

ACTIVE PULSATION DAMPENERS

2021 | 1



» All about your flow™

We began our journey in 1980 in Kungälv, a small town on the Swedish west coast, as a family company with an ambition to one day become a global player on the pump market.

Since the foundation, we have taken pride in delivering a wealth of knowledge and passion for pumps to the industry, whilst supplying a wide range of premium products for various industrial applications.

Over the years, the company has developed into a global Tapflo Group with branches and distributors present in nearly every region of the world.

One thing did not change - we are still a family company.

Our solutions are designed and manufactured in Europe and distributed globally to offer the best service and flow solutions to our customers for a variety of applications.

Our values, Commitment, Quality and Simplicity are reflected both in our product and business approach.



For fast and flexible service and high-quality products readily available worldwide, choose Tapflo.

Quality commitment

At Tapflo we are simply committed to quality. As a result, our production standards, as well as products quality, comply with various globally recognised certification and quality control standards. The Tapflo manufacturing process is certified according to ISO 9001:2015, confirming that our processes are appropriate, effective, customer-focused and continuously improved.



Tapflo values

Our culture is concluded in Our values

Commitment

We are different from our competitors because of our willingness to exceed the customers' expectations, move fast and be flexible. Our culture is based on the spirit of togetherness, enthusiasm and integrity. We come from all over the world but we share the same values and we respect each other. We are committed.

Quality

We understand that the quality in our work is never better than the weakest link, that's why we focus on every small detail. We share a common passion for continuously finding more efficient and effective ways to provide value to our customers. As a manufacturer we have control of the complete process both in terms of our products and the way we operate internally. That is why we manufacture the highest quality pumps in our segment.

Simplicity

We have a saying, "Simple is art" which means we try to find smooth and uncomplicated solutions in everything. By keeping it simple we can focus on the essential, like designing uncomplicated pumps with few components. For us it is a key to success; strive to simplify what is complex.

DT series - Active pulsation dampener

Automatically setting the correct pressure to minimise the pulsations



The active pulsation dampener is the most efficient way to remove pressure variations on the discharge of the pump.

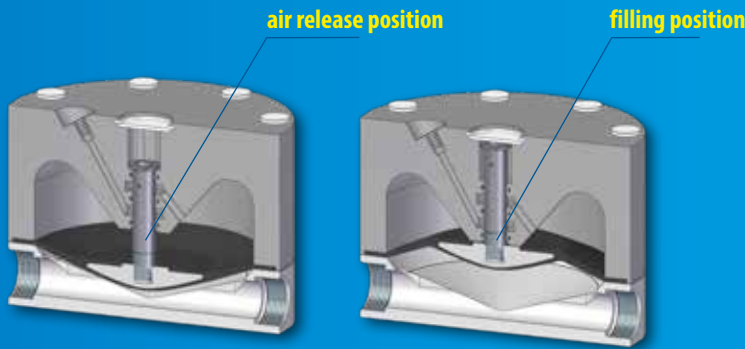
The Tapflo pulsation dampener works actively with compressed air and a diaphragm, automatically adjusting to the current pressure to minimise the pulsations.



Explosion proof models are available

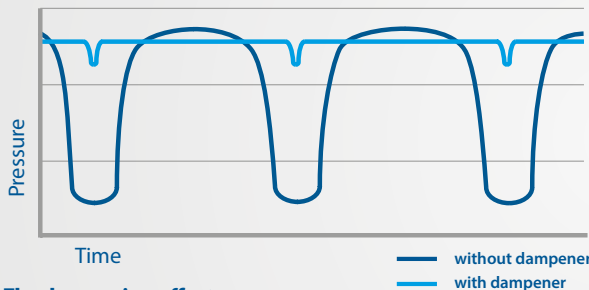
Certified according to directive 2014/34/EC (ATEX), group II, cat 2, for use in EX-zone 1.

Working principle



When the pressure in the piping system decreases, due to the pulsating nature of the pump operation, the pulsation dampener eliminates pressure peak to the discharge between the pump strokes, therefore supplying a steady flow of pumped medium. This pumping action created by the dampener, decreases the pressure variations and pulsations.

Features



The dampening effect

The pressure variation in a discharge line with and without a pulsation dampener.

