



D003991-6
Revision date 15 Jan 2026

Installation, Operation and Maintenance Manual

EVAC Optima 5 Toilet

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1. General

It is important that this manual is reviewed by all relevant personnel and all procedures are fully understood before the installation, operation, and maintenance of the EVAC Optima 5 Toilet. All activities must be completed safely and correctly.

This IOM manual D003991-6 applies to the product numbers below:

Table 1 Product numbers (PN)

EVAC PN	PRODUCT NAME/PRODUCT MODEL
6559513	Evac Optima 5, wall model, Prestige
6559517	Evac Optima 5, wall model, Prestige soft close
6559514	Evac Optima 5, wall model USPH, Prestige
6559518	Evac Optima 5, wall model USPH, Prestige soft close
6559524	Evac Optima 5, wall model USPH, open front
6559515	Evac Optima 5, floor model, Prestige
6559519	Evac Optima 5, floor model, Prestige soft close
6559516	Evac Optima 5, floor model USPH, Prestige
6559520	Evac Optima 5, floor model USPH, Prestige soft close
6559526	Evac Optima 5, floor model USPH, open front
6588204	Evac Optima 5, floor model USPH, no push button (US PN: 5800428)

1.1 Scope

This manual provides instructions and notices for the installation, operation, and maintenance of the EVAC Optima 5 Toilet as supplied by Evac. This manual also includes important safety instructions.

1.2 Abbreviations

Table 2 Abbreviations and definitions

ABBREVIATION	TERM	DESCRIPTION
IOM	Installation, Operation, and Maintenance	It is a manual that contains instructions on the proper installation, operation and maintenance of a system or equipment.
PID	Piping and Instrumentation Diagram	A piping and instrumentation diagram is a detailed diagram of the process which shows the piping and process equipment together with the instrumentation and control devices.
PN	Product Number	Evac Product Number

1.3 Virtual patent marking notice by Evac

The following products may be protected by patents in the U.S. and elsewhere for Evac Oy. A website is provided to satisfy the virtual patent marking provisions of various jurisdictions including the virtual patent marking provisions of the America Invents Act and provide notice under 35 U.S.C. §287(a) for products that are protected by patents. The list of products and patents on the website may not be all inclusive. For example, some products listed may be covered by patents in the United States and elsewhere that are not listed, and other products not listed here may be protected by one or more patents in the United States and elsewhere.

For more info visit: <https://evac.com/patent-notice/>

1.4 References

Table 3 Reference documents

DOCUMENT NAME	DOCUMENT TYPE	DOCUMENT NUMBER
Evac equipment	Storage and preservation information	D002848
Evac Optima 5 Maintenance	Operation	D004058
Evac Optima 5 TROUBLE SHOOTING	Troubleshooting	D004068
Evac Optima 5 wall model, Prestige	Installation	D003606

Each toilet has its own GA drawing, Spare Parts List, Illustrated Parts List and Technical specification, which can be provided on request.

1.5 Product overview

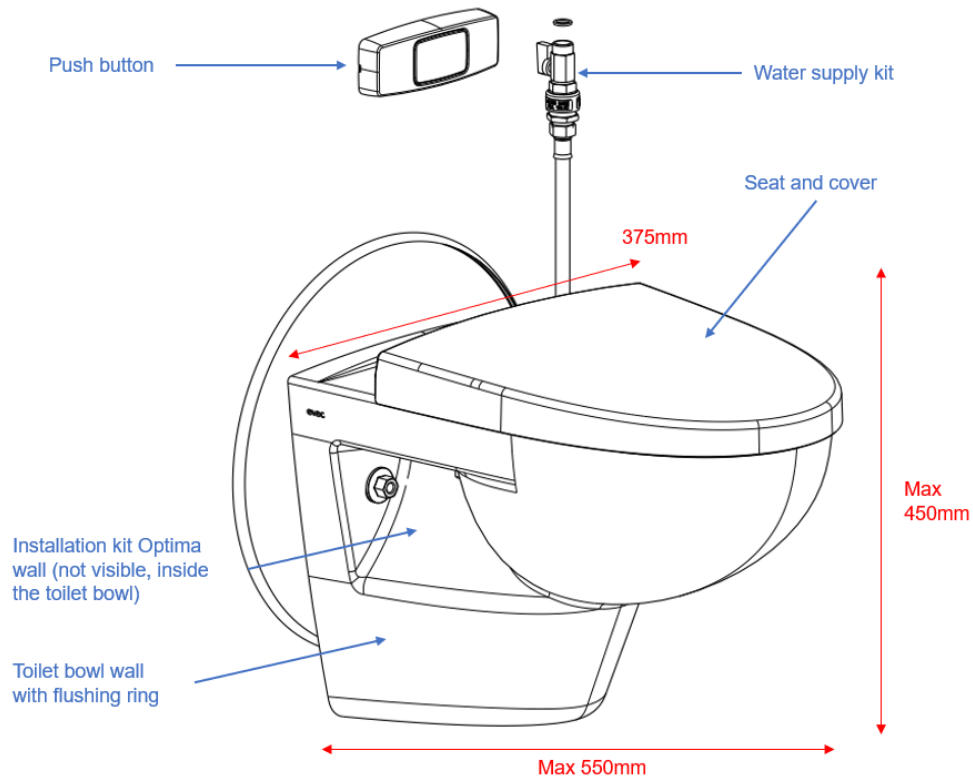


Figure 1: Example of Optima 5 toilet wall model

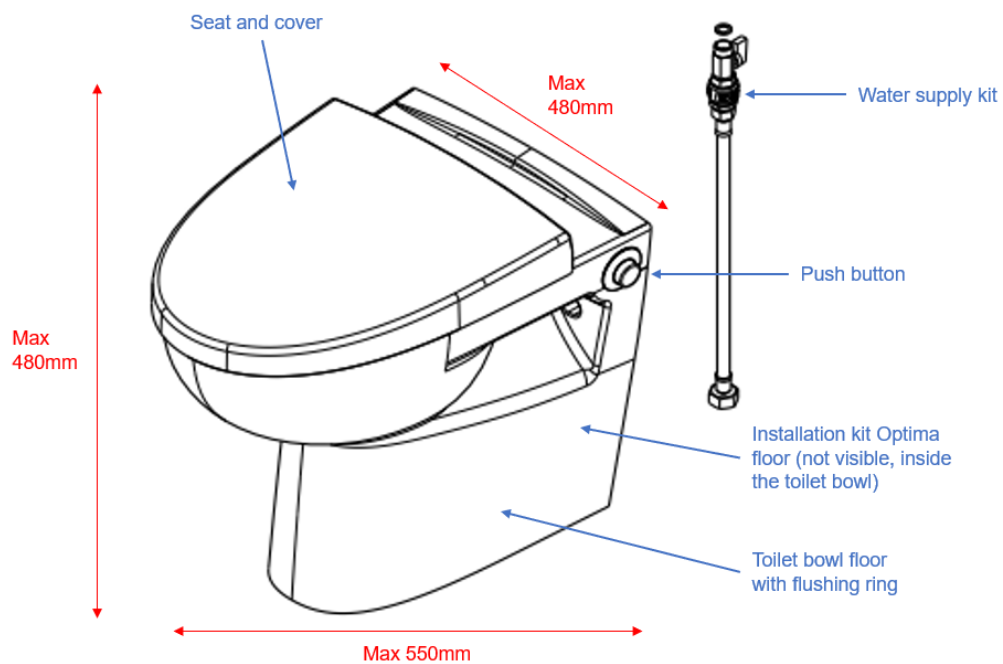


Figure 2: Example of Optima 5 toilet floor model.

1.6 Intended use of the product

The Optima 5 toilets are intended to be used as traditional toilets are used: for the evacuation of human feces, human urine, and other human waste occasionally used in toilets, e.g. vomit, blood. A user interacts with the toilet where human feces and/or urine enter the toilet bowl, and then the user interacts with the button (by pressing it with a finger or with a hand motion if auto flush is used) in order to activate the Optima 5 to conduct a flushing cycle.

1.7 Reasonably foreseeable misuse of the product

The Optima 5 toilet is not intended to be used to evacuate waste/items that are not:

- human feces,
- human urine, or
- human waste that is generally known to be evacuated with traditional toilets occasionally, e.g. vomit, blood.

