1. Introduction

This manual is intended to support the user during the installation, operation and maintenance of the damper valves models SATURNIA.

The “warning” and “caution” notes must be strictly followed. Not following the advice might result in damages of various severity levels for the operators and the place of installation of the valves, and the warranty may be invalidated.

2. Intended use

Valves are intended to shut-off or control gases of various natures. After the installation of the valves in the piping system, please ensure the temperature and pressure limits of the valve are always kept.
The technical datasheets of the SATURNIA valves, show the different limits in temperature and pressure of the different materials.
On the valve labels (example provided on paragraph 4), PS and TS, show the limits of pressure and temperature to complete the information provided in the technical datasheets. The information is based on neutral gases only, so please contact InterApp if you need additional information for other gases.

If the valve is operated outside it limits of pressure and temperature, personal damage and to the equipment might occur.

Damper valves type SATURNIA by themselves, are no equipment according to article 1 of the directive 2014/34/EU (ATEX). In potentially explosive areas, the user is obliged to identify dangerous ignition sources, perform a risk analysis of the entire system and initiate the necessary preventive measures.
Electrical and mechanical actuators as well as accessories are subject to a separate conformity analysis according to ATEX. The user is responsible to consider all the safety instructions for applications in explosion hazardous areas.

3. Safety information

General safety information

Damper valves are intended to be installed in a piping system, so the same regulations and safety measures that apply to the complete system, must be applied to the valve. In this manual, additional safety instructions related to the damper valve are contained.
InterApp does not assume any responsibility, so therefore the operator must ensure when operating the valve that:

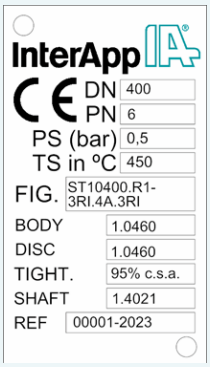
- The valve is only used properly as intended.
- The piping system has been laid professionally and is checked regularly.
- The valve is professionally connected to the piping.
- In the piping system, the common flow speeds in permanent operation are not exceeded.
- If abnormal operational conditions such as vibrations, erosion, solids in the medium, are present, they have been discussed with InterApp.
- At operating temperatures that result in hot or cold valve parts (incl. add-ons) and therefore might cause dangers, the installation must take into account protective measures against accidental touching.
- That any actuator that is installed on the valve not by InterApp are adjusted to the valve, and all the safety measures have been taken into account.
- Only expert personnel operate and service the valve.

Particular hazards

Before the valve is removed from the piping system, ensure that the pressure in the system is completely relived from both sides of the valve. Do not attend to dismount the valve of the pipes with pressure. Failure to follow this recommendation can cause damages to the personnel and the equipment.
Please notice that some residues could remain in the inner of the valve and that they might be dangerous for people or the environment. Therefore, the damper valve has to be handled with the corresponding caution.
Never attempt to unscrew or operate the valve without relieving the pressure. Do not remove the actuator of the valve, while the valve is still under pressure.

4. Marking and labelling

SATURNIA damper valves carry an aluminum label with the following information:

Label	Details	Explanation
	Manufacturer	InterApp
	CE marking	CE marking and notified body as per EU directives
	Nominal size	DN and number (in mm)
	Flange connection standard	PN – is a prefix for pressure rating of flanges
	Maximum pressure	PS – maximum allowable pressure in bar at room temperature
	Maximum Temperature	TS – Maximum allowable temperature in Celsius (for clean neutral fluids)
	Valve type and codification	FIG → ST1 / ST3 → selection code according InterApp ERP
	Body Material	BODY → Material used for the body
	Disc material	DISC → Material used for the disc
	Tightness	TIGHT. → Tightness of valve (% of cross sectional area)
	Shaft Material	SHAFT → Material used for the shaft
	Reference number	REF. → a unique number assigned to valve, which is used to identify and find a given transaction in the system

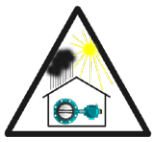
5. Transport and Storage

Special care should be taken when handling, storing and transporting the damper valves SATURNIA. Local regulations as well as the necessary safety measure must be observed at all times. The damper valves must be kept in the original packaging up to the installation.
InterApp damper valves SATURNIA should always be stored free from dust and humidity.

