10.05.03.00074
SVN G1/4-AG N013	10.05.03.00066
SVN G1/4-AG N014	10.05.03.00070
SVN G1/4-AG N015	10.05.03.00072
SVN G1/4-AG N018	10.05.03.00054
SVN G1/4-AG N019	10.05.03.00056
SVN G1/4-AG M10x1.25-AG N009	10.05.03.00060

Technical Data Check Valves SVN

Type	Required evacuation rate for pu = -0,3 bar [m³/h]	Required evacuation rate for pu = -0,3 bar [l/min]	Required evacuation rate for pu = -0,6 bar [m³/h]	Required evacuation rate for pu = -0,6 bar [l/min]	Max. flow rate [m³/h] when blowing off*	Max. flow rate [l/min] when blowing off*	Weight [g]
SVN G1/4-AG N011	2.3	38.3	3.3	55	27	450	8
SVN G1/4-AG N012	2.3	38.3	3.3	55	27	450	15
SVN G1/4-AG N013	2.3	38.3	3.3	55	27	450	9
SVN G1/4-AG N014	2.3	38.3	3.3	55	27	450	12
SVN G1/4-AG N015	2.3	38.3	3.3	55	27	450	18
SVN G1/4-AG N018	2.3	38.3	3.3	55	27	450	8
SVN G1/4-AG N019	2.3	38.3	3.3	55	27	450	18
SVN G1/4-AG M10x1.25-AG N009	2.3	38.3	3.3	55	27	450	10

*Blow-off pressure 5bar

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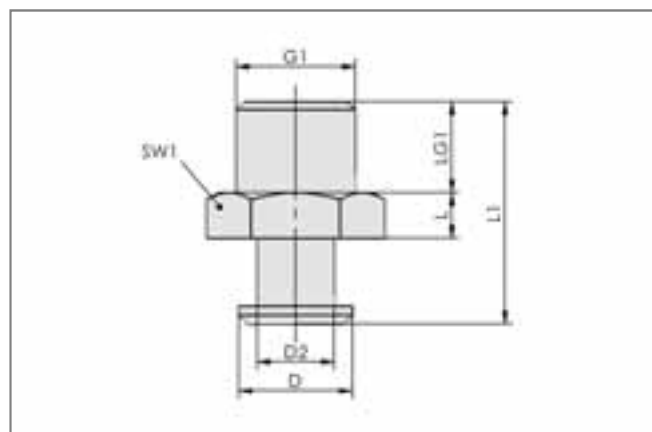
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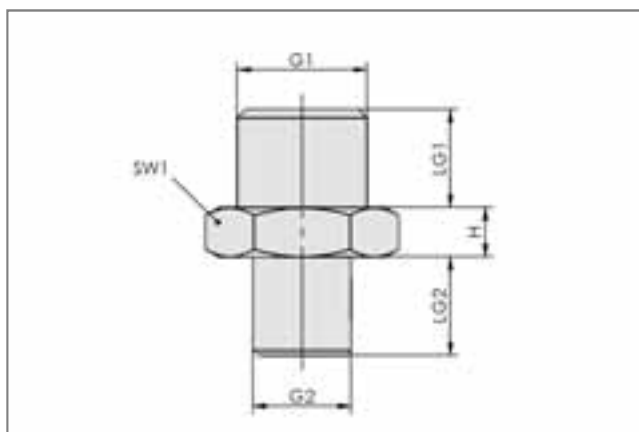
Check Valves SVN

Connection thread G1/4"

