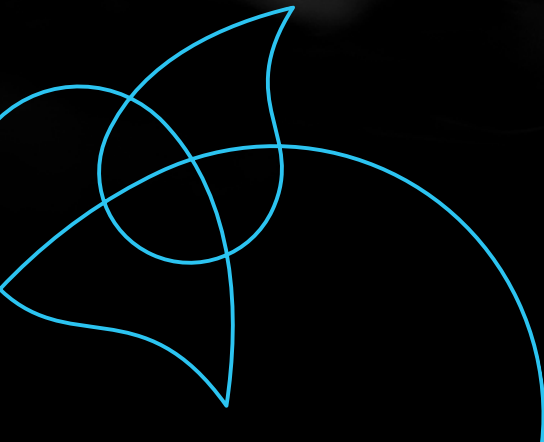




WAGATE® GATE VALVES

INSTALLATION MAINTENANCE
& PRODUCT GUARANTEE



PLEASE NOTE SERIAL/
ORDERNUMBER HERE::

THANK YOU FOR PURCHASING A WAPRO PRODUCT.
FOR FURTHER PRODUCT INFORMATION PLEASE REFER
TO WAPRO.COM

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SAFETY INSTRUCTIONS

WAGATE GATES AND VALVES – SVL, RVL, SVL-T, SVM-TG & RVM-TG

SAFETY INSTRUCTIONS

This manual must be read and fully understood before the product is commissioned. All personnel working with the device must be familiar with the safety and warning instructions in this document.

STANDARDS/GUIDELINES

Our products are designed and manufactured in accordance with recognized standards and directives. This is confirmed in the declaration of conformity.

COMMISSIONING

Before commissioning, the user must check for any damage incurred during transport or storage. Before first use, the user must ensure that the steps described in the commissioning section of the manual have been followed precisely. If the unit is equipped with an actuator from a third party, either from the manufacturer or another party, the user must ensure that the installation and commissioning of that product are carried out according to its specific operating instructions.

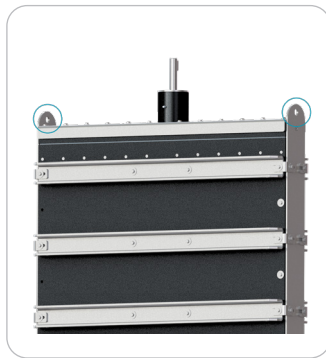
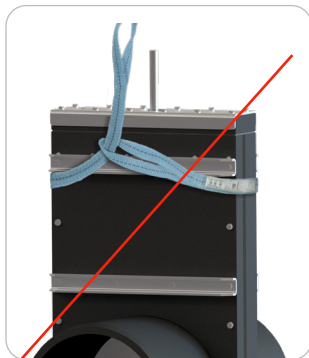
Note that all actuators delivered by the manufacturer will not be fully commissioned before delivery, as the installation of the electrical connection and communication interface can only be performed on-site. We recommend hiring a trained technician with knowledge of the selected type of actuator for this task.

The commissioning is entirely the user's responsibility. The manufacturer cannot be held liable for any consequential damages.

TRANSPORT AND STORAGE

TRANSPORT

The unit should remain in its original packaging throughout transport. The transport pallet must be level and securely fastened. It is not permitted to stack other products on top of the unit during transport. The unit can only be moved on its original transport pallet or by using at least two of the lifting points on the outside of the unit (applies only to valves that are too large to be handled manually).



STORAGE

The product must be stored in a dry, well-ventilated environment, protected from direct sunlight. Storage temperatures must be between -30°C and 40°C . The plastic surface temperature must not exceed 80°C . The unit must not be flooded or submerged in water during storage. If stored outdoors for extended periods, it is recommended to cover the inlet pipes to keep out dirt and debris, and to prevent animals from entering the valve.

In areas with high humidity or significant temperature variations, the transport packaging must be removed to avoid condensation buildup. If the unit has an electric actuator, it is recommended to connect the actuator to the mains power to allow the internal heater to prevent condensation from damaging the circuit boards.

IDENTIFICATION

Do not remove the label. When purchasing spare parts, specify the size and type of valve.

The image shows a black label for WAPRO WAGATE Gate Valves. The label features the WAPRO logo in blue and white. Below the logo, the text 'WAGATE® GATE VALVES [DN/OD] / [NPS/OD]' is printed. A grid of 20 checkboxes lists various valve models and sizes. The models listed are SVL, RVL, SVM-TG, RVM-TG, SVL-T, CV, and SVM-TG WITH ACTUATOR. The sizes listed are 110/4", 125/5", 160/6", 200/8", 250/10", 315/12", 355/14", 400/16", 450/18", 500/20", 560/22", 630/25", 710/28", 800/32", 900/36", and 1000/40". There is a CE mark and a field for 'Serial number and year of manufacture:'. At the bottom, the website 'wapro.com', the address 'Wapro A/S, Aggershusvej 7, DK 5450 Otterup', and 'Made in Denmark' with a Danish flag icon are visible.

