

# Mainsflush Troubleshooting Guide

Problem	Possible Causes	Action
Flush volume is either too low or too high.	Valve not commissioned at installation. Set screw requires adjustment.	The set screw is located in the centre of the white bonnet on the top of the valve. Screw clockwise to reduce flow, anti-clockwise to increase flow.  Refer to the 'Commissioning the System' instructions in our installation guide for full details.
Flush causes splashing over front of pan.	Excessive flush volume caused by incorrect set screw adjustment.	The set screw is located in the centre of the white bonnet on the valve. Screw clockwise to reduce flow.
Flush volume/flow rate is insufficient to clear waste.	Adjustment screw is not set correctly.	The set screw is located in the centre of the white bonnet on the top of the valve. Screw anti-clockwise to increase flow.
	Insufficient water pressure and/or flow.	Check water flow rate is minimum 1.5lt per second.  Check water pressure is between 350kpa and 500kpa.  Check pressure vessel is installed as per the manufacturer's instructions, that it is operating correctly and that its air pressure is set correctly.  Excessive water pressure combined with low flow rate may interfere with the operation of the Pressure Vessel. Check with the manufacturer. See below for more information on pressure vessel troubleshooting.
	Debris is caught in the piston chamber of the valve.	Conduct full service on the valve and piston including checking line strainer. Check for damage to valve & piston, particularly the rubbers and replace if damaged. Ensure that a line strainer is installed to prevent future blockages.
	Valve setup is not suited to installation conditions.	Call Customer Service on 1300 384 749 for advice and service assistance.

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	Water quality causing calcium build-up within the valve.	Service the valve to remove the piston. Clean the barrel of the valve and the piston to ensure removal of calcium build-up. Do not use de-scaling chemicals. Vinegar may assist in safe removal of calcium build up. Re-grease the piston with Rocol.
	Blockage or restriction in supply pipes or insufficient water volume from mains.	Check the maximum unrestricted water flow rate at the valve by removing the piston from the valve, re-attaching the white bonnet and opening the water supply. This will provide visual confirmation of the water supply.
Flush volumes vary intermittently.	There is insufficient water supply to the valve or the water demand is greater than the system can supply.	<p>Refer to the installation guide and the Mainsflush Plumbing Sizing Guide to ensure pipe sizes are sufficient.</p> <p>Ensure all relevant Australian Standards and National Plumbing Code requirements have been met.</p> <p>Mainsflush recommends a Hydraulic Engineer be engaged for installations of 6 or more valves.</p>
	Excessive friction loss in supply pipes.	<p>Long distances or excessive direction changes will affect water supply, particularly in times of peak demand.</p> <p>Rectify plumbing by upsizing or changing to recommended materials such as PEX, PPR or Rehau.</p> <p>Rectify plumbing to correct or avoid supply restrictions or blockages. Ensure excessive direction changes, dead legs and long runs are reduced or removed.</p>
Variable flush – servicing valve provides temporary fix only.	Excessive lubrication of piston or valve body.	<p>Service valve taking care to ensure excessive grease is removed from the barrel of the valve and the piston. Only a slight smear of grease is needed and this is best applied to the o-ring on the piston.</p> <p>Ensure the valve is clear of debris.</p> <p>Call Mainsflush Customer Service on 1300 384 749 if problems reoccur.</p>

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Insufficient flush volume on occasions.	Reduced regional water pressure at peak usage times.	Install or upgrade pressure vessel. Upsize supply pipes to the valve.
	Reduced water pressure due to other appliances being used.	Ensure valve is installed on an independent supply line.
	Valve setup is not suited to installation conditions.	Call Customer Service on 1300 384 749 for advice and service assistance.
Insufficient flush volume on occasions due to incorrect pressure vessel setup.	Pressure vessel is out of compressed air.	<p>To test the air pressure in the vessel: Turn off isolating ball valve to the vessel. Flush the toilet continually until there is no water remaining in the system. Use an air pressure gauge to measure the pressure on the Schroeder valve on the top of the pressure vessel. Vessels are factory set to 200kpa and pressure of between 100kpa and 200kpa is considered normal. If pressure is below 100kpa recharge to 200kpa air pressure or repair/replace vessel if faulty.</p> <p>Testing the air pressure when the pressure vessel is still connected to the water supply and is operational will give a higher reading but this reading is not necessarily indicative of the water pressure that the system is generating.</p>
	Pressure vessel's compressed air pressure is higher than the mains water pressure supplying it.	Excess air pressure will prevent the vessel from holding water. Adjust air pressure to correct setting. Usually this should be 200kpa but check with the vessel manufacturer for more information.
	High water pressure and low flow rate feeding vessel.	Excessive water pressure combined with low flow rate may interfere with the operation of the Pressure Vessel and significantly reduce its effectiveness. Check with the vessel manufacturer for advice.
	Pressure vessel does not have non-return valve installed.	This will allow water to back feed to other appliances and will affect the operation of the valve. Install a spring loaded non-return valve on the inlet to the pressure vessel.

