

## 2024SB TOILET

*intelligent™* Electronic Toilet Control, Modular, Wall Mount



### Product Description

- Modular, on wall surface.
- Electronic module detects the presence of the user and enters its 'stand-by' mode. The toilet flushes when the user leaves the detection area.
- Computer based micro controller w/specially designed infra red sensors to detect within a required distance.
- All non-corrosive materials.
- Auto-courtesy flush every 12 hrs.

### Features

- Vacuum breaker supplied
- All Stainless Steel / Waterproof
- Vandal Proof / Tamper cycle
- Remote control re-programmable / Non-interrupt
- Detect Range / Detect Frequency

### Certification

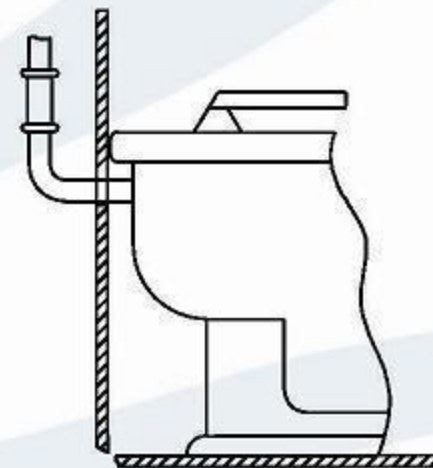
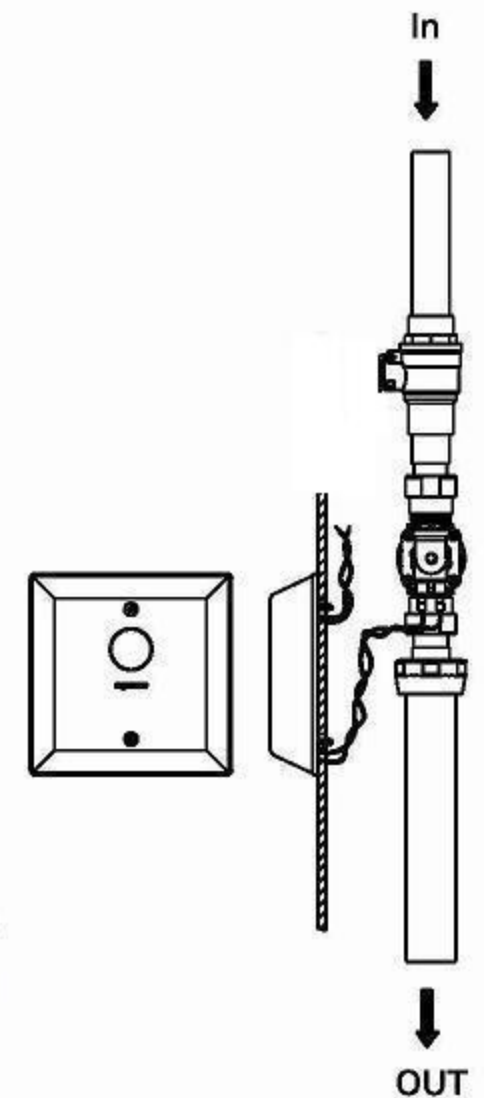
IAPMO cUPC  
ADA / ANSI compliant

### Model Choice :

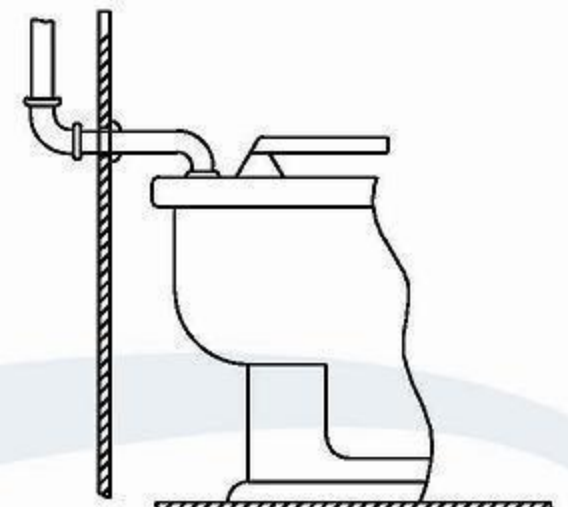
- 2024SB without pipe kit
- 2024SB-R e/w 1 1/2" Rear entry pipe kit
- 2024SB-T e/w 1 1/2" Top entry pipe kit, CP