WAPRO WAGATE® GATE VALVES [DN/OD] / [NPS/OD]

<input type="checkbox"/> SVL	<input type="checkbox"/> 110/4"	<input type="checkbox"/> 125/5"	<input type="checkbox"/> 160/6"	<input type="checkbox"/> 200/8"
<input type="checkbox"/> RVL	<input type="checkbox"/> 250/10"	<input type="checkbox"/> 315/12"	<input type="checkbox"/> 355/14"	<input type="checkbox"/> 400/16"
<input type="checkbox"/> SVM-TG	<input type="checkbox"/> 450/18"	<input type="checkbox"/> 500/20"	<input type="checkbox"/> 560/22"	<input type="checkbox"/> 630/25"
<input type="checkbox"/> RVM-TG	<input type="checkbox"/> 710/28"	<input type="checkbox"/> 800/32"	<input type="checkbox"/> 900/36"	<input type="checkbox"/> 1000/40"
<input type="checkbox"/> SVL-T	<input type="checkbox"/> 1200/48"			
<input type="checkbox"/> CV				
<input type="checkbox"/> SVM-TG WITH ACTUATOR		Serial number and year of manufacture: <input type="text"/>		

wapro.com Wapro A/S, Aggershusvej 7, DK 5450 Otterup Made in Denmark

VALVE APPLICATIONS

The table below shows the applicable areas of use for each valve type, as well as the available types of operation. If a valve is used outside its intended application area, proper functionality cannot be guaranteed. Please contact Wapro for advice.

MODEL	USE			PRESSURE	MANUAL OPERATION		AUTOMATIC OPERATION				
	Waste water	Clean water	Fish farming		One-sided (On-seating)	Two-sided (On/Off-seating)	Push/pull	Spindle	Linak acurator	Aurma acurator	Hydraulic cylinder
SVL	✓	*	*	✓		✓		✓		✓	✓
RVL		✓	✓		✓	✓		✓		✓	✓
SVL-T	✓	*	*	✓		✓		✓		✓	✓
SVM-TG	✓	*	*	✓			✓	*	✓	✓	✓
RVM-TG		✓	✓		✓		✓	*	✓	✓	✓

✓ = Recommended solution

* = Possible solution

[] = Is not recommended

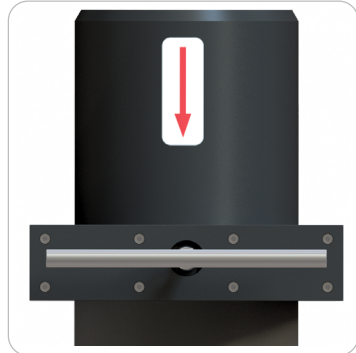
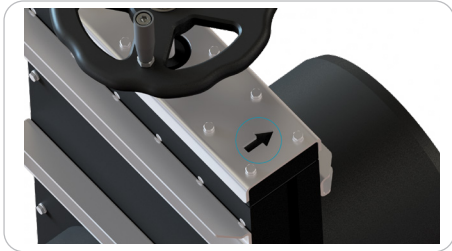
*As for further information and measurements, we refer to our product specifications

INSTALLATION

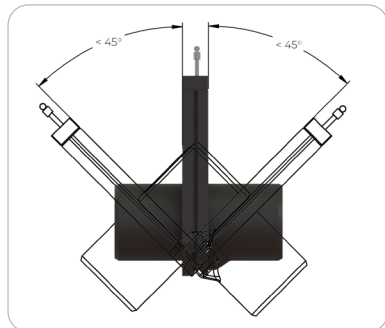
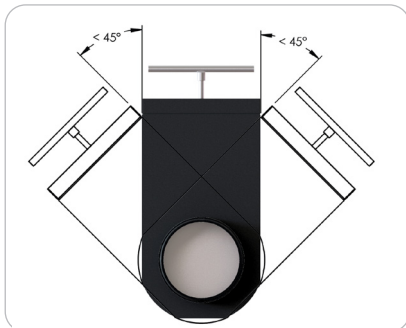
This manual must be read and understood before installation. All personnel working with the unit must be familiar with the safety and warning instructions in this document.

INSTALLATION DIRECTION

The valve must be installed so that the arrow on the top of the valve or on the inlet pipe follows the direction of the media flow.



Valves designed for upstream and downstream pressure, the RVL and RVM-TG series, are bidirectional and have no specified installation direction. During installation, the gate valve must not be tilted more than 45 degrees from the vertical position in any direction. Exceeding this limit may result in reduced watertightness, blockage of moving parts, and permanent damage to the valve. If an installation position beyond 45 degrees is required, please contact Wapro for alternatives.



