

COGNITO PULSATION DAMPENERS

Certified Quality



Nearly surge-free flow



Maintain Steady Pressure



Reduced vibration



1"



2"

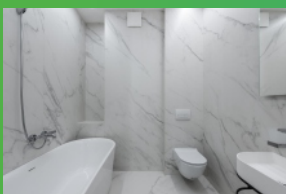


3"

Proud Recipient of the Prestigious Awards

Most Innovative Product Design by

Most Innovative Energy Saving Product by



CERAMICS



LITHIUM ION BATTERIES



CHEMICAL



PAINTS & COATINGS



PHARMA

and MANY MORE.....

Overview

Pulsation Dampener plays a very important role in Positive Displacement Pumps to reduce pulsations & vibrations during pump operation, thus ensuring continuous & precise non-pulsed flow rate.

Cognito Dampeners are designed to provide vibration free smooth continuous flow that makes this component a suitable equipment for safeguarding the system.

It maintains a constant volume of air support at diaphragm by automatically adjusting to the current pressure and thereby absorbing the pulse.

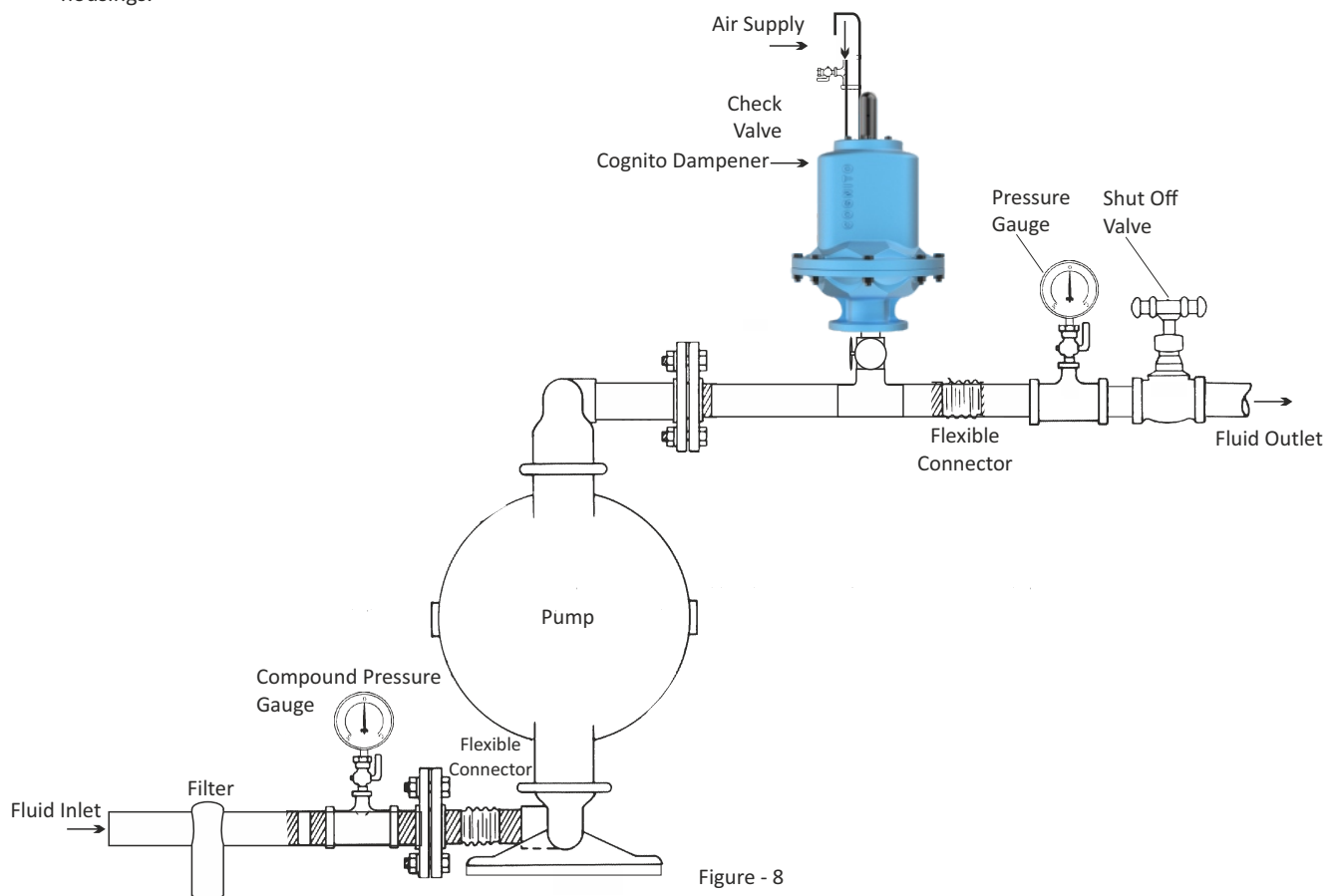
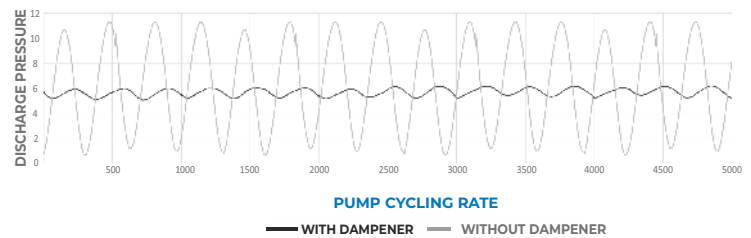
Working Principle

