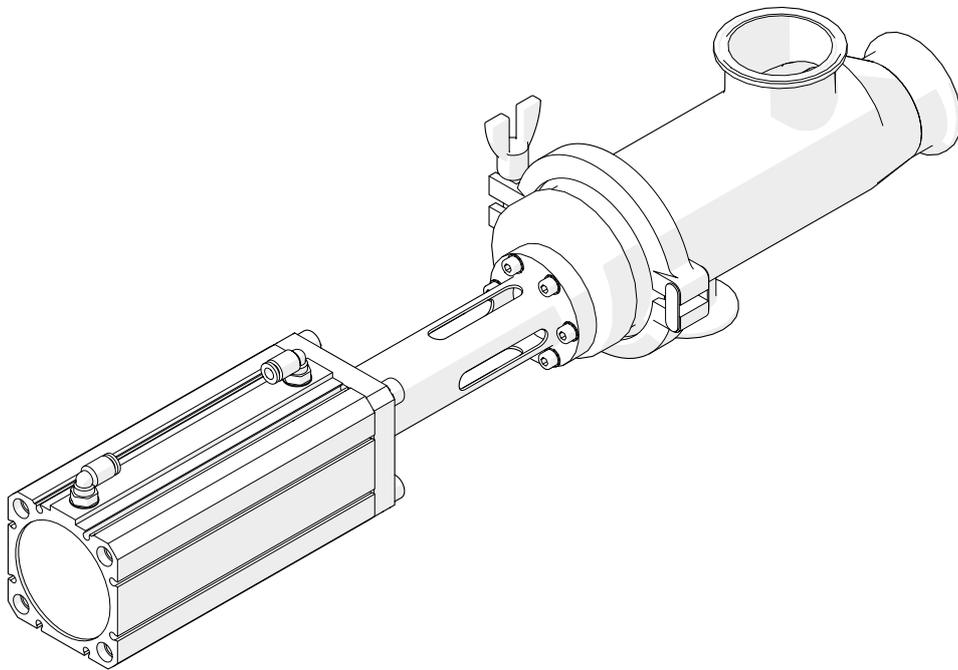


INSTALLATION, SERVICE AND MAINTENANCE INSTRUCTIONS

# PRODUCT RECOVERY SYSTEM

# SILPIG



13.001.32.0005



Original Instructions

13.001.30.04EN

(0) 2025/02

# EC Declaration of Conformity



**INOXPA S.A.U.**

Telers, 60  
17820 - Banyoles (Spain)

hereby declare under our sole responsibility that the

Machine: **PRODUCT RECOVERY SYSTEM**

Model: **SILPIG**

Size: **DN 40 - DN 100 / OD 1½" - OD 4"**

Serial number: **IXXXXXXXXXX to IXXXXXXXXX**  
**XXXXXXXXXXIINXXX to XXXXXXXXXXXXIINXXX**

fulfills all the relevant provisions of the following directive:

**Machinery Directive 2006/42/EC**  
**Pressure Equipment Directive 2014/68/EU<sup>1</sup>**  
**Regulation (EC) n° 1935/2004**  
**Regulation (EC) n° 2023/2006**

and with the following harmonized standards and/or regulations:

**EN ISO 12100:2010**  
**EN ISO 14159:2008**  
**EN 1672-2:2005+A1:2009**  
**EN ISO 13857:2019**

The technical file has been prepared by the signer of this document.

A handwritten signature in black ink, appearing to read "David Reyer Brunet".

David Reyer Brunet  
Technical Office Manager  
13th January 2025



Document: 13.001.30.05EN  
Revision: (0) 2025/01

<sup>1</sup>Class I equipment. Conformity assessment procedure used: Module A

# Declaration of Conformity



## **INOXPA S.A.U.**

Telers, 60  
17820 - Banyoles (Spain)

hereby declare under our sole responsibility that the

Machine:	<b>PRODUCT RECOVERY SYSTEM</b>
Model:	<b>SILPIG</b>
Size:	<b>DN 40 - DN 100 / OD 1½" - OD 4"</b>
Serial number:	<b>IXXXXXXXXXX to IXXXXXXXXXX XXXXXXXXXXIINXXX to XXXXXXXXXXXXIINXXX</b>

fulfills all the relevant provisions of these regulations:

**Supply of Machinery (Safety) Regulations 2008  
Pressure Equipment (Safety) Regulations 2016<sup>1</sup>**

and with the following designated standards:

**EN ISO 12100:2010  
EN ISO 14159:2008  
EN 1672-2:2005+A1:2009  
EN ISO 13857:2019**

The technical file has been prepared by the signer of this document.

A handwritten signature in black ink, appearing to read 'DRB'.

David Reyer Brunet  
Technical Office Manager  
13th January 2025

The UKCA logo, consisting of the letters 'UK' stacked above 'CA' in a bold, black, sans-serif font.

Document: 13.001.30.06EN  
Revision: (0) 2025/01

<sup>1</sup>Class I equipment. Conformity assessment procedure used: Module A

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## 2. Generalities

### 2.1. INSTRUCTIONS MANUAL

This manual contains information about the reception, installation, operation, assembly, and maintenance of the SILPIG product recovery system.

Carefully read the instruction prior to starting the equipment, familiarize yourself with the installation, operation and correct use of the equipment and strictly follow the instructions. These instructions should be kept in a safe location near the installation area.

The information published in the instruction manual is based on updated data.

INOXPA reserves the right to modify this instruction manual without prior notice.

### 2.2. COMPLIANCE WITH THE INSTRUCTIONS

Not following the instructions may impose a risk for the operators, the environment and the machine, and may cause the loss of the right to claim damages.

This non-compliance may cause the following risks:

- failure of important machine/plant functions,
- failure of specific maintenance and repair procedures,
- possible electrical, mechanical and chemical hazards,
- risk to the environment due to the type of substances released.

### 2.3. WARRANTY

The conditions of the warranty are specified in the General Sales Condition that has been delivered at the time of placing your order.



The machine may not undergo any modification without prior approval from the manufacturer.

For your safety, only use original spare parts and accessories. The usage of other parts will relieve the manufacturer of any liability.