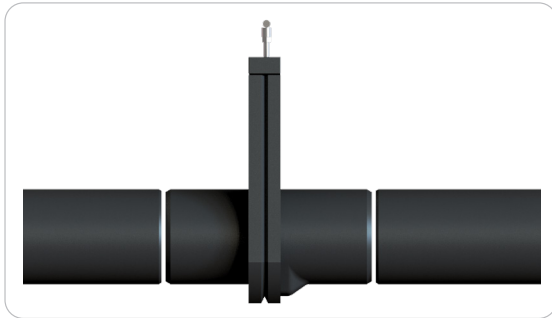
SERVICE ACCESS

To perform proper repair and service on the valve, a space directly above the valve head, equal to the height of the valve body, must be kept clear of other pipes and components to allow removal.

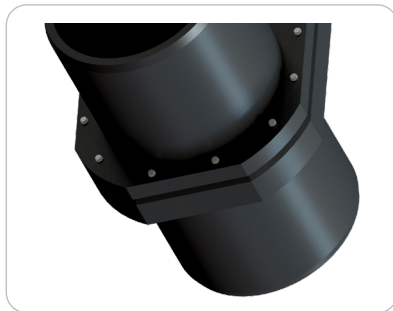
SUPPORT

DN 110-DN 315: Valves of these sizes are self-supporting and can be suspended with their pipes without additional support.

If a valve is equipped with any type of actuator, the valve must be supported according to the guidelines for larger sizes.



DN 355 and larger: Valves of these sizes are not self-supporting and must be supported from underneath. The flat contact surface on the underside of the valve is intended to be the main support point for the valve.



The pipes connected to the unit must be fully self-supporting, even when filled with water, and must not transfer loads to the valve. The design of the piping system must also account for thermal expansion to ensure that expansion of the connected pipe does not exert forces on the valve.

BURIED INSTALLATION

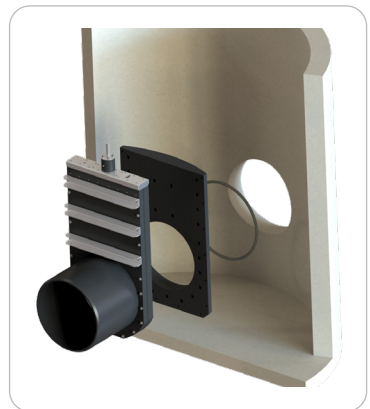
All wapro valves, except those with actuators, can be installed directly in the ground. The valve should not be buried deeper than half of its nominal pressure rating. example: for a valve rated for 1 bar/10 meters of water pressure, the maximum installation depth is 5 meters.

A wide range of spindle extensions are available for all models. see separate information on the website or contact wapro.

When ordering, note that the application is for buried installation.

WALL INSTALLATION

Valves can be manufactured with flanges for direct installation on both flat and curved walls.



INSTALLATION INTERFACE

The valve outlet pipes are made of PEHD100 and can be configured from the factory with either straight pipe connections, DIN flanges, loose DIN flanges, ANSI flanges, or socket couplings. For custom installation solutions, please contact Wapro.

ACTUATORS

All Wapro valves are available with a wide range of actuators, both for direct installation on the valve and to extend the valve spindle. Lengths are made to order. Note that valves are delivered as standard without any actuator. Handwheels, extensions, or other actuators can always be ordered after the initial delivery. Contact Wapro and specify the valve type and size.



Valve with Escotop



Valve with Extension



Valve with Mounting
Bracket



Valve with Handwheel

If a spindle extension is used, it is necessary to use wall brackets to eliminate excessive bending. The brackets should not be placed more than 1.5 meters (approximately 5 feet) apart.

ENVIRONMENTAL CONDITIONS

The unit is intended for use in temperatures between -25°C and 40°C (approximately -13°F to 104°F). If the unit is used below freezing, standing water must not accumulate inside the valve, as ice formation can cause permanent damage to the valve.

RETROFITTING ACTUATORS

If the user wishes to install an actuator, we recommend contacting Wapro for technical information on torque requirements and interface dimensions. If an actuator adapter is installed, the unit's interface follows ISO 5211.

COMMISSIONING

NOTE!

These steps must be followed carefully before the first use.

MECHANICAL INSTALLATION

Before the first use, all bolts on the valve should be retightened according to the table shown. Tighten the bolts on the valve head starting from the middle and continue in a circular motion. The bolts may have loosened during transport and storage due to temperature changes. After installation is complete, slowly move the valve from the open to the closed position. Ensure there is no sudden resistance in the movement, which could indicate a problem.

MOMENT/ TORQUE SPEC	M6	M8	M10	M6 IN THE VALVE HEAD
	7Nm	28Nm	50Nm	12Nm

Note: 1 Nm = 0.7376 ft-lbs.

