



Installation and operating instructions

BSK 02 – automatic safety set with common water connection for the washbasin and for the toilet

BASIC TECHNICAL INFORMATION

Time of water flow in washbasin:	1 s ÷ 45 min (in 1 s steps) – adjusted to 8 s
Flushing time for WC:	1 s ÷ 45 min (in 1 s steps) – adjusted to 5 s
Time of lag:	0 s ÷ 45 min (in 10 s steps) – adjusted to 0 s for washbasin - adjusted to 5 min. for toilet
Power supply:	12 V, 50 Hz
Power requirement:	10 VA
Water pressure:	0,3 – 1 MPa (3-10 Bar) for WC
Min. water flow required for WC:	70 l/min
Recommended power supply:	ZAC 1/20
Weblink:	BSK 02

Intended use

- BSK 02 is a fully stainless safety set in antivandal design combining a toilet and a washbasin in one unit. BSK 02 is designed to be installed on the wall; the washbasin shall be connected to pre-mixed water supply, the toilet to cold (non-potable) water for flushing. Both systems are completely separated. The washbasin is equipped with an outlet arm without an aerator.
- The washbasin control is almost the same as the toilet one.

Washbasin

- After pushing the button T2, the water turns on and runs for the pre-set time interval. After another push, the water starts running again. Process can be repeated with no limitations.

Toilet

- After pushing the button T1, the water turns on and runs for the pre-set time interval. After the water stops, new push of the button can turn it on again. After the second supply, time lag may be set. If the button is pushed during the time lag, nothing happens and the water does not run.
- Time lag may be set to 0 – 45 minutes. If the time lag is set to 0, pushing the button can turn the water on at any time.

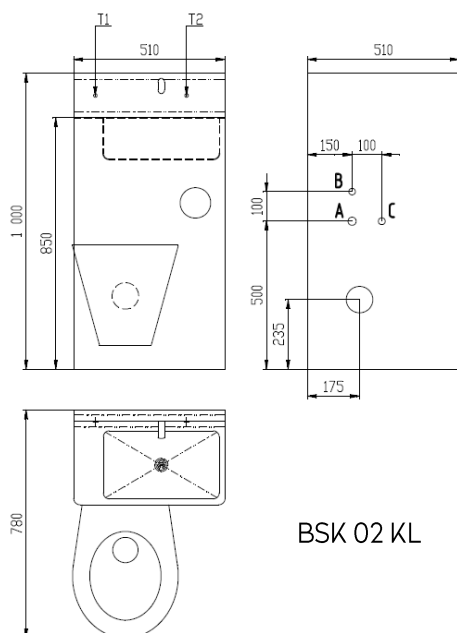
Installation

Construction preliminaries before installation

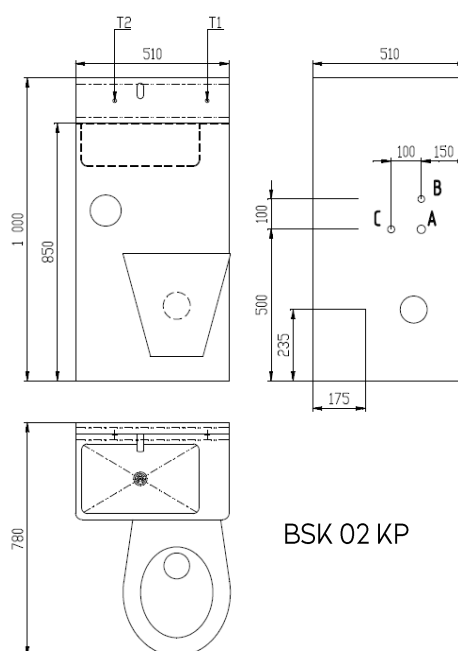
1. Water supply must be provided terminated by 1/2" female thread for the wash basin and 1" female thread for the toilet on the tiling level.
A - 1" water inlet for toilet min. flow rate 70 l/min. If the flow rate is lower, the toilet might not flush reliably.
B - 1/2" water inlet for washbasin
2. A **filter** must be installed in the water supply to collect solid impurities from water.
3. Set a outlet pipe (D) d = 110 mm



- Supply cable (C) CYKY 2x1.5 (min. 0.5m out of the wall for power supply 12V, 50 Hz (from a ZAC source) must be provided.