A pulsation dampener uses a flexible diaphragm to separate a liquid chamber from a compressed air chamber. A rod connected to the centre of the diaphragm activates the air inlet and exhaust which automatically admits or exhausts air to the air chamber. This maintains the diaphragms in mid-range of stroke to eliminate flow pulsation & pressure spikes.

Cognito Dampeners are suitable for EODD pump models and are available in Aluminium and Stainless-steel wetted housings.

Performance

Dampening 90+% for all the sizes



Features & Benefits

- Smooth Pulsation Free Flow
- Hassle Free Automatic Controlling
- Stabilizes Pressure
- Vibrations Free Pipes
- Compatible to Variable Pressure Application
- Help to Improve Pump Life

Markets

- 1) Ceramic Tiles / Foundry & Refractory / Tableware & Insulators
- 2) Paint, Dye & Inks / Speciality Chemicals / Li-ion Battery
- 3) Cement / Water & Wastewater Treatment / Pulp & Paper
- 4) Pharma / Latex / Packaging

.....and many more industrial process involving reciprocating pumps.

Technical Specification

Dampener Size	Compatible Pump Size	Air Inlet Size	Max. Pressure	Fluid Port
1"	1"	1/8" NPT	8 bar	1" NPT / BSP Female Threaded Port
2"	1"	1/8" NPT	8 bar	2" 150# ANSI
	1.5"	1/8" NPT	8 bar	2" 150# ANSI
	2"	1/8" NPT	8 bar	2" 150# ANSI
3"	3"	1/8" NPT	8 bar	3" 150# ANSI
	4"	1/8" NPT	8 bar	3" 150# ANSI
AMBIENT TEMPERATURE				-20°C to +55°C
OPERATING TEMPERATURE				-10°C to +110°C

Notes:

- Do Not Run the Dampener Without Air Supply
- Recommended Air Inlet Pressure : 1 bar Higher from the Discharge Pressure
- This Dampener is Automatic Air Controlling type

Material of Construction

Size	Model Number	Wetted Parts	
		Body	Diaphragm
1"	1AS/25AS	Aluminium	SANTOPRENE
	1AP/25AP	Aluminium	PTFE + SANTOPRENE BACKUP
	1SS/25SS	Stainless Steel	SANTOPRENE
	1SP/25SP	Stainless Steel	PTFE + SANTOPRENE BACKUP
2"	2AS	Aluminium	Santoprene
	2AP	Aluminium	PTFE + SANTOPRENE BACKUP
	2SS	Stainless Steel	Santoprene
	2SP	Stainless Steel	PTFE + SANTOPRENE BACKUP
3"	3AS	Aluminium	Santoprene
	3AP	Aluminium	PTFE + SANTOPRENE BACKUP
	3SS	Stainless Steel	Santoprene
	3SP	Stainless Steel	PTFE + SANTOPRENE BACKUP
Polypropylene Dampener (PP) - Contact IDEX			

