



Watering Regulator for Cage Systems

Manual Adjustment Part Number 52410-6

PDS™ Adjustment Part Number 52410-7

Introduction

The Chore-Time Water Regulator is designed to regulate water pressure for Chore-Time Layer and Brood Grow Nipple Watering Systems. There is a model for manual adjustment of the regulator and one for PDS™ controller adjustment.

Installation Guidelines

Each water pressure regulator is capable of supplying one tier (two lines) up to 600' [182.8 m]. Systems over 600' [182.8 m] require two regulators per tier (one per line).

In Modular Manure Belt Brood Grow installations using air drying tubes; two regulators per tier must be used no matter what the cage row length. The air tube prevents water line connection from one side of the cage row to the other.

The regulator assemblies should be mounted on one side of the cage row. This location should be easily reachable from the aisle for adjustment purposes and should not interfere with other equipment (DBS system, manure belts, egg belts, belt take ups, feeding system etc.). The regulator assemblies should also be located so they are protected from damage. Installation of the regulator assemblies should not be attempted until the location of all other equipment is established.

The height of the stand tube/air breathers must also be taken into consideration when positioning the regulator assemblies. It is important to be able to maintain this height so the full operating range of the regulator can be utilized.

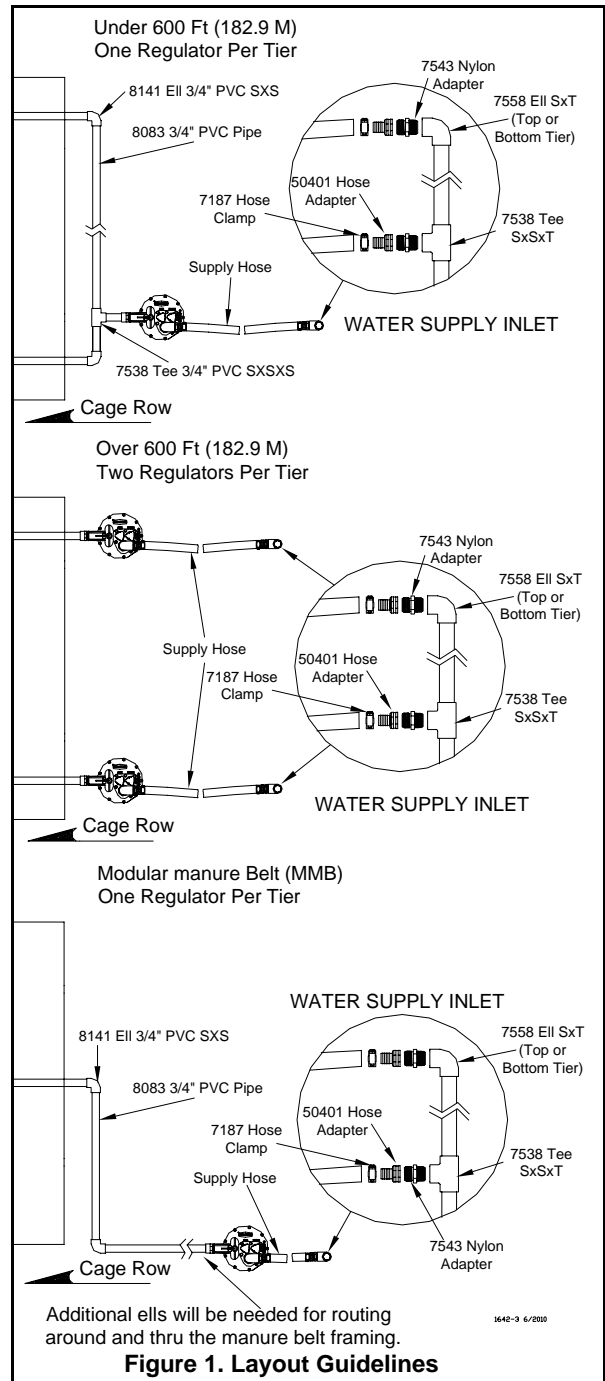
It is important to install the regulator in a way that will allow the assembly to be turned off the nipple pipe line. If removal is necessary the stand tube/air breather will need to be removed before turning the regulator off the nipple pipe line.

