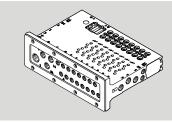
# VABM-L1-...HWS1/2-...-GR Manifold rail



# ESTO

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www.festo.com

Assembly instructions

8132034 2020-03d [8132036]



Translation of the original instructions

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#### 1 Applicable Documents

(III

All available documents for the product → www.festo.com/sp.

Documents	Product	Contents
Assembly instructions	Separator VABDB	-

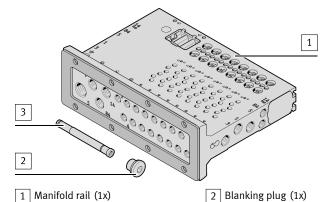
Tab. 1

#### 2 Safety instructions

- Only mount the product on components that are in a condition to be safely operated.
- Do not interchange outputs 2 and 4 of the components during the mounting procedure.

# 3 Product Range Overview

### 3.1 Scope of delivery



3 Plug module (1x)

VABM-L1-...HWS1/2-...-GR Fig. 1

## 3.2 Not in scope of delivery

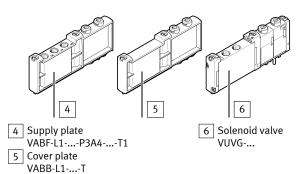
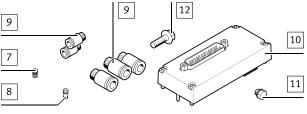


Fig. 2



- 7 Fixed flow restrictor
- VFFG-T-F... 8 Check valve
- VABF-L1-...H-L2
- 9 Fitting QS / NPQH / NPQR
- Fig. 3

- 10 Electrical interface VAEM-L1-S-...
- 11 Blanking plug B-M7
- 12 Screw M5x16-A2-70-PRES-IP

#### 4 Assembly

#### 4.1 Preparation

• Form pressure zones with the VABD-...-B separator → 1 Applicable Documents.

To feed additional operating pressure into the pressure zones or increase the exhaust performance:

Mount supply plate 4 on manifold rail 1.

In case of unused valve positions:

Mount cover plates 5.

### 4.2 Assembly of blanking plug/plug module

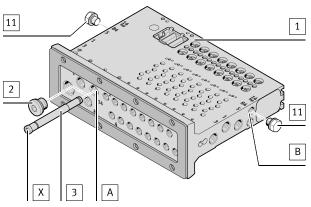


Fig. 4

- To demount the plug module  $\boxed{3}$  use the M4 thread [X]. With external pilot air:
- Push plug module 3 into port 14 [A].

With internal pilot air:

- Screw the blanking plug 2 into port 14 [A].
  Tightening torque: 1.5 Nm 20 %
- 2. Screw both blanking plugs 11 into ports 14 [B].

#### 4.3 Assembly of supply plate/cover plate/solenoid valve

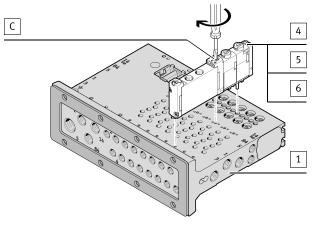


Fig. 5

- 1. Place the components 4/5/6 on the manifold rail 1.
- 2. Tighten screws [C].

VABM-L1- 10HWS		10HWS	14HWS		
	[C]	0.3 Nm + 50 %	0.55 Nm ± 20 %		

Tab 2

3. If applicable, place additional components  $\boxed{4/5/6}$  as desired.

#### Assembly of fixed flow restrictor/check valve/fitting

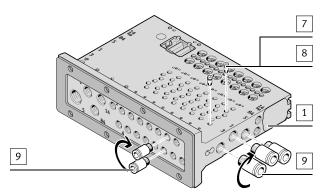


Fig. 6

- 1. If the seal is not mounted, first mount the sheet metal with the seal.
  - Use sheet metal (B1) only with 9 NPQH fittings. Use sheet metal (V2) only with 9 NPQR fittings.