6. Installation

Introduction:

To guarantee the benefits of the InterApp damper valves SATURNIA, proper procedures and compliance with the installation instruction are essential. The installation has to be carried out according to the state of the art and only by qualified personnel. InterApp reserves the right to decline responsibility for damage or premature failure if the recommendations contained in this instruction are not being followed. Dimension, material and application range of the damper valves SATURNIA are according to the technical documentation.
The weight of the damper valves SATURNIA is shown on the technical datasheets.
Due to its weight, special care should be taken during the installation of the valves, and the use of lifting devices, ropes, slings, etc. should always be considered.
For these operations the end user and personnel should wear the necessary protection equipment as per the local regulations and follow the local safety regulations.



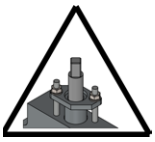
Storage:

InterApp damper valves SATURNIA should always be stored free from dust and humidity.

Precautions to be taken prior to installation:

Please make sure that the valve intended for installation is suitable for the service conditions prevailing. The responsibility about the used gases (corrosion resistance, pressure, temperature, etc.) lies by the user of the plant.
Call your supplier or InterApp if you need any assistance.
Please consider that turbulences (i.e. created by piping bow) generate dynamic forces increasing the operating torque of the valve. We recommend installing the valve minimum 2 x DN after pipe fittings.

Check before installation:

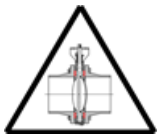


Gland packing:

Before use, check the tightness of the gland packing. Tighten it if there is leakage.
Note: Overtightening the gland packing may increase the torque of the damper and cause operational issues.

Positioning:

For the installation of valves in horizontal pipelines, we recommend to install the valves with their shaft in a horizontal position.
Please ensure that the lower edge of the disc opens with the direction of the flow. This prevents deposition of slurries and contamination in the shaft sealing area. (Fig. 1).



Gaskets:

Use flat or tadpole gaskets (Fig. 2) when the valve has to be mounted between flanges.

Installation:

Flange faces must be smooth and clean. Rust, welding scores, rests of paint, dirt, etc. must be removed in order to prevent damage of the gasket.

SATURNIA damper valves, in wafer style design, are suitable for installation between PN 2,5, PN 6, PN 10, PN 16, ANSI 150 or DIN 24154/R2,T2 flanges.

For the installation of valve between flanges of other standards consult InterApp or its authorized distributors. The valve should not be mounted in pipes, where the inner bore diameter is less than the nominal diameter of the valve.

The valve should never be installed between flanges which are not parallel to each other. Make sure that the valve is installed concentric in the pipe. The disc of a misaligned valve may be damaged (Fig.3).

The flanges have to be spread in order to ease the installation of the valve (Fig. 4). Open completely the disc (Fig. 5). Ensure that the piping is aligned. Tighten the nuts crosswise.