- ✓ Minimized vibrations and water hammer effects
- ✓ Protection of all kinds of instruments in your pipe system
- ✓ Optimized pump performance and reduced maintenance costs
- ✓ Minimum air consumption
- ✓ Reduced pressure peaks

Options & accessories



Pulsation dampener with stand



Pulsation dampener with pump



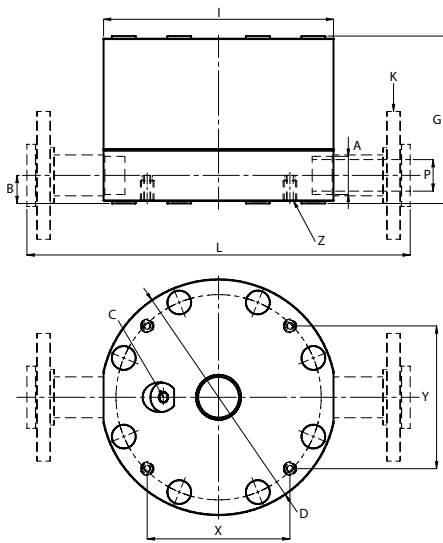
Pulsation dampener with guardian



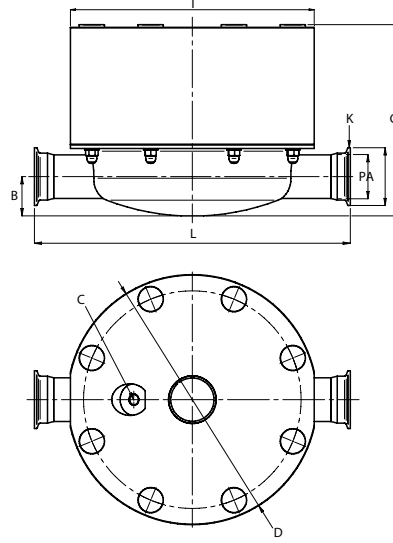
DTK – dampener designed to be built on pump