Material Profile:



CAUTION! Operating temperature limitations are as follows:

	Operating Temperatures	
	Max.	Min.
SANTOPRENE®: Injection molded thermoplastic elastomer with no fabric layer. Long mechanical flex life. Excellent abrasion resistance.	203 °F 95 °C	-40 °F -40 °C
VIRGIN PTFE: Chemically inert, virtually impervious. Very few chemicals are known to chemically react with Teflon®, molten alkali metals, turbulent liquid or gases, fluorine and a few fluoro-chemicals such as chlorine trifluoride or oxygen difluoride which readily liberate free fluorine at elevated temperatures.	220 °F 104 °C	-35 °F -37 °C
STAINLESS STEEL: CF-8M equal to or exceeding ASTM specification A743 for corrosion resistant iron chromium, iron chromium nickel, and nickel based alloy castings for general applications. Commonly referred to as 316 Stainless Steel in the pump industry.		

Maximum and Minimum Temperatures are the limits for which these materials can be operated. Temperatures coupled with pressure affect the longevity of diaphragm pump components.

Note : For specific applications, check the Chemical Resistance Chart, or Consult IDEX.

Santoprene® is a registered trademark of Celanese

Certification Standards & Markings

ATEX Directive	2014/34/EU	EN ISO 80079-36:2016 EN ISO 80079-37:2016 EN ISO 60079-0:2018	
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Hazardous location Markings:

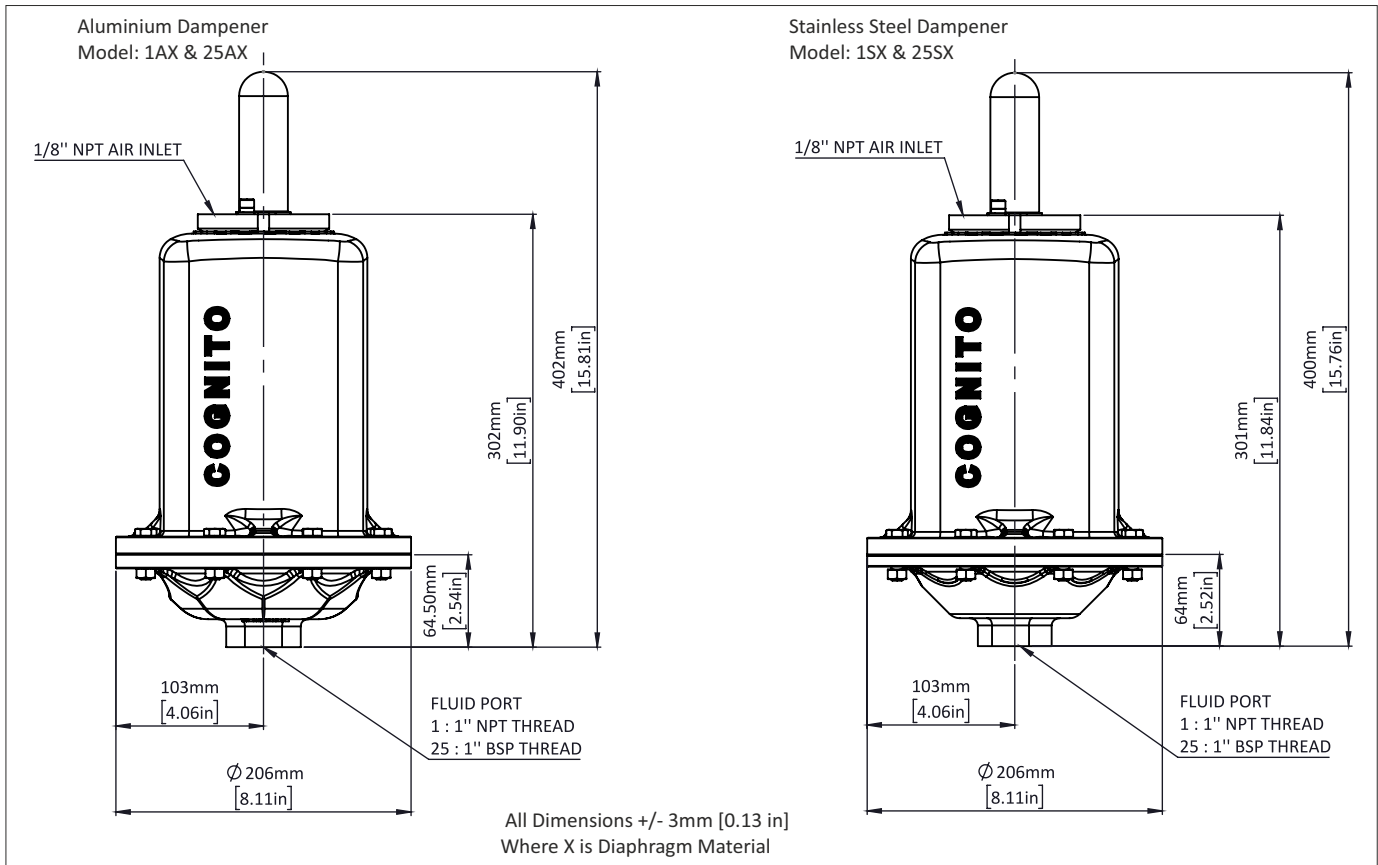
The non-electrical Ex h protection type used for the Dampener system is constructional safety type 'c'.