### Options

- 04-186 Transformer 120/24Vac
- 01-035 Pipe kit, 1-1/2" Top entry, CP
- 01-036 Pipe kit, 1-1/2" Rear entry



2024SB-R e/w 1 1/2"  
Rear entry pipe kit

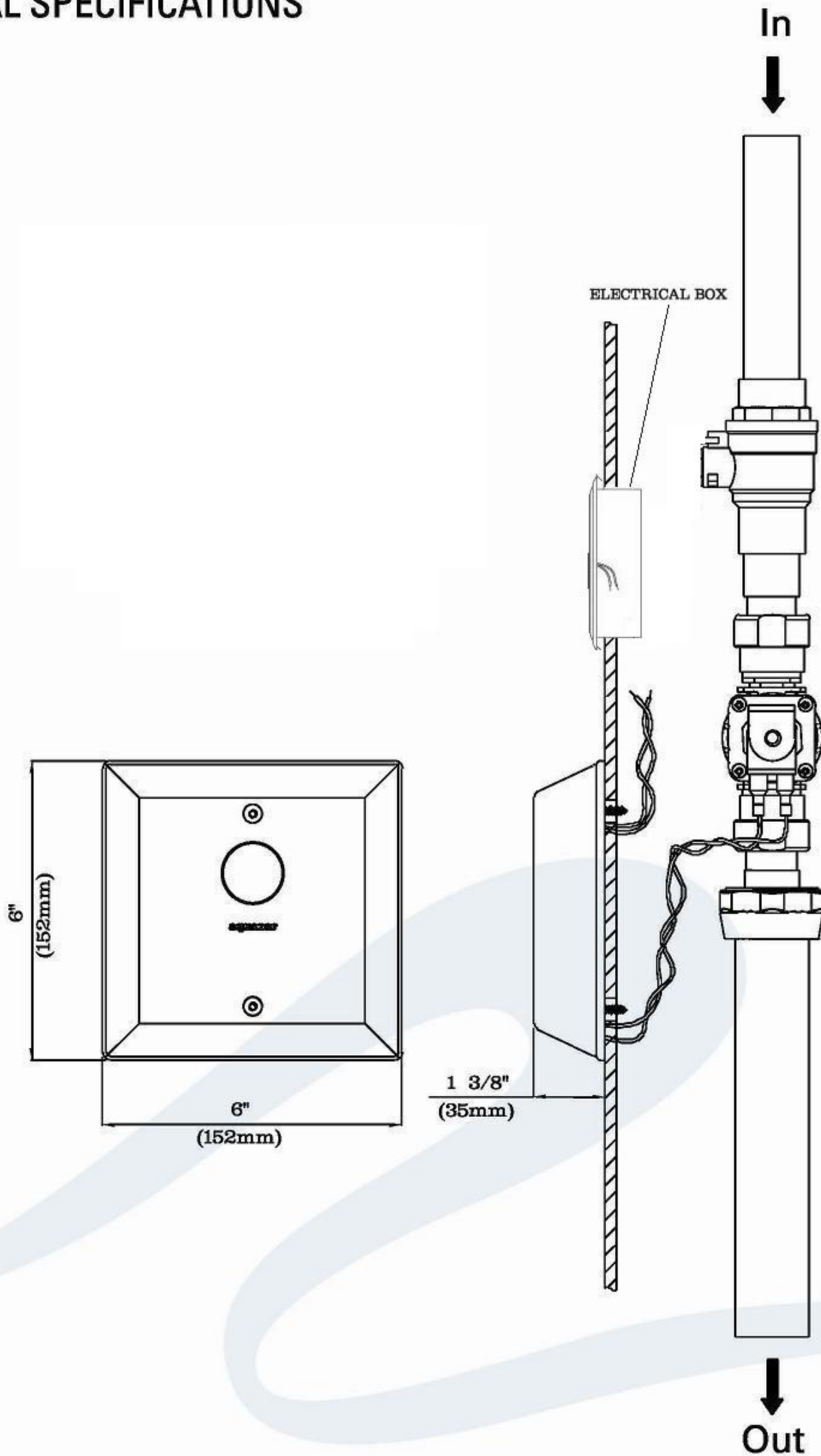


2024SB-T e/w 1 1/2"  
Top entry pipe kit, CP

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### TECHNICAL SPECIFICATIONS



## 2024SB TOILET

### *intelligent™* Electronic Toilet Control, Modular, Wall Mount PRODUCT DESCRIPTION

**Function:**

The electronic module detects the presence of the user and sets the circuit on stand-by mode (non-flushing). The computer based micro-processor with specially designed sensors is programmed to detect the presence of a user within a pre-determined distance and time to eliminate unnecessary flushing. After usage, the circuit detects the absence of the user and flushes automatically. The duration of flushing action and operating cycles are adjustable.

**Packaging:**

The entire unit is constructed of non-corrosive materials. The faceplate is 16 ga. stainless steel to withstand abuse and maintain a good appearance. The electronic module enclosure is made of high impact plastic and is sealed. There are no electro-mechanical devices (for adjustments) to hinder sealing or which may require troublesome disassembly.

**Adjustments:**

Adjustments are pre-set by the factory for normal-usage; reprogramming the control unit to suit special conditions is possible with an optional remote reprogrammer module. This user-friendly module permits easy function changes ( without dismantling the unit ) in the distance and time cycles,