Dimensions

PE, PTFE & aluminium dampeners



Stainless steel and sanitary dampener



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

Dimension	Dampener size																				
	9/20	25	30	50	70	80	100	120	125	200	220	225	400	420	425	800	820 A	820 S	825		
A	BSP	G 3/8"	G 1/2"	G 3/8"	G 1/2"	G 3/4"		G 1"			G 1 1/2"			G 2"			-	G 3"	-	-	
	DIN Flange	95	-	95	95	105	-	115	115	-	150	150	-	165	165	-	202	-	202	-	
	ANSI Flange	-	-	50,5	-	-	50,5	-	-	50,5	-	-	64	-	-	91	-	-	-	-	
	SMS3017/ISO2037	-	-	Rd 44x1/6"	-	-	Rd 52 x 1/6"	-	-	Rd 65 x 1/6"	-	-	Rd 78 x 1/6"	-	-	Rd 95 x 1/6"	-	-	-	Rd 110 x 1/4"	
B		15/33 ¹	15	10,6	17/32,4 ¹	16,5	16,5	25,5/45 ¹	25	16,5	33/50 ¹	41	41	41/61	41	46	92	92	19,3	19,3	
		0,59/1,3 ¹	0,59	0,42	0,67/1,27 ¹	0,65	0,65	1/1,77 ¹	0,98	0,65	1,29/1,97 ¹	1,61	1,61	1,61/2,40 ¹	1,61	1,81	3,62	3,62	0,76	0,76	
C		G 1/4"		G 1/4"			G 1/4"			G 1/4"			G 1/4"			G 1/4"			G 1/4"		
		110		158			208			277			360			470			470		
D		4,33		6,22			8,19			10,91			14,17			18,50			18,50		
		85 / 103 ¹	85	79	109/132 ¹	117/109 ²	116,5	148/161,5 ¹	135/144,5 ²	135	200/217,5 ¹	213/200,5 ²	209	244/261 ¹	256/243,5 ²	255	394	392	330	330	
G		3,35/4,06 ¹	3,35	3,11	4,29/5,20 ¹	4,61/4,29 ²	4,59	5,83/6,36 ¹	5,31/5,69 ²	5,31	7,87/8,56 ¹	8,39/7,89 ²	8,23	9,61/10,28 ¹	10,08/9,59 ²	10,04	15,51	15,43	12,99	12,99	
		107		155			203			270			352			470			470		
I		4,21		6,10			7,99			10,63			13,86			18,50			18,50		
	BSP	G 3/8"	G 1/2"	-	G 1/2"	G 3/4"	-	G 1"	G 1"	-	G 1 1/2"	G 1 1/2"	-	G 2"	G 2"	-	-	G 3"	-	-	
K	DIN Flange ⁴	DN15	-	DN 15	DN15	DN 20	-	DN25	DN 25	-	DN40	DN 40	-	DN50	DN 50	-	DN80	-	DN80	-	
	ANSI Flange ⁴	1/2"	-	1/2"	1/2"	1/2"	-	1"	1"	-	1 1/2"	1 1/2"	-	2"	2"	-	3"	-	3"	-	
	SMS3017/ISO2037 ⁵	-	-	DN 25	-	-	DN 25	-	-	DN 38	-	-	DN 50	-	-	DN 70	-	-	-	-	
	DIN 118513 ⁵	-	-	DN25	-	-	DN 25	-	-	DN 40	-	-	DN 50	-	-	DN 65	-	-	-	DN 80	
L	DIN & ANSI Flange	235	-	285	-	-	375	-	450	-	550	-	700	-	700	-	700	-	700	-	
		9,25	-	11,22	-	-	14,76	-	17,72	-	21,65	-	27,56	-	27,56	-	27,56	-	27,56	-	
P	BSP	107	-	155	-	-	203	-	270	-	352	-	450	-	450	-	450	-	450	-	
	Other Connections ³	4,21	-	6,10	-	-	7,99	-	10,63	-	13,86	-	17,72	-	17,72	-	17,72	-	17,72	-	
P	DIN Flange ⁴	14	-	17,3	14	22,9	-	26	29,7	-	45,4	44,3	-	51,4	56,3	-	80	-	80	-	
		0,55	-	0,68	0,55	0,90	-	1,02	1,17	-	1,79	1,74	-	2,02	2,22	-	3,15	-	3,15	-	
	ANSI Flange ⁴	14	-	17,3	14	22,7	-	26	30,1	-	45,4	42,8	-	51,4	54,8	-	80	-	80	-	
		0,55	-	0,68	0,55	0,89	-	1,02	1,19	-	1,79	1,69	-	2,02	2,16	-	3,15	-	3,15	-	
P	SMS3017/ISO2037 ⁵	-	-	22,6	-	-	22,6	-	-	35,6	-	-	49	-	-	66,8	-	-	-	-	
	DIN 118513 ⁵	-	-	0,89	-	-	0,89	-	-	1,40	-	-	1,93	-	-	2,63	-	-	-	-	
X		36	-	90,3	-	-	113,8	-	167,6	-	226,3	-	297	-	297	-	297	-	297	-	
		1,42	-	3,56	-	-	4,48	-	6,60	-	8,91	-	11,69	-	11,69	-	11,69	-	11,69	-	
Y		86,8	-	100,3	-	-	135,6	-	167,6	-	226,3	-	297	-	297	-	297	-	297	-	
		3,42	-	3,95	-	-	5,34	-	6,60	-	8,91	-	11,69	-	11,69	-	11,69	-	11,69	-	
Z		M4x20	-	M4x20	-	-	M8x22 M8x30 PE	M8x25	-	M8x22 PTFE M8x22 PE	M8x25	-	M8x22 PTFE M8x30 PE	M8x25	-	M8x22 PTFE	M8x25	-	M8x22 PTFE	M8x25	

1 = PE / PTFE 3 = SMS3017/ISO2037, DIN 11851, SMS1145, BS 4825 (RTJ) 5 = Only sanitary pumps
 2 = SS / ALU 4 = Only plastic and metal pumps * = Dimensions for other connections in IOM Manual

Dampener code



I. DT - Tapflo active pulsation dampener
 DTK – dampener designed to be built on pump

II. Basic options:
 X = ATEX approved, group II, cat 2
III. For Tapflo pump size (l/min)

IV. Material of wetted dampener housing:
 A = aluminium
 P = polyethylene
 W = stainless steel AISI 316L
 T = PTFE
 X = PTFE/alu

V. Material of diaphragm:
 E = EPDM
 B = PTFE 1705B (solvents)
 W = White (food grade) EPDM
 N = NBR (nitrile rubber)
 T = PTFE
 Z = PTFE with white back

Tapflo pumps with integrated pulsation dampener

If you are looking for an effective way to eliminate pressure variations on the pump discharge and you have limited space in your installation or want a simpler installation, the built-on dampener is an ideal solution for Tapflo diaphragm pumps.