It is recommended to install the regulator assembly equal to or slightly higher than the nipple water line. Installing the regulator with this recommendation will aid in removal of unwanted air in the system.

Single regulator installations (feeding two lines per tier) should be plumbed so the output from the regulator flows through the same number of restrictions (ells) to feed both lines. The same number of restrictions will assure equal volume of water to both lines. Equal volume of water is especially important in brood grow installations so the flush times (from one line to another) are close to the same.

In layer systems the connection between the regulator and the water supply inlet is made with a 3/4" [1.91 cm] flexible hose assembly. This hose connects between the regulator and the water supply. The hose and connectors must be of high quality and rated for the incoming water pressure.

In brood grow systems use the provided 5/8" x 36" [1.59 x 91.4 cm] regulator inlet supply hose. This hose connects between the regulator and the water supply.



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Dome Air Riser Installation

Layer and brood grow systems require one (1) dome air riser for every four (4) regulators installed per supply line. Install the dome air riser between the high pressure water supply and regulator closest to the high pressure water supply.

Multiple dome air risers if required: Install the second dome air riser close to the middle of the cage bank.

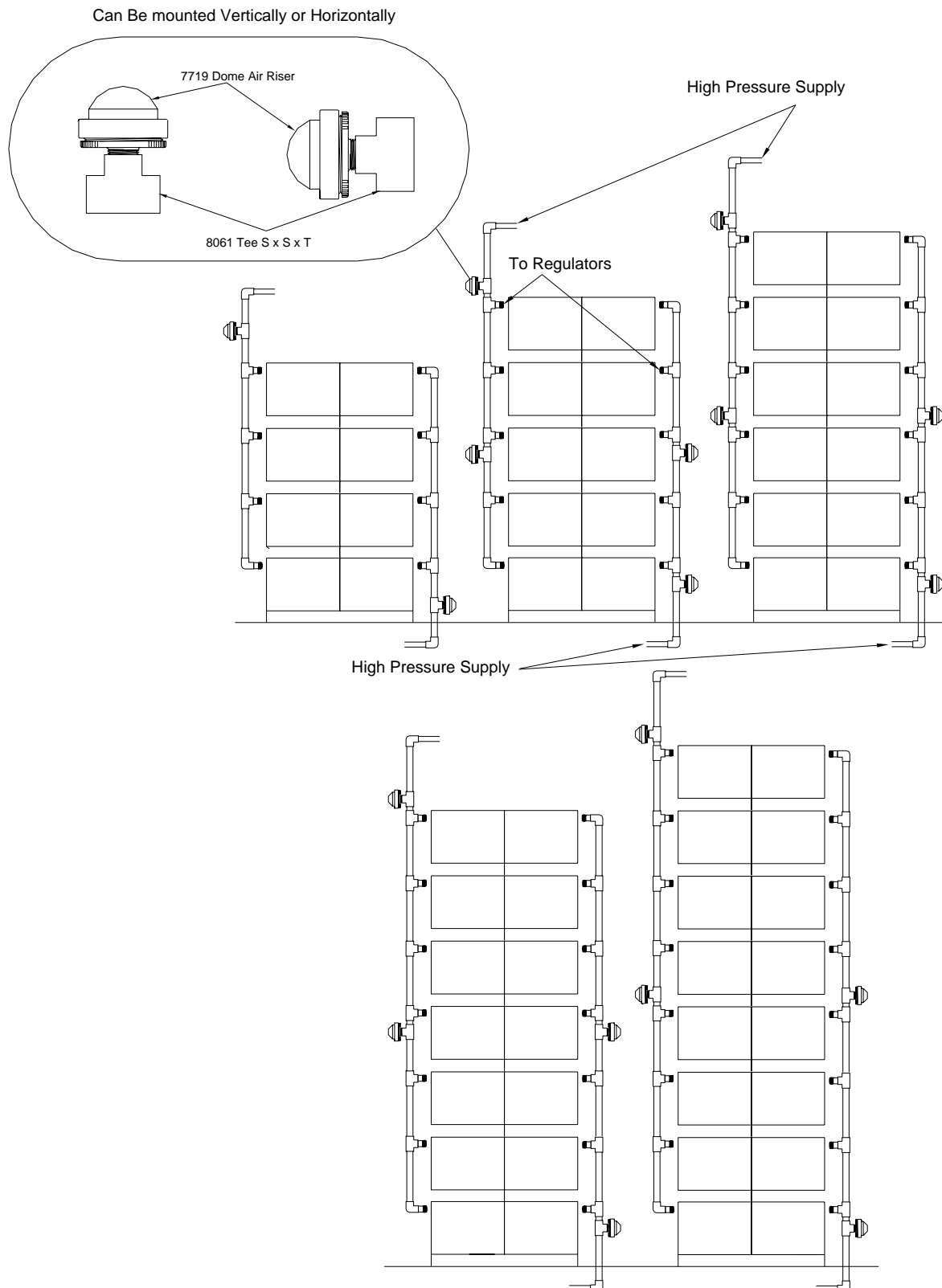


Figure 2. Dome Air Riser Installation Guidelines

Regulator Assembly

- Do not overtighten fittings when assembling threaded connections!
