

# **K-Valve Cage Cup Watering Systems**

## **Installation & Operator's Instruction Manual**



## Chore-Time Warranty

**Chore-Time Equipment** warrants each new product manufactured by it to be free from defects in material or workmanship for one year from the date of initial installation by the original purchaser. If such a defect is found by Chore-Time to exist within the one year period, Chore-Time will, at its option, (a) repair or replace such product free of charge, F.O.B. the factory of manufacture, or (b) refund to the original purchaser the original purchase price, in lieu of such repair or replacement.

### Conditions and limitations:

1. The product must be installed and operated in accordance with instructions published by **Chore-Time** or warranty will be void.
2. Warranty is void if **all components** of a system are not supplied by **Chore-Time**.
3. This product must be purchased from and installed by an authorized Chore-Time dealer or certified representative thereof, or the warranty will be void.
4. Malfunctions or failure resulting from misuse, abuse, negligence, alteration, accident, or lack of proper maintenance shall not be considered defects under this warranty.
5. This warranty applies only to systems for the care of poultry and livestock. Other applications in industry or commerce are not covered by this warranty.

**Chore-Time** shall not be liable for any **Consequential or Special Damage** which any purchaser may suffer or claim to have suffered as a result of any defect in the product. **“Consequential”** or **“Special Damages”** as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs and operational inefficiencies.

THIS WARRANTY CONSTITUTES CHORE-TIME’S ENTIRE AND SOLE WARRANTY AND CHORE-TIME EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, EXPRESS AND IMPLIED WARRANTIES AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE SOLD AND DESCRIPTION OR QUALITY OF THE PRODUCT FURNISHED HEREUNDER.

Any exceptions to this warranty must be authorized in writing by an officer of the company. Chore-Time reserves the right to change models and specifications at any time without notice or obligation to improve previous models.

**CHORE-TIME EQUIPMENT, A Division of CTB, Inc.**  
**P.O. Box 2000**  
**Milford, Indiana 46542-2000 U.S.A.**

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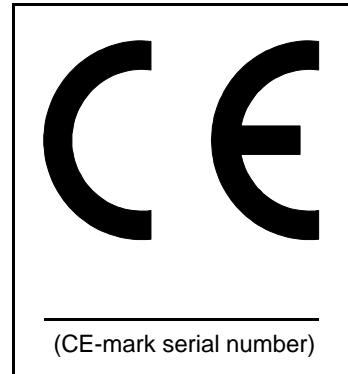
**\*Legend: C = Customer (end user), D = Distributor (sales), I - Installer of equipment**

## Support Information

This manual is designed to provide comprehensive planning, installation, operation, and parts listing information. The Table of Contents provides a convenient overview of the information in this manual. The Table of Contents also specifies which pages contain information for the sales personnel, installer, and consumer (end user).

**IMPORTANT: CE stands for certified Europe.** It is a standard which equipment must meet or exceed in order to be sold in Europe. **CE** provides a benchmark for safety and manufacturing issues. **CE is required only on equipment sold in Europe.**

Chore-Time Equipment recognizes CE Mark and pursues compliance in all applicable products. *Fill in the CE-Mark serial number in the blank space provided for future reference.*



## Distributor and Installer Information

Please fill in the following information about your Product.  
Keep this manual in a clean, dry place for future reference.

**Distributor's Name** \_\_\_\_\_

**Distributor's Address** \_\_\_\_\_

**Distributor's Phone** \_\_\_\_\_ **Date of Purchase** \_\_\_\_\_

**Installer's Name** \_\_\_\_\_

**Installer's Address** \_\_\_\_\_

**Installer's Phone** \_\_\_\_\_ **Date of Installation** \_\_\_\_\_

**System Specifications** \_\_\_\_\_

## Safety Information

**Caution, Warning and Danger Decals** have been placed on the equipment to warn of potentially dangerous situations. Care should be taken to keep this information intact and easy to read at all times. Replace missing or damaged safety signs.

Using the equipment for purposes other than specified in this manual may cause personal injury and or damage to the equipment.

### Safety–Alert Symbol

**This is a safety–alert symbol.** When you see this symbol on your equipment, be alert to the potential for personal injury. This equipment is designed to be installed and operated as safely as possible...however, hazards do exist.



### Signal Words

**Signal words** are used in conjunction with the safety–alert symbol to identify the severity of the warning.

**DANGER**..... indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



**DANGER**

**WARNING**..... indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



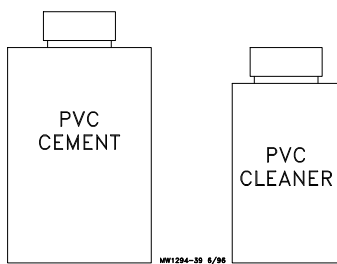
**WARNING**

**CAUTION**..... indicates a hazardous situation which, if not avoided, **MAY** result in minor or moderate injury.

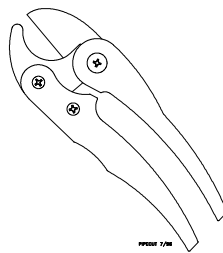


**CAUTION**

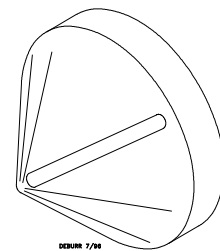
## Tools Required



**PVC Cement &  
Cleaner**



**PVC Pipe Cutter**



**Deburring Tool**

## Prior to Installation

Chore-Time recommends taking time to lay out the sections of water pipe and other large components prior to beginning each installation step. Hardware, tools, and small components (valves, etc.) may be conveniently carried in a carpenter's apron.

It is very important to maintain good water quality with the cage watering system. Good water quality maximizes performance and life of the equipment while minimizing maintenance and repair.

Pump the well for two days prior to hookup of the system to remove sand, mud, and debris. Chore-Time recommends a water test by a reputable water treatment company in the area. Water treatment and/or extra filtration may be required, depending on the water test results.

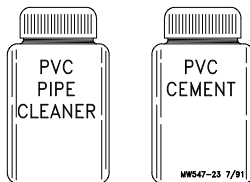
Incoming pressure must be 40 p.s.i. (275 kPa) or higher for use with Chore-Time equipment. Installation procedures will vary depending on such things as the model of cup used, the type of cage, the type of house, whether it's a new or existing cage system, and many other factors. However, installation of Chore-Time Cage watering Systems can be broken down into the following general steps:.

1. Installation of the Cups and miscellaneous accessories.
2. Installation of the water lines.
3. Control Panel installation
4. Installation of the supply line and Cage Manifold.

The first two steps are nearly the same for all cage systems. Differences for each cage system will be pointed out in the installation procedure.

Detailed instructions for the installation of the water lines, cups, and miscellaneous accessories are broken into sections that deal with each particular type of installation.

Repair parts information for Chore-Time Cage Watering Systems is available on pages 19 through 25. Keep this manual after installation for repair information. Also, the Maintenance and Operation Guidelines and the Troubleshooting Guide can be used as aids in managing and operating the system.