Changing the service conditions can only be carried out with prior written authorization from INOXPA.

The non-compliance of the prescribed indications in this manual means misuse of this gear on the technical side and the personal safety and this exempts INOXPA of all responsibility in case of accidents and personal injuries and/or property damage. Also, excluded from the warranty all breakdowns caused by improper use of the gear.

Please do not hesitate to contact us in case of doubts or if further explanations are required regarding specific data (adjustments, assembly, disassembly, etc.).

# 3. Safety

## 3.1. WARNING SYMBOLS



Safety hazard for people in general and/or equipment

### ATTENTION

Important instruction to prevent damage to the equipment and/or its function

## 3.2. GENERAL SAFETY INSTRUCTIONS



Read the instruction manual carefully before installing and starting the equipment. Contact INOXPA in case of doubt.

Do not use in processes involving products or temperatures that are incompatible with the sealing materials or PIG. The system designer is responsible for determining this compatibility.

The equipment must be handled only by qualified personnel.

The system designer or the person responsible for specifying the system is accountable for ensuring the compatibility of the electrical equipment.

### 3.2.1. During installation

Always take into account the [Technical Specifications of chapter 9](#).

The installation and use of the equipment should always be in accordance with applicable regulations regarding health and safety.

Do not use the equipment until its proper functioning has been verified. After assembly, repair, cleaning, or any modification, connect the air and electrical supply, and ensure it has been correctly assembled, with proper supervision to check its operation and detect any leaks.

Ensure that the shafts are perfectly aligned. Misalignment may cause damage to the stem, shaft (due to friction), bushings, and seals.

Firmly tighten all static and connected parts to prevent loosening. If the equipment operates at high frequency or is installed in a high-vibration environment, ensure all parts are securely fastened.



Account for potential pressure drops in the pneumatic circuit and/or electrical supply failures, as these may pose safety risks to the installation.

Verify the equipment's operation when restarting after an emergency or unexpected shutdown.

The shaft and the PIG are magnetised. DO NOT approach magnetic metal elements, as they have a strong magnetic pull. Avoid placing the item on metal tables or benches during handling. DO NOT place it near metal tools or objects that could be attracted by the magnetic field.

The service life of the PIG largely depends on the quality of the installation, including the interior pipe finishing, welds, cleanliness, and any factors that may affect its smooth movement.

The equipment must be installed and operated in accordance with industry best practices and exclusively by qualified personnel.

During installation, all electrical work must be performed by authorised personnel.

### 3.2.2. During operation

Always take into account the [Technical Specifications of chapter 9](#). NEVER exceed the specified limit values.

Do not use in environments containing corrosive gases, as these may damage the cylinder and seals.

The service life of the PIG largely depends on the quality of the installation, including the interior pipe finishing, welds, cleanliness, and any factors that may affect its smooth movement.



The equipment must be operated in accordance with industry best practices and exclusively by qualified personnel.

NEVER touch the equipment or pipes in contact with the liquid during operation. When handling hot products, there is a risk of burns.

The PIG circulates through the tubes at high speeds, so the circuit must be designed for safety to ensure it NEVER exits during operation.

Do not handle the actuator while the system is operating or under compressed-air pressure.

The ball and actuator detectors have a water protection rating of IP67, providing complete protection against dust and water immersion.

### 3.2.3. During maintenance

Always take into account the [Technical Specifications of chapter 9](#).

NEVER disassemble or remove the equipment until the pipes are fully emptied. Be aware that the fluid inside may be hazardous or extremely hot. Refer to the applicable regulations in each country for such cases.

The pipes must be depressurised before opening any part of the circuit, as the PIG may escape at high speed and cause serious injury.

Do not leave loose parts on the floor.



When inspecting the equipment, first ensure that measures are in place to prevent falling objects and loss of control of the equipment. Then cut the supply pressure, disconnect the electrical power, and release all air. Upon startup, verify that the system operates normally, the actuator is in the correct position, and the detectors provide the correct signals.

The shaft and the PIG are magnetised. DO NOT approach magnetic metal elements, as they have a strong magnetic pull. Avoid placing the item on metal tables or benches during handling. DO NOT place it near metal tools or objects that could be attracted by the magnetic field.

The service life of the PIG largely depends on the quality of the installation, including the interior pipe finishing, welds, cleanliness, and any factors that may affect its smooth movement.

All electrical work must be performed by authorised personnel.

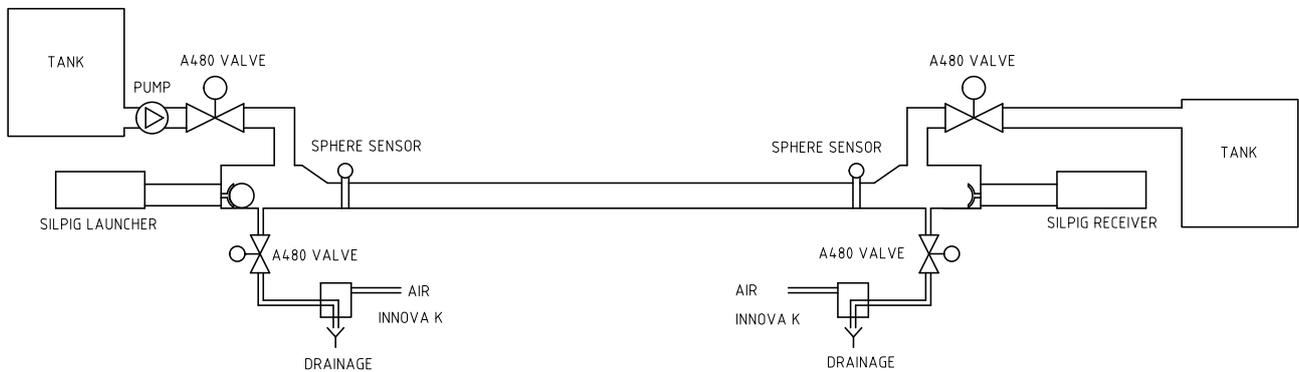
# 4. General Information

## 4.1. DESCRIPTION

The SILPIG system is designed to recover the remaining product inside a pipeline after the pumping process and/or to remove the product to facilitate subsequent cleaning through a CIP process.

