

# Pulsion Damper / Volume Compensator



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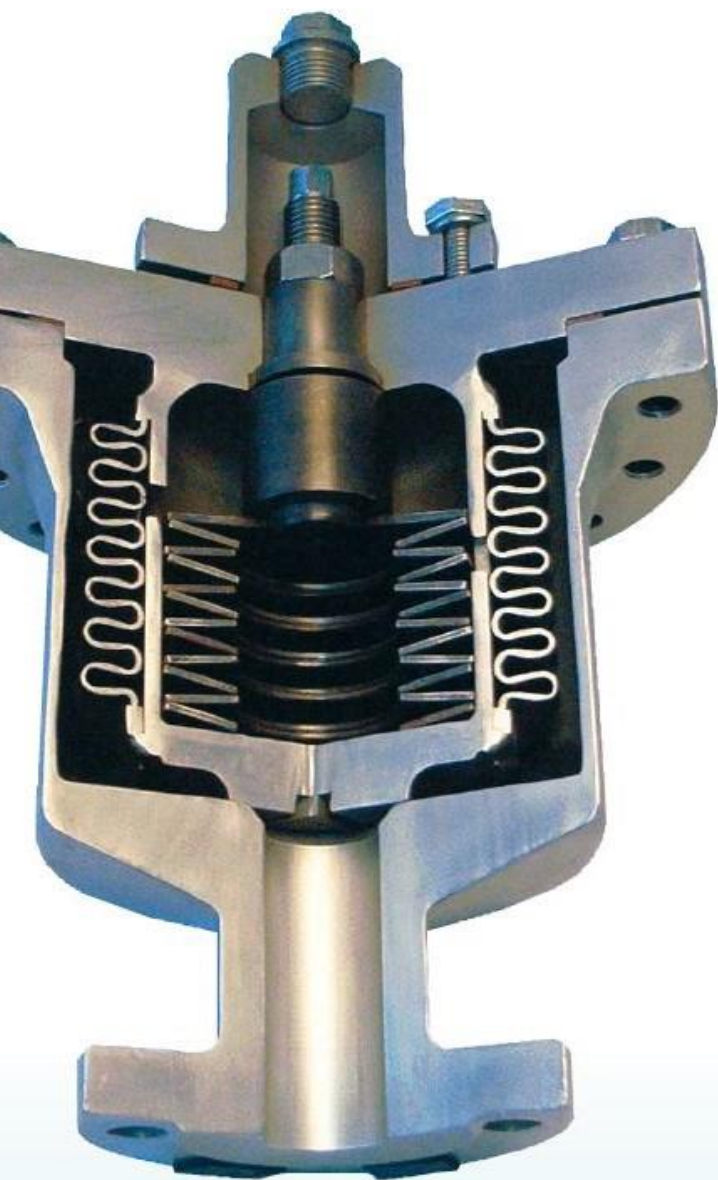


Volume / Pressure Accumulator  
Type CB ...

The Expertise for Components

# PULSION DAMPER / VOLUME COMPENSATOR

The volume compensator has been developed together with the chemical industry. The function of the compensator can be compared with a pressure relief valve with a hermetically sealed container (tank).



Deutsches Gebrauchsmuster  
G 88 16 953.7

## Applications

- Absorption of a liquid product in a closed piping system
- Pulsation dampening on high pressure systems above PN 100
- By corrosive and toxic products which create a hazardous condition when in contact with atmosphere. (environmental and health protection)

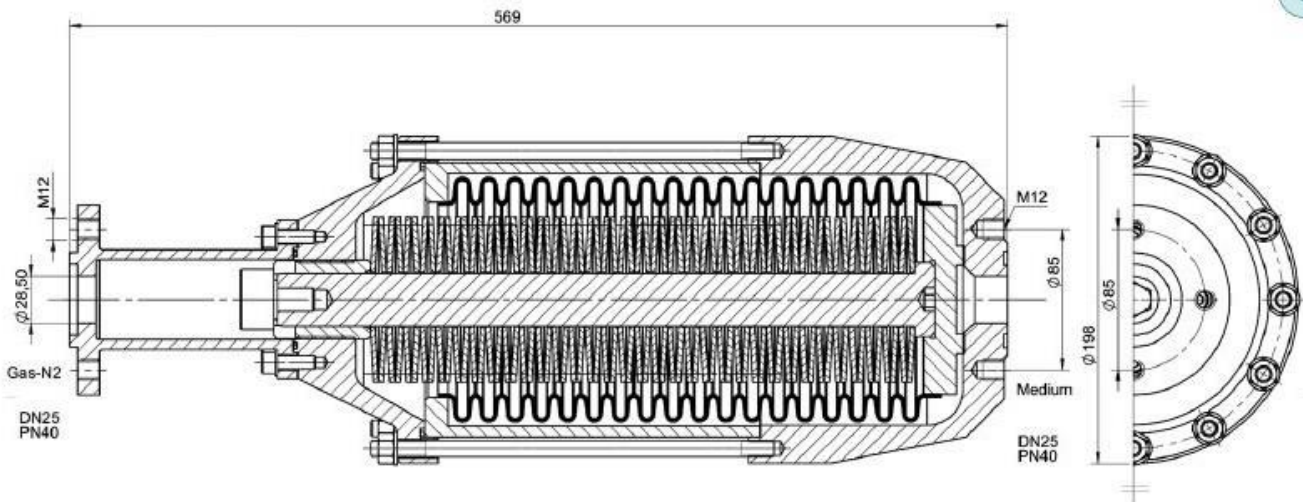
## Construction

- Safety by using approved and correct materials
- available with flange connections only
- no dynamic sealing components
- maintenance free

## Testcertifications

- according DIN/EN 10 204 - 3.1 or 3.2 inclusive TÜV- Test certification.