for example:

Flush Cycle Duration	1 - 15 seconds
Detect Delay (Acknowledgment)	0 - 14 seconds
Flush Delay	2 seconds
Sensitivity (Detect Range)	1 - 15 level ( 6 to 28 inches )

**Technical Specifications:**

Electrical requirements	24 Vac 15 V.A.
Electro-mechanical Valve	24 Vac 50/60 Hz
Operating Water Pressure	15 to 150 psi
Water Flow Rate	Adjustable
Water Connection	1" copper
** Auto courtesy flush	12 hrs. after last use

## 2024SB TOILET

### *intelligent™* Electronic Toilet Control, Modular, Wall mount FUNCTION INFORMATION

<b>A ) Flush Time (Run Time)</b>	<b>1 to 15 seconds</b>
<b>B ) Detect Delay (Detect Time)</b>	<b>0 to 14 seconds</b>
<b>C ) Flush Delay</b>	<b>2 seconds</b>
<b>D ) Sensitivity (Detect Range)</b>	<b>1 to 15 level ( 6 to 28 inches )</b>

#### **A) Flush Time (Run Time)**

The water flush time cycle is normally set to 6 seconds.

*\*\* This flush cycle is reprogrammable from 1 to 15 seconds ( a 1/2 to 1 second longer delay is due to the "slow close" feature the water valve has to prevent water hammer effects ).*

#### **B) Detect Delay (Detect Time)**

The detection delay is set at 6 seconds. This is to prevent unwanted starts.

*\*\* The delay is reprogrammable from 0 to 14 seconds.*

#### **C) Flush Delay**

The flush delay is usually set at 2 seconds. This allows the user to leave before the flush cycle operates and prevents unwanted splash on the user.

#### **D) Detection Range, Sensitivity**

The detection range is adjustable through reprogramming and detects between 6" to 28". ( 72 cm )

Factory- programmed detection range is set at sensitivity level 8.