The SILPIG system consists of a sending station, a receiving station, the PIG, two position detectors, four A480 butterfly valves, and two INNOVA K valves.

The process begins by placing the PIG in the launch position. It is propelled toward the receiving station by a driving fluid, usually compressed air. As it moves, the PIG pushes the product inside the pipeline for recovery. Once it reaches the receiving station, the entire system can be cleaned through CIP, with the added advantage that the PIG is also cleaned. After this phase, the PIG is returned to the launch station, and the system is ready for the next production cycle.



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# 5. Installation

## 5.1. RECEPTION OF THE EQUIPMENT



INOXPA is not liable for any deterioration of the material caused by its transport or unpacking.

When receipt the equipment, check to see whether all the parts listed on the delivery slip are present:

- complete equipment,
- its components if any are supplied,
- instructions manual.

INOXPA inspects all its equipment before packaging. However, it cannot guarantee that the merchandise arrives at the user intact.

When unpacking the equipment:

- remove any possible traces of packaging from the equipment or its parts,
- inspect the equipment or the parts that comprise it for possible damage incurred during shipping,
- take all possible precautions against damage to the equipment and its components.

## 5.2. TRANSPORT AND STORAGE



The buyer or user shall be liable for assembly, installation, start-up and operation of the equipment.

Take all possible precautions when transport and storage the equipment to avoid damage it and its components.

### 5.3. IDENTIFICATION OF THE VALVE

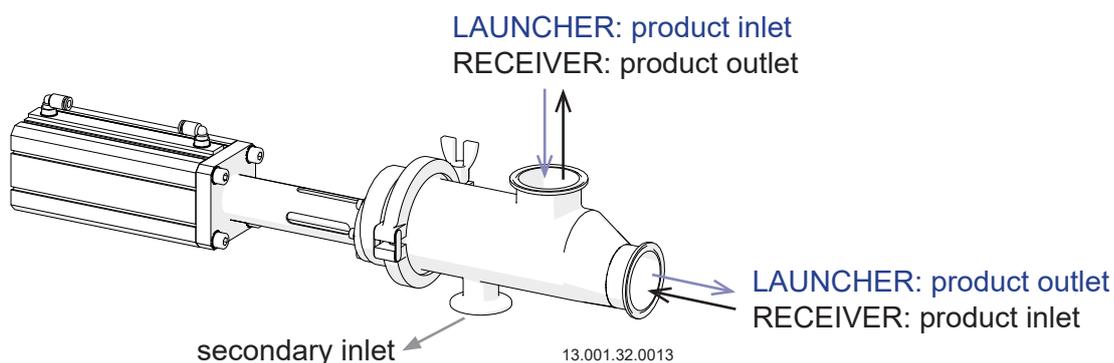
S0120	11	06	52	040
				<b>Size</b>
				038 SMS 38
				040 DN 40 - OD 1½"
				050 DN 50 - OD 2"
				051 SMS 51
				063 OD 2½" - SMS 63,5
				065 DN 65
				076 OD 3" - SMS 76
				080 DN 80
				100 DN 100 - OD 4"
				104 SMS 104
				<b>Seals</b>
				52 EPDM
				78 FPM
				<b>Material</b>
				06 1.4404 (AISI 316L)
<b>Connection</b>				
		00	weld	
		11	male	
		77	clamp	
<b>Model</b>				
S0120	SILPIG DIN			
S0121	SILPIG OD			
S0122	SILPIG SMS			

### 5.4. LOCATION

Place the equipment leaving enough space around it to realize easily the dismantling, the inspection and the review the equipment as well as in order to access to the actuator air connection's device for equipments with automatic actuation even when the equipment is operating.

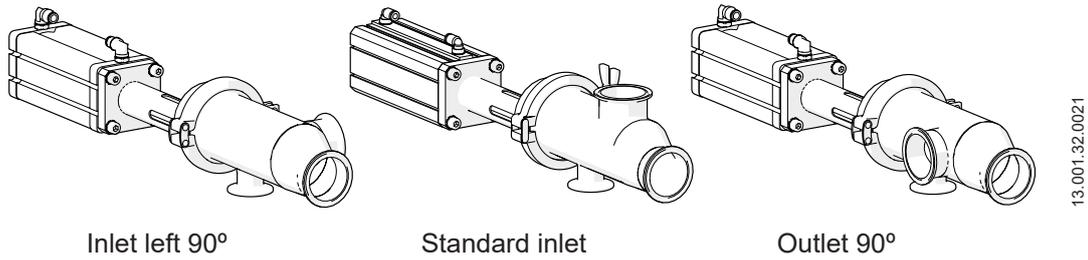
### 5.5. FLUID CONNECTIONS

The equipment has two main ports and one secondary port. The two main ports are for product inlet and outlet, and they are connected to the main pipeline of the system. The secondary port is used for drainage and for introducing the driving fluid for the ball and/or CIP.

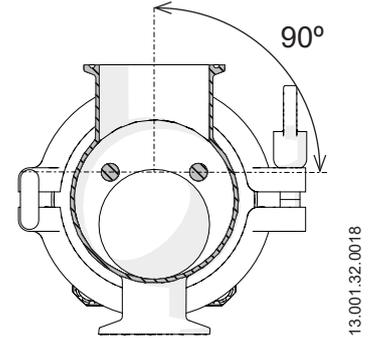


### 5.6. EQUIPMENT ORIENTATION

The equipment must be mounted horizontally, respecting the product flow direction indicated in section 5.5. [Fluid connections](#).



Additionally, as shown in the following figure, the PIG guide rods must be positioned on a plane perpendicular to the axis of the inlet port.