Problem	Possible Causes	Action
	Multiple pressure vessels connected to one line.	Different air pressure settings may result in reduced efficiency and only one of the vessels being in effective operation. Balance the system by ensuring that all vessels are operating on the same air pressure setting.
	Pressure vessel installed off-line or in wrong location.	The pressure vessel should be connected directly to the line. Check with the vessel's manufacturer for advice on correct location.
	Pressure vessel installed sideways.	Davey pressure vessels can be installed on any angle, including on their side, without affecting their performance. Check for other causes of the problem.
Insufficient flush volume on occasions due to incorrect pressure pump/tank water setup.	Toilet flushes well the first time but with low flow second time.	This may be because the pressure pump's setting is below 350kpa. Ensure pump is set to maintain minimum required pressure of 350kpa.
	Pressure pump and supply setup is inadequate.	Long runs and friction loss may require upsizing of pressure pump. Valve performance may be improved by upsizing the pressure vessel and upsizing the pipe from the vessel to the valve.
Valve will not shut off and is flushing non-stop.	Debris has jammed inside the valve. Touchpad is faulty.	Turn off power to the touchpad. If water stops then the Mainsflush valve is ok and the fault is in the touchpad.  If water continues to run with power off, turn set screw clockwise until water stops. Then turn anti-clockwise for 4-6 turns and test system again. If water continues to flow service the valve.  Alternatively, shut off water at the isolating ball valve briefly then re-open ball valve. The Mainsflush valve should re-set immediately but should then be serviced to ensure there is no damage to rubber seals and that all debris has been cleared.
Valve will not shut off fully and is dribbling constantly.	Debris has jammed inside the valve. Rubber seal has been damaged.	Service the valve to remove any debris and check for damaged rubber seal.  Replace seal if necessary.  Ensure that a line strainer is installed in the system.

Problem	Possible Causes	Action
System is noisy.	<p>Excessive water pressure.</p> <p>Incorrect supply pipes or flush pipe installation.</p> <p>Isolating Ball Valve is partially open.</p>	<p>Check for excessive pressure in pressure vessel or mains supply. Install Pressure Reducing Valve on inlet to pressure vessel to reduce pressure to between 350kpa and 500 kpa.</p> <p>Supply pipes should be PEX, PPR, Rehau or similar and not copper.</p> <p>Upsizing supply pipes will assist in noise reduction.</p> <p>Minimise any changes in direction in supply pipes to reduce water cavitation noise.</p> <p>Check all supply lines affecting habitable areas are acoustically insulated and securely fastened using appropriate clamps.</p> <p>Check flush pipe is a Gerberit Silent pipe or acoustically insulated.</p> <p>Check that flush pipe does not contain any 90 degree bends.</p> <p>Ensure valve is covered with the foam acoustic casing supplied at purchase.</p> <p>Open Isolating Ball Valve to full flow. A partially open valve may generate water cavitation noise.</p>
Flush creates water hammer effect.	<p>Excessive water pressure.</p> <p>Incorrect installation.</p>	<p>Ensure water pressure at the valve does not exceed 500Kpa.</p> <p>Reduce pressure with appropriate plumbing changes.</p> <p>Ensure pipes are adequately secured using appropriate clamps.</p>
Flush time is too short.	<p>Incorrect setting of Full Flush time on touchpad.</p>	<p>The touchpad is factory set for a 5 second full flush but can be manually changed to a shorter duration at installation. Refer to the installation guide for details on how to re-set the timing. The half flush setting cannot be adjusted.</p> <p>Fault may be related to other issues. Refer to troubleshooting flush problems.</p>
Flush activates repeatedly.	<p>Touchpad has become wet.</p>	<p>Touchpad may become usable again after drying out otherwise it must be replaced. Gaskets are available as spare parts or alternatively the touchpad should be protected from moisture with a bead of silicone.</p>

Problem	Possible Causes	Action
System not flushing when touchpad pressed.	Touchpad is not receiving power.	<p>Ensure the power outlet is supplying power to the touchpad. Check that all connections are secure.</p> <p>Replace leads if damaged.</p> <p>Check 24Volt AC Power Transformer and valve by bypassing the touchpad and connecting the power lead directly to the valve. The valve should activate automatically when the power is turned on. This will indicate there is power through the system and that the valve is working.</p> <p>If the valve activates when directly connected, turn power off, re-connect the touchpad and test.</p> <p>If the valve does not activate when directly connected there may be a fault with the transformer or the valve.</p>
	Touchpad is not sufficiently secured in place.	Ensure the touchpad is securely mounted to the wall. Loose mounting may result in loss of sensitivity.
	Touchpad damaged.	Check for visible damage to the connections and circuitry.
	Touchpad is not sensitive enough.	Sensitivity can be adjusted if necessary. This is likely to be appropriate only in special circumstances. Contact Mainsflush Customer Service on 1300 384 749.
	Touchpad appears to be active but the system does not flush.	<p>If the valve clicks when the touchpad is touched but no water flushes then the valve may have a piston or water supply problem.</p> <p>Check that water is connected and the isolating ball valve at the Mainsflush valve is open.</p> <p>Service the valve to ensure it is free of debris and correctly greased. If problem persists refer to the 'low flow' section above or call Mainsflush Customer Service on 1300 384 749.</p>

Problem	Possible Causes	Action
<p>Water is coming out of the air gap in valve.</p>	<p>Incorrect installation.</p>	<p>Check that flush pipe is DN40mm and is a minimum of 450mm in length.</p> <p>Check there are no 90 degree bends or horizontal runs in flush pipe.</p> <p>Check there are no bends immediately at the outlet of the valve. A minimum 450mm drop of straight pipe is required before any change in direction of the flush pipe.</p>
	<p>Debris has entered the system.</p>	<p>Debris may be lodged between the valve and the flush pipe. Service the valve to clear any debris in the body of the valve and ensure flush pipe is clear.</p>
	<p>The rubber boot may be damaged.</p>	<p>Service the valve and check the condition of the rubber boot. Replace if damaged using the Rubbers Kit available as a spare part.</p>