



# Farm Chlor® Chlorinator Instruction Manual



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# Welcome to improved water quality

Your new FIL Farm Chlor® Chlorinator is an easy and affordable way to ensure that water reticulated to the entire farm or home is free of bacterial pathogens such as E.coli.

## Key Features and Benefits:

- Farm Chlor® Chlorinator does not require electricity
- The unit provides reliable and adjustable chlorine dosing
- Requires no tools for routine operation
- Simple to install and maintain
- Affordable treatment of all farm water no matter the size
- Low running and capital cost
- Simple monitoring with test strips at point of use
- Emergency by-pass via PVC isolation ball valves
- Farm Chlor® Chlorine products are the only solid chlorine product approved for dairy (DPF15) and drinking water use.

## Chlorine Use

Chlorine must be obtained from GEA FIL for use with the FIL Farm Chlor® Chlorinator. This ensures that the chemical is compliant for use with milk contact surfaces and for drinking water.

***WARNING: Farm Chlor® Chlorinator is NOT COMPATIBLE with any other chemical or chlorine, such as Dichlor or Trichlor pool chemicals, these products may cause fire or explosion if mixed or contaminated with other chemicals, dirt or organic matter.***

## Never modify the unit in any way

This product is backed by a 12 month warranty covering manufacturing defects and is based on correct installation and chlorine product use.

# What's included?

The contents of the box should include the following items to help assemble, set up and test your Farm Chlor® Chlorinator unit.

1. 1 x Chlorinator
2. 2 x Check valves
3. 2 x Isolation Ball valves
3. 1 x Bypass Ball valve
4. 1 x Chlorine test strips

If any of these items are missing please return to the place of purchase or contact GEA FIL on 0508 434 569



# Installation Guidelines

FIL Farm Chlor® Chlorinator is designed to chlorinate water that is clear and free of heavy contamination and minerals.

It is recommended you consult your GEA FIL Area Manager to ensure Farm Chlor® Chlorinator is a suitable system for your requirements. Where clarity is an issue we recommend suitable treatment in addition to Farm Chlor® Chlorinator.

It is important that you read all of the below information before installation. We recommend that Farm Chlor® Chlorinator is installed by a GEA Milking Equipment Service Partner.

## Farm Chlor® Chlorinator Unit Overview

- The standard system is for a 32mm water line. As the unit length is short, the standard 32mm provides no flow restriction, so standard fittings can be used to adapt the unit to other sized lines.
- Each unit is set to 100PSI during manufacture and is suitable for lines with up to 150PSI pressure, (with adjustment).
- The drain valve is used to clear sludge and sediment from the unit. This sludge which will contain chlorinated water which can be kept and used for disinfecting drains etc. A hose must fitted to the valve so that waste can be collected, and strong hose clips used to ensure it does not come off.

**WARNING:** Strong chlorine will be ejected when the drain valve is open at high pressure, make sure that eyes are protected.

- Check valves help prevent back-flow or leakage to the water source - these are included. It is important you take time to install a by-pass when the unit is installed to prevent unforeseen farm water disruption in the event of any problem.

- Water leaks will see more water use, which in turn will use product faster than anticipated. It is recommended that water leaks are repaired for maximum convenience and economy.

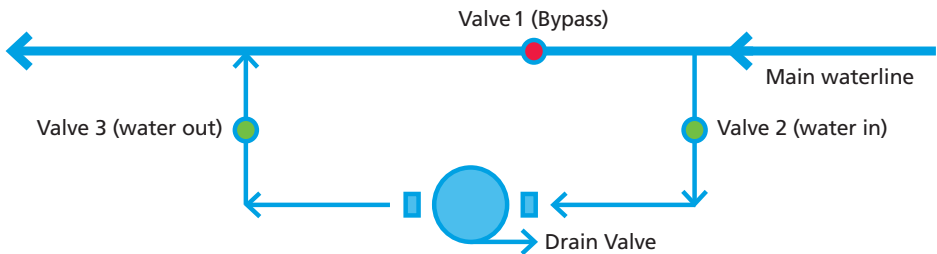
## Location Instructions

1. The unit should be installed after the pump and before the tank. This ensures all components of your system are chlorinated and the chlorination has sufficient contact time to act in the tank.
2. Installation location must be out of direct or reflected sunlight and in a cool, dry place (5-25°C). You must also protect the unit from freezing. Heat can generate excessive pressure and cause the unit to fail, explode, or pipes to burst. A small cover or open-sided lean to can be used to achieve this.
3. Farm Chlor® Chlorinator should be installed in a level and accessible location near a fresh water source for ease of use and refilling.
4. We recommended the entire farm system is chlorinated, including stock water.

# Installation Instructions

1. Ensure the unit is empty; there should be no chlorine in the cylinder for installation.
2. Place the unit in line with water direction. Water in Check Valve (7) should connect to water in flow.
3. Place the unit in line with water direction. Water comes into the system via the black “turbulator”, this is the water supply side. Check Valves (7 & 8) must have the correct directional flow, arrows match flow direction.
4. Connect the piping for the bypass. The circles below in red and green show the ball valves normal operational mode. (Red off, green on).
5. To bypass the unit, open valve 1 and close valve 2 and 3.

## FARM CHLOR® UNIT (TOP VIEW) BYPASS CONNECTION EXAMPLE



# Setting Chlorine Level

1. The adjuster dial (5) is used to set the Chlorine level, once the chlorine has been added. This dial should only be adjusted by hand. The coarse control valve (6) helps establish a normal set position and can be adjusted.
2. If the unit is only used for a small volume of water (<10,000 L/day), only 1-2 chlorine rods should be inserted into the unit.
3. Begin with a low dose (setting 0.5-3ppm). With the dial fully closed, rotate anti-clockwise 1 full rotation to partially open.
4. Using the chlorine test kit, test the chlorine level going into the tank to determine the approximate level, adjust the dial to get approx. 1ppm going into the tank
5. Once you have the unit dosing into the tank leave for one - two days and then re-test at the point of use.
6. If adjustments are required make these changes with the adjuster dial - reducing clockwise, increasing anti-clockwise.