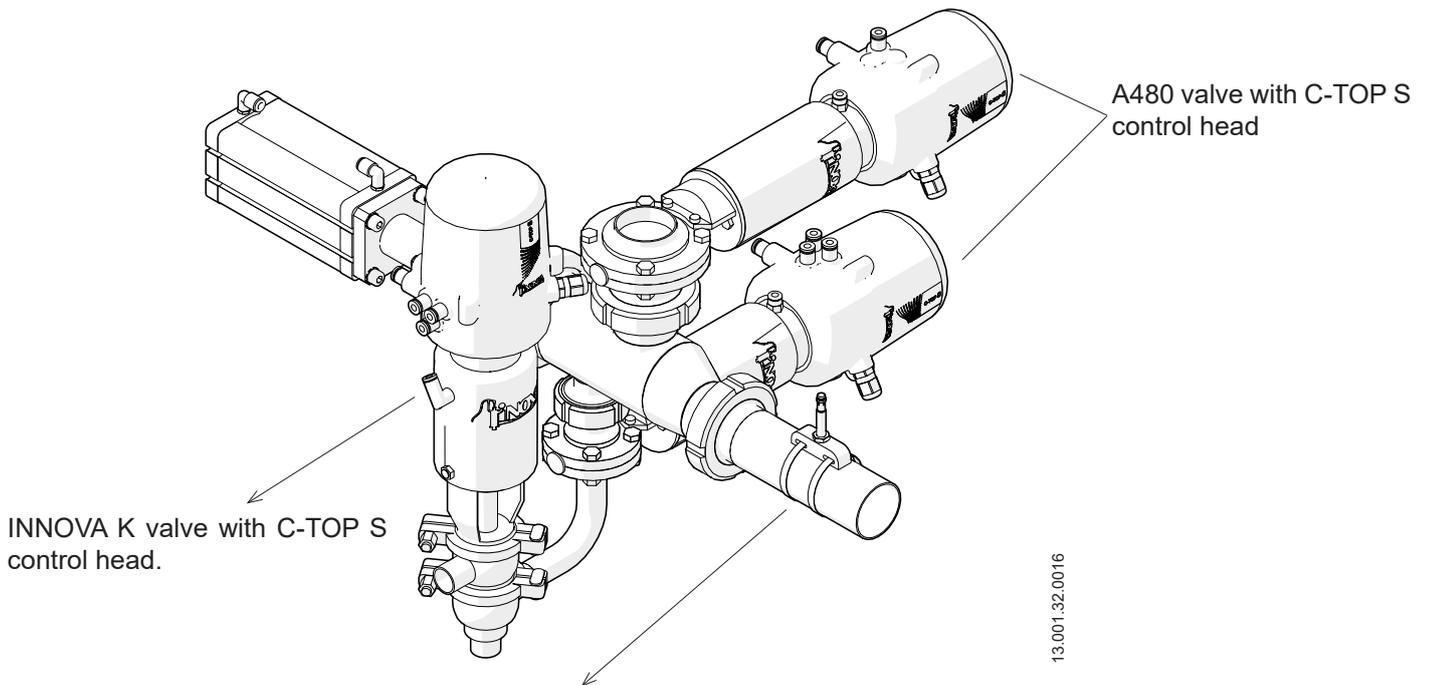
### 5.7. GENERAL INSTALLATION

After the location of the equipment is defined, the equipment can be joined to the pipe using fittings.

During installation, the equipment avoids using excessive force and pay special attention to:

- vibrations that may be produced on the facility,
- thermal dilation that the pipe may undergo when hot fluids are circulating,
- the weight that the pipe can support,
- excessive welding current.

In the installation, 1.5D elbows should be used to ensure the proper passage of the PIG.



**PIG Detector:**

The PIG detector should be placed between 100 and 120 mm from the equipment outlet.  
If this distance is not respected, the shaft's magnetic field could interfere with detectio, causing the detector to send incorrect signals.

**ATTENTION**



Carefully read the instruction manual and data sheet for the PIG detector before installing and starting the equipment.  
The PIG detector installation must be performed by authorised personnel.

### 5.8. CHECKING AND REVIEW

Perform the following checks before using the equipment:

- check that the PIG is magnetised on the shaft,
- apply compressed air three or four times, ensuring that the actuator completes the opening and closing operations smoothly,
- verify that the actuator pushes the PIG inside the piping and receives it without issues,
- ensure that the PIG detectors provide the correct signal when the ball passes,
- if the PIG detectors have piston detectors, check that they provide a signal indicating the actuator's movement.

### 5.9. ACTUATOR AIR CONNECTION

To perform the air connection to the actuator:

- connect and check the air connections (G 1/8" thread for tubing Ø6 mm),
- check the compressed air pressure and characteristics,
- ensure the quality of the compressed air complies with the specifications described in section [9. Technical Specifications](#).

**ATTENTION**



The buyer or user will be responsible for the assembly, installation, start-up, and operation of the equipment.

## 6. Start-up



Read carefully the instructions in chapter 5. [Installation](#) before start-up the equipment.



Before start-up, the persons in charge must be duly informed about how the equipment works and the safety instructions to follow. This instruction manual will be available to personnel at all times.

Before putting the equipment or the actuator into service the following must be taken into consideration:

- check that the welds are properly polished to avoid damaging the PIG,
- check that there are no elements or deformations obstructing the passage of the PIG,
- check that there are no forks that can divert the PIG,
- check that the piping and equipment are completely free of possible traces of welding slag or other foreign particles to avoid damaging the PIG. Clean the system if necessary,
- check that the shaft alignment between the PIG pusher and the actuator shaft allows smooth movement,
- check that the compressed air pressure at the inlet of the actuator matches what is indicated in chapter 9. [Technical Specifications](#),
- consider the quality of the compressed air, according to the specifications described in chapter 9. [Technical Specifications](#),
- check for possible leaks, and make sure the pipes and their connections are sealed and do not have any leaks,
- activate the equipment.

### ATTENTION



Do not modify the operating parameters for which the equipment has been designed without prior written authorisation from INOXPA.

Do not touch the moving parts of the coupling between the actuator and the equipment when the actuator is connected to the compressed air supply.



¡Burn hazard! Do not touch the equipment or pipes when the hot fluids are circulating or when cleaning and/or sterilization are being carried out.

