DECHLOR DEMON™ 2 ½”

Patent pending

Dechlorinate Water Discharge During Flow Testing And Flushing Operations

- Designed to work with the Hose Monster® or other flow devices*.
- It measures only 6” in length and attaches directly to the hydrant.
- Conserve on the quantity of dechlorinating agent used.
- Minimal friction loss due to its short length and low profile intake and outlet tubes.

The Dechlor Demon neutralizes chlorine during the flow operation before the discharge water lands in the street gutter with minimal interference in the flow testing or flushing.

Basic Operation

The Dechlor Demon diverts some of the flowing water through a bypass and into a mixing tank that contains a concentration of ascorbic acid. (or your choice of dechlorinating agent) This resulting concentrate continues through the bypass and is injected back into the flowing water. The chlorine is neutralized upon contact with the solution.

Included

Qty	*Description*
1	Dechlor Unit 2 ½” NST
2	3/4” x 6’ braided tube with quick connect couplings.
1	Mixing tank 6” x 12”
1	Tank manifold with male/female connectors

Recommended optional equipment:

1	Slow-close hydrant gate valve 2 ½”

The benefits of using the slow-close gate valve are that sample water can be taken from the ball valve on the DD unit and that flow rate can be controlled with minimum stress to hydrant.
Note that there are two sets of operating instructions based on WITH or WITHOUT hydrant gate valve.

Recommended Dechlorination agent

Vita-D-Chlor tablets

Ascorbic acid and Slow Close Hydrant Gate Valve sold separately through us.

*Contact us to determine compatibility of flow devices with the Dechlor Demon.

HYDRO FLOW PRODUCTS
Hydro Flow Products, Inc.
www.HoseMonster.com
888.202.9987, 847.202.9884 Fax
Service@flowtest.com

(rev. 040210)

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OPERATING INSTRUCTIONS for 2 ½”
WITH Slow-close hydrant gate valve

1. Attach swivel coupling of DD unit to the 2 ½” hydrant nozzle.
2. Attach 2 ½” slow-close gate valve to outlet end of DD unit. (This step is optional. The benefits are that sample water can be taken from the ball valve on the DD unit and that flow rate can be controlled with minimum stress to hydrant.)
3. Attach 2 ½” discharge hose (and Hose Monster®) to male end of slow-close gate valve.
4. Close the three valves
    a. Inlet ball-valve
    b. Outlet ball-valve
    c. Slow-close hydrant gate valve
5. Add ascorbic acid tablets to mixing tank. (see over to determine quantity)
6. Thread manifold onto mixing tank. Hold tank in the horizontal position while installing manifold so that the inlet tube doesn’t bind against the tablets.
7. Fill tank with water.
    a. Attach tube to inlet side of tank manifold and to the DD unit. (Male fitting of DD unit. Female fitting of tank manifold)
    b. Attach the discharge tube to the DD unit, but not to the tank manifold yet. (Female fitting of DD unit. Male fitting of tank manifold)
    c. Check that the two ball-valves and the slow-close gate valve are closed.
    d. Open hydrant. No water should be flowing at this time. (If this is a flow test, bleed air through gauge cap and take static pressure reading when hydrant is fully open and the pressure stabilized.)
    e. Open the ball-valve on inlet side of DD unit to fill tank. Water will exit the tank manifold outlet when tank is full. Then close ball-valve.
    f. Attach remaining tube to tank manifold.
    g. Close both ball-valves.

At this point both tubes are attached, tank is charged with Vita-D-Chlor, the tank is full of water, the slow-close gate valve is closed, the hydrant is fully open but no water is flowing.

Begin flowing water

1. Put tank in upright position.
2. Open outlet ball-valve fully.
3. Open inlet ball-valve about half-way.
4. Open the slow-close gate valve as would normally be done for flow testing or flushing.
5. Immediately check chlorine level of discharged water.
    a. If too high a chlorine level is present, open inlet ball-valve another quarter turn or add more ascorbic acid into the tank.
    b. If there is zero chlorine in the discharge water, the inlet ball-valve may be closed slightly to conserve the use of ascorbic acid.
    c. Adjust inlet ball-valve as appropriate.