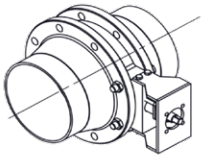


Figure 1

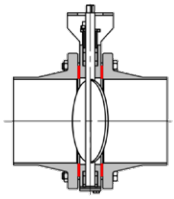


Figure 2

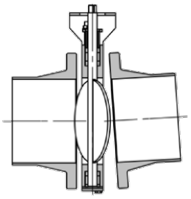


Figure 3

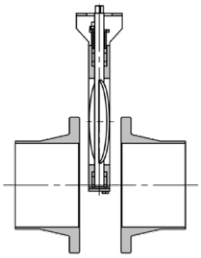


Figure 4

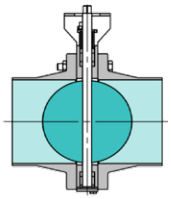
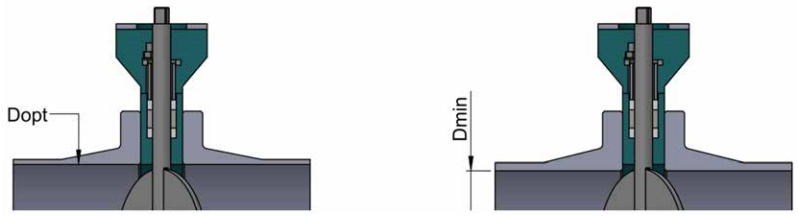


Figure 5

Flange inside diameter:

The InterApp damper valve Saturnia has to be mounted between flanges with gasket. It has bidirectional tightness. It is centred by stay-bolts or by screws. The inner diameter of the flange should be in accordance with the stated values Dopt and Dmin.



Dmin Minimum diameter of the flange enabling to move the disc (in case of a perfectly centered valve).
Dopt Diameter of the flange for optimal mounting.

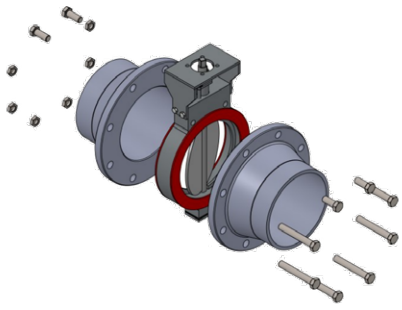
DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Dmin	–	29	58	79	110	138	192	240	290	334	378	426	474	570
Dopt (ST)	33,6	59	79	98	125	151	204	250	310	350	397	445	494	589
Dopt (SR)	33,6	52	71	90	118	148	199	246	297	338	386	435	486	580

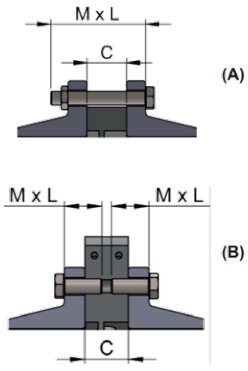
Bolting:

Due to the necessity of use a seal between the flanges on both sides of the valve - the screw lengths have been increased accordingly.

Wafer type DN 50 - 600

(A) bolt with nut + **(B)** bolt (2 or 4)





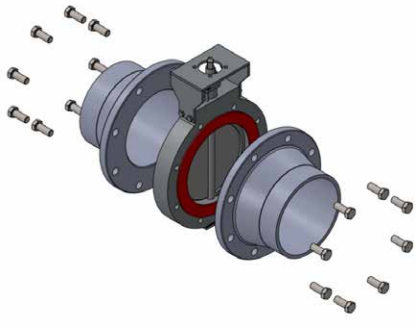
DN	C	Type of drilling	PN 2,5 / 6			PN 10			PN 16		
			n	A	B	n	A	B	n	A	B
				M x L	M x L		M x L	M x L		M x L	M x L
50	46	2 A + 2 B	4	M12x120	M12x50	4	M16x120	M16x50	4	M16x120	M16x50
65	46	2 A + 2 B	4	M12x120	M12x50	4	M16x120	M16x50	4	M16x120	M16x50
80	46	2 A + 2 B	4	M16x120	M16x50	8	M16x120	M16x50	8	M16x120	M16x50
100	46	2 A + 2 B	4	M16x120	M16x50	8	M16x120	M16x50	8	M16x120	M16x50
125	46	4 A + 4 B	8	M16x120	M16x50	8	M16x120	M16x50	8	M16x120	M16x50
150	46	4 A + 4 B	8	M16x120	M16x50	8	M20x120	M20x50	8	M20x120	M20x50
200	46	6 A + 2 B	8	M16x120	M16x50	8	M20x120	M20x50	12	M20x120	M20x50
250	46	8 A + 4 B	12	M16x120	M16x50	12	M20x120	M20x50	12	M24x120	M24x50
300	46	10 A + 2 B	12	M20x120	M20x50	12	M20x120	M20x50	12	M24x120	M24x50
350	46	10 A + 2 B	12	M20x120	M20x50	16	M20x120	M20x50	16	M24x120	M24x50
400	46	14 A + 2 B	16	M20x120	M20x50	16	M24x120	M24x50	16	M27x120	M27x50
450	56	14 A + 2 B	16	M20x130	M20x60	20	M24x130	M24x60	20	M27x130	M27x60
500	56	16 A + 4 B	20	M20x130	M20x60	20	M24x130	M24x60	20	M30x130	M30x60
600	56	18 A + 2 B	20	M24x130	M24x60	20	M27x130	M27x60	20	M33x130	M33x60