### PVC Cement Directions

**FOLLOW THE DIRECTIONS ON THE CONTAINER OF PVC CEMENT FOR SAFE HANDLING AND BEST RESULTS.**

1. Be sure pipe is cut off squarely. **USE PIPE CUTTERS ONLY.** Failure to use pipe cutters voids the warranty.
2. Remove dirt and burrs from outside and inside of the pipe.
3. Dry fit all parts before cementing. Pipe should be fit into fittings without applying excess force.
4. Surfaces to be joined should be clean--free from dirt, oil, and grease. Use PVC Pipe Cleaner, as needed.
5. **APPLY CEMENT TO BOTH SURFACES TO BE JOINED.** Apply cement sparingly, but evenly over the entire surface, leave no bare spots. Use a PVC cement containing PVC resin (gray in color).
6. Quickly join the two PVC components, giving them a twisting motion to bring the joint into alignment as the parts are pushed together.
7. Keep light pressure on the joint for a few seconds to allow the joint to harden.

## Control Panel Installation

Install the Control Panel on a Wall or partition where can be conveniently adjusted and serviced, but where it will not interfere with other equipment. The Control Panel can accommodate up to 45,000 birds. However, Chore-Time recommends one control panel per cage row to allow the best management of the system.

An incoming water pressure, between 40 p.s.i. (275 kPa) minimum and 125 p.s.i. (860 kPa) maximum, is recommended for use with the control panel.

The maximum allowable water supply pressure to the inlet side of the regulators is 60 p.s.i. (413 kPa). For higher pressures a Step Down Regulator and Gauge Assembly is available to reduce the supply pressure before the Filter Control Panel. One Step Down Regulator is recommended for each Filter Control Panel.

REMEMBER: For every 28" (711 mm) change in height, water pressure fluctuates 1 p.s.i. (48 kPa).

### 9275 Control Panel

The standard 9275 Filter Control Panel is shipped assembled as shown in **Figure 1**. The Inlet Elbow Assembly may be rotated up if the water supply is from above. The Valve must be removed before rotating the assembly.

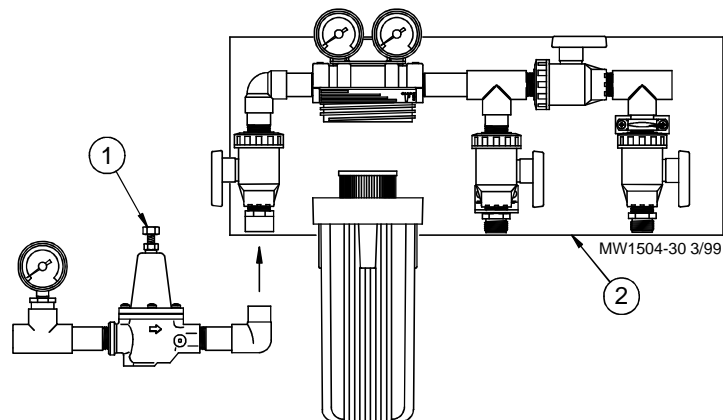


Figure 1

Key	Part No.	Description
1	35308	Step Down Regulator and Gauge Kit (shipped un-assembled)
2	9275	Filter Control Panel (shipped assembled)

## 36802-2 Flushable Filter Control Panel

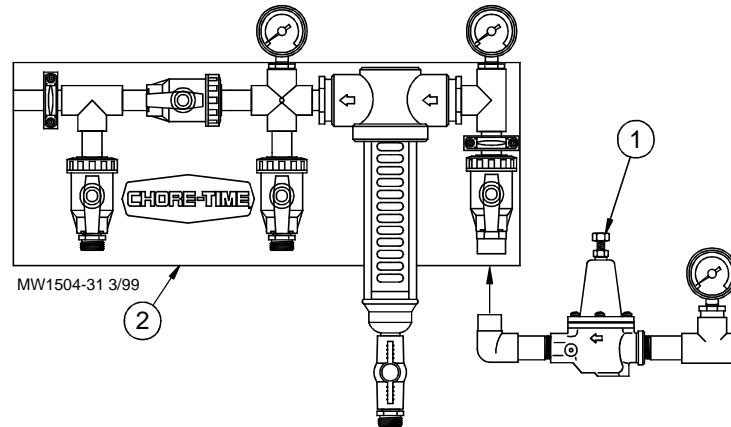


Figure 2

Key	Part No.	Description
1	35308	Step Down Regulator and Gauge Kit (shipped un-assembled)
2	36802-2	Flushable Filter Control Panel (shipped assembled)

## Install Supply Lines from the Control Panel to Manifolds

Install the incoming water line from the control panel to the cage manifold. Water can be supplied from above or below. 3/4" PVC pipe, ells, and couplers are supplied to run a supply line to each manifold.

At least the first section of water line should be installed for each cage line before installing the Cage Manifold.

**Failure to use Pipe Cutters to cut pipes will void the warranty!**

## Cage Manifold Installation

The water supply line, pipes, couplers, gauges, etc. located at the inlet end of the cage row are referred to as the cage manifold.

K-Valve installations: **Figure 3** shows the recommended cage manifold assembly and installation for systems up to 600 ft. (183 m). For systems over 600ft (183 m), refer to **Figure 4**.

**IMPORTANT: No more than two cage tiers per Pressure Regulator. Make sure the Pressure Regulator is mounted high on the upper tier of the two cage tiers that it is to regulate. For cage rows over 600 feet long use one regulator per tier.**

The water supply line is commonly located near the center of the cage bank. The manifold may be installed directly against the end of the cage bank if it does not interfere with the Dropping Board Scrapers, End Framing, etc. Some installations may require the cage manifold being installed several inches (75 mm) from the end of the cages.



Follow the instructions for safe use and handling of PVC cement and dry fit all parts before cementing.

**NOTE:** A 3/4" Ball Valve, see **Figure 3**, must be installed in the supply line from filter control panel **BEFORE** any cage lines are supplied with water. This valve will enable the water supply to be shut off for an entire cage row. If optional gauges are to be used on each line, install as shown. A pressure gauge is supplied with each Regulator Assembly. Locate the gauge and position it on the top line of the two tiers being regulated (under 600 feet cage row length) where it can be read conveniently.

**NOTE:** The manifold kit includes valves for use at the far end of the waterer lines. These allow individual lines to be flushed or drained. These valves are to be installed after the waterer lines are installed.

**IMPORTANT:** A Lever Handle Valve **MUST** be installed below each pressure gauge, see **Figure 3**. Close Lever Handle Valve during high-pressure flushing. Any water pressure above 15 psi applied to gauge will destroy the gauge.