The ascorbic acid in the tank is continuously being expended. Check chlorine level as necessary and adjust Intake ball-valve or add ascorbic acid to the tank to achieve desired level. Since many factors can affect the dechlorination reaction, always test treated water for residual chlorine levels to assure complete dechlorination.

Rinse inside of tank at end of day to avoid residual build up.

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Determining Qty of Dechlor Tabs

There are three variables in determining how many Vita-D-Chlor tabs to put in the tank.

1. Chlorine content.
2. Flow rate through hydrant or pump.
3. Concentration of ascorbic acid in mixing tank.

All of these variables change during the flow test or flushing operation. Monitor chlorine levels as required to maintain desired level.

Example:

Put four Vita-D-Chlor tabs in the tank and fill it with water. Open Intake ball-valve and Outlet ball-valve fully. Open slow-close gate valve as would normally be done for flow testing or flushing. Check the discharge for chlorine level. If the chlorine level is too high, add tabs to the tank or open the Intake ball-valve more. If the chlorine is completely neutralized, it could be the result of using too much ascorbic acid. Too much ascorbic acid is not known to damage the environment but it is costly. Adjust the bypass valve one-half way and check the chlorine level again. Open or close the bypass valve until the desired chlorine level is achieved. Note that the tabs are dissolving as water flows through the bypass. The chlorine level will need to be monitored and the Intake ball-valve adjusted accordingly.

More information on this topic is available at www.vita-d-hlor.com/UseCalculations.htm.

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OPERATING INSTRUCTIONS for 2 ½”
WITHOUT Slow-close hydrant gate valve

1. Attach swivel coupling of DD unit to the 2 ½” hydrant nozzle.
2. Attach 2 ½” discharge hose (and Hose Monster®) to male end DD unit.
3. Close the three valves
   Inlet ball-valve
   Outlet ball-valve
   Slow-close hydrant gate valve
4. Add ascorbic acid tablets to mixing tank. (see over to determine quantity)
5. Thread manifold onto mixing tank. Hold tank in the horizontal position while installing manifold so that the inlet tube doesn’t bind against the tablets.
6. Fill tank with water.
   a. Attach tube to inlet side of tank manifold and to the DD unit. (Male fitting of DD unit. Female fitting of tank manifold)
   b. Attach the discharge tube to the DD unit, but not to the tank manifold yet. (Female fitting of DD unit. Male fitting of tank manifold)
   c. Check that the two ball-valves and the slow-close gate valve are closed.
7. Open the ball-valve on inlet side of DD unit to fill tank. Water will exit the tank manifold outlet when tank is full. Then close ball-valve.
8. Attach remaining tube to tank manifold.
9. Close both ball-valves.

At this point both tubes are attached, tank is charged with Vita-D-Chlor, the tank is full of water and the hydrant closed.

Begin flowing water

1. Put tank in upright position.
2. Open outlet ball-valve fully.
3. Open inlet ball-valve about half-way.
4. Open the slow-close gate valve as would normally be done for flow testing or flushing.
5. Immediately check chlorine level of discharged water.
   a. If too high a chlorine level is present, open inlet ball-valve about a quarter turn or add more ascorbic acid into the tank.
   b. If there is zero chlorine in the discharge water, the inlet ball-valve may be closed (adjusted) slightly to conserve the use of ascorbic acid.
   c. Adjust inlet ball-valve as appropriate.

The ascorbic acid in the tank is continuously being expended. Check chlorine level as necessary and adjust Intake ball-valve or add ascorbic acid to the tank to achieve desired level. Since many factors can affect the dechlorination reaction, always test treated water for residual chlorine levels to assure complete dechlorination.

Rinse inside of tank at end of day to avoid residual build up.

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