VSK Series Large-Area Vacuum Grippers



Product Features

- Highly flexible configuration: single or multiple units can be installed depending on the size and weight of the workpiece.
- Modular design for easy maintenance and quick replacement.
- Customizable according to specific application conditions and suction force requirements.

Ordering Code

316 3 R54 W 40 S - □ - VSK

- 316: Suction cup length (mm)
- 3: Number of suction cup rows
- R54: Suction cup pitch — R18: 18mm; R54: 54mm
- W: Suction surface type — H: Sponge type; Others: Suction cup selection series
  * For more suction cup types and codes, please refer to the suction cup selection guide.
- 40: Suction surface parameter — Sponge thickness or cup diameter
- S: Suction surface material

Nil	EPDM (For sponge type)
N	NBR
F	FKM
S	Silicone
EP	EPDM 3-component blend

* For more suction cup types and codes, please refer to the suction cup selection guide.

- □: Vacuum source — P: Without vacuum source; Nil: Internal vacuum
- VSK: Valve technology — VSK: Non-return valve; VW: Flow control valve

Application Guidelines

Application examples	Suction cup type	Sponge type
Rigid workpieces such as metal sheets	●	●
Flexible items such as cardboard boxes	●	●
Long and flat materials such as wooden planks or profiles	—	●
Rough or contoured surfaces	—	●
Layered picking of small parts or scattered items	—	●

ISO9001 CE

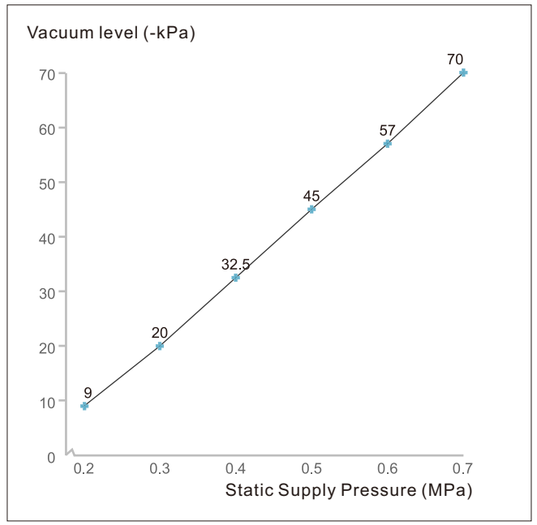
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Specifications

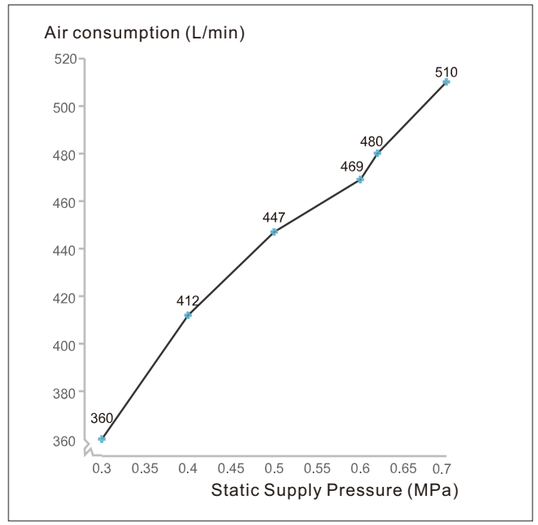
Type	Model	No. of Suction Ports	Air consumption (L/min)	Suction force (N)	Weight (Kg)	Other
Suction cup type	316 3R54 W40S-VSK	15	234	190	3.7	Working temperature: -20~80°C Air supply: Dry, clean compressed air Max. supply pressure: 0.7MPa Max. vacuum level: −60kPa Noise level: Below 70dB(A)
	442 3R54 W40S-VSK	23	234	300	4.7	
	530 3R54 W40S-VSK	27	300	350	5.4	
	640 3R54 W40S-VSK	33	300	430	6.3	
	838 3R54 W40S-VSK	44	510	550	7.7	
Sponge type	316 3R18 H20-VSK	41	234	375	2.7	
	442 3R18 H20-VSK	62	234	550	3.3	
	530 3R18 H20-VSK	77	300	680	3.7	
	640 3R18 H20-VSK	95	300	820	4.2	
	838 3R18 H20-VSK	128	510	1090	5	

* Air consumption values are tested at 0.7 MPa and calculated using theoretical pressure drop equations.
* Suction force is measured using contoured wooden boards at -30 kPa vacuum and 0.5 MPa air pressure, without safety factor.