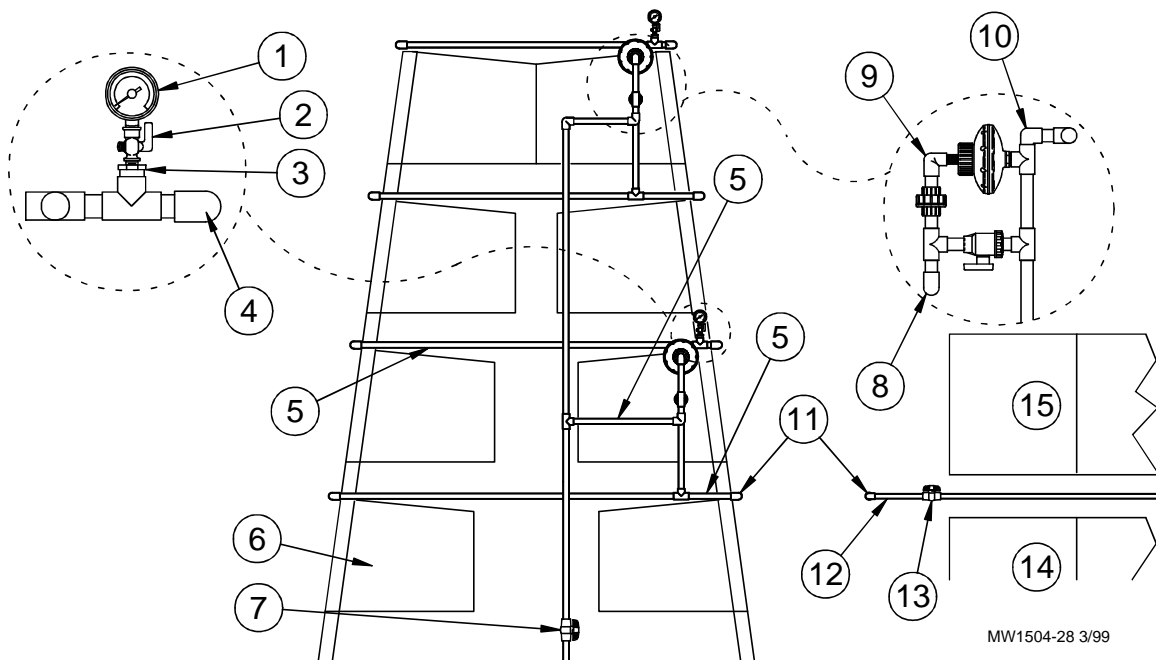


Figure 3

Key	Description	Part No.
1	Low Pressure Water Gauge	27722
2	Lever Handle Valve	30137
3	3/4" x 1/4" Reducer Bushing	7789
4	3/4" x 1/2" PVC Ell	8074
5	3/4" PVC Pipe	
6	Cage Bank	
7	3/4" Ball Valve	34728
8	3/4" PVC Ell	8141
9	K-Valve Inlet Assembly	30135
10	3/4" PVC Street Ell	30138
11	1/2" x 3/4" PVC Ell	8074
12	1/2" PVC Pipe	
13	1/2" Ball Valve	9254
14	Bottom Tier	
15	Middle Tier	

## Cage rows over 600' (183 m)

For cage rows over 600' in length, install the manifold components as shown in **Figure 4**. Notice the 3/4" supply line supplies the entire cage row, but water pressure is controlled by an Inlet Assembly which supplies a maximum of one tier. A 3/4" Tee must be located after the Inlet Assembly to supply both sides of each tier. Install a 1/2" Ball Valve on each water line.

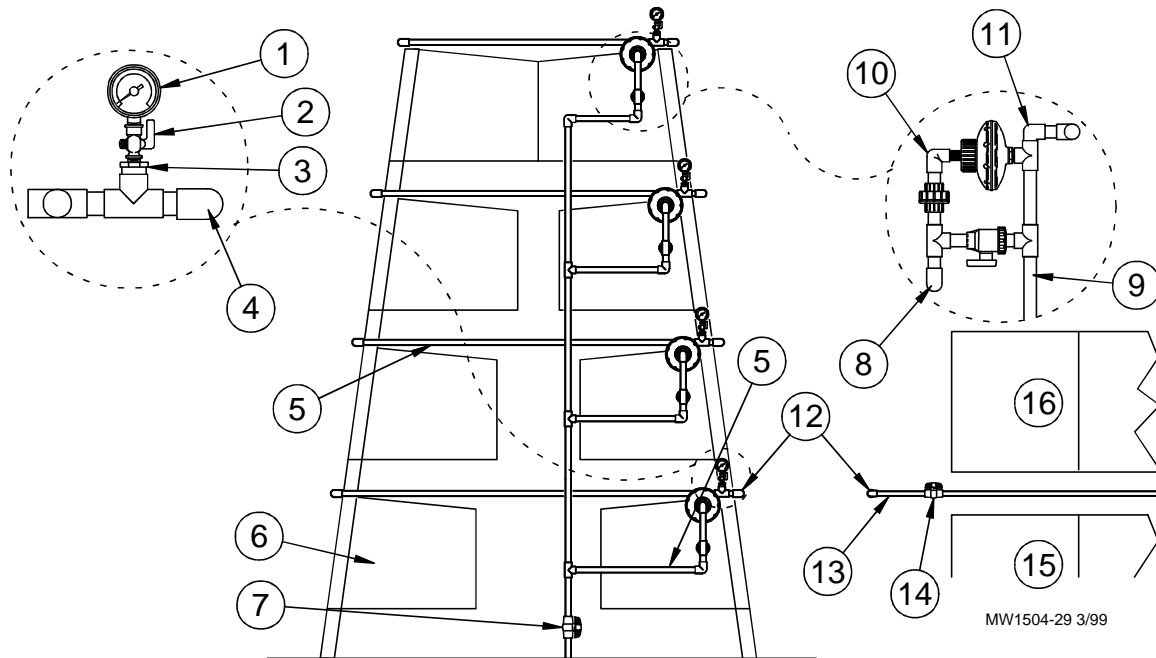


Figure 4

Key	Description	Part No.
1	Low Pressure Water Gauge	27722
2	Lever Handle Valve	30137
3	3/4" x 1/4" Reducer Bushing	7789
4	3/4" x 1/2" PVC Ell	8074
5	3/4" PVC Pipe	
6	Cage Bank	
7	3/4" Ball Valve	34728
8	3/4" PVC Ell	8141
9	3/4" PVC Cap	8050
10	K-Valve Inlet Assembly	30135
11	3/4" PVC Street Ell	30138
12	1/2" x 3/4" PVC Ell	8074
13	1/2" PVC Pipe	
14	1/2" Ball Valve	9254
15	Bottom Tier	
16	Middle Tier	

## Component Spacing Diagrams

Watering System	Pipe Coupler	Slip Connector	Wire Tie
Chore-Time K-Valve Cup (8' pipes)	Locate at all pipe joints not using a Slip Connector	Locate on 48 (14.6 m) foot centers beginning at the 6 <sup>th</sup> pipe joint	Locate at every other partition

**Begin at the Manifold end of the cage row. DO NOT INCLUDE THE CONNECTION AT THE MANIFOLD WHEN COUNTING PIPE JOINTS.**

Repeat the pattern specified above for the entire length of the cage row (on each tier).

## Waterer Line Installation

Water line locations and specific installation instructions for each watering system are given in separate sections of this manual.

The following instructions apply to all systems.

Handle PVC waterer line carefully.

1. Distribute waterer lines along each cage row and place in the approximate location where the line will be installed.
2. Install a coupling, as shown in **Figure 5**, at the FIRST (5) PIPE JOINTS from the manifold end of the row.

Apply PVC cement to the outside of the pipe and the inside of the coupling to be joined. See the directions on page 6 for instructions on proper use of PVC cement.

