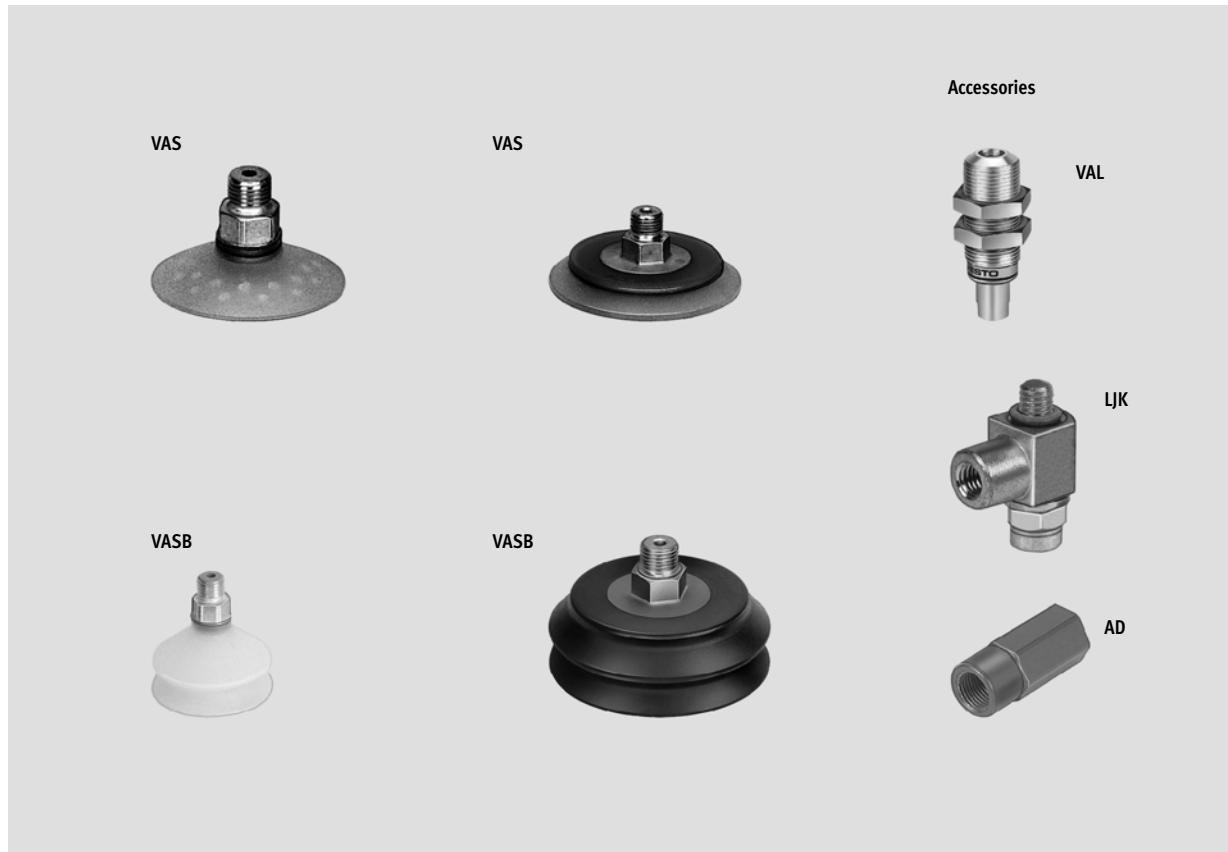


Suction cups VAS/VASB

Key features at a glance

Vacuum technology



2.4

Suction cups complete with connecting thread

Suction cup

VAS

Bellows suction cup

VASB

- Diameters
 VAS: 1 ... 125 mm,
 VASB: 8 ... 125 mm
- Suction retention of workpieces with smooth, impervious surfaces
- Silicone suction cups are approved in the production of food products
- Can be adapted for use with uneven, curved and inclined surfaces with bellows suction cups

Perbunan (NBR)