DN	C	Type of drilling	ANSI cl. 150		
			n	A	B
				UNC x L [Inch]	UNC x L [Inch]
2"	46	2 A + 2 B	4	UNC 5/8"-11 x 4"	UNC 5/8"-11 x 1 1/2"
2 ½"	46	2 A + 2 B	4	UNC 1/2"-13 x 3 1/4"	UNC 5/8"-11 x 1 1/2"
3"	46	2 A + 2 B	4	UNC 1/2"-13 x 3 1/2"	UNC 5/8"-11 x 1 3/4"
4"	46	4 A + 4 B	8	UNC 5/8"-11 x 4"	UNC 5/8"-11 x 2"
5"	46	4 A + 4 B	8	UNC 5/8"-11 x 4 1/2"	UNC 3/4"-10 x 2"
6"	46	4 A + 4 B	8	UNC 5/8"-11 x 4 1/2"	UNC 3/4"-10 x 2"
8"	46	6 A + 2 B	8	UNC 5/8"-11 x 5"	UNC 3/4"-10 x 2"
10"	46	8 A + 4 B	12	UNC 3/4"-10 x 5"	UNC 7/8"-9 x 2 1/2"
12"	46	10 A + 2 B	12	UNC 3/4"-10 x 5 1/4"	UNC 7/8"-9 x 2 1/2"
14"	46	10 A + 2 B	12	UNC 3/4"-10 x 5 1/2"	UNC 1"-8 x 2 3/4"
16"	46	14 A + 2 B	16	UNC 7/8"-9 x 6 1/4"	UNC 1"-8 x 3 1/4"
18"	56	14 A + 2 B	16	UNC 7/8"-9 x 6 3/4"	UNC 1 1/8"-13 x 3"
20"	56	16 A + 4 B	20	UNC 1"-8 x 7 1/4"	UNC 1 1/8"-7 x 3 1/4"
24"	56	18 A + 2 B	20	UNC 1"-8 x 8 1/4"	UNC 1 1/4"-7 x 3 1/2"

DN	C	Type of drilling	DIN 24154/R2,T2		
			n	A	B
				M x L	M x L
71	46	2 A + 2 B	4	M8x120	M8x50
80	46	2 A + 2 B	4	M8x120	M8x50
100	46	2 A + 2 B	4	M8x120	M8x50
125	46	2 A + 2 B	4	M8x120	M8x50
150	46	4 A + 4 B	8	M10x120	M10x50
200	46	4 A + 4 B	8	M10x120	M10x50
250	46	4 A + 4 B	8	M10x120	M10x50
300	46	6 A + 2 B	8	M10x120	M10x50
355	46	6 A + 2 B	8	M10x120	M10x50
400	46	10 A + 2 B	12	M10x120	M10x50
450	56	10 A + 2 B	12	M10x130	M10x60
500	56	8 A + 4 B	12	M10x130	M10x60
600	56	18 A + 2 B	16	M12x130	M12x60