BE SURE THE PIPE SECTIONS ARE JOINED SO THAT THE HOSE BARBS ARE ALL ORIENTED PROPERLY AND POINT IN THE SAME DIRECTION.

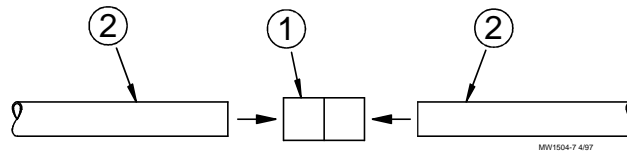


Figure 5

Key	Description
1	Coupling
2	Pipe Sections

3. Install a slip connector, as shown in **Figure 6**, at the SIXTH PIPE JOINT. The slip end of the connector should be closest to the manifold end of the house. Glue the coupling to the water line coming from the manifold end. See directions on page 6 for instructions for proper use of PVC cement.  
Make sure that the indicator line on the Slip Connector is aligned with the edge of the cap on the Slip Connector, as shown in **Figure 6**.  
Align the next section of pipe and cut off to proper length as shown in **Figure 6**.  
Glue the end of the pipe in the reducing fitting on the end of the Slip Connector.  
K-VALVE CUP INSTALLATION: A slip connector should be located every 48 feet (14.6 m).
  4. Repeat steps 2 and 3 the entire length of the cage row.
  5. Beginning at the manifold end of the cage row, use a nylon tie at every other cage partition. Nylon ties should be spaced every 30" (76.2 cm) for 15" cages, 32" (81.3 cm) for 16" cages, or 48" (121.9 cm) for 12" and 24" cages.
- NOTE:** Do not exceed 48" (121.9 cm) spacing between nylon ties.

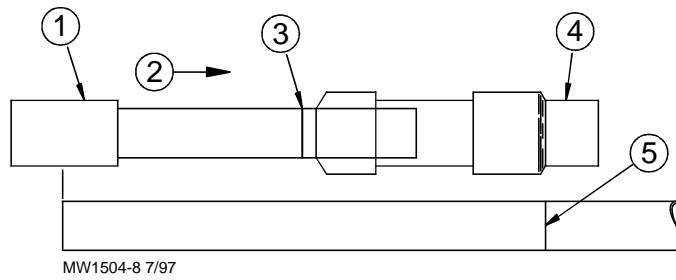


Figure 6

Key	Description
1	Coupling
2	Water Flow
3	Indicator Line
4	Reducing Fitting
5	Cut Pipe Section Here

### Outlet Drain Installation

The Manifold Kit contains an outlet valve for each cage waterer line. This is used when flushing or draining lines during required maintenance of the system.

At the far end of the cage house--opposite the control panel and manifold end--install an outlet valve on each waterer line. Use the adapter supplied to install the 3/4" drain valve on the 1/2" PVC pipe as shown in **Figure 7**.

**NOTE:** Do not install the drain OVER, or IN FRONT OF, the cages.

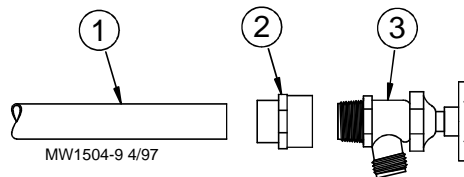


Figure 7

Key	Description
1	End of Water Line
2	Adapter
3	Drain Valve

# Installation of the CHORE-TIME K-Valve Cup

## Chore-Time K-Valve Cup (No Spout)

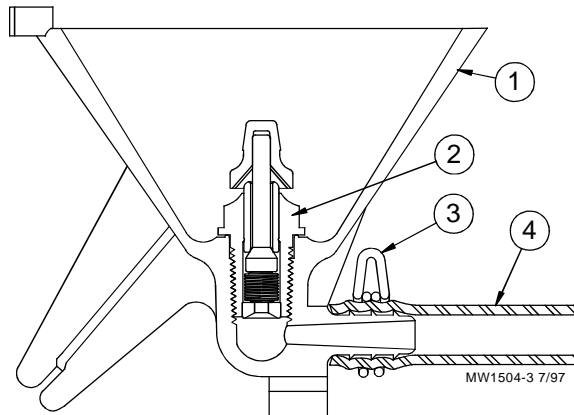


Figure 8

Key	Description
1	Cup
2	K-Valve
3	Clamp
4	Tubing

The Chore-Time K-Valve Cup System uses flexible hose to connect the K-Valve Cup to the waterer line. This allows the Chore-Time K-Valve Cup to be used with a variety of cage systems. The watering system is available with waterer lines that have hose barb saddle assemblies at spacings corresponding to various cage widths. Cups may be placed at every partition or at every other partition.

The cups must be located at recommended locations in the cage. It is very important that the cups are located out of direct exposure to falling manure and away from the feeder trough.

Several hose lengths are available to allow the cups to be positioned as needed. Cups are available with and without spouts. Cups with spouts are available to help direct water away from the feeder trough.

Consult your Chore-Time Cage Distributor for recommended cup locations for your system.

### Water Line Location

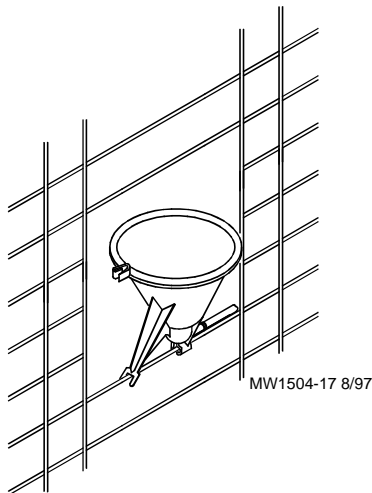
The waterer lines should be installed on top of the cages, in front of the cage legs. The water line should be located to prevent manure build-up on the pipes.

**Note:** Waterer line must be located so that the hose can be properly routed when the cups are installed.

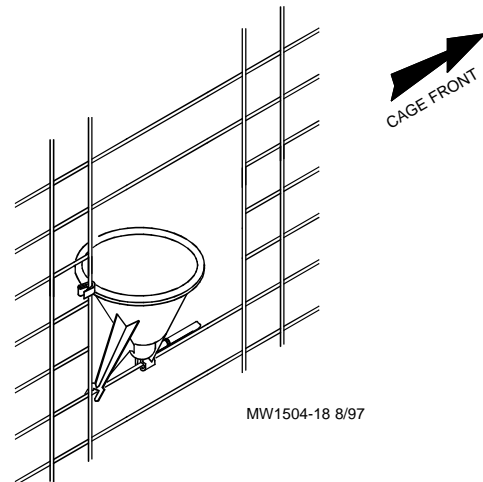
## Cup Installation

Refer to the Cage Notching Instructions to determine the exact cup locations.

1. Place the Cup and Hose Assembly into the cage partition opening as shown in **Figure 9**. Snap the cup into place as shown in **Figure 10**. If the cup has a spout, it must direct water away from the feed trough.