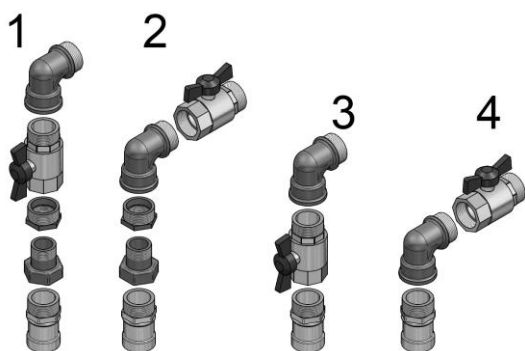
BSK 02 KL



BSK 02 KP

Assembly

- Install the installation frame so as the drainage is positioned as shown in the picture and fix it to the walls by chemical mortar.
- Connect the supply cable for the 12 V, 50 Hz electronics – the polarity does not matter.
- Screw the 1" connection set (1, 2, 3, or 4 – see picture) to the inlet pipe. Their outlets must be oriented so



that breaking of the inlet hoses is prevented and so that these hoses form a loop.

If connection set 3 or 4 is chosen, it is necessary demount water inlet hose first from BSK 02, mount it on the water inlet and after that fix it to BSK 02. If connection set 1 or 2 is chosen, there is no need to demount inlet hose.

- Set the outlet pipe with sealing collar (shorten if is required).
- Set the water flow rate to wash basin by the ball valve. When setting it, the BSK must be put aside from the wall therefore you need to put a container (bucket) under the drainage to catch the water. Water flow rate for the toilet does not have to be adjusted; it is pre-set for the maximum.
- Place the BSK 02 on the installation frame and secure it by the supplied safety screws.
- If the pre-set time intervals for water running or the time lag do not suit you, you can adjust them as required.

Setting of parameters

- All settings can be carried out only within 20 min. after switching on the power supply! For any setting after this period it is necessary to switch first off the power supply, wait approx. 5 sec, connect again the



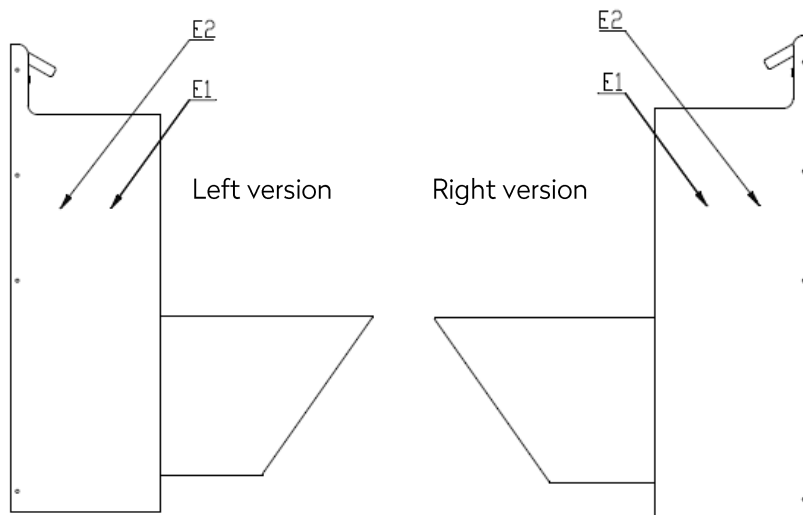
power supply and within following 20 min do all the setting. To switch the electronics from “standard operation mode” to “setting mode” put the magnet for aprox. 2 sec, aprox. 30 mm above the control diode light. Each of the electronics is set individually. Electronic for toilet (E1) is placed closer to the front side of BSK 02, electronic for washbasin (E2) is placed closer to back side. The set parametres remain in memory of electronics even after the power supply is turned off.

Setting process

- hold the magnet - the control diode turns on red. If the magnet is hold shortly (less than 2 sec.) then after removing it the control diode turns on green – the electronics returned to the “standard operation mode” (not ready for setting).

Time of water flow setting

- After control diode turns on red, the control button must be pushed within next 5 sec.(water starts flowing). Setting is finished with another push the button (water stops flowing), the electronics will get into the “standard operation mode”. The time between first and second push is the time of water flow.



Enforced pause setting

- If you hold the magnet more than 5sec. the diode starts to flash red and green. The setting is finished by push control button. The time of pause is set in intervals of 10 sec. (rounded down). Therefore if the pause is set for e.g. 18 sec., the real time of the pause will be only 10 sec. If no pause is wanted, then the control button must be pushed down within first 10 sec. after control diode starts to flash red and green. The pause will be set for 0 sec. (there will be no pause between the shower periods).