- Minimal markings left on shiny surfaces

Polyurethane (PUR)

- Long service life
- Gentle handling with soft suction cup material

Silicone (SI)

- Excellent thermal resistance

Height compensator for vacuum generator VAL-...

to compensate tolerance differences

Elbow LJK-...

with vacuum port at the side

Adapter AD-...

for vacuum generators, for attachment to piston rod thread

Suction cups VAS/VASB

Overview and ordering data

Vacuum technology

Suction cup VAS							
Suction cup \varnothing	Mounting thread	Perbunan VAS-...-NBR		Polyurethane VAS-...-PUR		Silicone VAS-...-SI	
		Part No.	Type	Part No.	Type	Part No.	Type
1 mm	M3	173 437	VAS-1-M3-NBR	–		–	
2 mm	M3	173 438	VAS-2-M3-NBR	–		–	
5 mm	M5	173 439	VAS-5-M5-NBR	–		–	
8 mm	M5	34 588	VAS-8-M5-NBR	36 135	VAS-8-M5-PUR	160 988	VAS-8-M5-SI
10 mm	M5	173 440	VAS-10-M5-NBR	173 441	VAS-10-M5-PUR	173 442	VAS-10-M5-SI
15 mm	G $\frac{1}{8}$	36 142	VAS-15- $\frac{1}{8}$ -NBR	36 136	VAS-15- $\frac{1}{8}$ -PUR	158 973	VAS-15- $\frac{1}{8}$ -SI
30 mm	G $\frac{1}{8}$	34 587	VAS-30- $\frac{1}{8}$ -NBR	36 137	VAS-30- $\frac{1}{8}$ -PUR	158 974	VAS-30- $\frac{1}{8}$ -SI
40 mm	G $\frac{1}{4}$	36 143	VAS-40- $\frac{1}{4}$ -NBR	36 138	VAS-40- $\frac{1}{4}$ -PUR	158 975	VAS-40- $\frac{1}{4}$ -SI
55 mm	G $\frac{1}{4}$	36 144	VAS-55- $\frac{1}{4}$ -NBR	36 139	VAS-55- $\frac{1}{4}$ -PUR	158 976	VAS-55- $\frac{1}{4}$ -SI
75 mm	G $\frac{1}{4}$	36 145	VAS-75- $\frac{1}{4}$ -NBR	36 140	VAS-75- $\frac{1}{4}$ -PUR	160 989	VAS-75- $\frac{1}{4}$ -SI
100 mm	G $\frac{1}{4}$	34 586	VAS-100- $\frac{1}{4}$ -NBR	36 141	VAS-100- $\frac{1}{4}$ -PUR	160 990	VAS-100- $\frac{1}{4}$ -SI
125 mm	G $\frac{3}{8}$	152 605	VAS-125- $\frac{3}{8}$ -NBR	152 606	VAS-125- $\frac{3}{8}$ -PUR	160 991	VAS-125- $\frac{3}{8}$ -SI
8 mm	M5, on side	–		12 612	VAS-8-M5-S	–	

