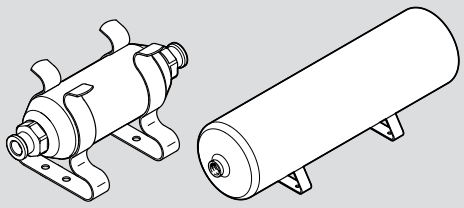
CRVZS
Air reservoir



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Operating instruction

8165848
2022-08d
[8165850]

8165848

Translation of the original instructions

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1 Applicable Documents

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

2 Safety

2.1 Safety instructions

- Only use the product in its original condition without unauthorised modifications.
- Only use the product if it is in perfect technical condition.
- Observe the identifications on the product.
- Take into account the ambient conditions at the location of use.
- Before working on the product, switch off the compressed air supply and lock it to prevent it from being switched on again.
- An increase in the operating pressure above the maximum permissible values may lead to rupture of the housing. Install a suitable safety device to prevent excess pressure.

2.2 Intended use

The compressed air reservoir is used to store group 2 ➔ 9 Technical data fluids.
The air reservoir can be used for the following applications:
- For compensation of pressure fluctuations.
- To provide greater volumes of compressed air to supply of fast clocking drives.
- To compensate for suddenly occurring air consumption.
- For attachment to compressors.
- For vacuum applications.

2.3 Training of qualified personnel

Work on the product may only be carried out by qualified personnel who can evaluate the work and detect dangers. The qualified personnel have knowledge and experience in pneumatics.

3 Additional information

- Contact the regional Festo contact if you have technical problems ➔ www.festo.com.
- Accessories and spare parts ➔ www.festo.com/catalogue.

4 Product design

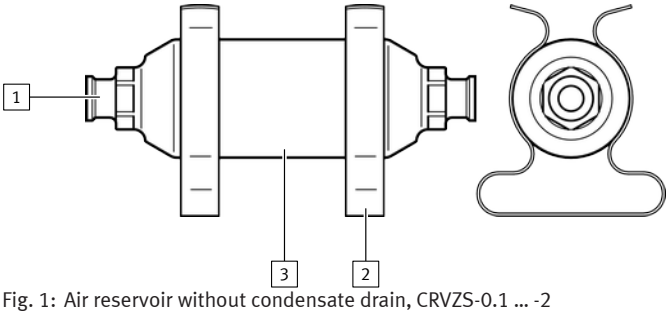

Fig. 1: Air reservoir without condensate drain, CRVZS-0.1 ... -2

1 Air reservoir port (2x)
2 Retaining clips, loose (with CRVZS-2: clips, welded on)
3 Air reservoir storage volume

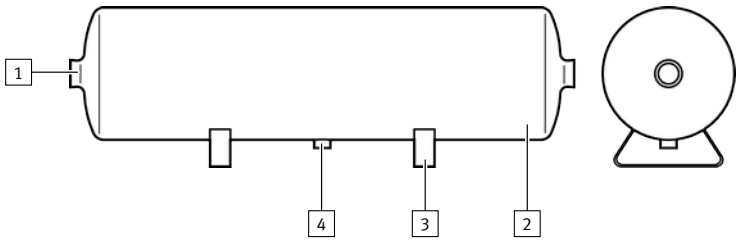

Fig. 2: Air reservoir with condensate drain, CRVZS-5 ... -20

1 Air reservoir port (2x)
2 Air reservoir storage volume
3 Clips, welded on
4 Condensate drain

5 Function

The operating medium is supplied and discharged at both ends of the air reservoir via central ports. Condensate can be drained from a threaded plug on the air reservoir on sizes CRVZS-5 ... -20.

6 Mounting

⚠ WARNING

Mechanical vibrations.
Vibration can cause material fatigue and reduce the fatigue strength of the air reservoir and fasteners.
- Protect the air reservoir from mechanical vibrations.

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Due to the manufacturing process, an oxide layer remains on the inside of the air reservoir.
- Use suitable filters between the air reservoir and other pneumatic products for sensitive applications.

The air reservoir can be installed as follows:
- As part of a piping system.
- With retaining clips.
- With through-holes on the welded clips.