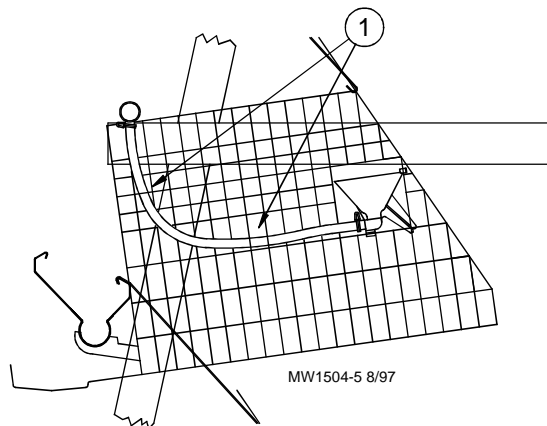


**Figure 9**



**Figure 10**

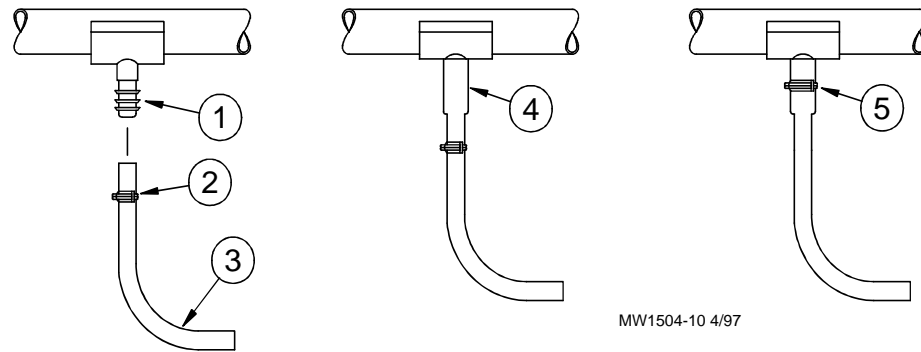
2. Thread the hose through the partition as shown in **Figure 11**. This will prevent the birds from stepping on or getting caught in the hoses. DO NOT KINK THE HOSE.



**Figure 11**

Key	Description
1	Thread Hose Through Partition

3. Slide the end of the hose over the hose barb on the pipe and secure with the hose clamp. See **Figure 12**.



**Figure 12**

Key	Description
1	Hose Barb
2	Hose Clamp
3	Hose
4	Slide hose onto the barb, liquid soap will help the hose slide easier on barb
5	Slide hose clamp into place, position midway on hose barb

In cold weather the cup and tubing assembly must be kept warm until they are installed or the tubing may have to be warmed to enable the hose to slide over the barb.

## **Before Turning On The Water . . . . .**

### **Post Installation Check List**

- clean all dirt out of cups,
- flush all lines at maximum pressure (1 min per 100' of cage row length) to remove all air and any foreign objects that may be inside the system from the installation (be sure lever handle valve is closed to protect pressure gauge),
- be sure filters are installed correctly and contain a filter cartridge,
- make sure that the cups are fastened to the partitions properly,

### **After turning on the water**

- make sure regulators are set to proper pressures
- check for any leaking or dripping pipe connections,
- check valves,
- maintain house temperature above freezing



## Recommendations and Guidelines for Operation

The Chore-Time Cage Watering System requires a minimum incoming water pressure of 40 p.s.i. (275 kPa) to the control panel. **THIS IS THE MINIMUM ALLOWABLE WATER PRESSURE.** Recommended pressure is 40 to 60 p.s.i. (275 kPa to 413 kPa).

For best operation, maintain water pressure at 1.5 to 2.0 p.s.i. (10.3-13.8 kPa). Check the pressure gauge at the manifold to see that this pressure is achieved at the cage bank. Elevation differences between the two locations may require adjustment of the control panel pressure setting to achieve the desired pressure at the cage waterer lines.

### Water Quality

Water quality is very important for proper operation of the system. Consider the following:

HARDNESS (Calcium and Magnesium) above 14 GPG (grains per gallon) a water softener should be used.

PH under 6.5 a neutralizing filter is recommended.

IRON above 0.5 ppm (parts per million) should be treated with a water softener, a mechanical filtration system, or chlorination, depending on raw water hardness.

### Precautions

1. Do not over chlorinate. The maximum concentration is 2 ppm for extended periods and 5 ppm for flushing only. Do not chlorinate 2 days before or after medication is used.  
To Chlorinate: Mix a stock solution of 3/4 ounces of household chlorine bleach (5.25% Sodium Hypochlorite) per gallon of water or 5.9 ml of bleach per liter of water. Set the proportioned to dispense at a rate of one ounce per gallon or 7.8 ml per liter.
2. Some vitamins and medication are syrup type liquids or are sugar based. Avoid these types of compounds. These compounds may leave a slimy deposit on the valve seals preventing them from sealing properly. Flush line at high pressure (incoming line pressure) to remove deposits.
3. Some pumps and/or special purpose gas injectors may add excessive air to the water supply. For proper operation of the system in these cases, an Air Remover Kit is recommended to remove the excessive air from the system. Contact your local Chore-Time distributor.  
**FAILURE TO FOLLOW THESE PRECAUTIONS WILL VOID THE WARRANTY ON THE CHORE-TIME WATERING SYSTEM.**

# Cage Watering System Maintenance

## General Maintenance

Chore-Time Cage Watering System components require very little maintenance; the various components are designed and molded from chemical resistant plastic compounds to provide maximum service with minimal maintenance. Routine maintenance, however, will help guarantee good service and prolong the life of the equipment.

When the system is new, monitor water pressure closely. This will be helpful in determining whether dirt particles, sand, or other particles are present in the water supply. It will also help determine frequency of filter cartridge cleaning and/or replacement.

Check the water filter periodically and clean as necessary. Use the pressure gauges on the control panel as guidelines. When the pressure drops across the filter, it's time to clean or replace the filter cartridge. It's a good idea to keep an extra filter cartridge on hand.

Chore-Time recommends a 20 micron cartridge. Replacement cartridges for the 9275 Filter Control Panel are available from Chore-Time under part number 7723. Replacement cartridges for the 36802-2 Flushable Filter Control Panel are available from Chore-Time under part number 36806.

While in operation, flush the water system thoroughly every 4 weeks (minimum) to remove algae or trash that builds up in the lines.

**NOTE: THIS IS MINIMUM!** Some installations may require more frequent maintenance.

If algae growth becomes a problem, Chore-Time recommends use of a bleach solution. See "Recommendations and Guidelines" for additional details.

For additional information, see the "Operator's Troubleshooting Guide" in this manual.

## Maintenance Between Flocks

Flush all air out of the lines.

Flush each line at full pressure for approximately 1 minute per 100' of cage row length to remove deposits and sediments.

Check pressure drop across water filter and clean or replace if necessary.

Check pressure gauges, regulators, and shut off valves for proper operation.

Maintain house temperatures above freezing between flocks.

It is strongly recommended that the water remains on between flocks.

## Chore-Time K-Valve Components

Chore-Time does not recommend servicing K-Valve Assemblies due to potential damage to components during disassembly and reassembly.

Chore-Time recommends replacing any malfunctioning K-Valve that cannot be corrected by flushing the lines or triggering the K-Valve.