Bellows suction cup VASB							
Suction cup \varnothing	Mounting thread	Perbunan VASB-...-NBR		Polyurethane VASB-...-PUR		Silicone VASB-...-SI	
		Part No.	Type	Part No.	Type	Part No.	Type
8 mm	M5	35 410	VASB-8-M5-NBR	35 417	VASB-8-M5-PUR	160 992	VASB-8-M5-SI
15 mm	G $\frac{1}{8}$	35 411	VASB-15- $\frac{1}{8}$ -NBR	35 418	VASB-15- $\frac{1}{8}$ -PUR	158 977	VASB-15- $\frac{1}{8}$ -SI
30 mm	G $\frac{1}{8}$	35 412	VASB-30- $\frac{1}{8}$ -NBR	35 419	VASB-30- $\frac{1}{8}$ -PUR	158 978	VASB-30- $\frac{1}{8}$ -SI
40 mm	G $\frac{1}{4}$	35 413	VASB-40- $\frac{1}{4}$ -NBR	35 420	VASB-40- $\frac{1}{4}$ -PUR	158 979	VASB-40- $\frac{1}{4}$ -SI
55 mm	G $\frac{1}{4}$	35 414	VASB-55- $\frac{1}{4}$ -NBR	35 421	VASB-55- $\frac{1}{4}$ -PUR	158 980	VASB-55- $\frac{1}{4}$ -SI
75 mm	G $\frac{1}{4}$	35 415	VASB-75- $\frac{1}{4}$ -NBR	35 422	VASB-75- $\frac{1}{4}$ -PUR	160 993	VASB-75- $\frac{1}{4}$ -SI
100 mm	G $\frac{1}{4}$	35 416	VASB-100- $\frac{1}{4}$ -NBR	35 423	VASB-100- $\frac{1}{4}$ -PUR	160 994	VASB-100- $\frac{1}{4}$ -SI
125 mm	G $\frac{3}{8}$	152 609	VASB-125- $\frac{3}{8}$ -NBR	152 610	VASB-125- $\frac{3}{8}$ -PUR	160 995	VASB-125- $\frac{3}{8}$ -SI



Accessories			
Mounting thread	Height compensator	Part No.	Type
Height compensator			
M5	5 mm	151 209	VAL-M5-5
G $\frac{1}{8}$	10 mm	151 210	VAL- $\frac{1}{8}$ -10
G $\frac{1}{4}$	20 mm	151 211	VAL- $\frac{1}{4}$ -20
Elbow, vacuum port on side			
M5		151 783	LJK-M5-1/l
G $\frac{1}{8}$		151 784	LJK- $\frac{1}{8}$ -1/l
G $\frac{1}{4}$		151 785	LJK- $\frac{1}{4}$ -1/l
Adapter for attachment to piston rod thread			
M6/M5		157 328	AD-M6-M5
M6/G $\frac{1}{8}$		157 329	AD-M6- $\frac{1}{8}$
M6/G $\frac{1}{4}$		157 330	AD-M6- $\frac{1}{4}$
M8/G $\frac{1}{8}$		157 331	AD-M8- $\frac{1}{8}$
M8/G $\frac{1}{4}$		157 332	AD-M8- $\frac{1}{4}$
M10x1.25/G $\frac{1}{8}$		157 333	AD-M10x1,25- $\frac{1}{8}$
M10x1.25/G $\frac{1}{4}$		157 334	AD-M10x1,25- $\frac{1}{4}$
M12x1.25/G $\frac{1}{4}$		160 256	AD-M12x1,25- $\frac{1}{4}$
M12x1.25/G $\frac{3}{8}$		160 257	AD-M12x1,25- $\frac{3}{8}$

Suction cups VAS/VASB

Technical data

Vacuum technology

Suction cup

Type	VAS-...						
Size	1-M3	2-M3	5-M5	8-M5(-S)	10-M5	15-1/8	
Medium	Atmospheric air						
Connection	M3	M3	M5	M5*	M5	G1/8	
Type of mounting	Thread						
Nominal size [mm]	0.4	1	1.5	2	2	3	
Effective suction cup \varnothing [mm]	0.8	1.6	4	5.5	8	12	
Suction force at -0.7 bar [N]	0.035	0.14	0.9	1.6	4.5	7.9	
Temperature range	NBR	-20 ... +80 °C					
	PUR	-20 ... +60 °C					
	SI	-40 ... +200 °C					
Materials [connector/suction cup]	NBR	Steel/(NBR)	Al/NBR	Brass/NBR	Al/NBR	Brass/NBR	
	PUR	only as of 8 mm \varnothing : (die-cast zinc/polyurethane (M5, G1/8: brass, VAS-10-...: Al))					
	SI	only as of 8 mm \varnothing : AlMgSi 1/silicone					
Weights [kg]	NBR	0.001	0.011	0.002	0.004	0.003	0.011
	PUR	-	-	-	0.004	0.003	0.011
	SI	-	-	-	0.002	0.003	0.006