The Optima 5 toilet is not intended to be used as a toy/game. The Optima 5 toilet is not intended to be flushed unnecessarily. Necessary flushing means flushing human waste and flushing for installment, commissioning, and/or maintenance purposes.

2. Safety procedure

2.1 General

Are pointed out in this manual as follows:



DANGER!

Denotes an imminent danger. If not prevented, death or most severe injuries will be the consequence. The notes indicated by this symbol are given to prevent personal injury. Disregarding these notes may result in serious injury or death.



CAUTION!

Denotes a possibly dangerous situation. If not prevented, slight or minor injuries may be the consequence.



NOTE!

Denotes useful advice and other important information. The notes indicated by this symbol must be treated as general operating information. Disregarding these notes may result in undesirable results or conditions.

These operating instructions contain the procedures to be followed during installation, operation, and maintenance of the equipment. Please keep the manual in a safe and accessible location near the unit. Carefully read these instructions before operating the system. Always comply with the safety instructions listed in this document, the existing shipboard accident prevention regulations and any internal Work Health and Safety rules.

Persons could be endangered and damage to equipment may result if the machinery is not used for the intended purpose. An inadequately trained person and incorrectly performed work may also cause harm.



NOTE!

A first aid kit must always be available.

2.2 Personnel qualification and training

Ensure that all personnel involved in the installation, commissioning, operation, and maintenance of the Evac units are properly qualified and trained to carry out these tasks. Work on the electrical system and electric parts of the Evac supplied equipment must only be carried out by a properly qualified electrician. Lack of personnel's skills and knowledge of the operation instructions can cause risk to life and damage to the equipment. Evac systems must be used according to the following instructions, and only by authorized personnel who are fully aware of the risks involved in the operation of the unit.

Moreover, the operating company has the responsibility to ensure that personnel fully comprehend the contents of the operating instructions.

The Evac unit receives, macerates and discharges sewage waste. Personnel must, always, observe safety regulations while performing maintenance or repairs which carries certain hazards. Every practical safety feature has been incorporated into the design and manufacture of this equipment; however, personnel must be aware of the potential hazards.

2.3 Disease hazard

Sewage is a common mode of transmission for parasitic organisms such as bacteria, fungi, protozoa, viruses, and worms. Some of these may be pathogenic; they can cause serious communicable diseases. Most diseases associated with sewage result from hand-to-mouth transfer of the pathogenic organisms. After coming into contact with sewage or any contaminated equipment items, personnel must thoroughly wash infected areas of themselves with a disinfectant soap solution. This precaution is an absolute requirement before eating, drinking, or performing hand-to-mouth functions. Skin abrasions, punctures or any other wounds require immediate and proper medical attention. Additionally, it must be avoided to perform maintenance work on the Evac units if there are any kinds of wounds on the skin in areas that can get into contact with the wastewater or sludge.

2.4 Chemical hazard

When using chemicals which are hazardous and/or dangerous for ground water or marine biology, it is essential to follow the corresponding regulations and laws regarding hazardous substances and water balance. Such dangerous chemicals are, for example, solvents, cleaning agents, care agents etc.



CAUTION!

ALWAYS refer to official Safety Data Sheets (SDS) provided for hazardous materials when handling chemicals. These must always be provided by the chemical supplier.

2.5 Electrical hazards

Before maintenance is performed on any electrical equipment, disconnect the power supply, and perform electrical lock-out/tag-out (LO/TO) as per local regulations. Prevent the equipment from switching on unexpectedly. Motors must also be labelled "OUT OF SERVICE". Only authorized maintenance personnel must make repairs to this equipment.



CAUTION!

Safety devices may only be opened, dismantled, or removed by authorized personnel and when the machine is standstill, safety secured and isolated.

Evac equipment is supplied with high voltages. The high voltages of the electricity and the available electrical current are dangerous and potentially fatal. To avoid electrical shock, cut the electrical current by placing the main circuit breaker in OFF position. Do this before performing any maintenance work on electrical equipment or motors. Personnel must exercise extreme caution when opening the electrical cabinet door although the main circuit breaker is in OFF position; the terminals of incoming electrical current are still live.

2.6 Hazard during installation

Proper placement can extend equipment lifetime. The equipment is to be installed on a straight and steady base. The unit is to be levelled horizontally. There must be sufficient space reserved around the unit for operation and maintenance. The machine must be anchored securely to the foundation or supporting structure.

Ensure that in case of a leak any surrounding equipment is not damaged. Before installation, operators must be aware of the contents of this manual. Mechanical installation must be completed before any electrical work commences.

Switching the machine on for operational check, trial run, wet testing, etc. may only be performed by skilled electricians performing the electrical connection work.



DANGER!

The combination of water and electricity can be fatal.

2.7 Operation and maintenance hazards

Evac equipment must be operated and maintained by authorized and trained personnel only. All work and modifications to the system must be approved by the manufacturer. Under no circumstances, the equipment power is switched on, or the equipment is pressurized when work is performed. Be aware of the rotating parts of pumps.

Before the start-up of the Evac unit, ensure that no one is in danger. Take all necessary measures to ensure that the Evac unit is used only in a safe and reliable state.

Once per day check the Evac unit for visual and auditory signs of damage and/or defects. In case of abnormalities, damage, or a change in the normal operation of the unit, stop the unit immediately and refer to the troubleshooting section. In case the ship's crew is unable to bring the system to its normal operation, please contact Evac service representative.

The electrical parts of the unit must be inspected at regular intervals. Defects such as loose connections or scorched cables must be repaired without delay. Inspection, servicing, and maintenance work is only allowed to be carried out when the machine is at standstill and safety secured. Ensure that the unit is completely switched off before any maintenance and repair work is undertaken.

Restart is only permitted after malfunctions, faults and/or damages have been completely rectified. Never use the Emergency-Stop push button for normal stopping of the machine, malfunctions/damages may be the result.



CAUTION!

Before starting up, ensure that no unauthorized persons are close to the machine, either working on it or at risk from its start-up.

2.8 Disposal and environmental protection

The operator is responsible for disposing of materials which result from maintenance. This may involve wastewater and solid residue, cleaning and care agents, auxiliary material, lubricants, and other waste materials of all sorts, including worn machine components.

Disposal must be performed according to local legislation for protection of emissions, waste disposal, protection of water resources, etc.

2.9 Evac component nameplates and tag numbering

All Evac units and components are identified and marked according to the SFI Group numbering system. Marking equipment and pipes is of the utmost importance to safety at all times. Accidents, injuries and damage to machines and equipment can be caused by ignorance of substances that flow through pipes. Do not remove component tag plates during maintenance and if removed they must be attached back to the correct place after maintenance work. The nameplates with equipment tag number, label plates, caution plates, marking notice boards, instruction plates, safety markings etc. are supplied by Evac and engraved with letters in the English language.

2.10 Handling during transport and installation

No lifting apparatus is needed due to low weight.

Place hands and arms around main bowl appropriately to ensure proper handling during installation to wall.