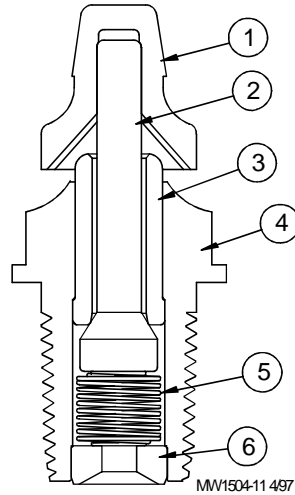


Figure 13

Key	Description
1	Deflector
2	Valve Pin
3	Valve Sleeve
4	K-Valve Body
5	Spring
6	Retaining Washer

**Important: Installation seating torque is 15 in. lbs. (38 cm. kg). Use only enough pressure to seat the Valve Body shoulder firmly against the bottom of the cup. DO NOT overtighten the K-Valves when installing into the cups! Overtightening may result in damage to the valve body or the cup.**

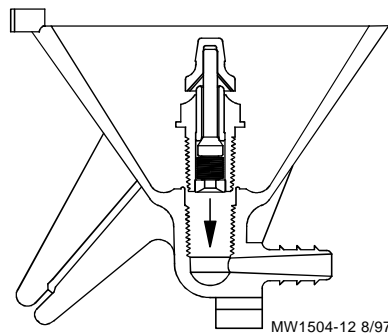
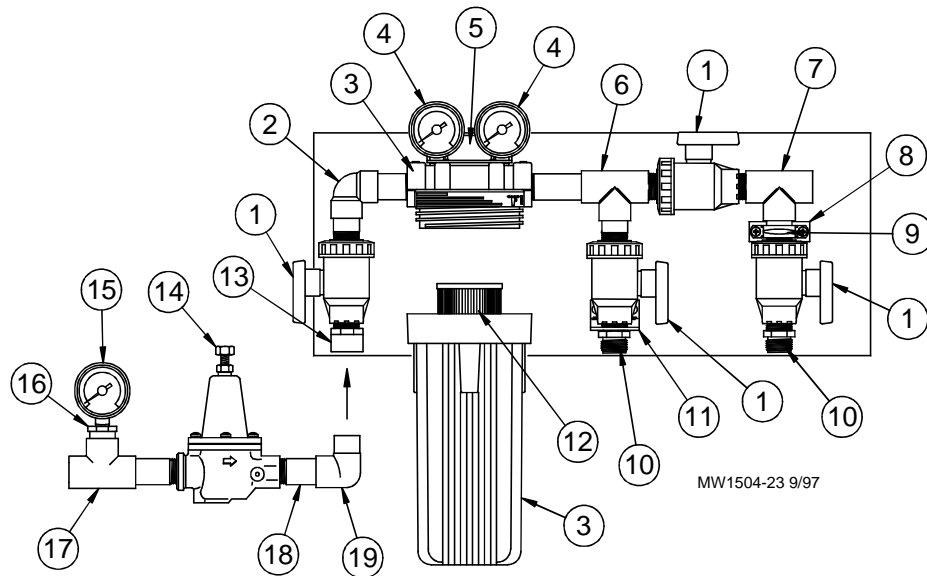


Figure 14

# Parts Listing

## 9275 Water Filter Control Panel

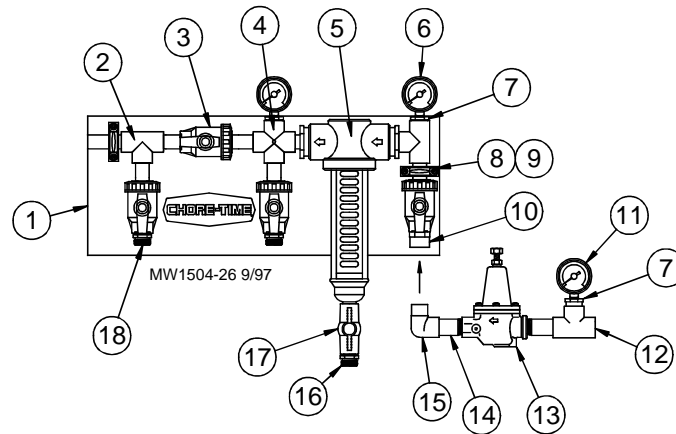


Key	Description	Part No.
1*	3/4" PP Valve	36720
2*	Filter Inlet Assembly	35306
3*	Water Filter	35309
4*	High Pressure Water Gauge	7718
5*	Filter Mounting Bracket	35302
6*	Filter Outlet Assembly	35304
7*	Medicator Outlet Assembly	35305
8*	Standoff Block	35300
9*	3/4" Plastic Conduit Clamp	35301
10*	3/4" Nylon Adapter	7543
11*	Medicator Connector Brace	35307
12*	Filter Cartridge	7723
13*	3/4" PVC Male Adapter	9229
14**	Regulator	29951
15**	High Pressure Water Gauge	7718
16**	3/4 x 1/4 Reducer Bushing	7789
17**	3/4" PVC Tee	7538
18**	3/4" Threaded PVC Nipple	7531-1
19**	3/4" PVC Street Ell	30138
--*	Union	8137

\*These items may be ordered as an assembly under Part Number 9275.

\*\*These items may be ordered as an assembly under Part Number 35803.

## 36802-2 Flushable Filter Control Panel



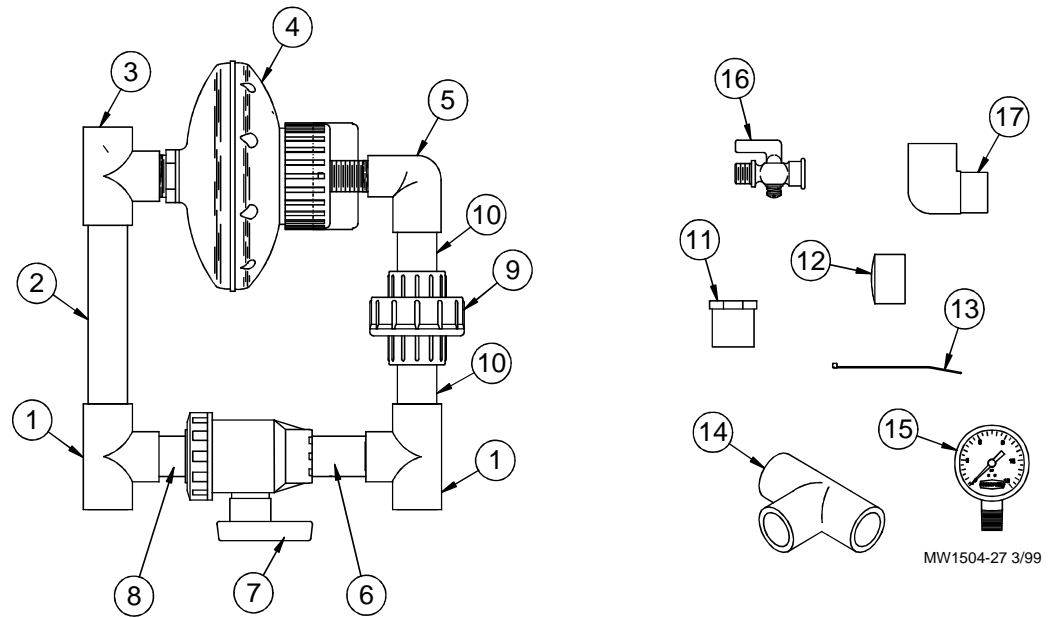
Key	Description	Part No.
1	Mounting Board	35303
2	Medicator Outlet Assembly	36805
3	3/4" Valve	36720
4	3/4" Cross	7536
5	Filter Inlet Assembly	36803
6	Pressure Gauge	7718
7	3/4" x 1/4" Reducer Bushing	7789
8	Standoff Block	35300
9	3/4" Plastic Conduit Clamp	35301
10	3/4" PVC Male Adapter	9229
11*	High Pressure Gauge	7718
12*	3/4" PVC Tee	7538
13*	Step Regulator	29951
14*	3/4" Threaded PVC Nipple	7531-1
15*	3/4" PVC Street Ell	30138
16	Nylon Adapter	29141
17	1/2" Ball Valve	34961
18	3/4" Male Adapter	7543