# 7. Operating problems

External leak: the product leaks through the shaft	
Jerky operation of the equipment	
The shaft does not push or retrieve the PIG correctly	
The PIG detectors do not detect it	
Premature wear of the PIG	
POSSIBLE CAUSES	SOLUTIONS
• The main seal is worn or deteriorated	Replace the seals. Replace the seals with ones made of a different material or grade that is more appropriate for the product.
• Seals jamming	Check alignment of the shaft and wear of the seals.
• The actuator does not operate effectively.	Check the compressed air supply pressure Replace with another or repair.
• The bushing is worn or deformed	Replace the bushing. Check shaft alignment.
• Deformation of gasket	Replace the seals with others of different quality, if prematurely deteriorated.
• Incorrect operation of the actuator or worn actuator components.	Check the actuator. Check the compressed air pressure.
• Dirt in the actuator	Clean the actuator.
• The PIG is blocked up	Recover the PIG. Use a detection pen to find the PIG in the installation.
• EI PIG is damaged	Replace the PIG
• The detectors are not working correctly.	Check the connection. Replace the detectors.
• The PIG is driven by the compressed air at high speed and does not give the sensor time to detect it as it passes	Lower the air pressure
• The PIG is driven by compressed air at high speed, creating considerable friction and hammering against the PIG collector	Lower PIG recovery air pressure
• Installation in poor condition: poorly performed welds, dirty pipes, inadequate internal finishing, etc.	Check installation

# 8. Maintenance

## 8.1. GENERAL CONSIDERATIONS

This equipment, just like any other machine, requires maintenance. The instructions in this chapter cover the maintenance of the equipment, the identification and replacement of the spare parts and the disassembly and assembly of the equipment. The instructions are aimed at maintenance personnel and those responsible for the supply of spare parts.



Read carefully the chapter [9. Technical Specifications](#).

Maintenance work should only be done by qualified persons who are trained and equipped with the necessary equipment to perform this kind of work.

All replaced material should be duly disposed or recycled according to the directives in effect in each area.

Make sure that the pipes are not under pressure before starting maintenance work..

## 8.2. MAINTENANCE

To perform maintenance properly is recommended:

- periodic inspection of the equipment and its components,
- keeping an operational record of each equipment writing down any problems,
- always having spare replacement seals and PIG in stock.

Pay special attention to the hazard warnings indicated in this manual during the performance of the maintenance work.



The equipment and the pipes must never be under pressure during maintenance.

⚠ Burn hazard! Do not touch the equipment or the pipes when hot fluids are circulating or when cleaning and/or sterilization are being carried out.

The time interval between each preventive maintenance may vary in accordance with the work conditions to which the equipment is subject: temperature, pressure, number of operations per day, type of cleaning solutions used, etc.

### 8.2.1. Maintenance of the seals

REPLACING SEAL	
Preventive maintenance	Replace after 12 months
Maintenance after a leak	Replace at the end of the process
Planned maintenance	Regularly check the absence of leaks and the smooth operation of the equipment. Keep a record of the equipment's maintenance. Use statistics for planning inspections.
Lubrication	During assembly, apply lubricants that are suitable with the material of which the seat seal is made. See the following table.

SEAL COMPONENT	LUBRICANT	NLGI DIN 51818 Class
HNBR / FPM	klübersynth UH 1 64-2403	3
EPDM / HNBR / FPM	PARALIQ GTE 703	3

### 8.2.2. Storage

The equipments should be stored in a closed area under the following conditions:

- temperature between 15°C y 30°C,
- air humidity < 60%

Storage of the equipment outdoors is NOT allowed.

### 8.2.3. Spare parts

To request spare parts is necessary to indicate the type of equipment, the size, the fabrication number, the position and the description of the part which can be found in chapter 9. [Technical Specifications](#).

## 8.3. CLEANING



The use of aggressive cleaning products such as caustic soda and nitric acid may burn the skin.

Wear rubber gloves during all cleaning procedures.

Always wear protective goggles.

### 8.3.1. CIP (clean-in-place) cleaning

If the equipment is installed in a system with a CIP process, its disassembly will not be required. EPDM, HNBR and VMQ are the standard seals material that will be used for CIP cleaning, both in alkaline mediums and in acid mediums. The materials of the seal NBR and FPM are not recommended.

Two types of solutions can be used for CIP processes:

**a. alkaline solution:** 1% by weight of caustic soda (NaOH) at 70°C (150°F). To make this solution:

1 kg NaOH + 100 l H<sub>2</sub>O<sup>1</sup> = cleaning solution

2,2 l NaOH at 33% + 100 l H<sub>2</sub>O = cleaning solution

**b. acid solution:** 0,5% by weight of nitric acid (HNO<sub>3</sub>) at 70°C (150°F). To make this solution:

0,7 l HNO<sub>3</sub> at 53% + 100 l H<sub>2</sub>O = solución de limpieza

1) only use chlorine-free water to mix with the cleaning agents

#### ATTENTION



Check the concentration of the cleaning solutions. An incorrect concentrations may lead to the deterioration of the equipment seals.

To remove any traces of cleaning products, ALWAYS perform a final rinse with clean water at the end of the cleaning process.



Clean the entire interior and exterior of the equipment before starting disassembly and assembly tasks.

### 8.3.2. Automatic SIP (sterilization-in-place)

Sterilization with steam is applied to all equipment including the pipping.

#### ATTENTION



Do NOT start the equipment during the sterilization with steam.

The parts and the materials will not be damaged if the indications specified in this manual are observed.

No cold fluid can enter the equipment until the temperature of the equipment is lower than 60°C (140°F).

Maximum conditions during the SIP process with steam or superheated water:

- a. maximum temperature: 140°C / 284°F
- b. maximum time: 30 min
- c. cooling: sterile air or inter gas
- d. materials: EPDM, HNBR (the materials NBR and FPM are not recommended)

### 8.4. DISASSEMBLY AND ASSEMBLY OF THE EQUIPMENT

Proceed with caution. Personal injury can occur.

Always disconnect the compressed air before starting any operation to disassembly or assembly the equipment.

Do not touch the moving parts when the actuator is connected to the compressed air supply.



Equipment and actuator assembly and disassembly should only be done by qualified persons.