ELECTRIC ACTUATOR

The unit can be equipped with various types of electric actuators, typically from the manufacturer AUMA. The wiring diagram for the actuator varies depending on the actuator specifications. Therefore, a wiring diagram and a complete manual are provided physically with each actuator. If these documents are lost, full documentation can be downloaded from the following website: [AUMA Wiring Diagrams](#). The order reference for the download is available on the nameplate on the side of the actuator.

See pos. 2 in figure 9.1.

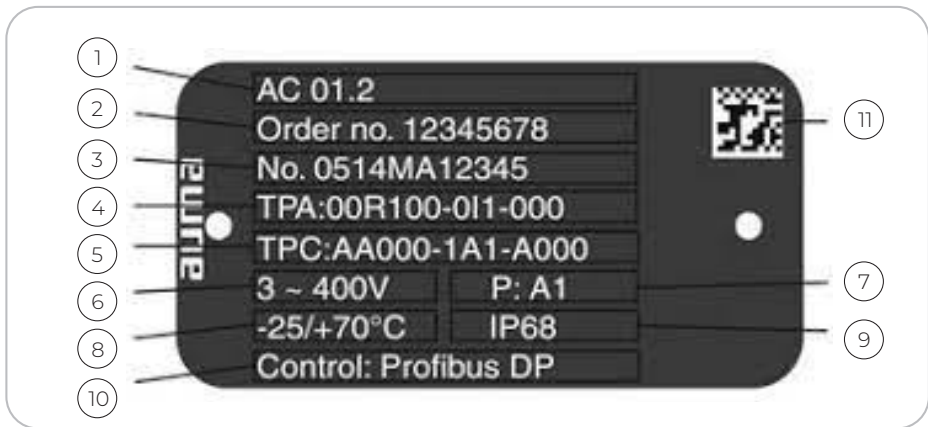


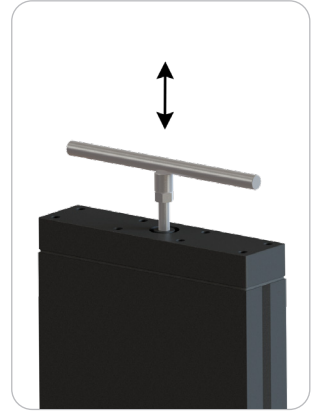
Fig. 9.1

To complete commissioning the complete commissioning step in the operation manual specific to the actuator must be completed.

SVL, RVL & SVL-T

To close the valve push gently on the valve handle until a natural resistance is met. The valve opening is fully closed slightly before reaching the end of the valves travel. Pressing hard on the handle will not improve valve performance and can lead to permanent damage.

To open the valve, pull on the valve handle. The water pressure pressing on the valve can give a reasonable amount of resistance to initial movement, but this is completely normal behavior. The valve is fully open when a resistance is met. Never use heavy equipment to move the valve, as excessive force can permanently damage the valve. If the valve is used in a setting with a lot of vibrations, like near a road, it is recommended to use a position lock to mechanically lock the valve in place. Otherwise, the vibrations can make the valve slowly close over time.



SVM-TG & RVM-TG

To close the valve, turn the operating device clockwise until a natural resistance is met. The valve opening is fully closed slightly before reaching the end of the valves travel. Applying high torque on the handle will not improve valve performance and can lead to permanent damage.



To open the valve, turn the operating device anti-clockwise until a natural resistance is met. The water pressure pressing on the valve can give a reasonable amount of resistance to initial movement, but this is completely normal behavior. The valve is fully open when a resistance is met.

ELECTRIC OPERATION AUMA ACTUATOR, IF SUPPLIED

COMMISSIONING

Note that valves supplied with AUMA actuator will not be set up from the factory. To commission the valve either follow the commissioning steps in the AUMA specific manual supplied with the actuator or get the local branch of AUMA to carry out the commissioning. Contact Wapro for further advice.



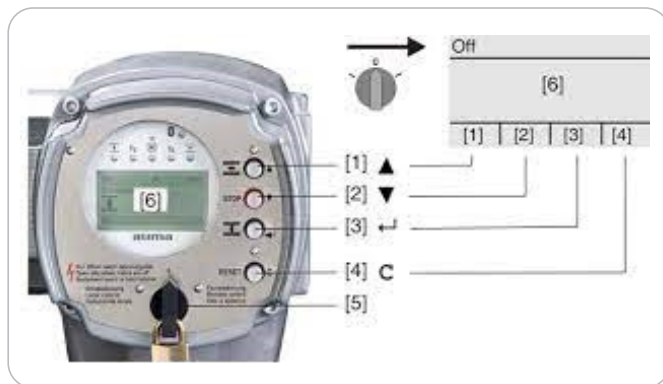
LOCAL ELECTRIC OPERATION

To operate the valve using the selector switch [5] is moved into the “Local” position. Then, depending on the current position, either button [1] or [3] is pressed to make the actuator move to the desired position automatically. The actuator will stop when it has reached its programmed end stop. The movement of the valve can be stopped at any time by using button [2]. At all times the current position of the valve can be seen on the display [6] as well as observing the mechanical position indicators.