LUG type DN 50 - 600

B Bolt



DN	C	PN 2,5 / 6		PN 10		PN 16	
		n	M x L	n	M x L	n	M x L
50	46	4	M12x50	4	M16x50	4	M16x50
65	46	4	M12x50	4	M16x50	4	M16x50
80	46	4	M16x50	8	M16x50	8	M16x50
100	46	4	M16x50	8	M16x50	8	M16x50
125	46	8	M16x50	8	M16x50	8	M16x50
150	46	8	M16x50	8	M20x50	8	M20x50
200	46	8	M16x50	8	M20x50	12	M20x50
250	46	12	M16x50	12	M20x50	12	M24x50
300	46	12	M20x50	12	M20x50	12	M24x50
350	46	12	M20x50	16	M20x50	16	M24x50
400	46	16	M20x50	16	M24x50	16	M27x50
450	56	16	M20x60	20	M24x60	20	M27x60
500	56	20	M20x60	20	M24x60	20	M30x60
600	56	20	M24x60	20	M27x60	20	M33x60

DN	C	ANSI cl. 150	
		n	UNC x L [Inch]
2"	46	4	UNC 5/8"-11 x 1 1/2"
2 ½"	46	4	UNC 5/8"-11 x 1 1/2"
3"	46	4	UNC 5/8"-11 x 1 3/4"
4"	46	8	UNC 5/8"-11 x 2"
5"	46	8	UNC 3/4"-10 x 2"
6"	46	8	UNC 3/4"-10 x 2"
8"	46	8	UNC 3/4"-10 x 2"
10"	46	12	UNC 7/8"-9 x 2 1/2"
12"	46	12	UNC 7/8"-9 x 2 1/2"
14"	46	12	UNC 1"-8 x 2 3/4"
16"	46	16	UNC 1"-8 x 3 1/4"
18"	56	16	UNC 1 1/8"-13 x 3"
20"	56	20	UNC 1 1/8"-7 x 3 1/4"
24"	56	20	UNC 1 1/4"-7 x 3 1/2"

DN	C	DIN 24154/R2,T2	
		n	M x L
71	46	4	M8x50
80	46	4	M8x50
100	46	4	M8x50
125	46	4	M8x50
150	46	8	M10x50
200	46	8	M10x50
250	46	8	M10x50
300	46	8	M10x50
355	46	8	M10x50
400	46	12	M10x50
450	56	12	M10x60
500	56	12	M10x60
600	56	16	M12x60

Cleansing of the piping:
When cleansing the piping system it is very important to assure that the cleaning products and devices are harmless for the valve. Not convenient products and devices might destroy the valve.

Removal:
When removing the valve from the pipe please take care not to damage the disc.

Disposal:
Please notice that some residues could remain in the inner of the valve and that they might be dangerous for people or the environment. Therefore, the damper valve has to be handled with the corresponding caution. After its use, the damper valve has to be disposed of according to the state of the art and under consideration of the environment.

7. Functional Tests

When putting the piping system in operation for the first time, please follow the local regulations and the necessary safety measures of the whole system.
In order to remove potential debris located in the piping system, prior to the normal operation of the same, it is recommended to flush the piping system.
Prior starting to use the installation, we recommend to make a function test. Therefore the valve must be opened and closed at least once in order to check that the disc doesn't touch the flanges and that the valve is tight through the passage and toward outside.