The shaft and the PIG are magnetised. DO NOT approach magnetic metal elements, as they have a strong magnetic pull. Avoid placing the item on metal tables or benches during handling. DO NOT place it near metal tools or objects that could be attracted by the magnetic field.

Handle the PIG carefully because it is strongly magnetised and may cause hand entrapment.

The following tools are needed in order to disassemble and assemble the equipment:

- 2 mm Allen spanner and two 11 mm spanners for equipment of DN40 to DN50 size,
- 6 mm Allen spanner and two 17 mm spanners for equipment of DN65 to DN100 size.

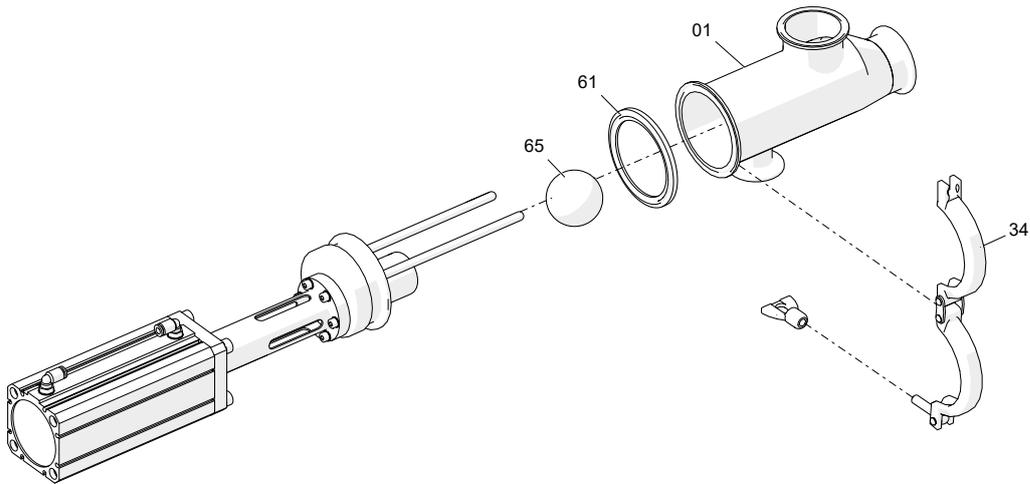
#### 8.4.1. Disassembly

1. Release the compressed air from the actuator (10).
2. Remove the clamp (34).
3. Separate the body (01) and the clamp seal (61) from the equipment.
4. At the launcher station, retrieve and store the PIG (65) which will be attached to the shaft due to the magnetic field.
5. Loosen and remove the screws (23B) and the washers (25B) that joint the actuator (10) to the lantern (66).
6. Separate the equipment shaft (08) from the actuator shaft (10) using two spanners.
7. Loosen and remove the screws (23A) and the washers (25A), then separate the lantern (66) from the body cover (12).
8. Separate the shaft seals (60) and the guide bushing (17) from the body cover (12).

### 8.4.2. Assembly

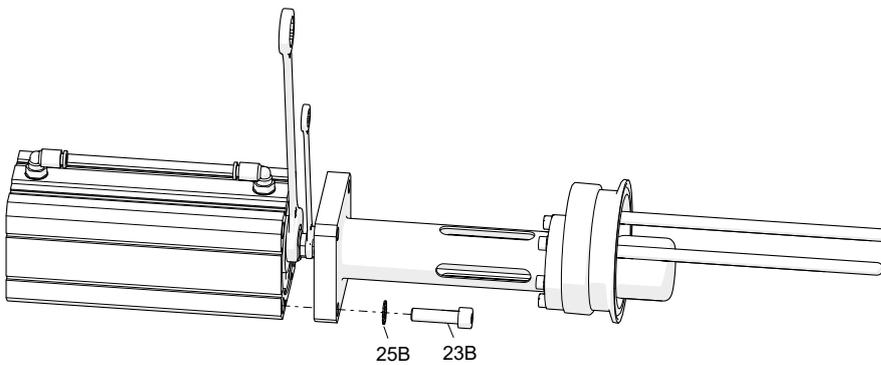
1. Place the seals (60) and the guide bushing (17) on the body cover (12).
2. Mount the lantern on the cover using screws (23A) and washers (25A).
3. Insert the shaft (08) through the hole of the cover body (12).
4. Thread the equipment shaft (08) to the actuator shaft (10). Ensure the thread is secured with Loctite 242.
5. Joint the lantern (66) to the actuator (10) using screws (23B) and washers (25B).
6. At the launcher station, attach the PIG to the shaft carefully.
7. Place the clamp seal (61) on the body cover (12).
8. Place the body (01) and joint the body cover (12) with the clamp (34).
9. Apply compressed air.