## Things to note:

- For stock and drinking water supplies the range should be set from 1-5 ppm. On smaller farms or systems the dial may need to be set very low.
- One Farm Chlor® Chlorinator Rods is sufficient to dose 3 x 30,000 litre tank at approx. 1ppm (depending on organic load).
- To ensure best control with <10,000 litres per day volumes only add two rods to begin with..

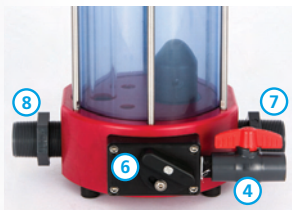
# Filling/Refilling Directions

1. Always use eye protection and gloves when handling Farm Chlor® Chlorinator Rods.
2. Clear any sludge\* present by opening the drain valve (4) and partially open the coarse control valve (6) by gently pushing it down.
3. Once the sludge is clear, close the drain valve (4) and adjust the coarse control valve (6) back to its closed position.
4. Isolate the unit by turning off the isolation valves (9) on either side of the unit.
5. Open the drain valve (4) enough to remove any pressure from the system.
6. Ensure enough space is left so the chlorine solid added will not overflow the unit and will be completely submerged.
7. Open the unit lid and add the Farm Chlor® Chlorinator Rods directly into the chamber using a plastic scoop or dry gloves. Do not overfill or force the product into the chamber as this will damage the unit.
8. To reinstate the unit close the drain valve (4) and slowly open the exit isolation (9) valve first, then gently open the supply valve (9). The unit will automatically bleed any air from the system.
9. It's important to rinse the outside of the unit if any spills or contact with chlorinated water occurred to prevent damage to the unit.
10. Check every few days to ensure that there is sufficient chlorine in the unit and measure the water at point of use to ensure the dose is correct with the chlorine test strips provided.

\*By-product from the chlorine solid as well as sand and debris



# Overview



## Key

- |    |                                    |
|----|------------------------------------|
| 1  | Lid                                |
| 2  | Pressure gauge                     |
| 3  | Pressure relief valve and overflow |
| 4  | Drain valve                        |
| 5  | Fine adjustor                      |
| 6  | Coarse/low pressure control        |
| 7  | Water in Check Valve               |
| 8  | Water out Check Valve              |
| 9  | Water in and out Isolation Valves  |
| 10 | Bypass Valve                       |

# Maintenance

- Check FIL Farm Chlor® Chlorinator after installation every few days to ensure that there is sufficient chlorine and measure the water at your point of use to ensure the dose level is correct using chlorine test strips.
- When replacing chlorine, ensure the removal of any sludgy residue.
- Ensure the internal and external of the unit is flushed with fresh water every once and awhile.
- Always check the o-rings and if perished or torn, replace at once.
- Manufacturer's warranty 12 months covers manufacturing defects.
- Ensure sufficient protection of the unit from sunlight and harsh weather such as frosts.
- Further test strips and maintenance seals can be purchased from your local rural retailer.



# FAQ's:

**Q: Can I use other chlorine in Farm Chlor® Chlorinator?**

**A:** No it is dangerous to do so. Farm Chlor® Chlorinator Rods are the only approved chlorine recommended for use. This product is MPI approved for Farm Dairy use (DPF15). In addition, other chlorine products or chemicals can create explosive reactions with Farm Chlor®.

**Q: I am now off water exclusion; do I need to continue using Farm Chlor® Chlorinator?**

**A:** Yes, the Farm Chlor® system kills pathogens in water. If your water contains pathogens then this system should be used on-going to ensure the water is suitable for dairy use.

**Q: I don't like chlorine in my drinking water.**

**A:** Check that the Farm Chlor® Chlorinator is dosing correctly at the point of use by using the chlorine test kit provided.

If it is between >1 ppm it can be reduced by adjusting the adjuster dial, or by using less chlorine in the internal cylinder. If the adjuster is set at the minimum the unit may need maintenance.

If the chlorine level is less than or equal to 1ppm, then a carbon filter can be installed on the house or kitchen line to remove this. Do not install a carbon filter on the line to the shed.

If the chlorine level is very high (>5ppm) and the dial is at its minimum check the installation is correct as described in the guidelines (page 5), including using a tank, and that the adjuster dial is set correctly.

**Q: The unit keeps getting sediment in it. What should I do?**

**A:** The solid chlorine by-product should be mostly contained in the cylinder. Use the FIL Farm Chlor® Chlorinator Rods to minimise residue.

Each time you refill the unit, you should remove any sludge or settled residue. Never drill additional holes in the internal cylinder to try and get the sediment to go through your system.

Sediment can block off the chlorine flow and cause pressure build up, and even explosion. Sometimes sediment in the water can create problems with dosing. FIL Farm Chlor® Chlorinator is designed to be used with sediment free water.

**Q: I want to discontinue chlorinating my water?**

**A:** To cease chlorination, let the Farm Chlor® Chlorinator rods run out, or simply by-pass the unit. Chlorine inside the unit, once wet, should be covered with water to prevent chlorine gas being released.

**Q: I don't know how to set up the unit?**

**A:** Most of our service partners offer installation. This will ensure you have training and use the unit economically and safely.

**Q: The unit keeps getting sediment in it. What should I do?**

**A:** The solid chlorine by-product should be removed each time you refill the chlorinator.



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