2.11 Noise emission

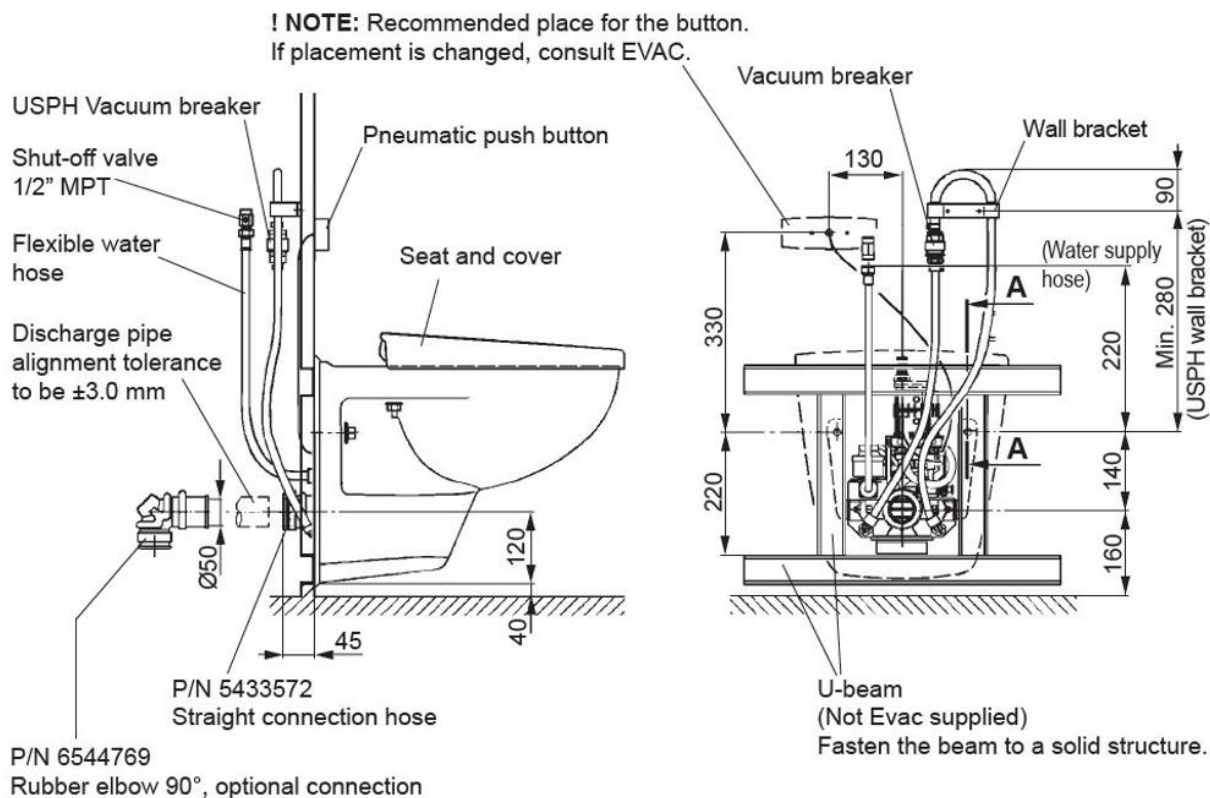
The A-weighted emission sound pressure level at the workstation is **79 dB(A)**.

The peak C-weighted instantaneous sound pressure level does not exceed **130 dB(C)**.

3. Installation

This chapter provides an understanding of the product installation.

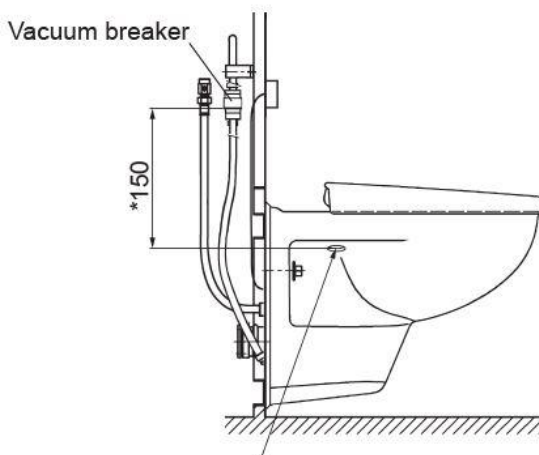
3.1 EVAC Optima 5



NOTE!

If the installation location does not have a floor drain adjacent a water block (6588256) is strongly recommended to be installed in the water inlet.

Overflow point:



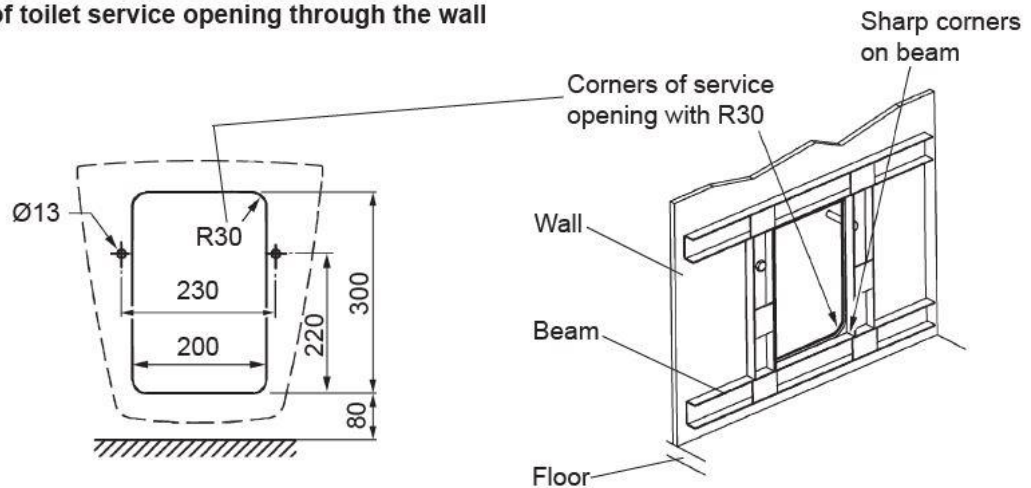


NOTE!

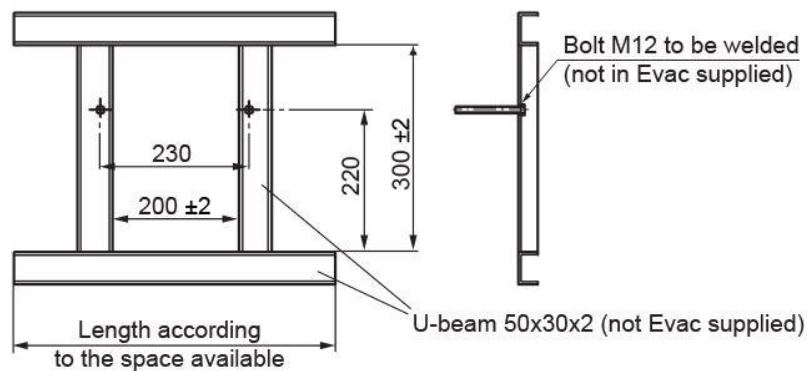
Overflow point is inside the toilet bowl.

* The vacuum breaker air inlet must be located at a minimum of 150 mm (6") above the overflow point of the toilet.