ATEX Marketing		II 2 G D	Ex h IIC T5-T3 Gb Ex h IIIC T91°C -T156°C Db	DNV 24 ATEX 71332X
IECEX Marketing			Ex h IIC T5-T3 Gb Ex h IIIC T91°C -T156°C Db	IECEX DNV 24.0012X
UKCA Marking		II 2 G D	Ex h IIC T5-T3 Gb Ex h IIIC T91°C -T156°C Db	DNV 24 UKEX 72641X

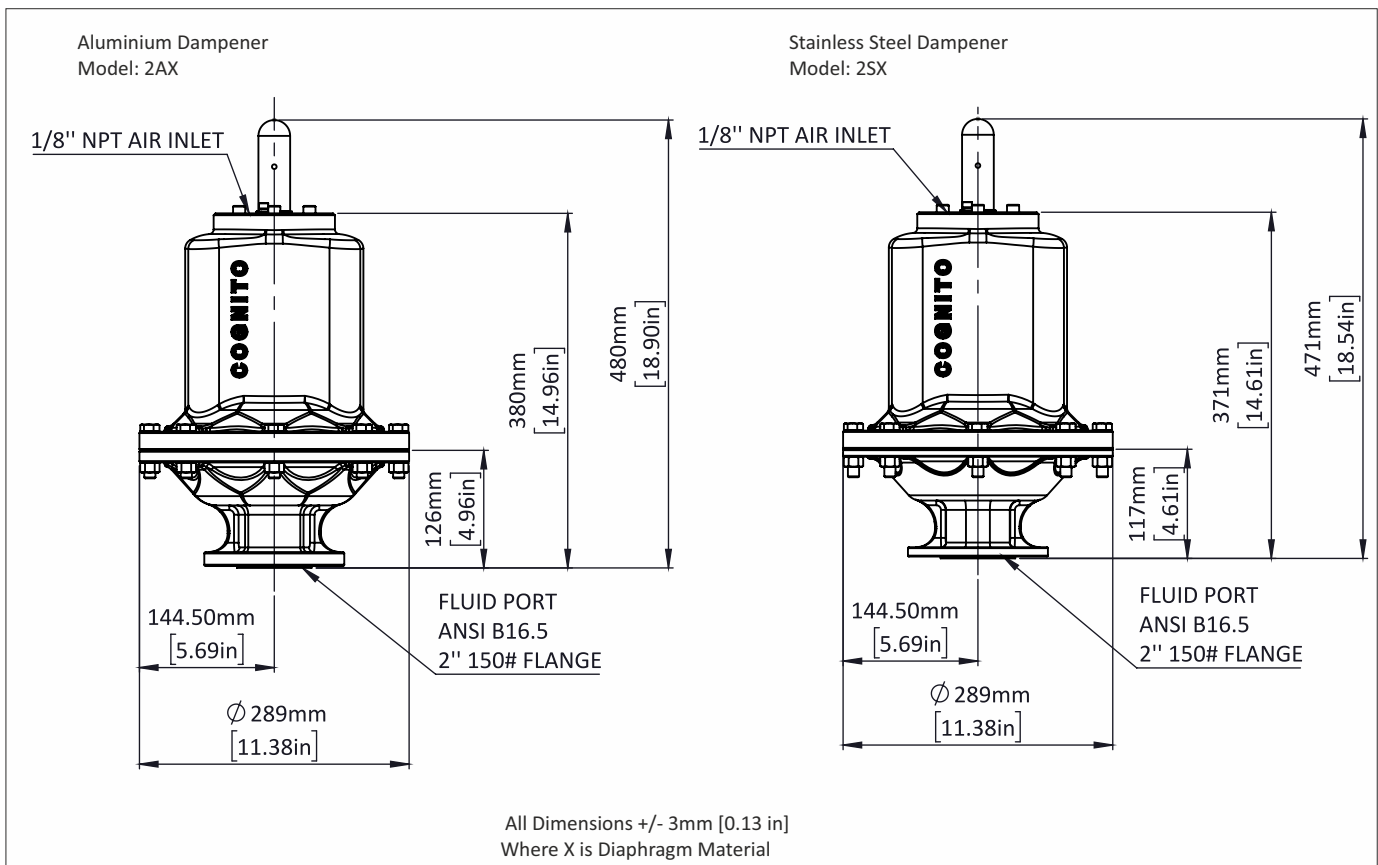
Note : 1" Dampener is not explosion proof certified. It should be used for safe area only.

