

Models

PD9/20	PD125
PD25	PD200
PD50	PD220
PD70	PD225
PD80	PD400
PD100	PD420
PD120	PD425

Pulsation dampeners

E



CE Instruction manual

Active pulsation dampeners

topflo®

Dampeners in PE & PTFE,
metal and sanitary version



- ▶ Instructions for installation, start up, operation, maintenance and repair
- ▶ Spare parts



Read this instruction manual carefully, before you install and operate the dampener

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Introduction

The active pulsation dampener is the most efficient way to remove pressure variations on the discharge of the pump. The Tapflo pulsation dampener works actively with compressed air and a diaphragm, automatically setting the correct pressure to minimise the pulsations. The pulsation dampener is available for all Tapflo pump sizes and material versions.

With proper attention to maintenance, Tapflo active pulsation dampeners will give efficient and trouble free operation. This instruction manual will familiarise operators with detailed information about installing, operating and maintaining the dampener.

Declaration of conformity

Machinery directive 89/392/EEC, Annex 2A

Tapflo AB declares that:

Product name: **Active pulsation dampener**
Models: **PD...**

Is in conformity with the essential health and safety requirements and technical construction file requirements of the EC Machinery directive 89/393/EEC with amendments 91/368/EEC, 93/94 EEC and 93/68 EEC.

Manufacturer: **Tapflo AB**

Address: **Filaregatan 4
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Sweden**

Tapflo AB, september 1st 1999



Börje Johansson
Managing director

▶ 1. INSTALLATION & SAFETY

1.1 The warning symbols

The following warning symbols are present in this instruction manual. This is what they say.



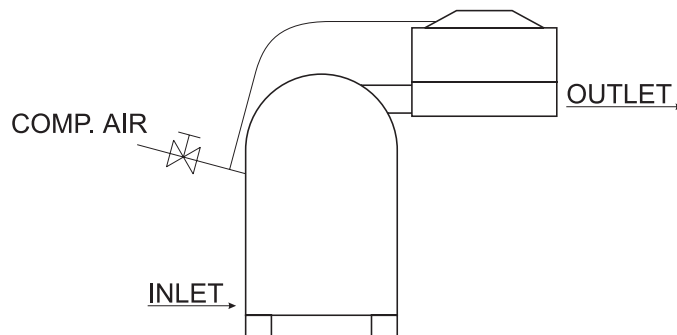
This symbol stands next to all safety instructions in this instruction manual where danger to life and limb may occur. Observe these instructions and proceed with utmost caution in these situations. Inform also other users of all safety instructions. In addition to the instructions in this instruction manual, the general safety and accident prevention regulations must be observed.



This signal stands at points in this instruction manual of particular importance for compliance with regulations and directives, for correct work flow and for the prevention of damage to and destruction of the complete dampener or its subassemblies.

1.1 Installing the dampener

The pulsation dampener is installed according to the sketch. It can be connected with a nipple immediately after the pump outlet, or placed independent of the pump with a flexible hose between the pump and the dampener. Make sure that the dampener does not cause any tension or strain to the pump. The air hose is connected to the pump air hose with a T-connection, between the pump and regulator/valves (See sketch. The air to the dampener must have the same flow and pressure as to the pump).



1.3 Safety

The dampener must be installed according to local and national safety rules.



The dampeners are constructed for particular applications. Do not use the dampener on applications different from that for which it was sold without consulting Tapflo AB to ascertain its suitability.

1.3.1 Protection



In the interest of health and safety it is essential to wear protective clothing and safety goggles when operating, and/or working in the vicinity of Tapflo dampeners.

1.3.2 Air pressure



The maximum air pressure for Tapflo dampeners is 8 bar. Higher air pressure than 8 bar can damage the dampener and may cause injury to personel in vicinity of the dampener.

1.3.3 Noise level

At tests, the noise level from a Tapflo dampener has not exceeded 70 dB(A).

1.3.4 Temperature hazards



Raised temperature can cause damage on the dampener and/or pipings and may also be hazardous for personel in the vicinity of the dampener/pipings. Avoid quick temperature changes and do not exceed the maximum temperature specified when the dampener was ordered.

▶ 2. MAINTENANCE

2.1 Dismantling the dampener

2.1.1 Before the dismantling procedure



Be sure to drain all liquid from the dampener. Cleanse or neutralize the dampener thoroughly. Disconnect the air connection and then the suction and discharge connections.

