

## Compensating components

**FESTO**



## Datasheet

### Length compensator VAL

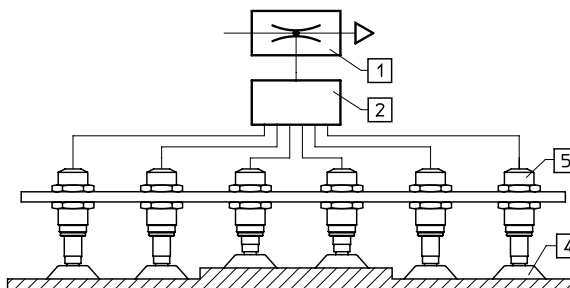
Accessory for suction cups VAS/VASB

→ Internet: vas



Gentle handling of the workpieces by compensating for any excess stroke of the handling device or for tolerance differences in the workpiece thickness.

[1] Vacuum generator  
 [2] Distributor  
 [4] Suction cup  
 [5] Length compensator



General technical data			
Vacuum connection	M5	G1/8	G1/4
Suction cup mounting	M5	G1/8	G1/4
Design	Vacuum port on top		
Mounting position	Any		
Type of mounting	With male thread M16x1	With male thread M22x1.5	With male thread M26x1.5
Height compensator for suction cup holder [mm]	5	10	20
Product weight [g]	25	62	118

Operating and environmental conditions	
Operating pressure [bar]	-0.95 ... +8
Operating medium	Compressed air to ISO 8573-1:2010 [7:-:-]
PWIS conformity	VDMA24364-B1/B2-L
Suitable for the production of lithium-ion batteries	Metals with more than 1% by mass of copper, zinc or nickel are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils.
Ambient temperature [°C]	-10 ... +60
Corrosion resistance class CRC <sup>1)</sup>	2 - Moderate corrosion stress

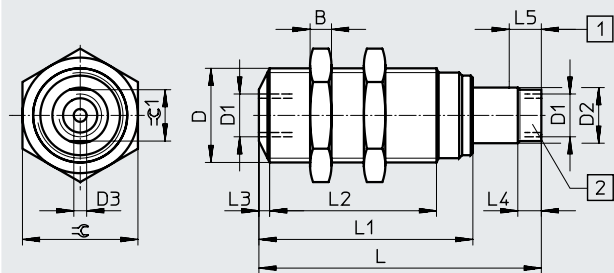
1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
 Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Materials	
Housing	Aluminium
Retaining bracket	Aluminium POM High-alloy stainless steel
Seals	NBR
Note on materials	RoHS-compliant

Datasheet

Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)



- [1] Spring deflection for length compensator
- [2] Port for suction gripper

Ordering data

Vacuum connection	B	D	D1	D2 ∅	D3 ∅	L	L1	L2	L3	L4	L5	≈C	≈C 1	Part no.	Type
M5	5	M16x1	M5	8	2	46	35	25.5	2	4.5	5	19	7	151209	VAL-M5-5
G1/8	6	M22x1.5	G1/8	13	3	66	50	39	2.5	5.5	10	27	12	151210	VAL-1/8-10
G1/4	8	M26x1.5	G1/4	17	4	100	73	60	2.5	6.5	20	32	16	151211	VAL-1/4-20

## Datasheet

### Angle compensator ESWA

Accessory for suction gripper ESG,  
mounting between suction cup  
complete holder and suction cup

→ Internet: esg



General technical data			
Pneumatic connection	M4	M6	M10
Suction cup mounting	M4	M6	M10
Allocating suction cup holders	Size 3	Size 4	Size 5
Design	Ball joint		
Angle compensator +/- [°]	15		
Mounting position	Any		
Type of mounting	With male thread		

Operating and environmental conditions		
Operating pressure [bar]	-0.95 ... +4	
Ambient temperature [°C]	0 ... +60	
Corrosion resistance class CRC <sup>1)</sup>	1	

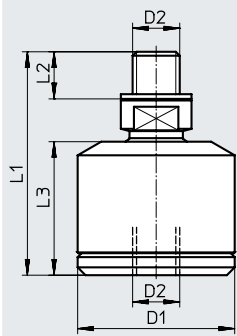
1) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).

Materials	
Housing	Aluminium, nickel-plated brass
Seals	NBR
Note on materials	RoHS-compliant

### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)



Ordering data							
Allocating suction cup holders	D1 ∅	D2	L1	L2	Weight [g]	Part no.	Type
Size 3	15	M4	23	4	9	191205	ESWA-3
Size 4	20	M6	28.5	6	19	191206	ESWA-4
Size 5	28	M10	40.5	10	57	191207	ESWA-5