8. Operation and Maintenance

Normal operation

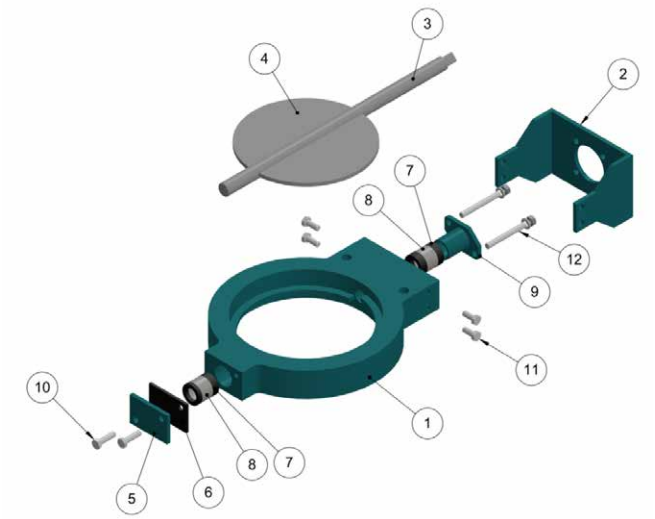
Please notice that fluid residues inside the damper valve could be dangerous for humans and the environment.
The damper valve must be handled accordingly and be cleaned carefully prior to the maintenance.

Maintenance

Introduction:

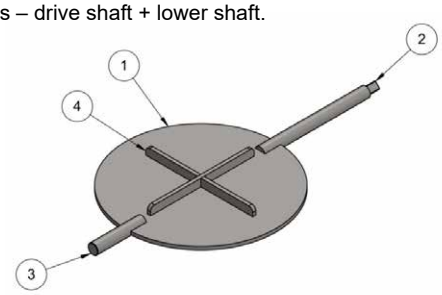
Maintenance is made at the own risk of the user. Maintenance on a SATURNIA must be executed by trained staff only. Only original spare parts are to be used.
The frequency of replacement of the wear parts, is highly dependent on the fluid, cycles, operating conditions, etc. The user should include in its maintenance program a chapter for inspecting the valves to check the wear parts and change them if necessary. In the next paragraph the spare parts are identified. Please contact InterApp to obtain the specific codes and additional information for the recommended spare parts.

1. Parts of a Saturnia:



Parts list	
1	Body (1.0425/1.4408)
2	Actuator bracket (EN ISO 5211)
3	Shaft (1.4021/1.4542)
4	Disc (1.0425/1.4408)
5	Body cover
6	Body gasket
7	Gland packing
8	Shaft bearing
9	Gland flange
10	Bolts for body cover (2 pcs)
11	Bolts for actuator bracket (4 pcs)
12	Threaded rod for gland push with nuts (2 pcs)

For DN 400 – DN 600 (picture below):
- disc is assembled with additional reinforcement.
- shaft is composed of two parts – drive shaft + lower shaft.



Parts list	
1	Disc
2	Drive shaft
3	Lower shaft
4	Reinforcement

2. Wear parts:

If there is an unusual leakage to the outside, it is highly recommended to replace the following components:
- gland packing.
- disassembly of the gland flange to replace gland packing.

2.1 Replacing the shaft sealing:

To replace the upper seal (7), first remove the actuator bracket (2) by unscrewing 4 bolts (11)(Figure 6). Then unscrew both nuts from the tie-rods (Figure 7) and remove them. Remove the gland flange (9) to release the gland packing and shaft bearing.
To replace bottom seal, unscrew both bolts (10) to release bottom gland packing and shaft bearing.

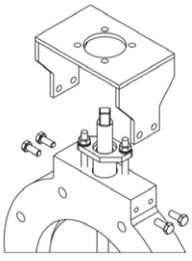


Figure 6

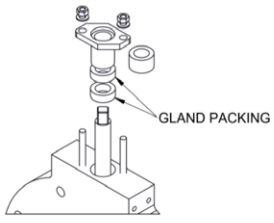


Figure 7

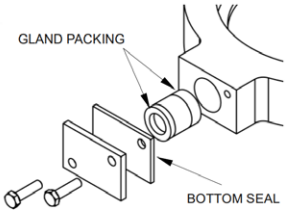


Figure 8

3. Reassembly:

Actually, you may reassemble the valve parts in reverse order of disassembly. You should clean all parts before reassembling. It is necessary to replace all seals. Please use the preassembled spare part kit.

Before using the valve in a piping system, it is required to make a function test.