- To decrease range, re-program sensitivity from level 7 to 1. ( 1 for a shorter range )
- To increase range, re-program sensitivity from level 9 to 15. ( 15 for a longer range )

*\* The sensitivity cycle is re-programmable from level 1 to 15.*

#### **E) Address - Detect Frequency**

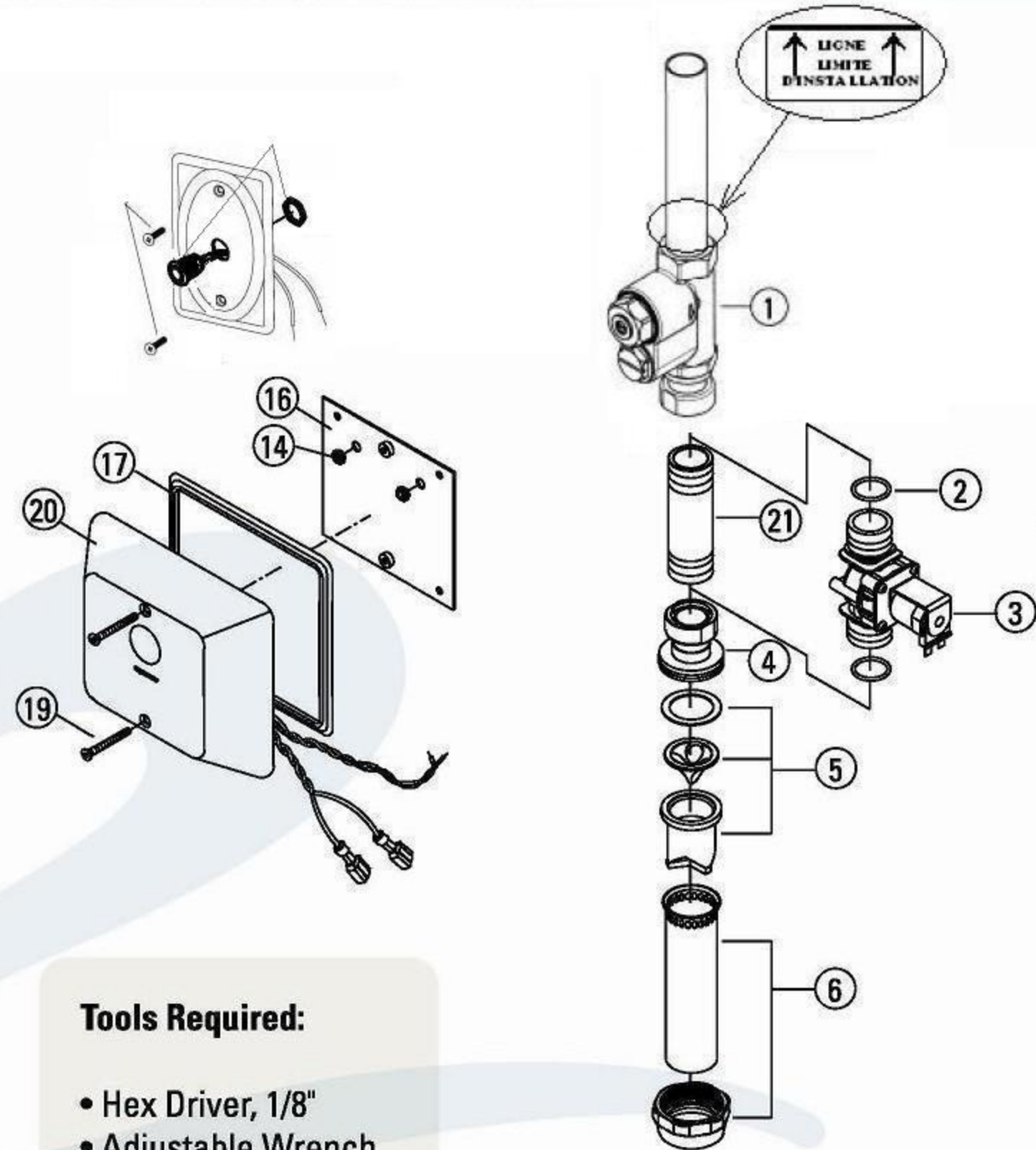
This feature eliminates possible problems of oppositely ( face to face) mounted systems. Such installation can trigger oppositely mounted units. This is easily remedied by simply re-programming a different detection frequency with the remote. The change of frequency, address 1 to 4, makes it impossible for one unit to be inadvertently triggered by another.