These items may be ordered separately, if needed.

Key	Description	Part No.
--	1/2 Pint PVC Cement	6303-3
--	Valve Repair Kit (for 3/4" Valve)	36804
--	Filter Repair Seal Kit	36807
--	Replacement 140 Mesh Filter	36809
--	Flushable Filter Assembly	36810

\*Items 11-15 are not included with the Flushable Filter Control Panel. They may be ordered separately as an assembly under Part Number 35308.

## 30135 K-Valve Inlet Assembly

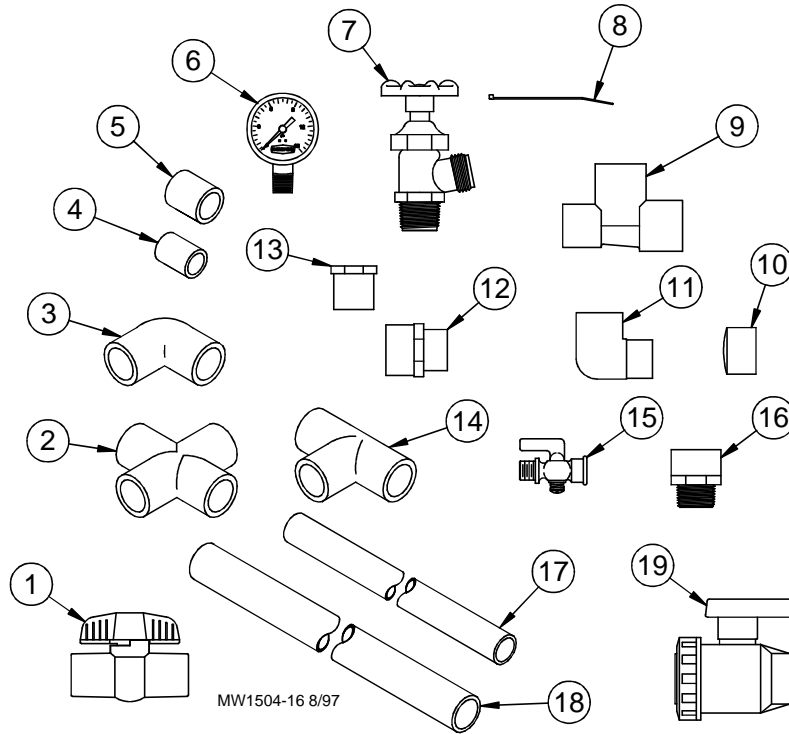


MW1504-27 3/99

Key	Description	Part No.
1	3/4" PVC Tee (SxSxS)	7538
2	3/4" PVC Pipe	29107-3
3	3/4" PVC Tee (SxSxT)	8061
4	Low Pressure Regulator	29135
5	3/4" x 1/2" PVC Elbow	9347
6	3/4" PVC Pipe	7531-9
7	3/4" Quarter Turn Valve	36720
8	3/4" PVC Pipe	7531-4
9*	3/4" PVC Union	8137
10*	3/4" PVC Pipe	29107-12
11*	3/4" x 1/4" Reducer Bushing	7789
12*	3/4" PVC Cap	8050
13*	Wire Tie	6635
14*	3/4" PVC Tee (SxSxS)	7538
15*	Low Pressure Water Gauge	27722
16	Lever Handle Valve	30137
17	3/4" PVC Street Ell	30138

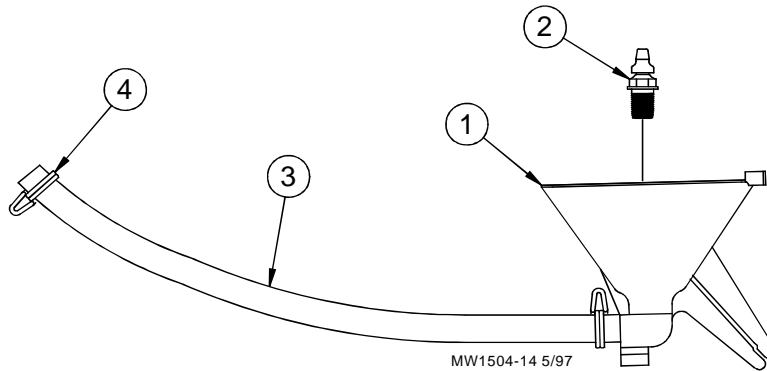
\*These items may be ordered as an assembly kit under Part Number 30136.

## Inlet Manifold Kits for Cage Waterer Lines

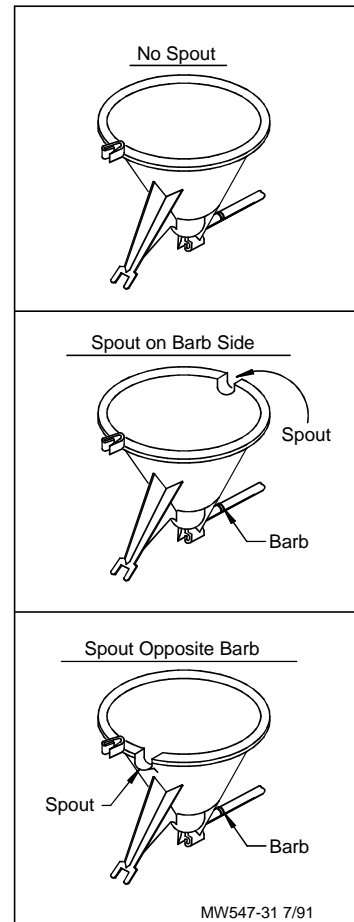


Key	Description	Part No.
1	1/2" Ball Valve 3/4" Ball Valve	9254 34728
2	3/4" PVC Cross	7536
3	1/2" PVC Ell 3/4" PVC Ell 1/2" x 3/4" PVC Ell	9066 8141 8074
4	1/2" PVC Coupler	9065
5	3/4" PVC Coupler	7775
6	Low Pressure Water Gauge	27722
7	Boiler Drain	9255
8	Wire Tie	6635
9	3/4 x 1/2 x 3/4 PVC Tee	30350
10	3/4" PVC Cap	8050
11	3/4" PVC Street Ell	30138
12	3/4" x 1/2" PVC Adapter	9062
13	3/4" x 1/4" PVC Reducer Bushing	7789
14	3/4" PVC Tee	7538
15	Lever Handle Valve	30137
16	3/4" Male Adapter	9229
17	1/2" PVC Pipe (10 ft. section)	7293-10
18	3/4" PVC Pipe (10 ft. section)	8083-10
19	3/4" PP Valve	36720
--	Valve Repair Kit (for 3/4" Valve)	36804