REMOTE ELECTRIC OPERATION

To operate the valve remotely the selector switch [5] is moved into the “remote” position. The actuator will no longer react to the local controls and is controlled by the signals sent to it via its connection interface. The precise details of these depend on the configuration of the actuator.

For more information on the connectivity and functionality of the actuator, we refer to the specific operation instructions on the AUMA supplied along with the actuator.



MANUAL OVERRIDE OPERATION

To activate manual override, press the blue button at the center of the handwheel to engage motion. The handwheel is rotated to move the core. The core rotates in the same direction as the handwheel, meaning that clockwise moment of the handwheel results in clockwise movement of the core. The handwheel is rotated until the mechanical position-indicators pop up showing that the desired position has been reached. Note that the correct alignment of the internal pathway is only reached when the mechanical position indicator is at the peak of its movement. Reactivating the electrical movement automatically disengages the manual override.

SVM-TG - WITH AUMA MULTI-TURN ACTUATOR AND MOTOR CONTROL

WaGate gate valves can be installed inline on stormwater and wastewater networks. The AUMA electric actuator enables automatic opening and closure of the valve

SVM-TG is as standard, designed to be mounted on a pipeline, i.e., a closed system where there is no natural access to the valve's gate. Therefore, under normal conditions for a standard SVM-TG valve, there is no risk of crush injuries at the valve gate.

Please note: If the assembled SVM-TG is without inlet or outlet pipes, the responsibility for ensuring there is no access to the gate valve during operation lies with the installer of the assembled SVM-TG in a structure or other installation.

It is assumed that all WaGate valves assembled with an AUMA actuator are operated only by professionally trained operators.

INSTALLATION

Please be aware that SVM-TG delivered with AUMA actuators are not pre-configured by Wapro.

To commission the actuator together with the valves, the AUMA-specific manual should be used. Below is a chart that shows the number of rotations for opening/closing and the required torque to set the actuator for a given valve size. See table 12.1.

It is recommended that the installation be carried out by AUMA to ensure proper setting and commissioning of the assembled Shut-off Valves and the actuator.

Table 12.1

Dimension	Pressure [bar]	Turns from closed position	Max torque [Nm]
SVM-TG DN/OD 110	6	31	20
SVM-TG DN/OD 125	6	34	20
SVM-TG DN/OD 160	6	42	20
SVM-TG DN/OD 200	6	51	20
SVM-TG DN/OD 250	4	63	29,0
SVM-TG DN/OD 315	4	76	46,0
SVM-TG DN/OD 400	2	99	27,0
SVM-TG DN/OD 450	2	113	35,0
SVM-TG DN/OD 500	2	125	43,0
SVM-TG DN/OD 560	2	112	75,0
SVM-TG DN/OD 630	2	123	95,5
SVM-TG DN/OD 710	1	141	60,5
SVM-TG DN/OD 800	1	161	77,0
SVM-TG DN/OD 900	1	177	97,0
SVM-TG DN/OD 1000	0,5	163	70,0
SVM-TG DN/OD 1200	0,5	195	100,0

Note: 1 bar = 14.5038 psi. 1 Nm = 0.7376 ft-lbs.

COMMISSIONING

The valve can be operated locally or remotely controlled. For further information, please see s. 15.

If the assembled valve is without outlet or inlet pipes, the responsibility for ensuring that there is no access to the SVM-TG damper plate during operation lies with the installer.

MAINTENANCE

When servicing and maintaining the assembled SVM-TG, it is crucial to ensure that the rotary switch (5) on the AUMA control panel is set to position 0 and that it is locked. When the rotary switch is in position 0, the valve can be operated manually using the handwheel on the AUMA actuator. Please see s. 11.

Maintenance of the AUMA actuator should be carried out in accordance with AUMA's manual. It is recommended that service and maintenance be performed by AUMA.

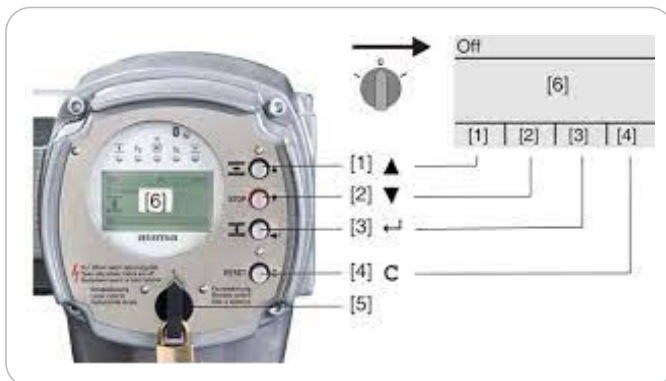


Risk of crush injuries due to incorrect use!