9. Troubleshooting

Fault	Action
Leak at the connection of the valve to the valve	1. Tighten the flange bolts.
	2. If the leaking remains even after tightening the bolts, proceed to dismantle the valve. Observe the instructions mentioned in the “Maintenance” section of this manual.
	3. Ensure that the pipe flanges are aligned and plane parallel.
	4. If still the leaking persists, check if the flange body surface is damaged. Order replacement parts from InterApp.
Leaking from the shaft of the valve	1. Repair needed. Repair shaft sealing system. Proceed to dismantle the valve. Observe the instructions mentioned in paragraph 8 of this manual.
	2. Order replacement parts from InterApp and contact us for further instructions.
The valve does not open or close	1. If the valve carries an actuator, please check the corresponding documentation of the actuator.
	2. If the valve is manually operated, please check for the following possibilities: • If foreign media is present → Please clean the piping. • Operating pressure to high → Operate the valve with its corresponding allowable pressure.
	3. If still the problem persists, please check for damages on the valve. Proceed to dismantle the valve. Observe the instructions mentioned in the “Maintenance” section of this manual.
	4. Order replacement parts from InterApp and contact us for further instructions.
Other malfunctions	1. If the valve is damaged, please contact InterApp for further instructions and spare parts ordering.

10. Further Information

Technical datasheets, drawings, other documents and further advice can be obtained from:

InterApp Polska Sp. z o.o.
ul. Św. Michała 43 PL - 61-119, Poznań

+48 616 247 420 info@pl.interapp.net

Additional further information can be obtained from: www.interapp.net

11. Manufacturer´ Declaration in accordance with EC directives

The manufacturer	**InterApp Polska sp. z o.o** ul. Świętego Michała 43 61-119 Poznań, Poland
declares	InterApp Butterfly valves: **Saturnia:** • diameter: DN 50 – DN 600, • wafer and lug body type, flange drilling PN 2,5, PN 6, PN 10, PN 16, ANSI class150, 24154/R2,T2. With the following valve configurations: • manually operated valves, • with electric or pneumatic actuator, • bare shaft for later assembling of an actuator.

That these products* meet the requirements of the following Directives:

Machinery Directive 2006/42 EG:The products are not a complete machine within the meaning of the European Machinery. Directive 2006/42. They are considered as “partly completed machinery” as per Article 1, paragraph 1.(g) of the directive.

1. If they are installed in a pipe system on any other complete system, the entire system is then considered a complete machine within the meaning of the European Machinery Directive 2006/42.
2. This declaration is the declaration of incorporation of partly completed machinery as it is laid out on ANNEX II, paragraph 1.B of the European Machinery Directive 2006/42
3. For the necessary customer risk analysis the table included in this declaration lists whether and how the requirements of the European Machinery Directive 2006/42 in relation to the valve and actuator unit are fulfilled.
4. The operation instructions of the valves and the relevant instruction of the actuators shall be observed at all times.

The relevant technical documentation has been compiled in accordance with part B of Annex VII, and the person responsible to make these documents available to the national authorities, by email and in electronic format is Mr. Piotr Bera, Managing Director of InterApp Polska sp. z o.o., and located in ul. Świętego Michała 43, 61-119 Poznan, Poland.

For conformity with the above directives it shall be observed by the user:

1. The user shall observe the “intended use“ as defined in the “Installation, Operation and Maintenance Manual“ which can be accessed from our webpage “www.interapp.net” and shall observe all notices contain in this document that may be relevant for the use. Failure to follow these notices and advices, will invalidate this declaration.
2. This partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of all the relevant European directives, by a person or institution responsible, where appropriate.
3. The manufacturer InterApp Polska sp. z o.o. has made and documented the necessary risk analysis – the responsible person for making available this information is Mr. Piotr Bera, Managing Director of InterApp Polska sp. z o.o.

Poznan, January 2024 Mr. Piotr Bera, Managing Director of InterApp Polska sp. z o.o.