a) Dimensional Drawing

a) 1" Dampener

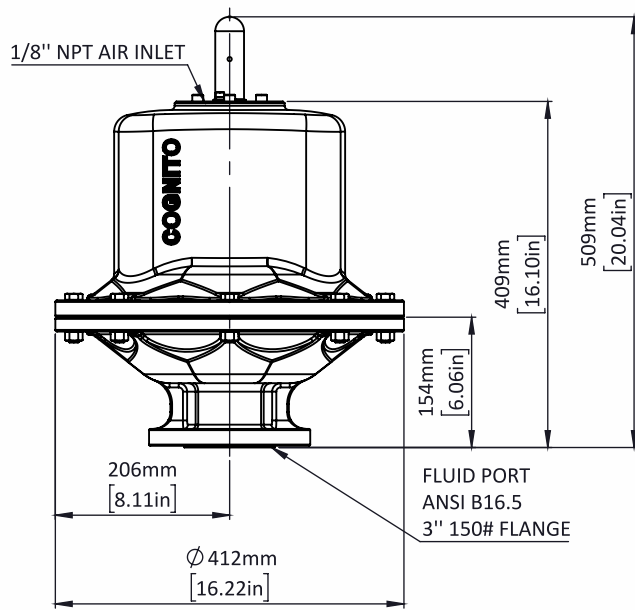


b) 2" Dampener

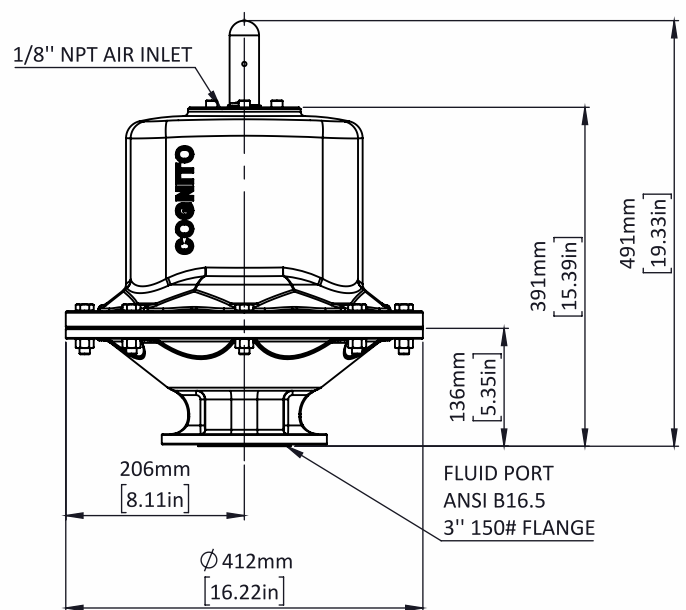


c) 3" Dampener

Aluminium Dampener
Model: 3AX



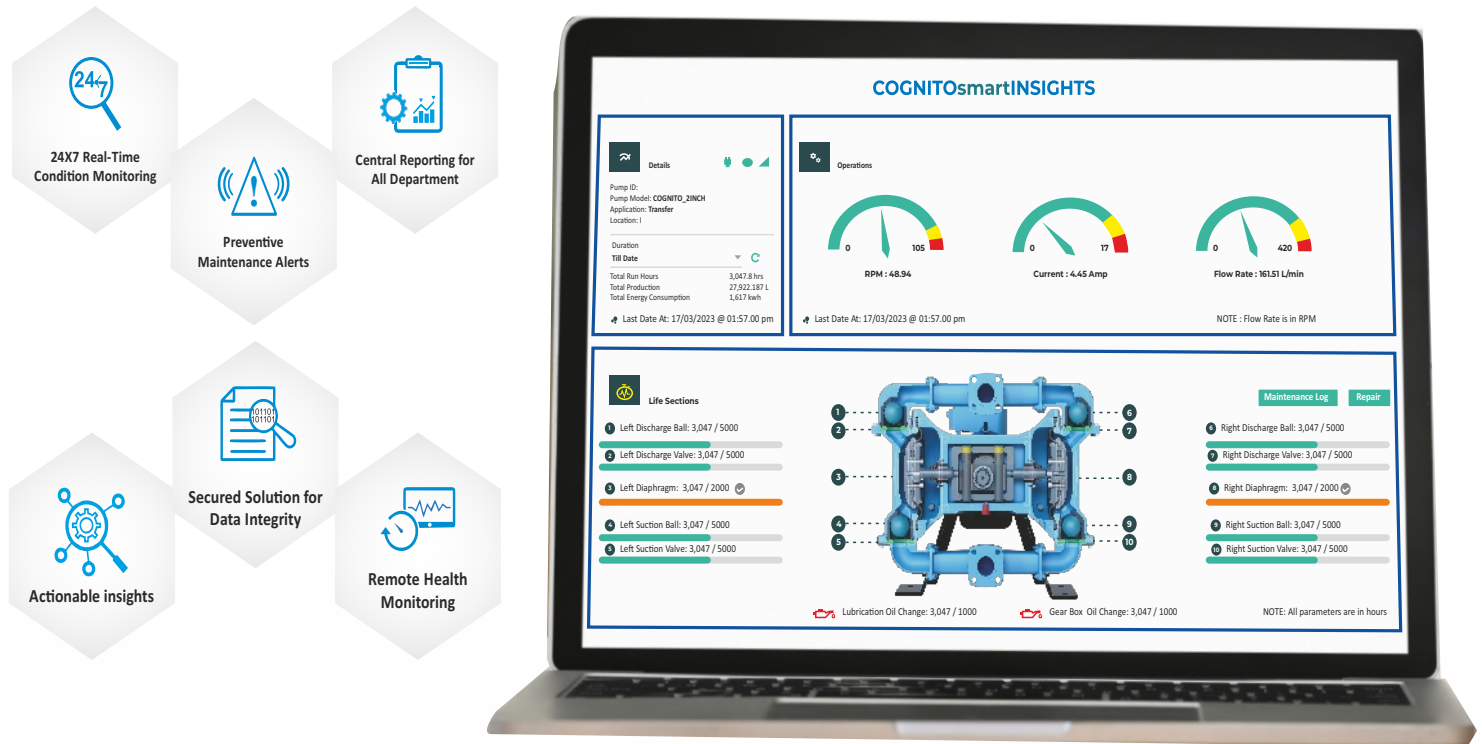
Stainless Steel Dampener
Model: 3SX



All Dimensions +/- 3mm [0.13 in]
Where X is Diaphragm Material

COGNITOsmartINSIGHTS

COGNITOsmartINSIGHTS, a web-based portal, can be accessed from anywhere and provides real-time updates for all your installed COGNITO pumps helping you remotely monitor critical applications.



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