Control diode

Standard operation mode

- green light – ready for operation
- red light – control button pushed down
- green light flashing – electromagnetic valve switched on
- orange light (red and green diode together)– enforced pause

Setting mode

- red light – electronics is in setting mode
- red light flashing – setting of water flow time
- red and green light flashing – pause setting



Attention

- The combi set BSK 02 **can be connected only to the ZAC power supply**, in other cases the manufacturer does not take the responsibility for reliable functioning or eventual damage arising from connection to other power supply unit.
- The connection of the electronics can be performed only by qualified and competent electrician.
- It is necessary to carry out the initial revision of electric devices before starting operation.
- Routine revisions of the electrical equipment have to be carried out.

Complete delivery

combi set with toilet and washbasin	1 pc	outlet pipe with sealing collar	1 pc
threaded rod M 8 with nut	8 pcs	connection hoses	2 pcs
corner valve	1 pc	safety screw M 6	6 pcs
electromagnetic valve	2 pcs	ball valve 1"	1 pc
electronic with inductive sensor	1 pc	mechanical part for vandal resistant button	2 pcs.
brazen elbow pipe 1"	1 pc	spherical valve 1"	1 pc

Magnets for setting and special allen keys are delivered separately

Possible failures (warranty is not applied) and their solution

Failure	Cause	Solution
The diod does not blink after switching on	Power source is not switched on Connected to 230 V	Switch on the power source Irreparable—electronic is destroyed
Insufficient water flow	Clogged inlet filter/sieve in the electromagnetic valve	Clean the filter of the solenoid valve
Water does not flow – when pushing down the controll button, the control diode is green	Defect on inductive sensor	Check the distance between the push button and inductive sensor – the sensor is probably too far from the button (does not react when button is pushed)
Water flows constantly – electronic functions properly	Dirt in the electromagnetic valve	Clean the valve
Water does not flow – electronic functions properly	Unsuitable power supply is used	Use power supply ZAC 1/50 – valves do not work with higher frequency

Maintenance and cleaning

- The device was made from the stainless steel of quality corresponding with ČSN 17 240 (AISI 304) standard and, therefore, it must not be operated in chemically-aggressive environment.
- **Preparations containing chlorine must not be used for its cleaning!!**
- Cleaning agents by WÜRTH are recommended:
 - Metal renewal agent - Order No. 893 121 1
 - Stainless steel spray treatment - Order No. 0893 121 – K.
- If corrosion has already occurred, it can be removed with a cleaner INNOSOFT B 570 from the company Emergo.



Repairs and settings

- The device has to be dismantled from the wall for all repairs and settings (apart from the time setting).

Cleaning the washbasin valve

- Screw out three spins holding the coil. Remove the coil; carefully take out plastic covering of the core; (be careful not to lose the spring). Remove the membrane, clean the space underneath. Check out the clearness of both inlets in the plastic centre of the membrane and insert the valve. It is necessary to observe the water flow direction at the back assembly – the arrow on the valve.

Cleaning the toilet valve, changing the membrane

- Unscrew the six screws holding the flange. Remove the flange (be careful not to lose the spring). Remove the membrane and clean the space underneath. Check passability of both openings in the membrane. Check the membrane completeness; the membrane can only burst close to its periphery. Assemble the valve in reverse order.
- To dismantle the coil, you need to slide out the securing peg in its bottom part, turn the coil all the way and slide it out. Now you can clean the seating face of the core.

Change of mode

- It is possible to switch over the electronics into the mode of "pressing valve replacement". The function of the electronics is following: after pushing the button, the water starts flowing and it will flow for the set time period. It is not possible to interrupt the water flow – it will stop automatically after having accomplished the set time.
- The set time is 1s ÷ 45 min after 1 second.
- The program change is carried out by cutting (joining) the jumpers.
- Jumper 1 – orange – sensor type selection – if the signal light shines in red at the standstill, it is necessary to change the state of the jumper (join, cut)
- Jumper 2 – green – if it is not cut, there is the version of "start-stop" – it is possible to let or stop the water flow arbitrarily – the total time of the water flow is measured.
- If it is cut, the water after having flowed in will flow for the set time period and it is not possible to stop it. After two batches it is possible to set a pause when water does not flow at all. It is suitable to set the pause length to 0s so that the water will flow after every push of the button.
- Jumper 3 – blue – if it is cut, after 72 hours of the standstill the outgoing of the water starts for 1 minute regardless of the state of the other jumpers. It prevents the drying up of the sewage system during a long-term shutdown.