Design Data Check Valves SVN



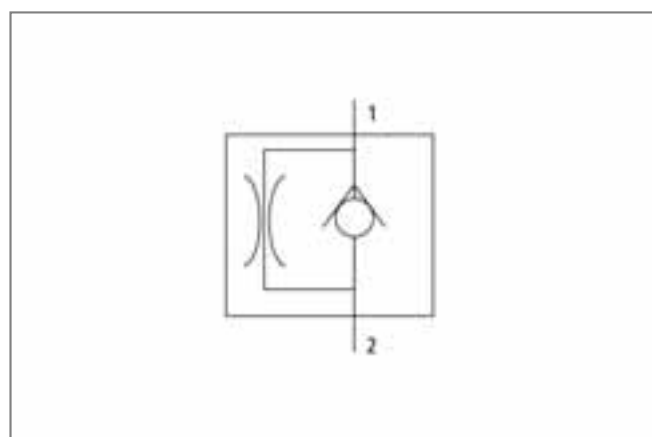
SVN G1/4-AG N011...N019



SVN G1/4-AG M10x1.25-AG N009

Type	Dimensions in mm							
	D	G1	G2	H	H1	LG1	LG2	SW1
SVN G1/4-AG N011	12.5	G1/4"-M	-	5	25	10	-	17
SVN G1/4-AG N012	18.0	G1/4"-M	-	5	30	10	-	22
SVN G1/4-AG N013	12.5	G1/4"-M	-	5	29	10	-	17
SVN G1/4-AG N014	16.5	G1/4"-M	-	5	30	10	-	17
SVN G1/4-AG N015	16.5	G1/4"-M	-	5	38	10	-	22
SVN G1/4-AG N018	14.0	G1/4"-M	-	5	29	11	-	17
SVN G1/4-AG N019	20.0	G1/4"-M	-	6	40	11	-	21
SVN G1/4-AG M10x1.25-AG N009	-	G1/4"-M	M10x1.25-M	5	10	10	10.0	17

Functional Circuit Diagram Check Valves SVN



Circuit diagram SVN (1 = vacuum generator; 2 = suction pad)

Check Valves



Flow Resistors SW

Nominal diameter from 0.25 mm to 2 mm



Suitability for Industry-Specific Applications



Flow resistors SW

Applications

- Flow resistor for handling of porous workpieces
- Reduction of the flow rate through individual suction pads in order to maintain the vacuum in the overall system
- May be installed in any orientation

Design

- Double-ended threaded nipple with reduced flow cross section
- Large gradation of different flow cross sections

Our Highlights...

- No moving parts
- Acts as a flow resistor with a reduced cross-section
- Minimum size

Your Benefits...

- > Robust design with long operating lifetime
- > Reduction of the cross-section of the vacuum line, particularly useful when handling porous workpieces
- > Also suitable for use in restricted spaces



Designation Code Flow Resistors SW

Abbreviated designation	Nominal size	Connection thread
Example SW 25 G1/8-AG:		
SW	25	G1/8-AG
SW	25 = 0.25 mm to 200 = 2.00 mm	G1/8-AG (AG = male (M)) G1/4-AG



Ordering Data Flow Resistors SW

Flow resistor SW is delivered as a ready to connect product.

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Flow Resistors SW

Nominal diameter from 0.25 mm to 2 mm

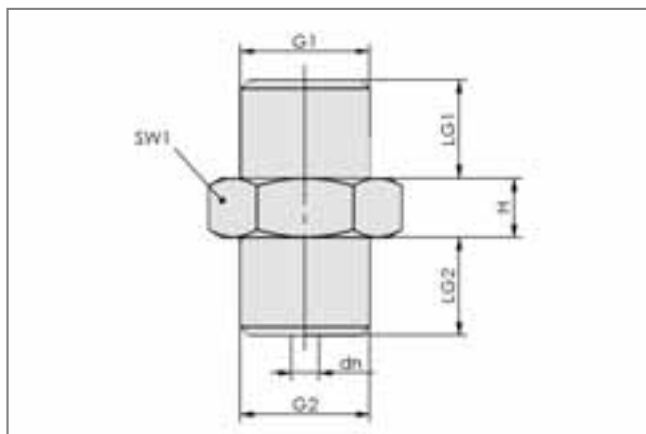
Flow Resistors SW

Type	Connection	
	G1/4"-M	G1/8"-M
SW 25	-	10.05.04.00034
SW 40	10.05.04.00010	10.05.04.00001
SW 50	10.05.04.00011	10.05.04.00002
SW 60	10.05.04.00012	10.05.04.00003
SW 70	10.05.04.00013	10.05.04.00004
SW 80	10.05.04.00014	10.05.04.00005
SW 90	10.05.04.00015	10.05.04.00006
SW 100	10.05.04.00016	10.05.04.00007
SW 110	10.05.04.00017	10.05.04.00008
SW 120	10.05.04.00018	10.05.04.00009
SW 150	10.05.04.00029	-
SW 200	10.05.04.00019	-