The following data are actual test results obtained by our company using profiled wood panels as the test object, provided for reference only.



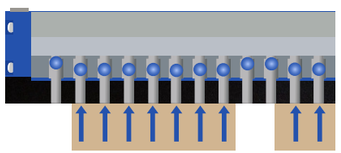
Vacuum Level-Supply Pressure Curve



Air Consumption - Supply Pressure Curve

VSK Check Valve Technology

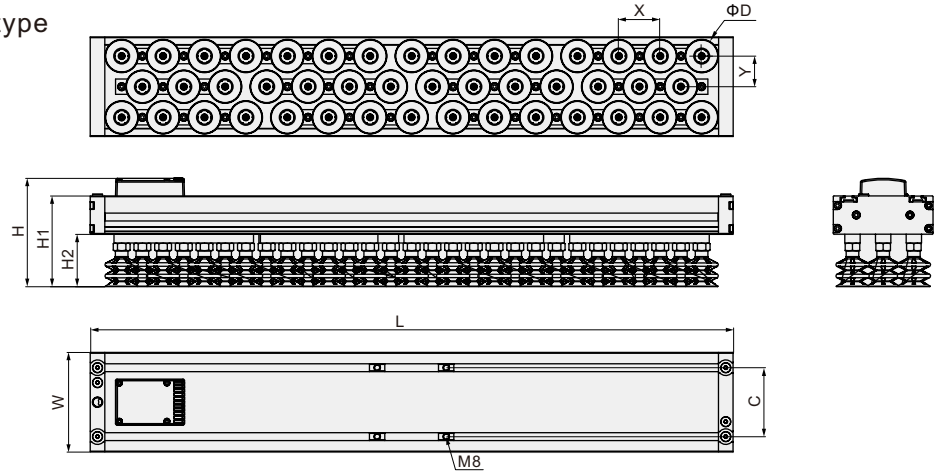
- Mechanical check valves integrated into aluminum profile surface
- Auto shut-off when suction port is uncovered to maintain vacuum level
- Anti-leakage design improves suction efficiency and reliability



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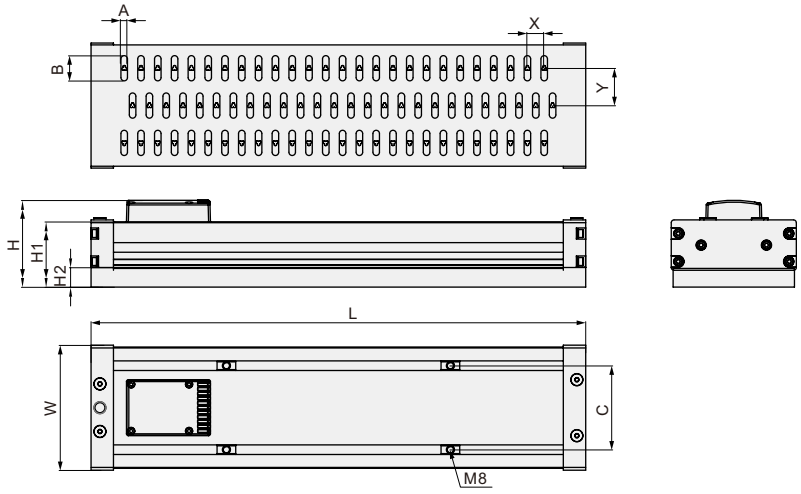
Main Dimension

Suction cup type



Model	L	W	H	H1	H2	X	Y	ΦD	C
316 3R54 W40S-VSK	316	134	141.4	118.4	68.4	54	40	40	90
442 3R54 W40S-VSK	442	134	141.4	118.4	68.4	54	40	40	90
530 3R54 W40S-VSK	530	134	141.4	118.4	68.4	54	40	40	90
640 3R54 W40S-VSK	640	134	141.4	118.4	68.4	54	40	40	90
838 3R54 W40S-VSK	838	134	141.4	118.4	68.4	54	40	40	90

Sponge type



Model	L	W	H	H1	H2	X	Y	A	B	C
316 3R18 H20-VSK	316	134	93	70	20	18	40	7	27	90
442 3R18 H20-VSK	442	134	93	70	20	18	40	7	27	90
530 3R18 H20-VSK	530	134	93	70	20	18	40	7	27	90
640 3R18 H20-VSK	640	134	93	70	20	18	40	7	27	90
838 3R18 H20-VSK	838	134	93	70	20	18	40	7	27	90