Ignoring the warning can lead to serious injury, or in the worst case, death.

- When performing maintenance on the WaGate gate valve (or any activity where personnel come in contact with the valve), the power supply to the AUMA multi-turn actuator must be disconnected by ensuring that the selector switch is in position 0 [5] and locked in this position.

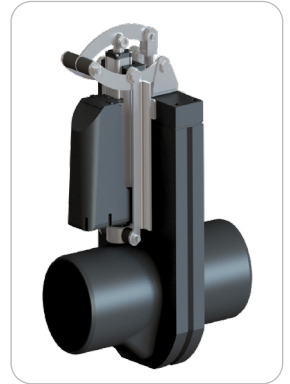
- Only trained and authorized personnel may operate the multi-turn actuator and perform maintenance on the WaGate gate valve.



ELECTRIC OPERATION LINAK ACTUATOR, IF SUPPLIED

COMMISSIONING

The valve with actuator and controller is delivered ready to use with the basic setup already carried out. For more advised options, including remote control some setup is required. See the specific controller documentation for setup procedures.



The documentation can be found here:

<https://www.linakthirdparty.com/products/motor-controllers-and-drivers/wcu/#/brochuresmanualsandbussetupfiles>

LOCAL ELECTRIC OPERATION

To use the valve, the controller has to be in the “local operations” mode, activated by pressing the button [2] shown on the figure below.



Note that when in this mode remote controls are inactive and will only be activated by pressing the [2] again.

To open the valve press and hold the “Up” button [1]. To close the valve, press and hold the “Down” button [3].

The current position of the valve is shown on the display [4], 0% indicates a fully closed valve and 100% indicates fully open. The valve will automatically stop when it reaches its programmed end stop.

REMOTE ELECTRIC OPERATION

To operate the valve remotely the button [2] has to be pressed to get the controller into “remote” position.

The actuator will no longer react to the local controls and is controlled by the signals sent to it via its connection interface.

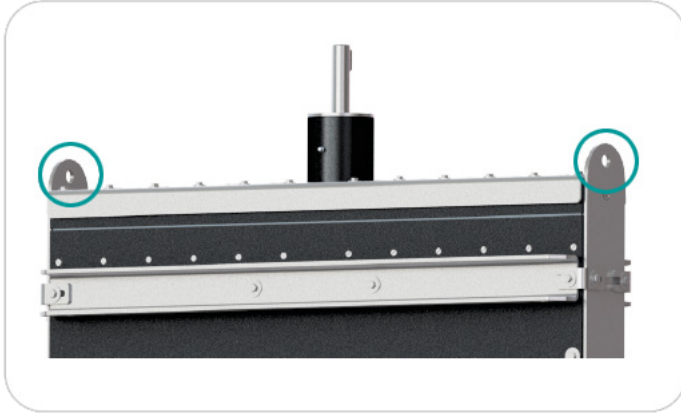
The precise details of these depend on the configuration of the controller.

MAINTENANCE

MAINTENANCE PLAN

The following maintenance must be performed for the product to operate as intended. Failing to do so voids the warranty. It is recommended that maintenance be conducted every six months. However, it is advisable to develop a maintenance schedule that is specifically tailored to the application and environmental conditions in which the valve operates.

- To check for proper function, a full open/close operation must be performed. Long periods without use can cause the gaskets to get stuck in place. The valve should operate smoothly and without sudden resistance. Jerking motion is a sign of sticking gaskets.
- Refill the bearing housing with bearing grease using the grease nipple. SKF LGWA 2/0.4 or similar is recommended for 0-40°C. For temperatures below freezing a lower viscosity grease is recommended. (Only applies to SVM-TG and RVM-TG sizes)



- Inspect the device for visual signs of damage. If any significant damage is found, please contact Wapro for advice.