* VAS-8-M5-S: Barbed fittings for 3 mm plastic tubing, lateral connection

Bellows suction cup

Type	VASB-...				
Size	8-M5	15-1/8	30-1/8	40-1/4	
Medium	Atmospheric air				
Connection	M5	G1/8	G1/8	G1/4	
Type of mounting	Thread				
Nominal size [mm]	2	3	3	4	
Effective suction cup \varnothing [mm]	5.5	12	25	32	
Suction force at -0.7 bar [N]	1.6	7.9	34	56	
Temperature range	NBR	-20 ... +80 °C			
	PUR	-20 ... +60 °C			
	SI	-40 ... +200 °C			
Materials [connector/suction cup]	NBR	Die-cast zinc/perbunan (M5, G1/8: brass)			
	PUR	Die-cast zinc/polyurethane (M5, G1/8: brass)			
	SI	AlMgSi 1/silicone			
Weights [kg]	NBR	0.004	0.011	0.015	0.030
	PUR	0.004	0.011	0.015	0.030
	SI	0.002	0.006	0.009	0.016

2.4



Suction cups VAS/VASB

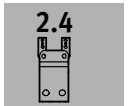
Technical data

Suction cup

Type Size	VAS-...						
	30- ¹ / ₈	40- ¹ / ₄	55- ¹ / ₄	75- ¹ / ₄	100- ¹ / ₄	125- ³ / ₈	
Medium	Atmospheric air						
Connection	G ¹ / ₈	G ¹ / ₄	G ¹ / ₄	G ¹ / ₄	G ¹ / ₄	G ³ / ₈	
Type of mounting	Thread						
Nominal size [mm]	3	4	4	4	4	7	
Effective suction cup Ø [mm]	25	32	44	60	85	105	
Suction force at -0.7 bar [N]	34	56	106	197	397	606	
Temperature range	NBR	-20 ... +80 °C					
	PUR	-20 ... +60 °C					
	SI	-40 ... +200 °C					
Materials [connector/suction cup]	NBR	Brass/NBR	Die-cast zinc/NBR				
	PUR	Die-cast zinc/polyurethane (M5, G ¹ / ₈ : brass, VAS-10-...: Al)					
	SI	AlMgSi 1/silicone					
Weights [kg]	NBR	0.013	0.026	0.032	0.076	0.138	0.152
	PUR	0.013	0.027	0.032	0.078	0.142	0.148
	SI	0.007	0.013	0.016	0.036	0.067	0.148

Type Size	VASB-...				
	55- ¹ / ₄	75- ¹ / ₄	100- ¹ / ₄	125- ³ / ₈	
Medium	Atmospheric air				
Connection	G ¹ / ₄	G ¹ / ₄	G ¹ / ₄	G ³ / ₈	
Type of mounting	Thread				
Nominal size [mm]	4	4	4	7	
Effective suction cup Ø [mm]	44	60	85	105	
Suction force at -0.7 bar [N]	106	197	397	606	
Temperature range	NBR	-20 ... +80 °C			
	PUR	-20 ... +60 °C			
	SI	-40 ... +200 °C			
Materials [connector/suction cup]	NBR	Die-cast zinc/perbunan (M5, G ¹ / ₈ : brass)			
	PUR	Die-cast zinc/polyurethane (M5, G ¹ / ₈ : brass)			
	SI	AlMgSi 1/silicone			
Weights [kg]	NBR	0.042	0.095	0.170	0.207
	PUR	0.042	0.095	0.170	0.194
	SI	0.026	0.053	0.95	0.194