*\*The address frequency is factory programmed at 1 and is reprogrammable from 1 to 4.*

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### INSTALLATION STEPS

- 1 - Connect the water supply to the 1" ball valve pipe assembly in a suitable location.
- 2 - Install the temporary valve jig # 21 to be temporarily used during roughing and pipe purging.
- 3 - Screw in the brass V. B. coupler # 4 to the jig #21.
- 4 - Screw in the Vacuum breaker # 6 to the V. B. coupler # 4.
- 5 - Connect the 1 1/2" pipe kit ( Optional Top or Back access ) between the V. B. # 6 and the toilet. Ensure that there is no tension in the pipes to allow jig/solenoid valve removal or future maintenance.
- 6 - With 1" ball valve closed, turn water source on. Open ball valve to flush out pipes and check for leaks.
- 7 - Close the ball valve and replace jig # 21 by the solenoid valve # 3.  
**Note :** Since O-ring seals are used, **Do Not** use teflon tape or sealants. Check for correct **water flow direction** by arrow symbol on solenoid.
- 8 - Mount and level on the wall the stainless steel wall plate # 16. Mount electronic module in the appropriate location above unit.
- 9 - Mark and drill a hole in the wall for the wiring. A rubber grommet # 14 is supplied for passing both the 24Vac wires ( power source ) and solenoid connection.
- 10 - Connect 24Vac power wires with wire twists. No polarity required.
- 11 - Connect the solenoid wires that have the insulated terminals to the incoming solenoid wires. No polarity required.
- 12 - Mount to electronic module faceplate the perimeter gasket # 17.
- 13 - Place two flat head screws # 19 in the faceplate holes and attach to the wallplate. Ensure wires are protected during final mounting.
- 14 - Apply current to 24Vac transformer feeding power to circuit module.
- 15 - It takes approx. 5 to 10 seconds to energize the electronic circuit.
- 16 - After this period, place hand in front of the detection lens to begin detection sequence. A red light in the lens area will indicate power and function. ( Make sure water supply ball valve is open )



#### Tools Required:

- Hex Driver, 1/8"
- Adjustable Wrench
- Soldering Tools

## 2024SB TOILET - intelligent™ Electronic Toilet Control, Modular, Wall Mount MAINTENANCE

Aquanar products are design and engineered with precision and specially chosen components. Replacement with genuine Aquanar parts are an important factor in product performance. Non genuine parts may void warrenty.

Remove power from breaker source.  
Remove faceplate/electronic module.  
Disconnect electrical tabs on the solenoid valve and the two power wires and two switch wires. ( Wire twists )  
Check carefully that corrosion did not form on connections.  
If corrosion or wire damage is present, repair accordingly.