Dimensions of toilet service opening through the wall

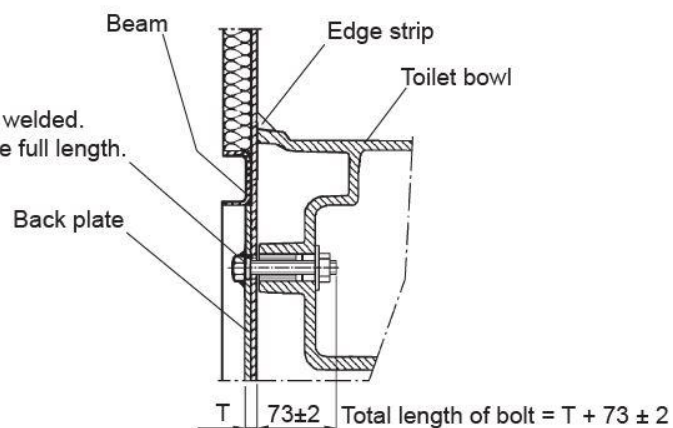


Toilet supporting beams for wall models



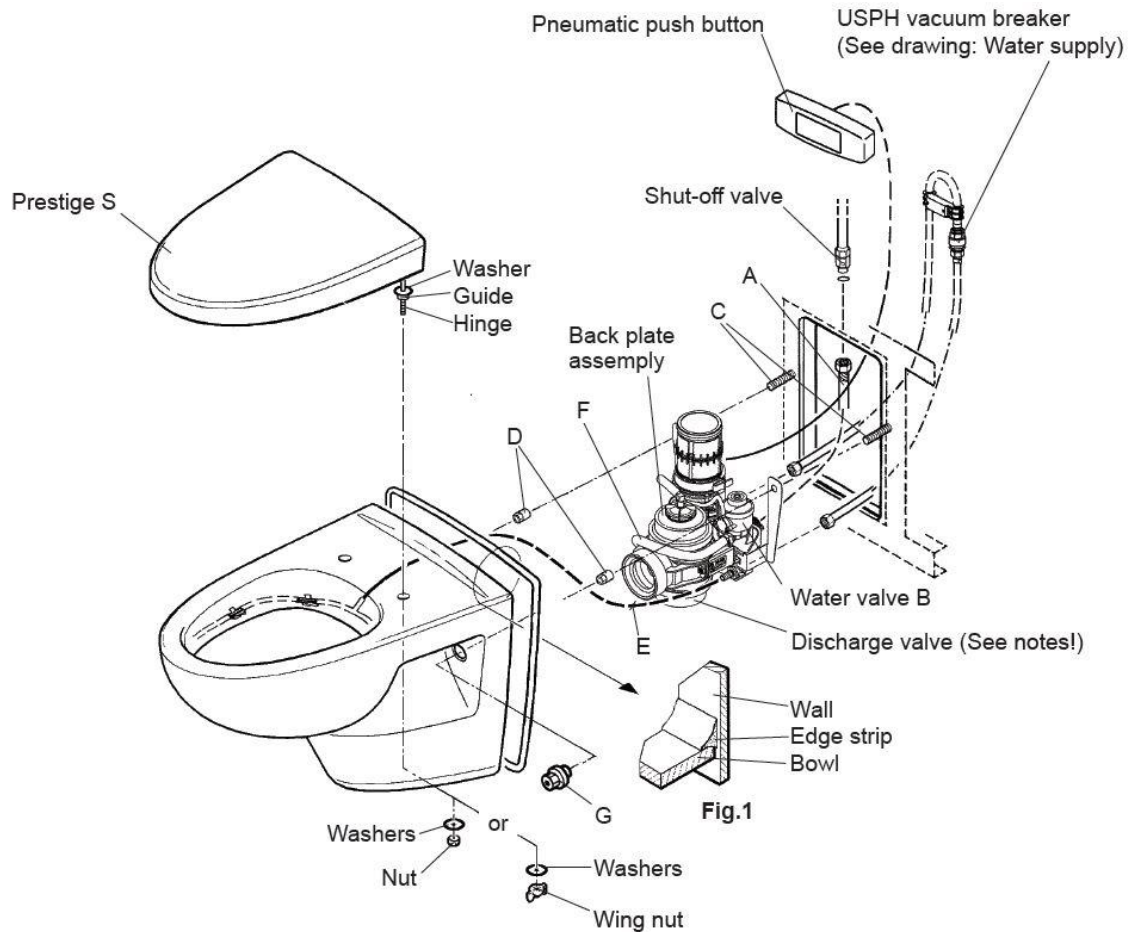
Cross section A - A

Bolt M12 (not Evac supplied) to be welded.
! NOTE: Thread on the bolt must be full length.



Installation kit P/N 6560986 consists of:

Plastic nut M12	2 pcs
Guiding nut	2 pcs
Edge strip	1 pc
Connection sleeve	1 pc
Hose clamp	2 pcs



- Connect the water connection hose (A) to the water valve (B).
- Install the back plate assembly on the wall using the bowl fastening bolts (C) (M12, not included) and the guiding nuts (D) (M12). The guiding nuts are necessary.
- Connect the hose (E) from the flushing ring to the connecting nipple on the back plate (see drawing: Water supply). Do not use any kind of grease during installation! Secure with hose clamps. Tighten the hose clamps with pliers.



NOTE!

Protect the water valve (B) during and after installation, especially from sharp objects / welding sparks.



NOTE!

Install the hose (E) to the right side of the discharge valve and below the hose (F).

- Lift the bowl onto the fastening bolts and tighten the securing nuts (G). Tightening torque is 10 Nm.

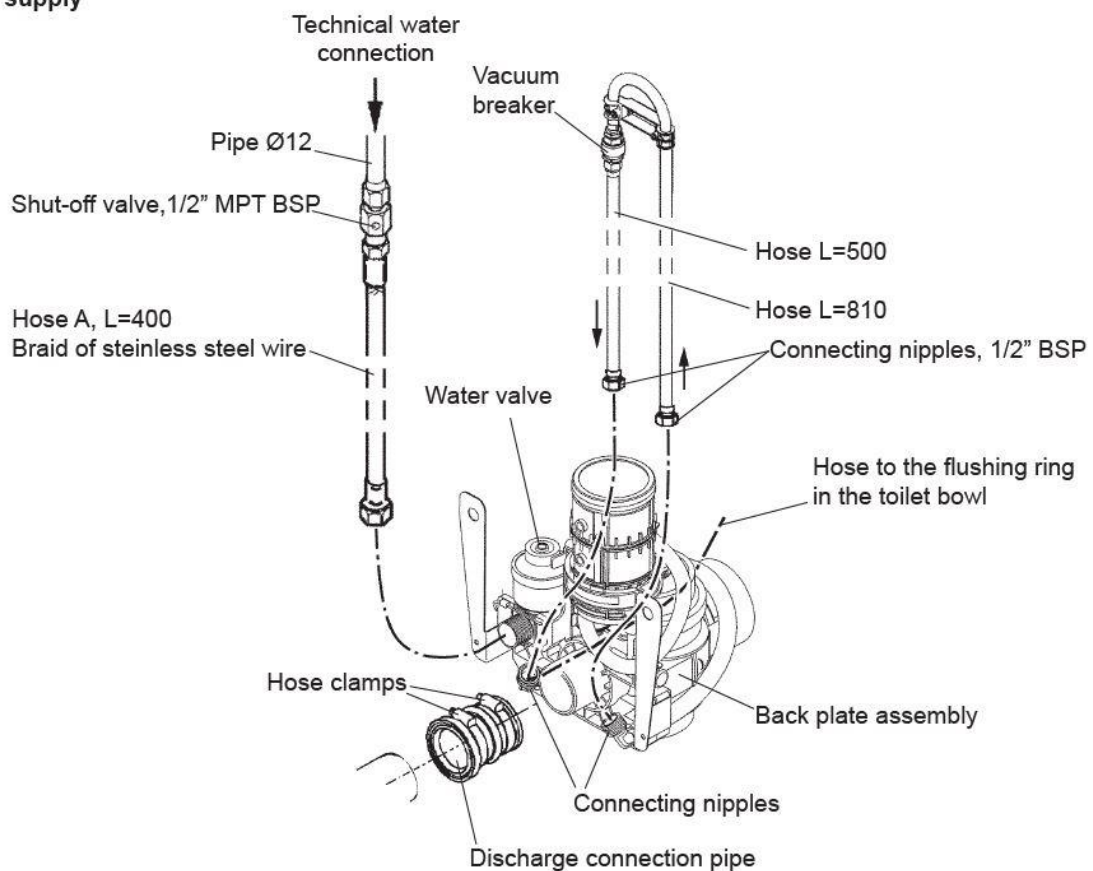


NOTE!

Check through the toilet service opening in the wall that the hoses run smoothly. The hoses shall not have any kinks.

- Fit the edge strip as shown in the figure 1. Place the joint of the strip to the bottom side of the bowl.
- Install the seat and the cover. See the installation of the seat and cover Prestige Soft Close.
- Connect the USPH vacuum breaker to the connecting nipples of the back plate (see drawing: Water supply).
- Fix the USPH vacuum breaker to the wall.
- Connect the discharge connection pipe. Secure with the hose clamps.
- Connect the shut-off valve to the water supply. The shut-off valve must be installed to the water supply piping's side to ensure the correct flow direction in the vacuum breaker. Note the vacuum breaker must be installed vertically as shown.
- Connect the water connection hose (A) to the shut-off valve.
- Install the pneumatic push button.

Water supply



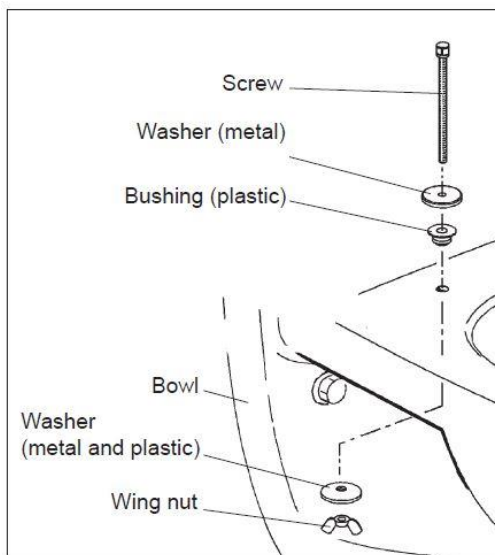
NOTE!