2.1.2 Dismantling procedure

- 1) Take off the nut covers (57) and unscrew the nuts (37). Pull out the pin screws (14) and the dampener housing (11) will get separated from the dampener block (12).
- 2) Remove the the circlip (27) carefully, so that it will not dissappear. Take out the muffler (25).
- 3) Press down the shaft (16). Hold the shaft by the flat end near the diaphragm with a suitable key. Unscrew the diaphragm (15) from the shaft by hand.
- 4) If necessary, take out the dampener block seal (36) and the o-ring (47). **Note! If these parts are removed, they must be replaced with new ones. If the dampener sealing is worn, also check the shaft for wear. If it is worn, it must be replaced.**

Check all components and clean or replace if necessary.

2.2 Assembling the dampener

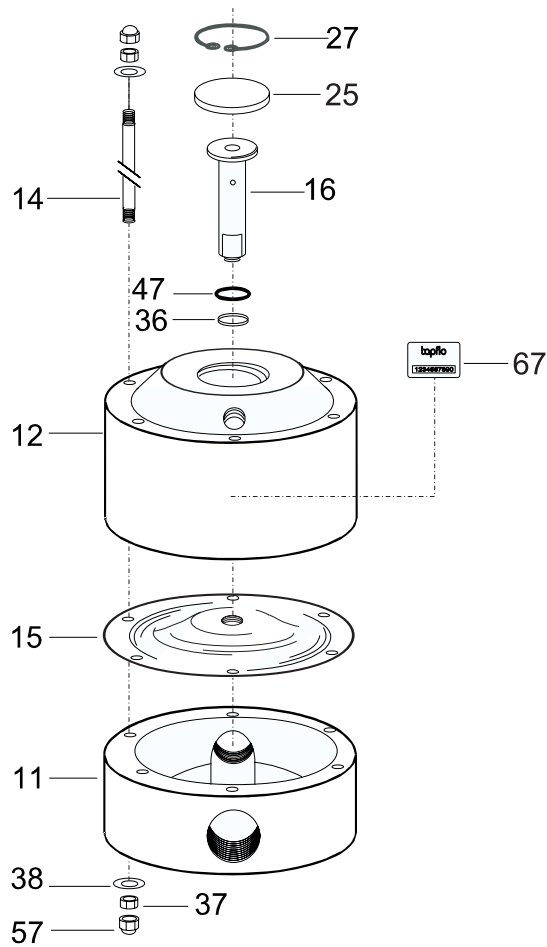
Follow the dismantling procedure in the oposite direction.



Make sure to fasten the nuts (37) equally.

▶ 3. SPARE PARTS

3.1 Spare part drawing/list



Pos	Description	Quantity
11	Dampener housing	1
12	Dampener block	1
14	Pin screw	* 4 / 6 / 8
15	Diaphragm	1
16	Shaft	1
25	Muffler	1
27	Circlip	1
36	Dampener block seal	3
37	Nut	* 8 / 12 / 16
38	Washer	* 8 / 12 / 16
47	O-ring (back up for 36)	3
57	Nut cover	* 8 / 12 / 16
67	Name plate	1

* = For dampener models in the following order:
 PD9/20, PD25 /
 PD50, PD70, PD80, PD100, PD120, PD125 /
 PD200, PD220, PD225, PD400, PD420, PD425

▶ 3. SPARE PARTS

3.2 Recommended spare parts

Even at normal operation some details in the dampener will be worn. In order to avoid expensive breakdowns we recommend having a few spare parts in stock as follows.