Bellows suction cup



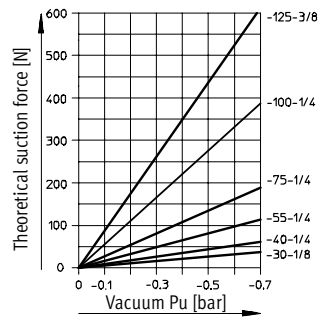
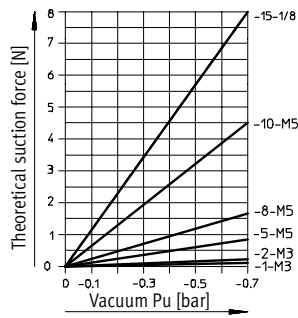
Suction cups VAS/VASB

Technical data

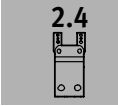
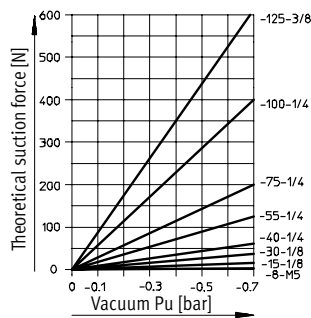
Vacuum technology

Theoretical suction force in relation to vacuum

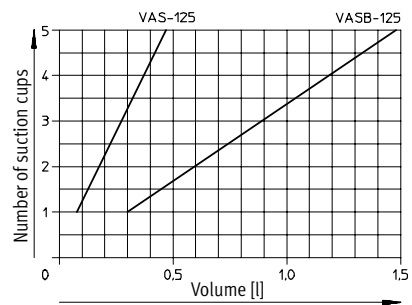
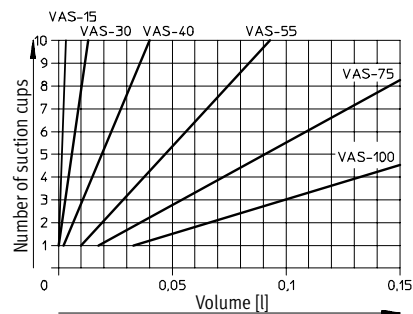
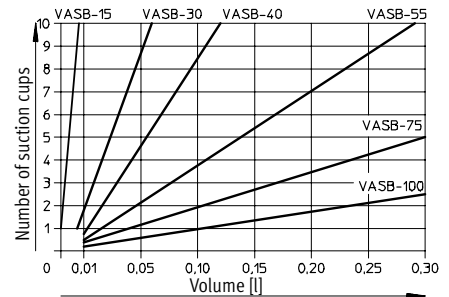
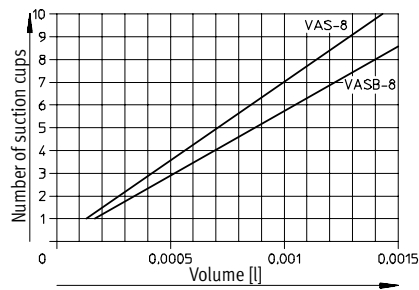
VAS-...



VASB-...