This declaration of conformity and operating instructions have been generated electronically and are legally binding without signature.

** The declaration of incorporation and all the different documentation of the actuators, observes the compliance of the actuators with the different relevant directives.*

Standards applied [butterfly valves]	
EN 593:2017 **EN ISO 12100:2011**	Industrial valves - Metallic butterfly valves for general purposes Safety of machinery - General principles for design - Risk assessment and risk reduction
Product documentation	
Product datasheets, catalogue, drawings	
Quality management system	
ISO 9001:2015	
InterApp Polska sp. z o.o. declares that the following basic requirements according to **ANNEX I of the Machinery Directive (2006/42/EC)**, are applied and fulfilled [Paragraph]	

1.1.2 a) b) c) d)	See operating manuals and related documentation. The protective measures for personnel are the same as the ones where the product will be installed.
1.1.2 e)	No specific tools are needed.
1.1.3	The materials in contact with the media are identified in the product datasheet, the order confirmation and in the valve label. The user must make a risk analysis.
1.1.5	Relevant instructions and information is given in the operating manuals and related documentation.
1.2	Responsibility of the user following the instructions of the actuator.
1.3.1	See operating manual and handling instructions.
1.3.2	For the functional parts, ensured through the intended use.
1.3.3	Fulfilled through design and assembling process.
1.3.4	Fulfilled.
1.3.7, 1.3.8, 1.3.9 and 1.4	Ensured through the intended use. Maintenance and servicing operations are never allowed with the valve under pressure and/or connected to the control system.
1.5.1, 1.5.2, 1.5.3 and 1.5.4	Responsibility of the user. See operating manuals and related documentation of the actuators.
1.5.5	Responsibility of the user when the products are installed in its final destination. See warnings and intended use of the operating manual.
1.5.7	In potentially explosive areas, the user is obliged to identify dangerous ignition sources, perform a risk analysis of the entire system and initiate the necessary preventive measures. If Ex-protection is required is must be stated in the order.
1.5.8	The responsibility of the user to verify the conditions of the media line and to establish the noise limits.
1.5.13	Valves are installed in piping systems, which can carry dangerous fluids. The user is responsible to ensure a correct installation of the valves for which information is given in the operation and installation manual and ensure the intended use.
1.6.1 and 1.6.5	See operating manual.
1.7.3	According to the manuals for the valves and the actuators.
1.7.4	Fulfilled through the manuals.

InterApp Polska sp. z o.o. declares that the following basic requirements according to **EN ISO 12100**, are applied and fulfilled	
Scope	*The risk analysis has been done considering the products a "partly completed machinery".* *The basis for the analysis of the butterfly valves is the product standard EN 593:2018 (Industrial valves - Metallic butterfly valves for general purposes).* *For the actuators, please refer to their own documentation.* *For the risk analysis, our long experience supplying the above mentioned valves + actuators, has been taken into account, with the result of the different instructions and warnings contained in the manuals.* *It is mandatory that for fulfilling the requirements of the clauses 4 to 6 of the ISO 12100, the user must make a risk analysis of the actuator and valve installed and taking into account all details of the final application. This type of analysis can not be done by InterApp Polska sp. z o.o.*
Machine limits	The limits of the "partly completed machinery" have been defined according the "intended use"
Hazard Identification	The hazards mentioned in the standard ISO 12100, have been identified for the complete risk assessment. Hazard related to dismantling, decommissioning and scrapping are not under the responsibility of InterApp Polska sp. z o.o.
Risk estimation	A risk estimation has been carried out, with the "intended use" for the products as a prerequisite.
Risk evaluation	A risk evaluation has been carried out.
Risk reduction	By means of; Inherent safe design measures and Information for use contained in the manual
Documentation of risk assessment and risk reduction	InterApp Polska sp. z o.o. has the documentation that demonstrates that the ISO 12100 procedure has been followed and the consequent results.

Note