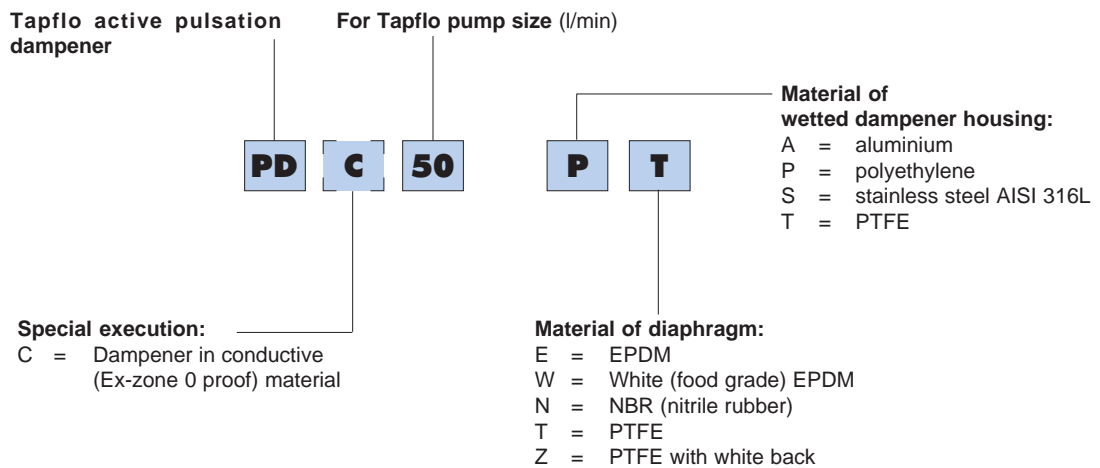
Qty	Description	Pos
1	Diaphragm	15
1	Muffler	25

3.3 How to order parts

When ordering spare parts for Tapflo dampeners, it will simplify if you give the *model number* from the nameplate of the dampener, pos No of the item and quantity.

3.4 Dampener code

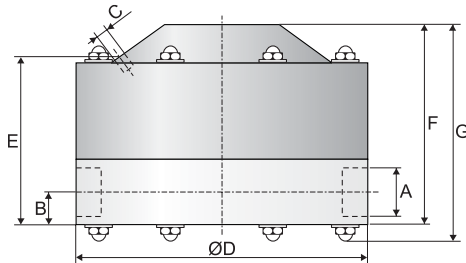
The code details the specification, size and materials of the major components.



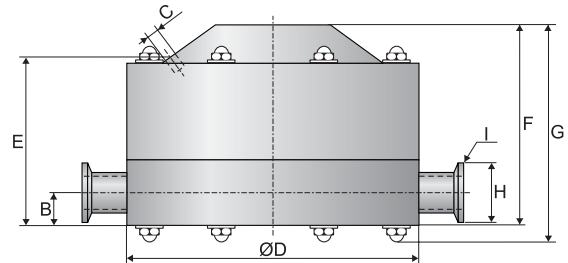
▶ 4. DATA

4.1 Dimensions

PE & PTFE and metal dampeners



Sanitary dampeners



Dimensions in mm (where other is not indicated)
 Dimensions in inch (where other is not indicated)

Dim	Dampener size				
	9/20/25	50/70/80	100/120/125	200/220/225	400/420/425
A	3/8 3/8	1/2" 1/2	1" 1	1 1/2" 1 1/2	2" 2
B	13 0.51	15 0.59	23 0.91	30 1.18	38 1.50
C	1/8" 1/8	1/4" 1/4	1/4" 1/4	1/4" 1/4	1/4" 1/4
ØD	104 4.09	150 5.91	200 7.87	270 10.6	350 13.8
E	70 2.76	98 3.86	121 4.76	184 7.24	198 7.80
F	77 3.03	105 4.13	127 5.00	191 7.52	239 9.41
G	89 3.50	119 4.69	146 5.75	210 8.27	260 10.2
H*	- -	50 2.0	50 2.0	77 3.0	95 3.7
I	- - -	TC 1" DN25 SMS 25	TC 1 1/2" DN40 SMS 38	TC 2" DN50 SMS 51	TC 3" DN65 SMS 63.5

* = Dimension for standard TC connection

▶ 5. WARRANTY & REPAIR

5.1 Returning parts

When returning parts to Tapflo AB please follow this procedure:

- Consult Tapflo AB for shipping instructions.
- Cleanse or neutralize and rinse the part/dampener. Make sure the part/dampener is completely empty from liquid.
- Pack the return articles carefully to prevent any damage under transport.

Goods will not be accepted unless the above procedure has been complied with.

5.2 Warranty

Tapflo AB warrants products* of its own manufacture will be free from defects in raw material and manufacture under normal use and service for a period of not more than one year. Tapflo's obligation under this warranty being limited to repair or replacement of its products which shall be returned to Tapflo AB. If a dampener or part is received defected, report to Tapflo AB immediately. Parts returned to our company must have written authorisation from Tapflo AB. This warranty will not apply to any of our products which shall have been used other than for their intended use.

**** Even when products such as pulsation dampeners operate under normal conditions, some parts are subject to wear and may have to be replaced within one year. This warranty will not apply to these parts being subject to wear.***



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