For non-U.S. flag vessels

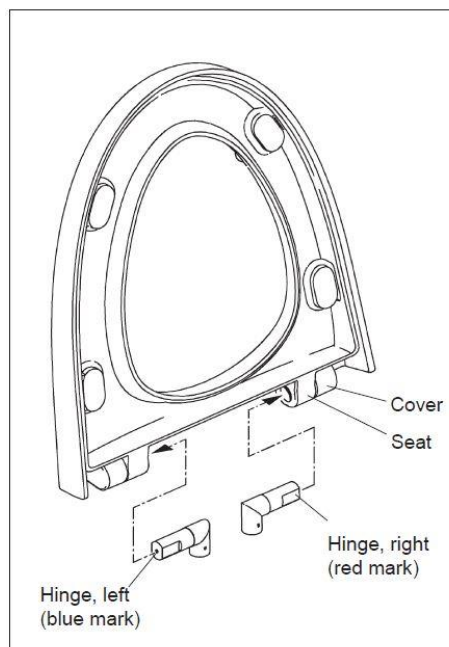
3.2 Toilet seat and cover products

This chapter reviews the installation of the Prestige soft closing, seat, and cover AM (N10006302) & Prestige plus soft closing, seat, and cover (6593661).

- 1) Install the parts of the installation kit. Note installation order.



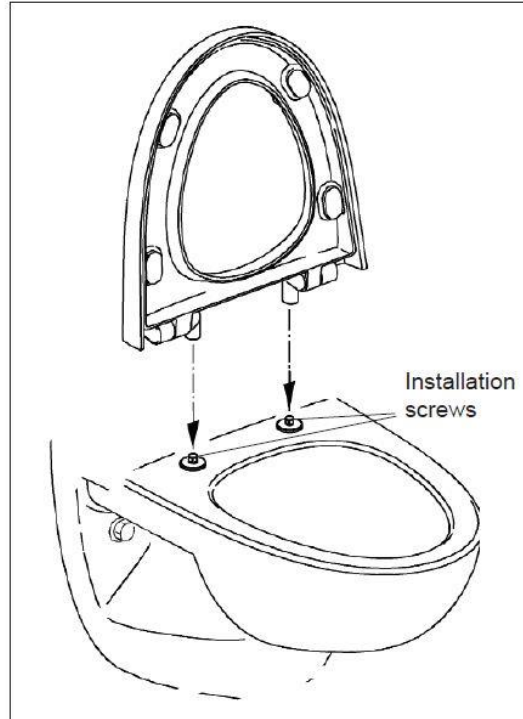
- 2) Push the hinges into the hole of the seat and the cover.



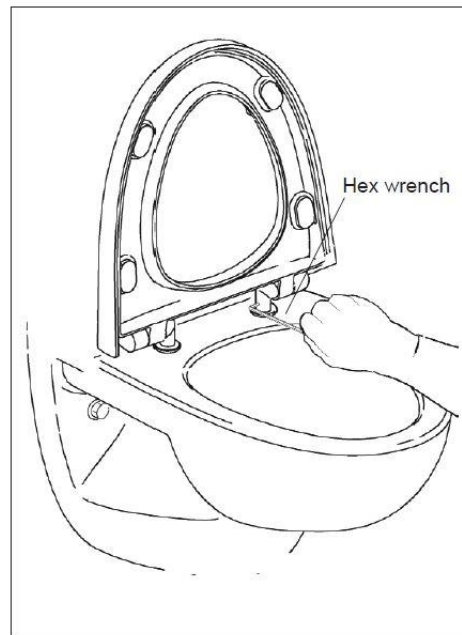
NOTE!

Do not open the seat (with the hinges inserted) hinges before assembly. The opening angle must not exceed 110°.

- 3) Install the seat and the cover with the hinges on the installation screws on the bowl.



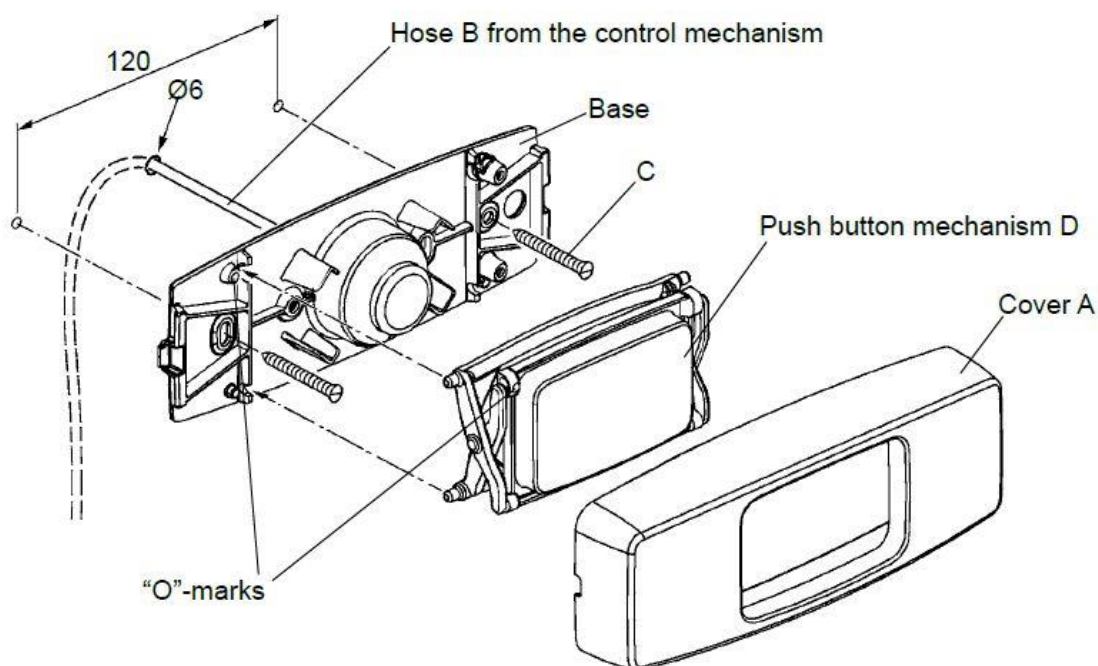
- 4) Tighten the retaining screws with a hex wrench. (The installation kit includes two hex wrenches.)



NOTE!
 Do not use excessive force.

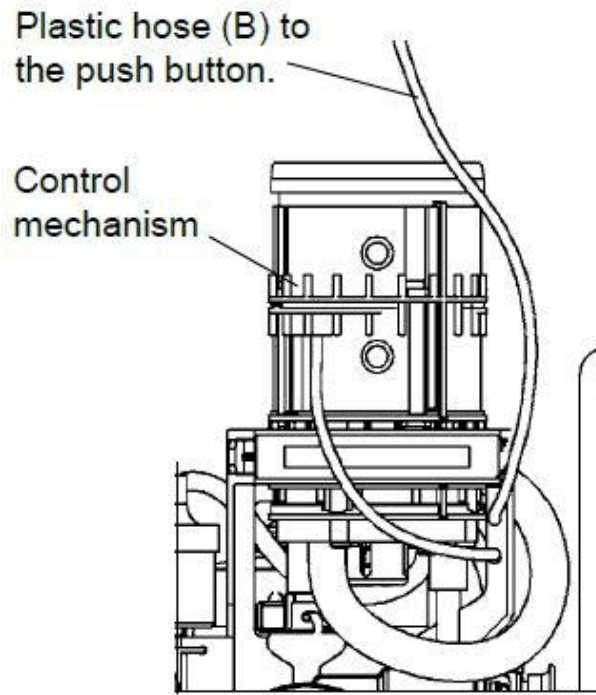
Do not use excessive force when closing, this may cause irreparable damage to the device.

3.3 Optima push button



- 5) Drill Ø6 hole for the hose (B).
- 6) Loose the cover A from the base.
- 7) Connect the plastic hose (B) from the control mechanism to the nipple of the base. Warm the end of the hose if needed to help installation.
- 8) Install the push button base using screws (C) (not included) on to the wall.
- 9) Place the push button mechanism (D). Note "O"-marks.
- 10) Snap the cover (A) its place.

3.3.1 Control mechanism



NOTE!