  - Continue according to the specific fittings.
  - When mounting customer-specific fittings, follow step 3.
  - When mounting the fittings 9 follow step 4.
- Screw customer-specific fittings into channels 1, 3 and 5, ports 14 and 84 and into outlets 2 and 4. Ensure that they are tight.
- Screw fittings 9 into channels 1, 3 and 5, ports 14 and 84 and into outlets 2 and 4.

9	M7	G1/8	G1/4	G3/8
QS	1.5 Nm – 20 %	5 Nm – 20 %	8.5 Nm ± 15 %	8.5 Nm ± 15 %
NPQH	3 Nm – 20 %	6 Nm ± 20 %	7.5 Nm ± 20 %	9 Nm – 20 %
NPQR	3 Nm – 20 %	3 Nm ± 20 %	7.5 Nm ± 20 %	9 Nm – 20 %

Tab. 3

Screw fixed flow restrictors 7/check valves 8 to tap threads into channels 3 and 5 of the sub-base 1 until they sit flush. When screwing in again, use the threads already present.

#### Assembly of electrical interface 4.5

If the plug is bent during assembly, the function of the electrical interface can no longer be guaranteed.

Mount and plug the electrical interface parallel to the manifold rail.

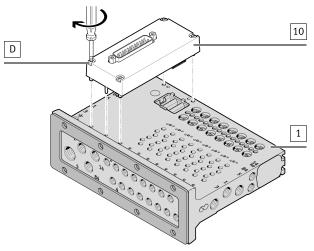


Fig. 7

- 1. Place electrical interface 10 on the manifold rail 1.
- Tighten screws [D]. Tightening torque: 0.7 Nm ± 20 %



Screws [D]: the VAEM-L1-S-M3-26/-50 variants only have 2 screws each.

#### 4.6 Assembly on the control cabinet

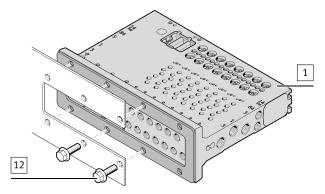


Fig. 8

- 1. Use the control cabinet cut-out contour → www.festo.com/sp.
- Place the manifold rail 1 on the control cabinet cut-out.
- Select screws.
  - Degree of protection ≠ IP67: select screws ISO 4762 M5 with appropriate length.
  - Degree of protection = IP67: select screws 12.
- 4. Tighten screws. Observe screw sequence and number.

Screw sequence	Tigh	itenir	ıg toı	rque		
Screw sequences of the manifold rails 1 (examples)	Degree of protection					
	≠ IP6	7		= IP6	7	
	Number					
	1.	2.	3.	1.	2.	3.
	Nm ± 20 %					
6 2 3 0 0 0 0 0 0 5 1 4	2	3.5	_	2	4	_
6 2 7 3 0 0 0 0 5 1 8 4	2	3.5	_	2	4	_
6 7 2 10 3 0 0 0 0 0 5 8 1 9 4	2	3.5	_	2	4	_
6 10 2 7 11 3 0 0 0 0 0 0 0 5 9 1 8 12 4	2	3.5	3.5	2	4	4
6 10 14 2 11 7 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3.5	3.5	2	4	4
6 14 10 18 2 15 7 11 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3.5	3.5	2	4	4
5 13 9 17 1 16 8 12 4	1	l	l	l	1	1

Tab. 4

#### Earthing 5

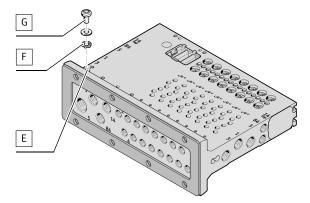


Fig. 9

Connect the earth terminal [E] to the earth potential. Shim the earthing screw [G] with a toothed disc [F]. The toothed disc [F] penetrates the anodised coating of the manifold rail 1. Earthing screw [G]: M5 x 10  $\$  Conductive connection established.