## Chore-Time K-Valve Cage Cup Line Components



Key	Description	Part No.
1	Chore-Time Cage Cup	14400-1
	No Spout	14400-2
	Spout Opposite Barb Side	14400-3
	Spout On Barb Side	14400-3
2	Valve Assembly	30330
3	Tubing & Clamp Assembly	
	8" Hose	14453-8
	10" Hose	14453-10
	13" Hose	14453-13
	15" Hose	14453-15
	18" Hose	14453-18
20" Hose	14453-20	
4	Clamp	9088-1



### Cup Assemblies for repair or replacement

#### Cup and Tubing Assembly with valve and hose

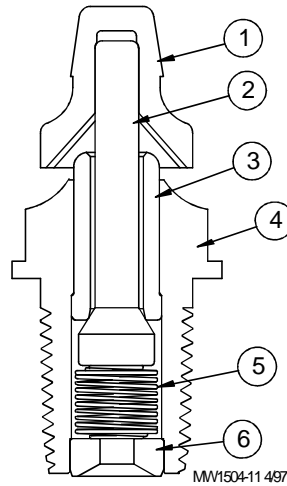
	No Spout	Spout Opposite Barb	Spout Barb Side
8" Hose	30334-8	30335-8	30336-8
10" Hose	30334-10	30335-10	30336-10
13" Hose	30334-13	30335-13	30336-13
15" Hose	30334-15	30335-15	30336-15
18" Hose	30334-18	30335-18	30336-18
20" Hose	30334-20	30335-20	30336-20

#### Cup and Valve Assembly, no hose

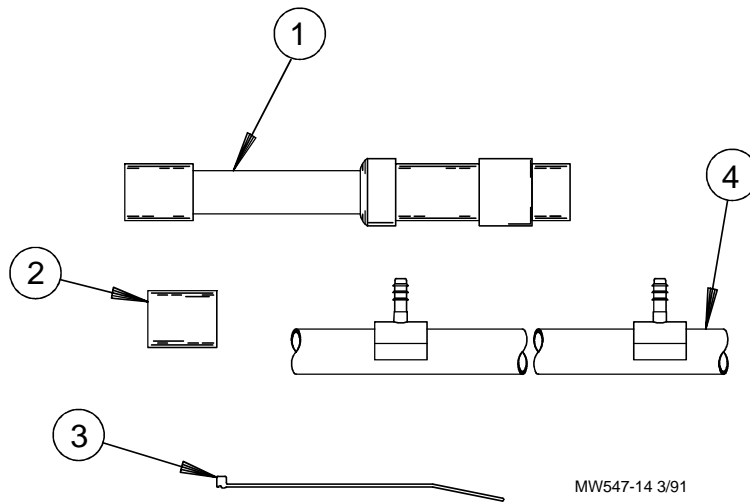
	No Spout	Spout Opposite Barb	Spout Barb Side
	30331	30333	30332



## Chore-Time K-Valve



Key	Description	Part No.
1	Deflector	29782
2	Valve Pin	29808
3	Valve Sleeve	29807
4	K-Valve Body	29944-1
5	Spring	29946
6	Retaining Washer	29945



Key	Description	Part No.
1	Slip Connector	8062
2	1/2" PVC Coupler	9065
3	Nylon Tie	6635
4	Pipe and Saddle Ass'y	
	12" Saddle Spacing	9750-11
	16" Saddle Spacing	9750-1
	20" Saddle Spacing	9750-3
	24" Saddle Spacing	9750-4
	30" Saddle Spacing	9750-5
	32" Saddle Spacing	9750-6
	40" Saddle Spacing	9750-8
	48" Saddle Spacing	9750-9
	60" Saddle Spacing	9750-10

## Installation and Repair Parts for Optional Water Meter

CHORE-TIME offers an optional water meter for installations where it is desirable to monitor usage. Installation and parts information is shown below.

Install the Water Meter on the incoming line where it can be easily checked to monitor water usage. The Water Meter requires use of two brass water meter connectors. Order these components separately according to the following parts information. They are not supplied with the water meter.

The water meter also requires two PVC couplers to install the meter in the incoming 3/4" (19 mm) PVC line. Use 3/4" (19 mm) Female Thread Adapter, Chore-Time part number 8160. Be sure to use teflon pipe tape at all threaded connections.

**NOTE:** The Water Meter has an arrow on the outside of the casing. The water meter **MUST** be installed so that water flows through the unit in the direction indicated.

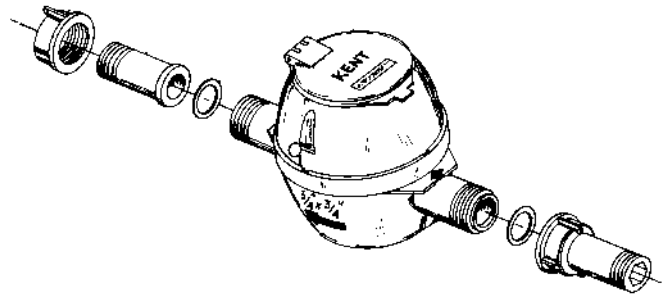
### Water Meter and Connectors

The unit displays water usage in gallons and liters.

13228-G	Gallons
13228-L	Liters

**Important:** For proper operation, the Water Meter must be installed with water flow in the direction shown by the arrow on the side of the casing.

**NOTE:** Water Meter requires use of two connectors.



Key	Description	Part No.
1*	1-11 1/2" NPT Flanged Nut / 2 used	----
2*	3/4-14 NPT Nipple / 2 used	----
3*	"O" Ring / 2 used	----
4	3/4" Water Meter	13092

\*Order Items 1, 2, & 3 under Chore-Time Part No. 13151.

## Trouble Shooting Guide

### All cups running over. . .

- Pressure set to high. Recommended pressure is 1.5 p.s.i. (10.3 kPa) with recommended maximum pressure of 3.0 p.s.i. (20.7 kPa).

### Individual cups running over. . .

- Usually trash in the valve. Trigger valve to flush particles out of valve. Replace valve if necessary.

### Birds not getting enough water. . .

- Water filter clogged.
- Check for proper pressure regulator setting.
- Check that control valves or line valves are fully opened.
- Supply hose pinched.
- Restricted flow.

Contact your nearby Chore-Time distributor or representative for additional information or parts. Please have the following information available when you call.

1. Year the system was purchased.
2. Line length and cup spacing.



**Made to work.  
Built to last.**

### **Revisions to this Manual**

<b>Page No.</b>	<b>Description of Change</b>
22	Drawing updated.
25	Chore-Time cage cup line components added.

**Contact your nearby Chore-Time distributor or representative for additional parts and information.**

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