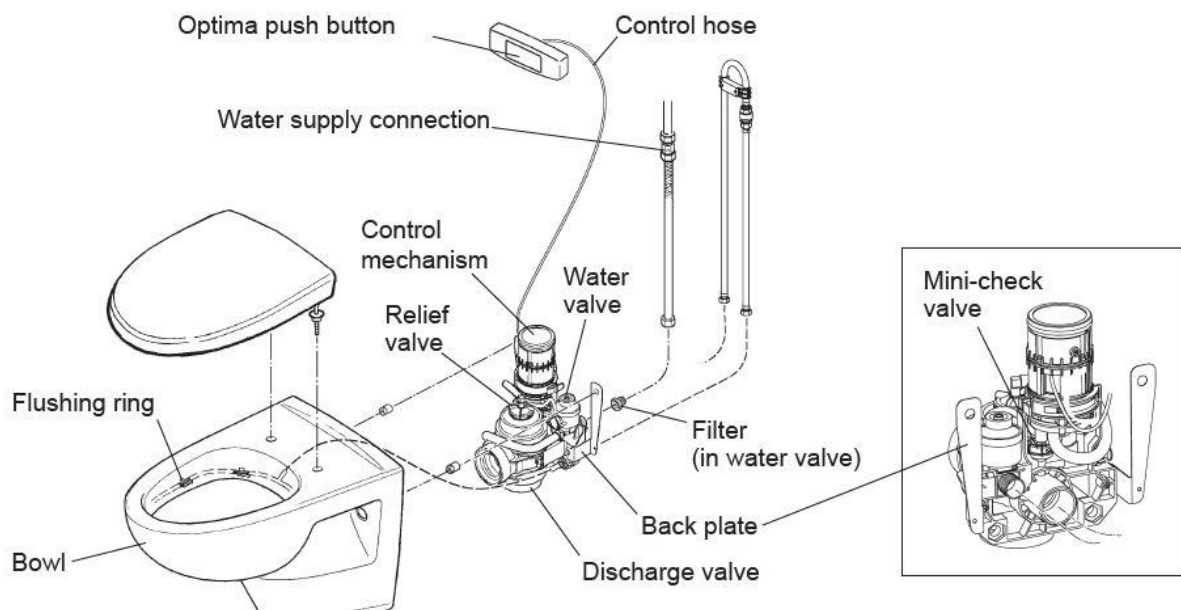
Note that the hose (B) is not flattened during installation. The air impulse must always flow free.

Make sure that the plastic hose is not detached from the control mechanism.

4. Operation

This chapter describes the operation of the EVAC Optima 5 Toilet unit. These instructions are to be thoroughly studied and understood by the operators prior to commencing operation of the unit.

4.1 Operation



The toilet is flushed by pressing the push button. The pneumatic push button is connected to the control mechanism with a control hose, which transports the air pulse from the push button to the control mechanism. The air pulse starts the flushing sequence, and the control mechanism connects vacuum to the control connections of the water valve and the discharge valve. The water valve opens and lets rinsing water flow into the bowl through the flushing ring. After a short delay vacuum acts in discharge valve housing and forces the rubber diaphragm in discharge valve to open. Contents of the bowl is drained to the vacuum sewer by a pressure difference between the bowl and vacuum sewer. The flushing cycle in the control mechanism starts the closing cycle. Vacuum enters to the relief valve. The relief valve opens the port between atmospheric air and the discharge valve. Atmospheric air enters to the discharge valve which closes immediately. After a short delay, the atmospheric air pulse reaches to the water valve and the relief valve. The water valve closes and lets a certain level of water at the bottom in the bowl.

After the flushing cycle has stopped the push button and the system will be ready for the next flush.

There is a very rare risk that if some valves/springs in the VT controller are not adequate, and if the system has low vacuum at around -0.3 bar, then there is a possibility that the water valve could flush, and the discharge valve could stay closed. This could possibly cause overflow into the bathroom area if the toilet were flushed several times at this low vacuum level.

However, this possibility is extremely low, and the risk is mitigated by high quality control processes.

4.2 Operation for Control mechanism

The functioning of the vacuum toilet/urinal is entirely controlled by the control mechanism. The operation of the control mechanism is based on vacuum in the sewage piping system.

Description of flushing sequence see document 003930-3.

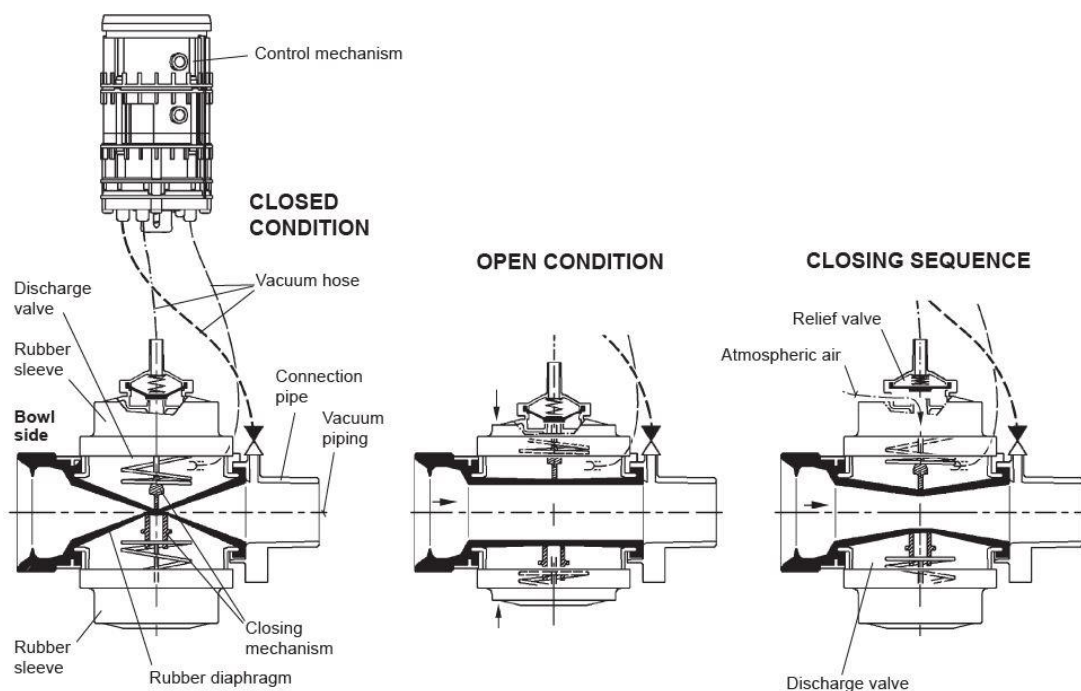
Jet 1 (document D003930-3, pos.5) controls the discharge valve opening time.

Jet 2 (document D003930-3, pos.4) counters the effect of quick changes in the vacuum supply.

Jet 3 (document D003930-3, pos.15) delays the vacuum changes in the chamber (14) (see document 003930-3).

This prevents a new flushing procedure to start before the previous procedure has stopped.

4.3 Operation for Discharge valve



Closed condition:

The control mechanism shuts off connection between the vacuum piping and the discharge valve housing. As the valve housing is under atmospheric pressure the spring-loaded closing mechanism closes the rubber diaphragm and isolates the bowl from the vacuum piping.

Open condition:

As the control mechanism opens the discharge valve, the housing is subjected to vacuum, thus forcing the closing mechanism to open. This in turn allows the rubber diaphragm to open and connects the bowl to the vacuum pipeline.

Closing sequence:

The vacuum pulse enters to the relief valve. The relief valve opens the port between atmospheric air and the discharge valve. Atmospheric air enters to the discharge valve which closes immediately. After a short delay, the atmospheric air pulse reaches to the water valve and the relief valve.

4.4 Start-up

- Clean the bottom of the toilet bowl.
- Check the mini-check valve and the discharge valve are clean and working correctly.
- Check the water supply hose and the filter of the water valve are not blocked up.
- Check sufficient vacuum (-0.3 bar) is available.
- Open the water supply valve in the water supply piping.
- Press the toilet push button. Pressing the button starts the flushing sequence. The discharge valve opens and the contents of the bowl are extracted by vacuum. At the same time the bowl is rinsed by water.
- When the discharge valve has been closed water level is restored in the bowl by the closing time delay of the water valve.

4.5 Monitoring

- Check the water valve provides the rinse water to the bowl at the same time as the discharge valve extracts the bowl contents when the push button is pressed.
- Check the push button returns to its non-activated state.
- Check after the discharge valve closes, the water valve continues to provide water to the bowl. If the water valve time delay is correctly adjusted, there should be a pool of water at the bottom of the bowl.
- Check there are no water or air leaks.



NOTE!

Water consumption is dependent on the water supply pressure and the vacuum level.