Technical Data Flow Resistors SW

Type	Nominal size	Required evacuation rate for pu = -0,3 bar [m³/h]	Required evacuation rate for pu = -0,3 bar [l/min]	Required evacuation rate for pu = -0,6 bar [m³/h]	Required evacuation rate for pu = -0,6 bar [l/min]
SW 25	0.25 mm	0.01	0.2	0.02	0.3
SW 40	0.40 mm	0.06	1.0	0.08	1.3
SW 50	0.50 mm	0.13	2.2	0.15	2.5
SW 60	0.60 mm	0.18	3.0	0.19	3.1
SW 70	0.70 mm	0.24	4.0	0.26	4.3
SW 80	0.80 mm	0.30	4.9	0.32	5.3
SW 90	0.90 mm	0.39	6.5	0.42	7.0
SW 100	1.00 mm	0.47	7.8	0.50	8.4
SW 110	1.10 mm	0.62	10.3	0.63	10.5
SW 120	1.20 mm	0.74	12.3	0.76	12.7
SW 150	1.50 mm	1.32	22.0	1.40	23.4
SW 200	2.00 mm	2.05	34.1	2.18	36.4

Design Data Flow Resistors SW



SW 25 to 200

Check Valves



Flow Resistors SW

Nominal diameter from 0.25 mm to 2 mm

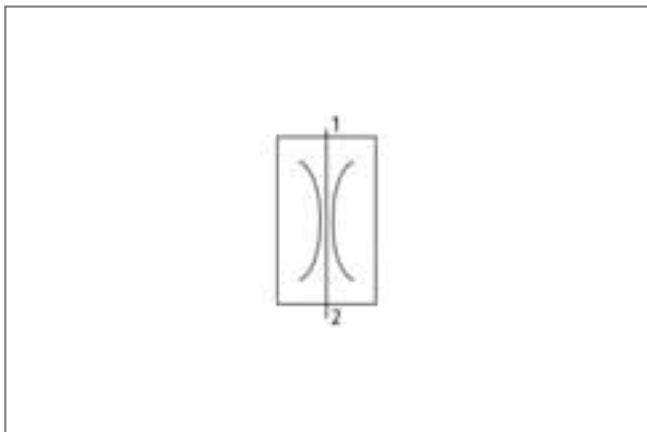


Design Data Flow Resistors SW

Type	Dimensions in mm						
	dn	G1	G2	H	LG1	LG2	SW1
SW 25 G1/8-AG	0.25	G1/8"-M	G1/8"-M	6	9.5	9.5	14
SW 40 G1/8-AG	0.40	G1/8"-M	G1/8"-M	6	9.5	9.5	14
SW 50 G1/8-AG	0.50	G1/8"-M	G1/8"-M	6	9.5	9.5	14
SW 60 G1/8-AG	0.60	G1/8"-M	G1/8"-M	6	9.5	9.5	14
SW 70 G1/8-AG	0.70	G1/8"-M	G1/8"-M	6	9.5	9.5	14
SW 80 G1/8-AG	0.80	G1/8"-M	G1/8"-M	6	9.5	9.5	14
SW 90 G1/8-AG	0.90	G1/8"-M	G1/8"-M	6	9.5	9.5	14
SW 100 G1/8-AG	1.00	G1/8"-M	G1/8"-M	6	9.5	9.5	14
SW 110 G1/8-AG	1.10	G1/8"-M	G1/8"-M	6	9.5	9.5	14
SW 120 G1/8-AG	1.20	G1/8"-M	G1/8"-M	6	9.5	9.5	14
SW 40 G1/4-AG	0.40	G1/4"-M	G1/4"-M	6	10.0	10.0	17
SW 50 G1/4-AG	0.50	G1/4"-M	G1/4"-M	6	10.0	10.0	17
SW 60 G1/4-AG	0.60	G1/4"-M	G1/4"-M	6	10.0	10.0	17
SW 70 G1/4-AG	0.70	G1/4"-M	G1/4"-M	6	10.0	10.0	17
SW 80 G1/4-AG	0.80	G1/4"-M	G1/4"-M	6	10.0	10.0	17
SW 90 G1/4-AG	0.90	G1/4"-M	G1/4"-M	6	10.0	10.0	17
SW 100 G1/4-AG	1.00	G1/4"-M	G1/4"-M	6	10.0	10.0	17
SW 110 G1/4-AG	1.10	G1/4"-M	G1/4"-M	6	10.0	10.0	17
SW 120 G1/4-AG	1.20	G1/4"-M	G1/4"-M	6	10.0	10.0	17
SW 150 G1/4-AG	1.50	G1/4"-M	G1/4"-M	5	9.0	9.0	17
SW 200 G1/4-AG	2.00	G1/4"-M	G1/4"-M	5	9.0	9.0	17



Functional Circuit Diagram Flow Resistors SW



Circuit diagram SW 25-200 (1 = vacuum generator; 2 = suction pad)

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