Suction cup volume

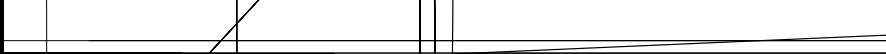
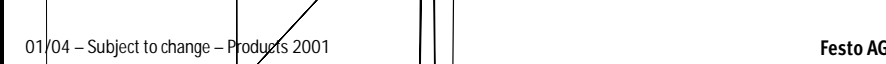
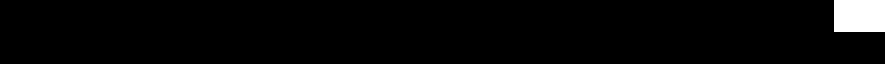
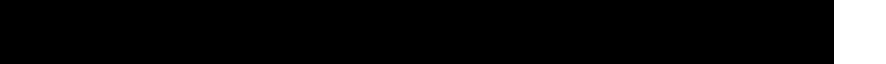
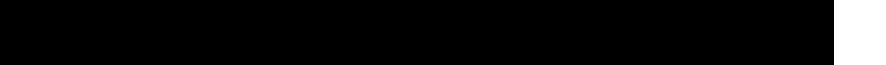
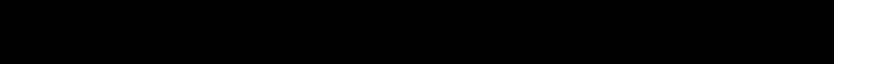
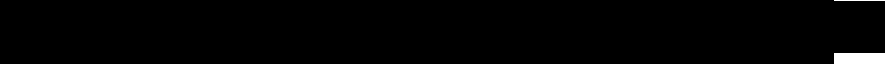
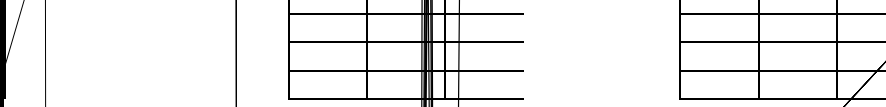
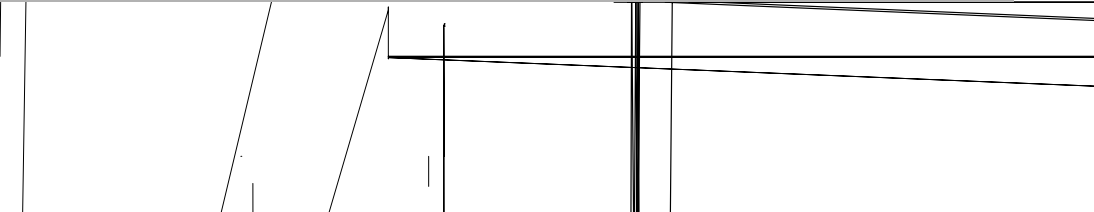
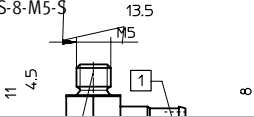


Suction cups VAS

Dimensions

Vacuum technology

VAS-8-M5-S



1-8

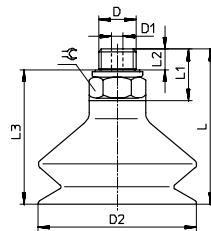
Suction cups VASB

Dimensions

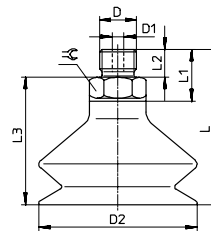
Vacuum technology

Bellows suction cup

VASB-...-NBR
VASB-...-PUR

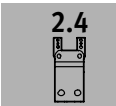


VASB-...-SI



Type	D	D1 Ø	D2 Ø	L	L1	L2	L3	≈
VASB-8-M5-NBR	M5	2	8	22	11	3	19	8
VASB-15-1/8-NBR	G1/8	3	15	27	13.5	6.2	20.8	13
VASB-30-1/8-NBR	G1/8	3	30	35.5	13.5	6.2	29.3	13
VASB-40-1/4-NBR	G1/4	4	40	45	18	7.8	37.2	17
VASB-55-1/4-NBR	G1/4	4	55	54	18	7.8	46.2	17
VASB-75-1/4-NBR	G1/4	4	75	45.5	18	7.8	37.7	17
VASB-100-1/4-NBR	G1/4	4	100	45.5	18	7.8	37.7	17
VASB-125-3/8-NBR	G3/8	7	125	63	23	9	54	19
VASB-8-M5-PUR	M5	2	8	22	11	3	19	8
VASB-15-1/8-PUR	G1/8	3	15	27	13.5	6.2	20.8	13
VASB-30-1/8-PUR	G1/8	3	30	35.5	13.5	6.2	29.3	13
VASB-40-1/4-PUR	G1/4	4	40	45	18	7.8	37.2	17
VASB-55-1/4-PUR	G1/4	4	55	54	18	7.8	46.2	17
VASB-75-1/4-PUR	G1/4	4	75	45.5	18	7.8	37.7	17
VASB-100-1/4-PUR	G1/4	4	100	45.5	18	7.8	37.7	17
VASB-125-3/8-PUR	G3/8	7	125	63	23	9	54	19
VASB-8-M5-SI*	M5	2	8	22	11	4.5	17.5	8
VASB-15-1/8-SI	G1/8	3	15	27	13.5	8	19	13
VASB-30-1/8-SI	G1/8	3	30	35.5	13.5	8	27.5	13
VASB-40-1/4-SI	G1/4	4	40	45	19	10	35	17
VASB-55-1/4-SI	G1/4	4	55	54	19	10	44	17
VASB-75-1/4-SI	G1/4	4	75	45.5	16	10	35.5	17
VASB-100-1/4-SI	G1/4	4	100	45.5	16	10	35.5	17
VASB-125-3/8-SI	G3/8	7	125	63	19.5	12	51	19