1

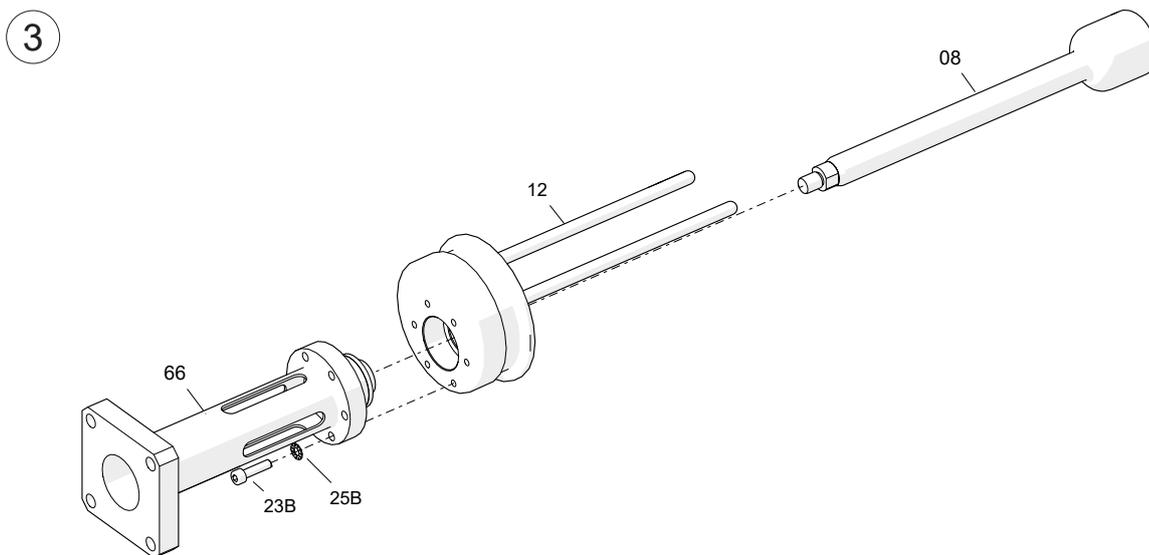


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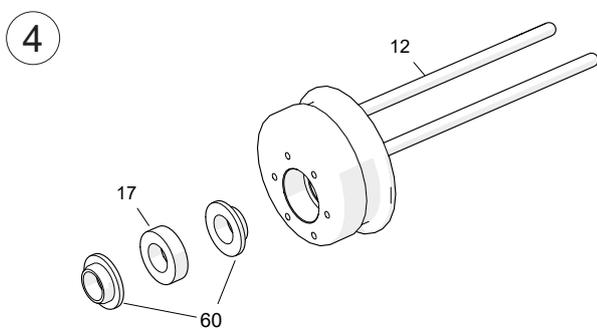
2



13.001.32.0008



13.001.32.0009

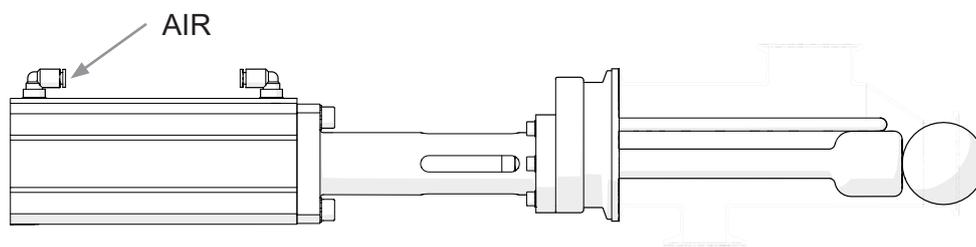


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### 8.5. PIG POSITION

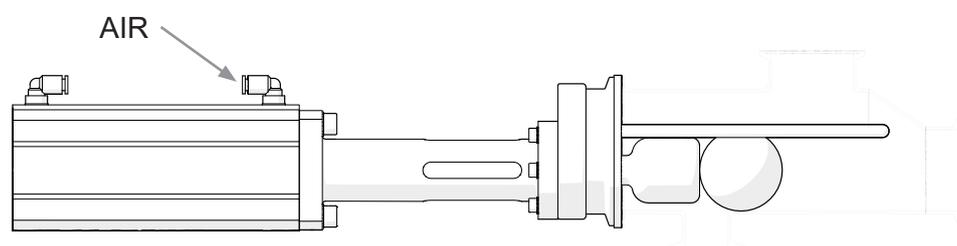
To determine the PIG position during assembly and/or disassembly, observe the shaft position. The following images represent the two possible PIG positions:

1. Push or retrieve position of the PIG: the equipment shaft should be adjusted to this position when introducing the PIG into the piping or when waiting for the PIG.



13.001.32.0012

2. Rest position: when the PIG is inside the equipment body.



13.001.32.0011

# 9. Technical Specifications

## 9.1. EQUIPMENT

Maximum working pressure	1000 kPa (10 bar)
Maximum working temperature	121°C (250°F) EPDM seals (for higher temperatures other grades of seals will be used)
Maximum PIG speed	1 m/s
Recommended pressure to push the PIG	100 kPa - 500 kPa (1 - 5 bar) <sup>1)</sup>

<sup>1)</sup> depending on the product and the working conditions

The maximum admissible flow depends on the equipment size and the viscosity of the fluid driving the PIG.

In case compressed air is used as a driving fluid, it is not recommended to operate with a dry pipe. The admissible compressed air pressure depends on the model, usage conditions and installation conditions. **Starting with 50 kPa is recommended. Then, gradually increase the pressure until reaching the maximum recommended pressure mentioned above.** When there is no product, the PIG return should be done at low pressure. If the driving fluid is compressed air, a return pressure between 50 kPa and 100 kPa (0.5 bar and 1 bar) is recommended.

### ATTENTION



Do not exceed the pressure and speed PIG limits. Overpressure and/or high speed can seriously damage the PIG.

## 9.2. ACTUATOR

Type	Double acting
Compressed air pressure	500 - 700 kPa (5 - 7 bar)
Compressed air quality	per ISO 8573-1:2010: <ul style="list-style-type: none"> <li>- <u>Solid particulate content</u>: quality class 3, max. particle dimension = 5 µ, max particle density = 5 mg/m<sup>3</sup>.</li> <li>- <u>Water content</u>: quality class 4, max. dew point = 2°C. If the equipment is used at a high altitude or under low ambient temperature conditions, the dew point must be adjusted accordingly.</li> <li>- <u>Oil content</u>: quality class 5, preferentially oil free, max. 25 mg oil per 1 m<sup>3</sup> air.</li> </ul>
Compressed air fitting	G 1/8
Continuous working temperature	-10°C - 60°C
Compressed air consumption (litres N/cycle of P <sub>rel</sub> = 6 bar)	

DN40 - DN 50 OD 1½" - OD 2"	DN65 - DN80 OD 2½" - OD 3"	DN100 OD 4"
1,1	2,5	3,7

## 9.3. MATERIALS

Parts in contact with the product	1.4404 (AISI 316L)
Other steel parts	1.4301 (AISI 304)
Seals in contact with the product	EPDM (standard) - FPM
PIG	VMQ (standard) - NBR - EPDM
Internal surface finish	bright polish Ra ≤ 0,8 µm
External surface finish	matt

### 9.4. SIZES AVAILABLES

DIN EN 10357 serie A  
(formerly DIN 11850 series 2)