The TK/TEK series provides all the advantages of using a standard Tapflo diaphragm pump with a DT dampener, but in a compact way.

The dampener housing is also the pump manifold so you do not have to worry about connecting the dampener to the pump. This solution does not affect the pump flow and improves the dampening effect as it is assembled inline. DTK is designed to convert AODD & EODD into pulsation-free pumps when installed and connected to compressed air, interchanging the regular outlet manifold.

TK series - for AODD pumps (plastic and aluminium)

- » Available for Tapflo plastic AODD pumps in sizes: TRK20, TK50, TK100, TK200 and their ATEX compliant versions.
- » Available for Tapflo aluminium AODD pumps in sizes: TXK25 A/X, TXK70 A/X, TXK120 A/X, TXK220 A/X, TXK420 A/X.
- » Since the dampener block is made of solid aluminium the TK series for aluminium AODD pumps are rated ATEX as standard.



TEK series - for EODD pumps (plastic and aluminium)

- » Available for Tapflo plastic EODD pumps in sizes: TEK50, TEK100, TEK200.
- » Available for Tapflo aluminium EODD pumps in sizes: TEK70 A, TEK120 A, TEK220 A and their ATEX compliant versions.



SET series - extension of TK pumps

- » Available for Tapflo pumps in sizes: T400 T, T400 P, T800 P and stainless steel.
- » Stainless steel frame available for larger pump models.
- » Available in both vertical and horizontal arrangements.



EN 10204



Certificates may vary depending on material execution of particular product.

Built-on dampener can be implemented on existing pumps, just by replacing pump outlet with DTK pulsation dampener.

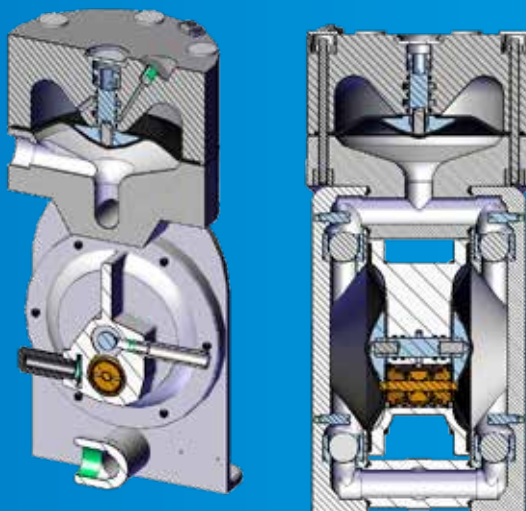
Example:

ATEX compliant PTFE pump + ATEX rated DTK pulsation dampener = ATEX compliant PTFE TK pump:



TX100 TTT + DTKX 100 TT = TXK100 TTT

Air supply to the dampener



For best dampening effect it is important that the pulsation dampener is supplied with the same air pressure as the pump.

Lack of air supply or supplying dampener with lower pressure makes dampener diaphragm unbalanced thus shortening its lifetime.

Did you know?

Tapflo DTK pulsation dampeners, unlike other available on the market, are designed in a way that provides fully in-line operation.

This, together with diaphragm of the same size as in the pump, results in a smoother flow and better cleanability of the whole unit.

DT pulsation dampener is fully in-line, to obtain the best possible dampening effect.

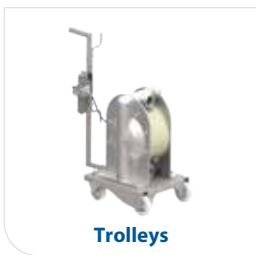


Product range

Diaphragm pumps & accessories



Peristaltic Pumps



Centrifugal pumps, filter units & accessories



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Tapflo products and services are available worldwide.

Tapflo is represented by own Tapflo Group Companies and carefully selected distributors assuring highest Tapflo service quality for our customers' convenience.

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