EVERY 12 MONTHS

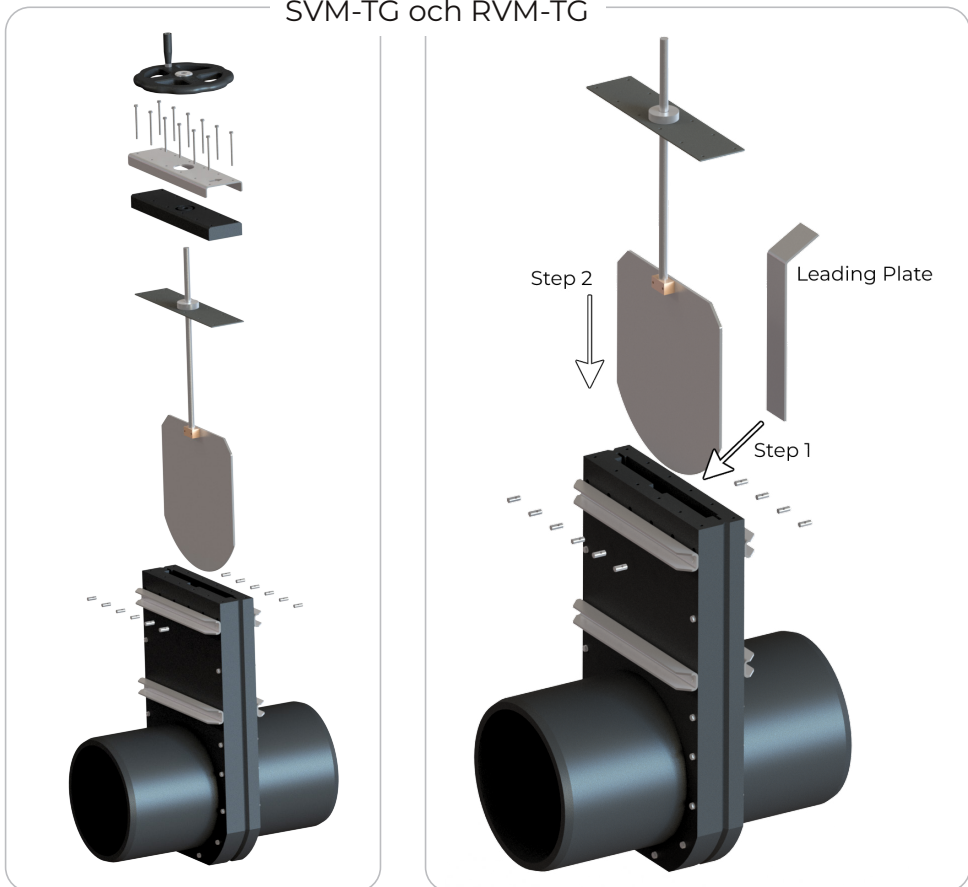
- If supplied with AUMA actuator, the actuator has an internal movement counter to keep track of movements. The gaskets should be inspected for wear or tears. This can either be done using a camera sent through the pipe system or by disassembling the valve (Described on the following pages)

MAINTENANCE INSTRUCTIONS

Disassembly of valve to change internal components or gaskets. Note that this service must be done while the valve is not under pressure.

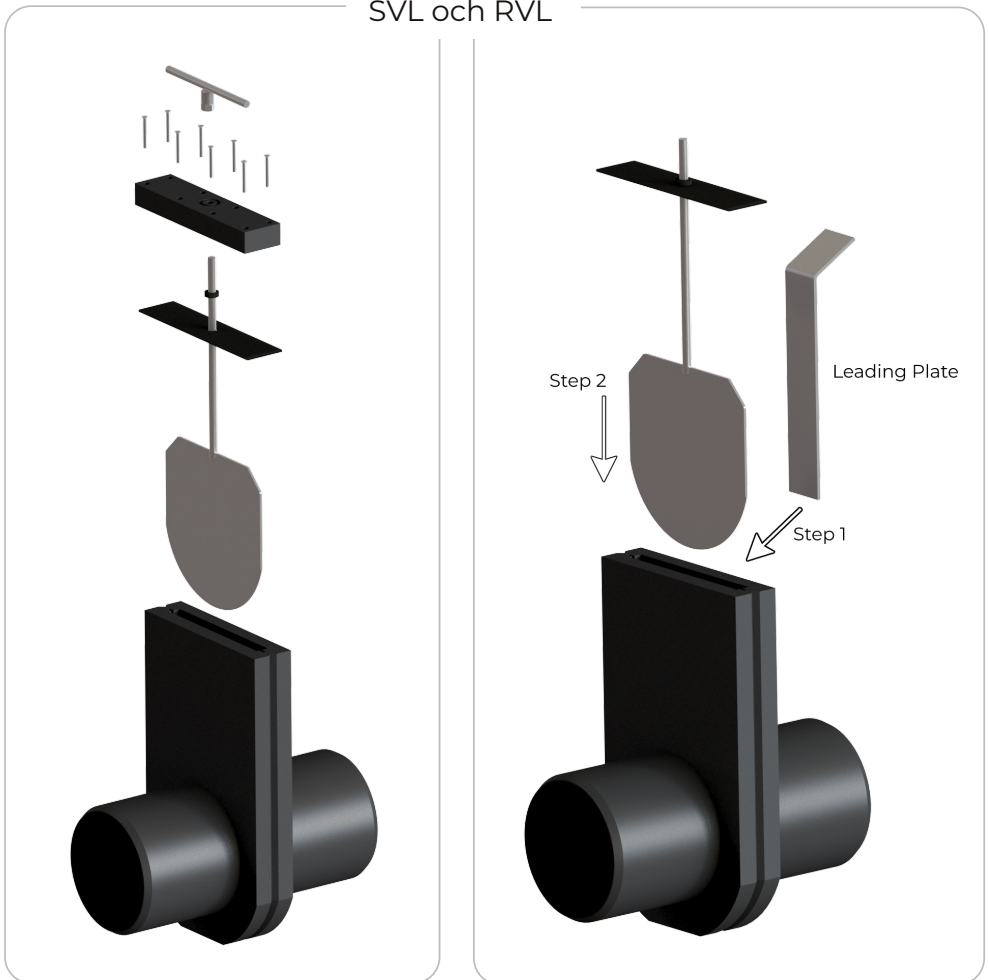
1. To make the service easier, the valve should be fully open before starting.
2. Remove the handwheel or any other operating device present.
3. Loosen the screws in the head of the valve.
4. Carefully remove the head from the valve. Be careful not to damage the seals in the head when removing the head.