Preparation for a toilet not to be used for a long period:

- Close the water supply valve.
- Run a flush cycle by pressing the push button.
- Close the toilet seat cover.

5. Maintenance

The EVAC Optima 5 Toilet needs to be serviced at regular intervals according to the operating and maintenance instructions to guarantee reliable functionality over a long period of time. Therefore, these maintenance instructions must always be available and followed by operators and maintenance staff. By doing these preventive actions, trouble free operation is guaranteed.

5.1 Preparation for maintenance

5.1.1 Isolation, draining and vacuum release

Prior to undertaking any maintenance work, the unit must be shut down, isolated from the process as well as the power supply, the vacuum in the system released and the unit drained.

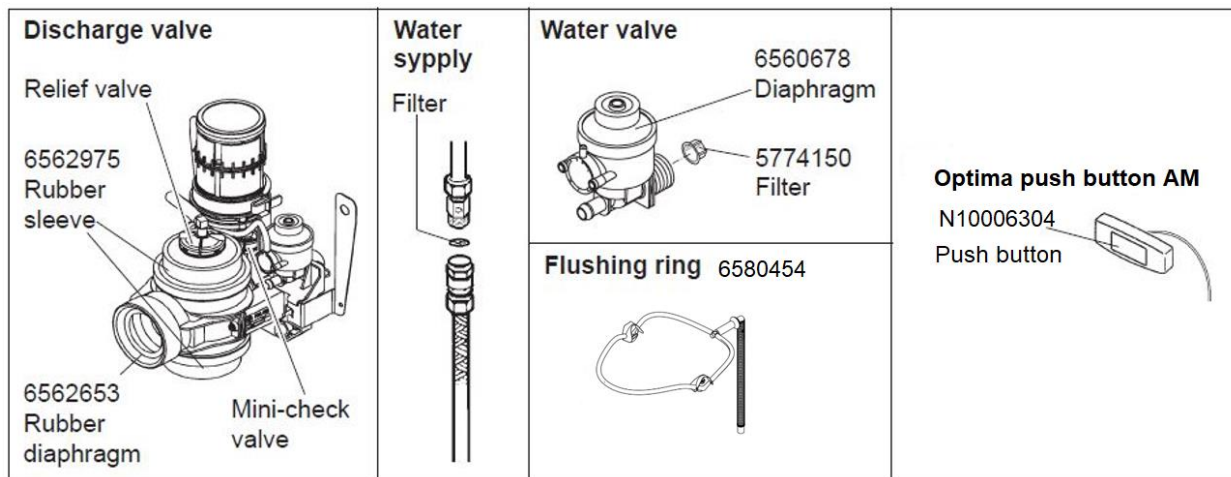
Mechanical, electrical isolation, vacuum release, draining must be describe here under subchapters if it is applicable to the system/product.

5.2 Maintenance schedule

Maintenance program is based on 20 toilet flushes per day and 20 years operation.

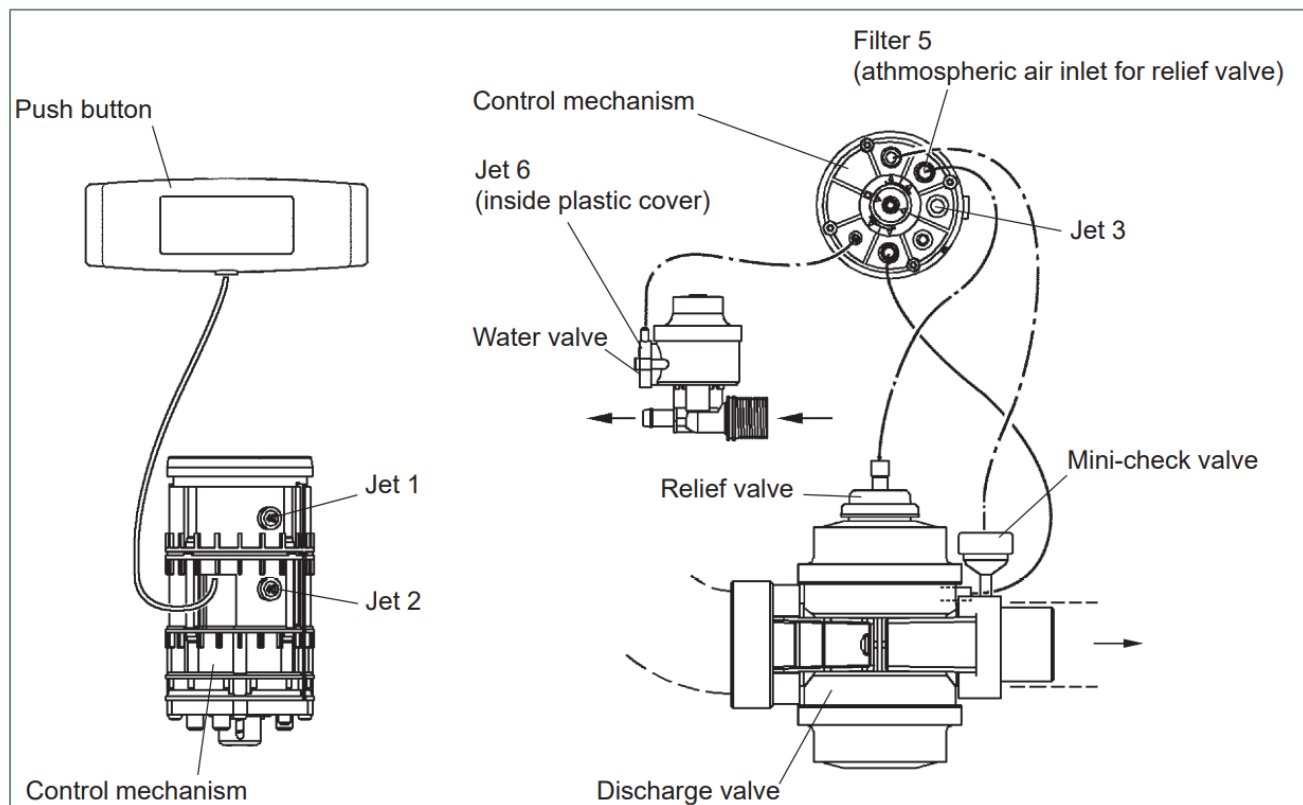
Table 4: Scheduled maintenance

PERIOD	TASKS	INSTRUCTIONS IN CHAPTER
Every year	Change the flap of the mini-check valve in every toilet. Check operation, the push button, the seat and cover, rinse pattern, discharge pattern. Check possible water and vacuum leakage. Clean the filter (not in USPH models) in the water supply.	
Every 5 years	Open and clean the filter (5774150) of the water valve. Check the flushing ring and flushing operation.	
Every 10 years	Change the rubber sleeve (6562975, 2 pcs) and the rubber diaphragm (6562653) of the discharge valve and the diaphragm (6543134) of the relief valve. Change the water valve (6560680). Change the bowl securing nuts (5990759, 2 pcs, wall models).	



NOTE!
 Use only genuine Evac spare parts.

5.3 Maintenance for Control Mechanism



Check that the air filter (5) is not blocked.
 Check hoses and pipe connections for leaks.

Toilet discharge time

Jet 1 Short discharge period Red jet 1.5 sec.
 Normal discharge period Blue jet 2.0 sec.
 Longer discharge period White jet 2.5 sec.
 Less restriction shortens the time

Water valve opening time

Jet 6 Normal bowl water level White jet
 Low bowl water level Blue jet

5.3.1 Cleaning instruction

- The seat is easy to clean, with just a few simple directions for you to observe.
- Use a mild soap solution or biological cleaners.
- Seat and hinges should not be left damp but be dried with a soft cloth.
- When using abrasive, corrosive, or chlorine-based cleaners for the bowl, avoid contact with the seat and hinges. Therefore, when cleaning the bowl, make sure that seat and cover are in an upright position until all the cleaner has been flushed away.

5.4 Toilet seat and cover products

This chapter reviews the installation of the Prestige soft closing, seat, and cover AM (N10006302) & Prestige plus soft closing, seat, and cover (6593661).

The seat is easy to clean, with just a few simple directions for you to observe.

- Use mild soap solution or biological cleaners.
- Rinse the seat and cover and the hinges with water and dry with a soft cloth.
- Do not use abrasive scouring powders for the seat, cover and hinges.
- Be careful with chemicals and cosmetics. Some of them may damage the seat.
- When you use abrasive, corrosive, or chlorine-based cleaners for the bowl, avoid contact with the seat, cover and hinges. Therefore, when you clean the bowl and flush cleaner away, make sure that the seat and the cover are in an upright position.