Volume/Pressure Accumulator Type CB 1,0-1,2 G

## Description of functions of the Volume Compensator

### Construction

The container is constructed for nominal pressure level PN 40 and a maximum operating Temperature of + 200 °C. Higher nominal pressure levels are possible on request.

Standard volume is 0,2, 0,5, 1,0 and 1,2 ltr. capacity.

The process pressure is adapted to the concerned system and can be e.g. 5...8 bar or more depending on the value of plate spring packages.

The container and the bellow are made of material W.Nr. 1.4571 ( on request other materials are possible) and the plate spring package consist of material 50CrV4. The sealing material between case and upper parts can be specified.

All welding seams are tested according to prescribed process examinations and are documented. You receive as well a certificate of our expert about a pressure test and a material certificate according DIN/EN 10 204-3.1, if necessary with TÜV certificate.

### Function

Given the working pressure, system volume, working temperature and the specific volumes, the size of the necessary volume compensating container can be determined.

In contrast the overflow valves or pressure-equalizing reservoirs under admission of e.g. nitrogen, our volume compensator can be pre stressed manually with a spanner. An operating pressure, that is higher than the pressure causes a compression of the bellow and the surplus of volume which is caused e.g. by thermal influences is absorbed. Another advantage of the volume compensator is that all parts which get in contact with the medium are made of materials desired by the customer. No soft elastomers are necessary.

Therefore the volume compensator is a kind of safety valve that is working without any transfer of the medium into another system.

Within certain limits the use in proportioning plants is possible to buffer pressure peaks and pressure blows (impacts) to ensure a neat dosage of liquids. Another use is possible in systems, that consists of parts working on different altitude levels.

Example: A pump fills up a tank that is installed 20 meters above the pump. When the tank is filled up a regulating valve has not been closed behind the pump to make sure that the pressure pipe does not "run empty". The closing is done most of times abruptly and with undesired pressure peaks. This can be avoided with the described volume compensator.



**Designation: CB1,0PN63**

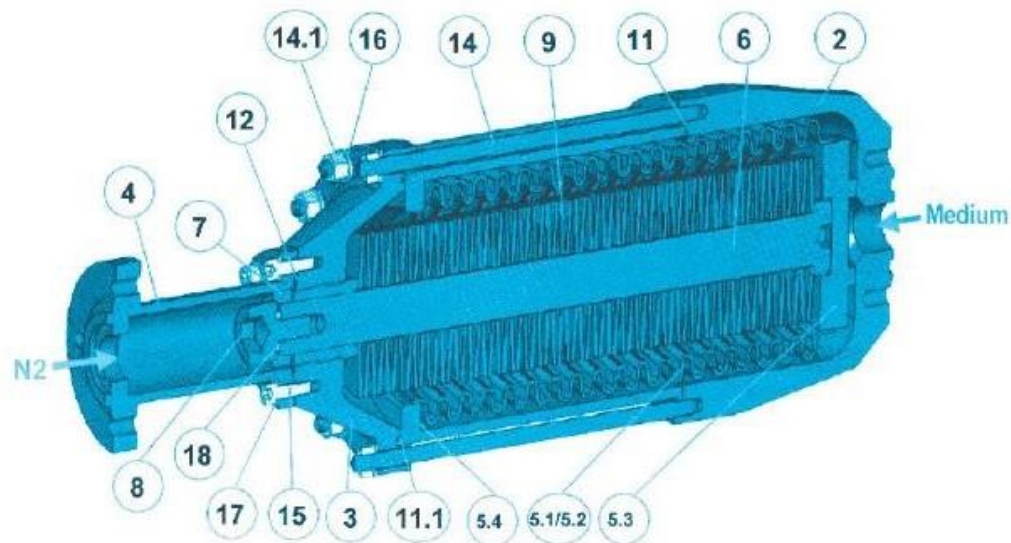
**Stock No.: CB10001470**

Pos.	Item
1	
2	housing lower part PN 63
3	housing upper part PN25/63
4	cowling PN 63
5	<b>bellow complete PN 25</b> <i>consist of:</i>
5.1	<i>external layer</i>
5.2	<i>internal layer</i>
5.3	<i>plate</i>
5.4	<i>border with elongation piece</i>
6	spring guide
7	bushing
8	screw
9	disk spring
10	
11	sealing
11.1	sealing
12	sealing
13	
14	double end stud with reduced shaft
14.1	nut
15	cap screw
16	washer
17	washer
18	washer

Parts list

216.81470 CB 1,0 PN 63.xls

Volume/Pressure Accumulator Type CB 1,0-1,2 G



## Installation advice and adjustment

The volume compensator can be used in suction and pressure pipes of pumps and as well for metering valves. We suggest for this application an vertical installation on a connecting pipe with nominal diameter DN 15 or DN 25.

In any case the volume compensator should be installed as near as possible to the unit that causes the pressure peaks. If you want to change the pressure at which the volume compensator begins to absorb the volume, the plate springs can be pre-stressed manually by a spindle.

For safety reasons over this screwed spindle a hood is installed which is equipped with a connecting plug to install a pressure gauge in the top. If a pressure gauge is installed a breakage of the bellow can be indicated directly.