DN 25 - DN 100

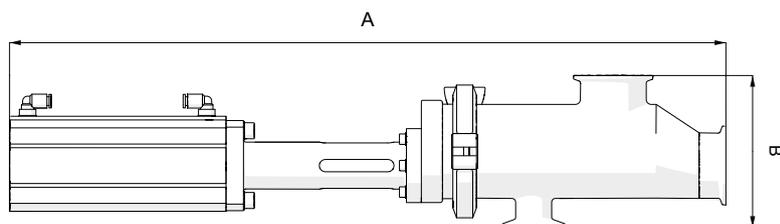
ASTM A269/270  
(corresponds to OD tube)

OD 1" - OD 4"

SMS  
Connections

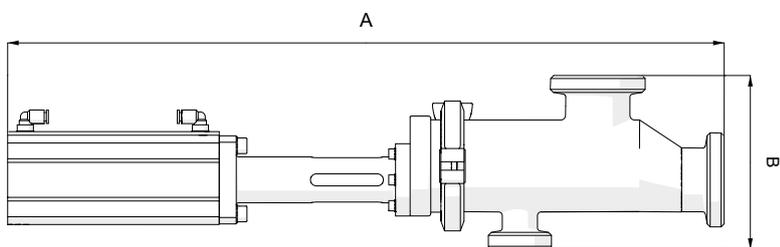
38 - 104  
male, clamp

### 9.5. DIMENSIONS



13.001.32.0015

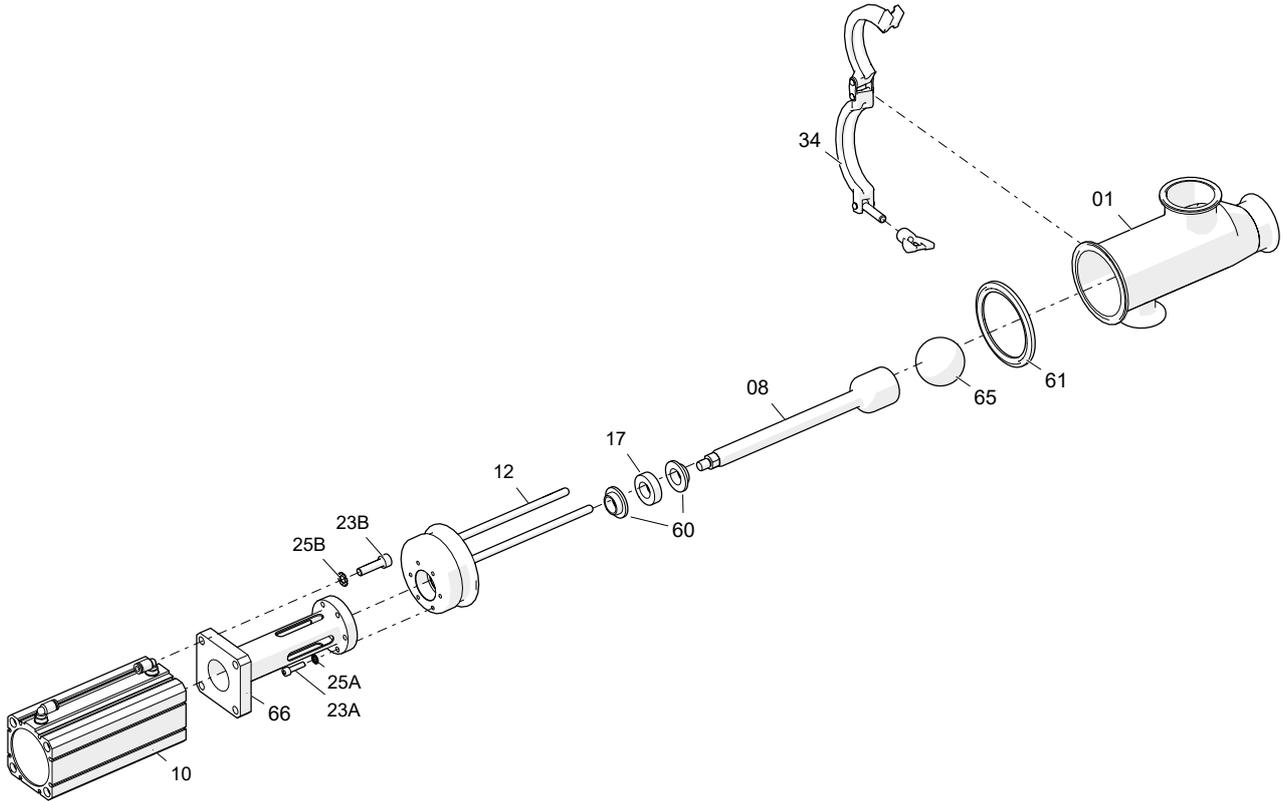
DN	Dimensions [mm]	
	A	B
40	580	125
50	580	125
65	815	170
80	825	170
100	1090	215
1½"	585	140
2"	590	140
2½"	815	180
3"	825	180
4"	1090	220



13.001.32.0017

DN	Dimensions [mm]	
	A	B
40	590	145
50	590	145
65	830	190
80	840	195
100	1115	245
38	580	125
51	580	125
63,5	815	165
76	825	165
104	1095	215

### 9.6. EXPLODED DRAWING AND PARTS LIST OF THE EQUIPMENT



13.001.32.0006

Position	Description	Quantity	Material
01	body	1	1.4404 (AISI 316L)
08	shaft	1	1.4404 (AISI 316L)
10	actuator	1	1.4307 (AISI 304L)
12	body cover	1	1.4404 (AISI 316L)
17	guide bushing <sup>1</sup>	1	PTFE
23A	Allen screw	6	A2
23B	Allen screw	4	A2
25A	washer	6	A2
25B	washer	4	A2
34	clamp	1	1.4301 (AISI 304)
60	shaft seal <sup>1</sup>	2	EPDM - FPM
61	clamp seal <sup>1</sup>	1	EPDM - FPM
65	PIG <sup>2</sup>	1	VMQ - NBR - EPDM
66	lantern		1.4404 (AISI 316L)

1) recommended spare parts  
 2) part not supplied with the equipment



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