### Cleaning the Solenoid valve / filter

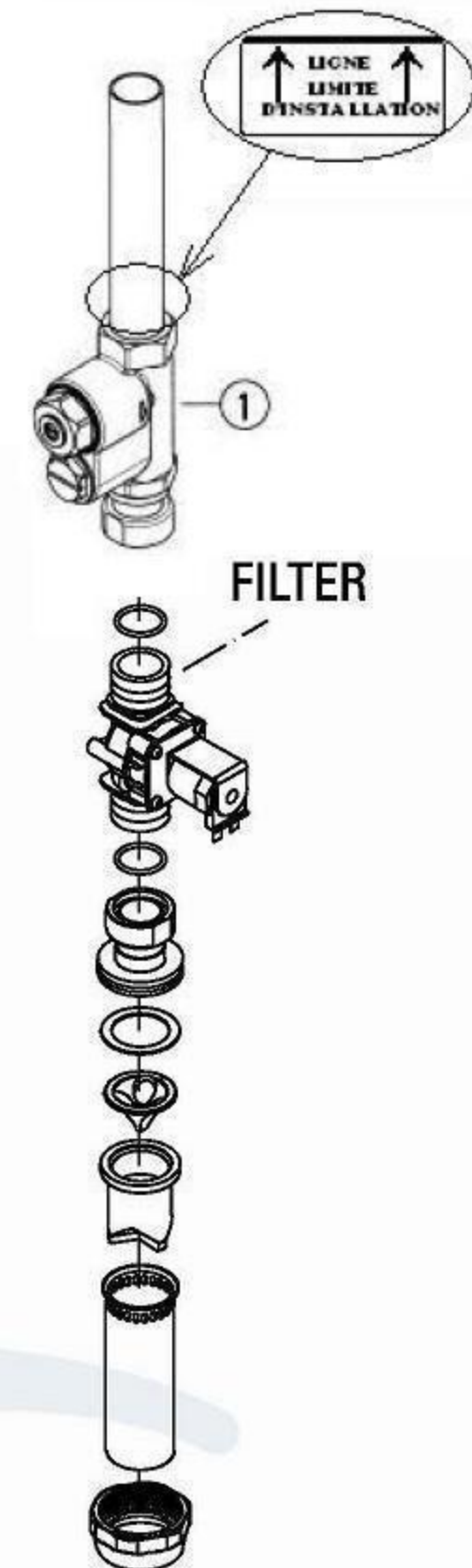
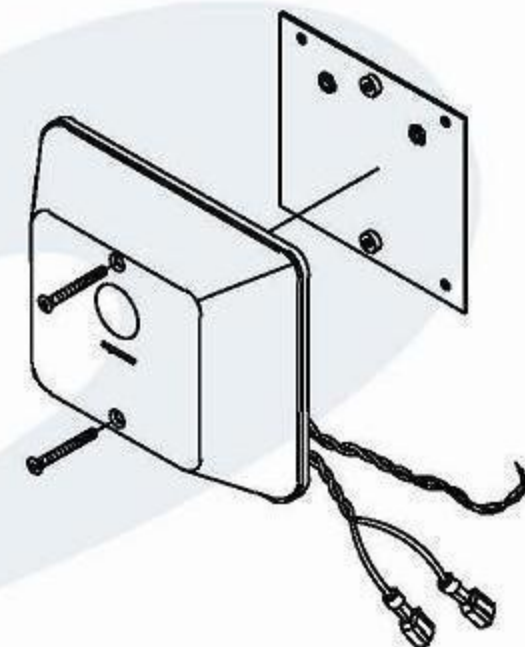
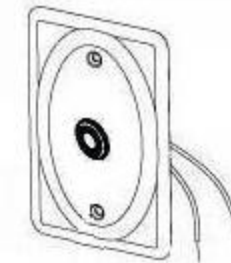
- Close water source at ball valve.
- Remove the solenoid valve and check if filter is clear of debris.
- Remove the V.B. brass flange and inspect the rubber diaphragm.
- Replace if necessary.
- Remove filter, clean and rinse with warm water.  
Dry and reassemble.

### Product Care

Aquanar products are constructed of the highest quality materials. although durable and robust, abrasives and harsh chemicals can damage surfaces. Clean Stainless steel faceplate and lens with a damp soft cloth. Dry with a soft towel.

### Re-assembling

To re-install, reverse the above steps.



## 2024SB TOILET - *intelligent™* Electronic Toilet Control, Modular, Wall Mount

### PARTS LIST

#	Description	Part Number
1	Ball pipe & 1" Tube assy	01-078
2	O-Ring 15/16" x .09	04-054
3	Magnetic valve 1" 24Vac	04-031
4	Brass adapter Assy, VB	01-079
5	V.B. Duckbill & Rubber kit	01-057
6	Vacuum breaker 1" & Nut kit C.P.	01-092
12*	Electronic Module	AQN-2020-2
13*	Nylon locknut, # 6-32	08-005
14	Rubber grommet	04-018
16	Wall plate, s.s.	02-054
17*	Seal, perimeter, rubber	02-139
18*	Face plate, modular s.s.	02-055
19	FHHSMS # 10-32 x 1.50" s.s.	08-048
20*	Consists of #12, 13, 17 & 18	AQN-2024SB-1
21	Décor Wall Plate CP	02-180
22	Switch safety button	04-038