SVM-TG och RVM-TG



5. Unscrew the spindle from the spindle nut (only applicable to SVM-TG & RVM-TG)
6. If the gasket must be changed a thin piece of plastic has to be inserted into valve between the gate and the gasket, before removing the gate. Otherwise reinserting the gate is impossible without damaging the gate. Gasket change is only possible on sizes DN400/NPS16 and up, and not on valves with double seals (RVM-TG).

SVL och RVL



GARANTI

WAPRO A/S WARRANTY

Wapro will address defects in material and/or workmanship in all new Wapro valves for a period of two (2) years from the documented purchase date, as long as the valve has been used in accordance with Wapro's instructions and recommendations under normal operating conditions. The warranty does not cover damage caused by external mechanical forces, such as interference from humans, animals, or machinery, and the warranty is void if the valve has been modified in any way after production.

To request warranty service, the buyer should contact the WaGate dealer where the valve was purchased within a reasonable time after defects are discovered. The valve's serial or order number must be provided when making a warranty claim. Wapro's liability is limited to replacement or repair of the defective valve. Wapro will not cover the costs of removing defective valves or subsequent installation of replacement valves. Furthermore, Wapro will not cover transportation costs for damaged or replacement valves.

Wapro guarantees that repaired or replaced valves are covered by the remaining warranty period of the original valve or 90 days, whichever is longer.

The above-mentioned warranty shall replace all other warranties, express or implied, including, without limitation, implied warranties or conditions of merchantability, fitness for a particular purpose, and non-infringement, which are expressly disclaimed, and is in lieu of all other obligations or liabilities on the part of Wapro.

To the extent permitted by applicable law, Wapro shall under no circumstances be liable to the buyer for any indirect, incidental, special, or consequential damages (including damages for loss of income or profit) or otherwise arising from or related to the delivery of valves, parts, or services hereunder, or the performance, use, or inability to use any of the valves, parts, or services, whether based on contract, warranty, tort (including negligence), or any other legal or equitable theory. To the extent permitted by applicable law, the remedies set forth in this limited warranty shall apply even if such remedies fail of their essential purpose. For the avoidance of doubt, no employee, agent, or other representative of Wapro is authorized to extend or otherwise modify this stated warranty.

EU DECLARATION OF CONFORMITY

for gate valves aimed to shut off and/or control flows on stormwater and wastewater networks, integrated with an electric multi-turn actuator to automate the opening and closing of the valve.

Manufacturer Gate valve:

Wapro A/S, Aggershusvej 7, DK-5450 Otterup, Denmark

Denomination/model:

WaGate® Gate Valve SVM-TG

Manufacturer actuator:

AUMA Scandinavia AB

Wapro hereby declares that this machinery, the WaGate® Gate valve SVM-TG integrated with an AUMA electric multi-turn actuator, fulfils all the applicable requirements of the Machinery Directive 2006/42/EG. The risk analysis has been carried out using DS/EN ISO 12100:2011 Safety of machinery – General principles for design – Risk assessment and risk reduction.

This machinery also complies with the leakage rates according to table 1, class 5, in the standard: DIN 19569-4:2000-11

Wastewater treatment plants - Principles for the design of structures and technical equipment - Part 4: Specific principles for shutoff devices as penstocks, sluice gates, stoplogs etc.

Furthermore, Wapro declares that the Gate valve is manufactured and delivered in line with: FPC (Factory Product Control), FPC is made according to Wapro A/S FPC-movement and presser test for Wagate Gate Valves SVM-TG (rev. 1)

The person responsible to compile the technical file: Morten Skjold, Aggershusvej 7, DK-5450 Otterup, Denmark

This declaration relates exclusively to the machinery in the state in which it was placed on the market, and excludes constructions applied and/or functional changes added subsequently by the final user. The declaration is only valid if the installation of the WaGate Gate valve SVM-TG integrated with AUMA electrical actuator is made according to the installation, operation and maintenance manual provided by Wapro A/S. This declaration was, on behalf of Wapro Group, drawn up by:



Morten Skjold **Datum:** 2024-07-08

Factory Manager

COO

Ort: Otterup, Danmark

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