7 Maintenance

The air reservoir is maintenance-free in intended use.
- Carry out a visual and audio check on the air reservoir once a year. The regulations of the country of use must be taken into account.

8 Fault clearance

Malfunction	Cause	Remedy
External damage after visual inspection.	Material defects in the product.	– Replace the product.
	Improper handling of the product.	
Audible leakage	The connecting parts are defective or damaged.	– Replace the faulty connecting part.
	The product is damaged.	– Replace the product.
Corrosion	Improper handling of the product.	– Replace the product.
	Incorrect storage of the product.	

Tab. 1: Fault clearance

9 Technical data

CRVZS		-0.1	-0.4	-0.75	-2
Certificates, declaration of conformity		➔ www.festo.com/sp			
Classification		Sound engineering practice			
Certification		Voluntary type test TÜV Süd			
Technical data, general					
Mounting position		Any			
Type of mounting		With retaining clips			With through-hole on the welded clips
Operating medium, group 2 fluids		Compressed air to ISO 8573-1:2010 [–:–:–]			
		Nitrogen			
Information on operating medium		Filtered, lubricated or non-lubricated compressed air			
Temperature of medium	[°C]	–10 ... +100			
Ambient temperature	[°C]	–10 ... +100			
Volume V	[l]	0.1	0.4	0.75	2
Wall thickness ea	[mm]	1.5	2		
Weight	[g]	226	543	736	1681

CRVZS		-0.1	-0.4	-0.75	-2
Technical data, pneumatic					
Operating pressure PS	[MPa]	–0.095 ... 1.6			
	[bar]	–0.95 ... 16			
	[psi]	–13.78 ... 232.1			
Test pressure PT	[MPa]	2.4			
	[bar]	24			
	[psi]	348.1			
Max. differential operating pressure at 100 °C (endurance limit)	[MPa]	1.6		1.35	0.75
	[bar]	16		13.5	7.5
	[psi]	232		195.8	108.8
Endurance limit with vacuum	[MPa]	–0.095			
	[bar]	–0.95			
	[psi]	–13.8			
Ports					
Air reservoir		G 1/8	G 1/4		G 1/2
Max. tightening torque	[Nm]	15	23		55
Materials					
Air reservoir		High-alloy stainless steel			
Retaining clips		High-alloy stainless steel			–
Clips		–			High-alloy stainless steel

Tab. 2: Technical data CRVZS-0.1 ... -2

CRVZS		-5	-10	-20
Certificates, declaration of conformity		➔ www.festo.com/sp		
Classification		Category I		Category II
Certification		Voluntary type test TÜV Süd		
Technical data, general				
Mounting position		Condensate drain underneath		
Type of mounting		With through-hole on the welded clips		
Operating medium, group 2 fluids		Compressed air to ISO 8573-1:2010 [–:–:–]		
		Nitrogen		
Information on operating medium		Filtered, lubricated or non-lubricated compressed air		
Temperature of medium	[°C]	–10 ... +100		
Ambient temperature	[°C]	–10 ... +100		
Volume V	[l]	5	10	20
Wall thickness ea	[mm]	2.5		3
Weight	[g]	3581	6459	10208
Technical data, pneumatic				
Operating pressure PS	[MPa]	–0.095 ... 1.6		
	[bar]	–0.95 ... 16		
	[psi]	–13.78 ... 232.1		
Test pressure PT	[MPa]	2.4		
	[bar]	24		
	[psi]	348.1		
Max. differential operating pressure at 100 °C (endurance limit)	[MPa]	0.45		
	[bar]	4.5		
	[psi]	65.3		
Endurance limit with vacuum	[MPa]	–0.095		
	[bar]	–0.95		
	[psi]	–13.8		
Ports				
Air reservoir		G1		
Max. tightening torque	[Nm]	130		
Condensate drain		G 3/8		
Max. tightening torque	[Nm]	27		
Materials				
Air reservoir		High-alloy stainless steel		
Clips		High-alloy stainless steel		

Tab. 3: Technical data CRVZS-5 ... -20