5.5 Troubleshooting

Table 5: Troubleshooting table

PROBLEM	POSSIBLE CAUSE	SOLUTION
Toilet is discharging continuously (discharge valve open).	Foreign object in bowl or in discharge valve.	Shut off the problematic branch line valve.
	Blocked air relief tubing.	Remove foreign object.
	Quick relief valve malfunction	Change discharge valve.
		Check and if necessary change control mechanism.
Bowl does not become empty when flushed	Discharge valve blocked.	Check relief valve operation.
	Leak in discharge valve housing.	Clear stoppage, if any, in discharge valve.
	Discharge pipe blocked.	Sharp tools may damage rubber.
	Rubber sleeves leaking.	Check that rubber sleeves are undamaged and correctly fitted.
No water or too little rinsing water.	Water shut-off valve closed.	Check relief valve operation.
	No water pressure.	Open valve.
	Filter full or dirt in water valve.	Provide water pressure.
	Flush ring loose.	Clean filter.
	Flush ring clogged.	Connect flushing ring.
	Filter blocked up in water supply.	Clean flushing ring.
Toilet is overflowing.	Water valve jammed in open position.	Clean filter.
	Bowl clogged or discharge valve not operating.	Close water shut-off valve.
	Misuse (buckets of water thrown in the bowl).	Clean / change water valve nozzles, springs, rubbers.
	Too low vacuum (less than 30kPa) to flush.	Discharge bowl, valve and piping with normally flushing.
Toilet does not flush.	No vacuum or low vacuum (less than 30 kPa).	Check vacuum level, remove blockage in piping.
	Clogged mini-check valve.	Clean / change mini-check valve.
	No impulse from push button.	Check hoses and membrane of push button.
	Jammed control mechanism.	Change control mechanism.
	Jammed quick relief valve.	Check air filter condition. It should be place.
		Check relief valve operation.

5.6 Storage and preservation

5.6.1 Short term preservation instructions

- All manual valves must be closed, and all open pipe ends etc. must be covered.
- The entire package unit must be covered by a waterproof overlapping material.
- The bottom edges of all waterproof covers must be left open and sufficient ventilation must be provided to prevent condensation under the coverings.



NOTE!

If the package unit is stored inside a covered storehouse, waterproof covers are not required, but the entire plant must be protected against dust with a lightweight covering.

5.6.2 Long term preservation instructions

- Inspect and list any damage to the equipment.
- Check that dust blinds are fitted on nozzles in and out from skids on single items of equipment and on free pipe ends and ducts.
- Check that painted and machined surfaces, which should be coated with a rust preventive wax or oil are maintained.
- Check that the protective covers are maintained.
- Sensitive equipment must be stored indoor in heated and humidity-controlled storage areas.
- All in/outlets from units/skids shall be plugged/blanked. Flanges shall be blanked with oil resistant rubber gaskets and steel or water-resistant plywood plate with 4 off galvanized bolts sufficient to provide mechanical protection and water/dust tight sealing.
- Threaded openings shall have metal plugs of metallurgy equal to the component being capped or plugged. If the IP rating is maintained, plastic plugs are acceptable for non-hydraulic/pneumatic systems.
- Flush through system with preservation medium. Drain out ensuring that no water is trapped in the system.
- All exposed unpainted-machined surfaces shall be coated with rust preventive wax.
- Aluminium sheeted glass fibre cloth shall be used to envelop pressure gauges, panels, junction boxes, instruments, pushbuttons, and connection boxes.
- Apply a thin layer of acid free Vaseline or equivalent to elastomer parts.
- All ball valves shall be locked in the open position.
- All exposed valves' spindles shall be covered with grease tape, PTFE lubricant or vulcanizing tape, or equal.
- General clean up routine and good housekeeping is a prerequisite for successful execution of preservation.
- Desiccative material shall not be in direct contact with metallic surfaces.

5.6.3 Special instructions for instrument equipment

- Instrument equipment containing electronics must be protected with desiccant or a vapor corrosion inhibitor.
- Gaskets / O-rings on instrument equipment must be greased with acid free Vaseline or equivalent.
- All non-terminated cable ends shall be fitted with a shrinking shroud.
- All spare cable entrances in panels and boxes must be plugged.

6. Customer support and warranty

6.1 Customer support

6.1.1 Web site access

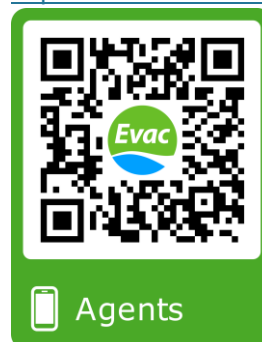
Evac Service web site:

<http://www.evac.com/services>



Evac Agents and distributors:

<http://www.evac.com/contactsearchtool>



6.1.2 E-mail requests

All requests for After-Sales Service intervention must be sent to the following email address:

Technical support:

evac.technicalsupport@evac.com

@ tech. support



Specifying:

- Type of unit
- Serial no.
- Defect found
- Evac part number
- Vessel name and /or IMO number.

Replacement parts:

evac.spareparts@evac.com

@ spare parts



Specifying:

- Type of unit
- Serial no.
- Evac part number
- Required quantity
- Manner of transport
- Vessel name and /or IMO number.

6.2 Warranty and liability

6.2.1 Warranty



Warranties are defined in the general terms and conditions of sale.
evac.warranty@evac.com

6.2.2 Liability

Evac cannot be held liable for operation faults or generic failures caused by improper use of the unit or operations carried out by persons not authorized by Evac.

Revision history

REV	DESCRIPTION	AUTHOR	APPROVER	DATE
1	First release			25 Sep 2015
2	Second release with updates			03 Apr 2020
3	Move data to new template	Aurel Gherghescu	Lauri Aalto	28 Apr 2021
4	Updated a pushbutton number and corrected folder structure	Sanna Renkonen	Jari Korpijärvi	1 June 2022
5	Move data to new template	Thibaut Reuchet	Jari Korpijärvi	08 Jan 2024
6	Chapter 1, 2 & 4 have been updated	Andrii Kalyta	Samuel Moy	15 Jan 2026



Evac is the world's leading provider of integrated water and waste management systems, as well as corrosion-protection systems for the marine, offshore, and building industries. With offices in 14 countries across four continents and representatives in more than 70 countries, we are close to our customers wherever they are. We contribute to a better environment and cleaner seas by helping our customers eliminate waste, conserve water, and mitigate emissions. Our ambitious target is to enable a future with no waste.

Read more about our solutions
[evac.com](https://www.evac.com)

evac
 nothing to waste

Innovative water and waste technologies on land and sea driving a future with no waste.

Evac Oy
 Linnoitustie 6
 02600 Espoo, Finland

EU DECLARATION OF CONFORMITY

According to Directive 2006/42/EC (Machinery Directive)

1. Manufacturer

Name:

Evac Oy

Address:

Linnoitustie 6

02600 Espoo, Finland

Country:

Finland

2. Product

Product name:

Optima 5 Wall Toilet

Product number(s):

6559513 and 6559517

Description:

The Optima 5 wall toilet is a vacuum toilet bowl with a push button and backplate assembly to be mounted on a wall/ toilet wall frame. The backplate assembly consists of a discharge valve, a water valve, and a VT controller. The backplate assembly can open and close the valves for a limited time so that when the push button is pressed by the user, the human waste is evacuated via vacuum pressure into the vacuum network and also water is released into the bowl. The vacuum piping network is not in the scope of the Optima 5 product.

3. Directives and Regulations Applied

- Directive 2006/42/EC – Machinery Directive

4. Harmonised Standards (where applicable)

5. Additional Information

The machinery complies with the relevant Essential Health and Safety Requirements of the legislation listed above.

6. Person Authorised to Compile the Technical File

Name:

Samuel Moy

Address:

Linnoitustie 6

02600 Espoo, Finland

7. Declaration

I hereby declare that the machinery described above complies with the relevant Union legislation.

Place and date:

Finland, 30 December, 2025

Name:

Jari Pudas

Function:

Product Line Manager

Signature:

A handwritten signature in black ink, appearing to be 'JP' or similar, written in a cursive style.