* Sealing rings are not included in the scope of delivery.

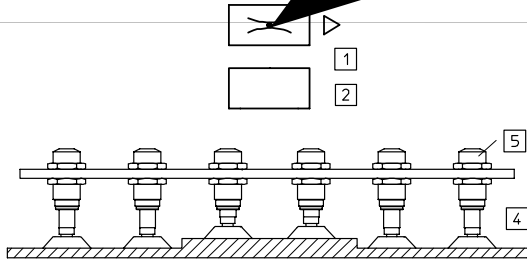


Vacuum technology

1

Suction cups VAS/VASB

Dimensions

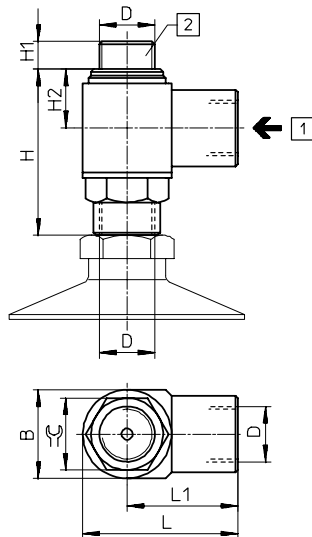


Suction cups VAS/VASB

Dimensions

Vacuum technology

Elbow
with lateral outlet LJK



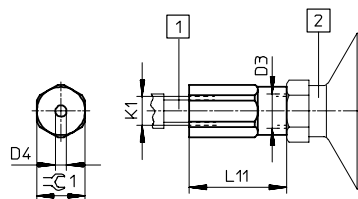
- 1 Air connection (vacuum)
- 2 Mounting thread

Type	B	D	H	H2	L	L1	$\approx \text{C}$
LJK-M5-1/1	10	M5	20	3.8	7.5	12.5	8
LJK-1/8-1/1	16	G1/8	30	5	28	20	13
LJK-1/4-1/1	20	G1/4	39	8	36	26.5	17

2.4



Adapter
for piston rod thread AD



Material: anodised aluminium

- 1 Piston rod
- 2 Vacuum port for suction cup

Type	D3	D4 Ø	K1	L11	$\approx \text{C}$ 1
AD-M6-M5	M5	2.3	M6	27	10
AD-M6-1/8	G1/8	2.3	M6	27	13
AD-M6-1/4	G1/4	2.3	M6	30	17
AD-M8-1/8	G1/8	3.2	M8	29	13
AD-M8-1/4	G1/4	3.2	M8	32	17
AD-M10x1,25-1/8	G1/8	4	M10x1.25	31	13
AD-M10x1,25-1/4	G1/4	4	M10x1.25	34	17
AD-M12x1,25-1/4	G1/4	6	M12x1.25	34	17
AD-M12x1,25-3/8	G3/8	6	M12x1.25	37	22

Suction cups VAS/VASB

Vacuum technology

Vacuum technology can be used in a wide range of applications:

- Lifting
- Placing
- Moving
- Insertion
- Conveyance
- Gripping
- Holding
- Loading
- Clamping
- Transporting
- Transferring
- Turning

Flexible automation technology is an important field of application for vacuum technology:

- Small, mid-sized and large series manufacturing
- Assembly
- Conveyor and packaging technology