- Do not allow glue to enter the 3/4" threaded inlet!
- Apply thread sealant tape or thread sealing compound (except hose threads) before installation.

NOTICE

Use only thread sealant tape or compound approved for ABS plastic on the regulator's fittings.

Failure to do so could result in damage to the regulator and will void the warranty.

Line Connection Components Installation

1. Install Male PVC Adapter into the 3/4" threaded outlet.
2. Glue 1.44" threaded PCV pipe to the 3/4" slip by thread PVC elbow. Allow time for the glue to set before installing to the 3/4" female threaded inlet.
3. Install glued assembly to the 3/4" female threaded inlet. Be sure the elbow is properly oriented for connection to the water supply.

Note: The 3/4" Male adapter may be installed directly into the 3/4" threaded inlet when PVC elbow is not required.

4. Install nylon 3/4" hose adapter to 3/4" slip by thread PVC elbow.

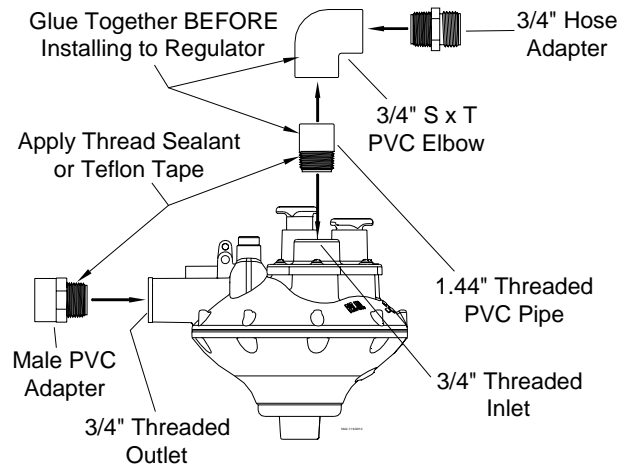


Figure 3. Line Connection Components

Stand Tube Installation

1. Place one (1) o-ring against the shoulder of the stand tube outlet. Lubricate the o-ring with water or soapy water. **DO NOT USE PETROLEUM BASED LUBRICANTS!**
2. Push the stand tube assembly over the lubricated o-ring until it hits the top of the regulator. Make sure the o-ring is properly positioned.
3. Locate clamp below the o-ring and tighten. Make sure the stand tube is secure but to not overtighten the clamp.

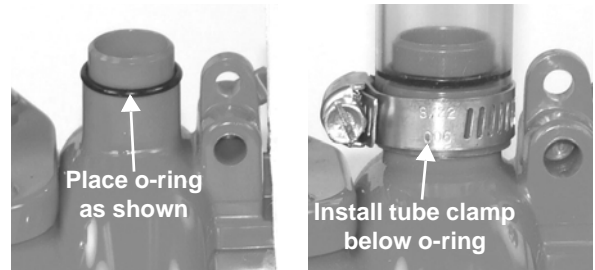


Figure 4. Stand tube installation

Water Supply Connection

After the regulator assembly is attached to the nipple line connect the regulator assembly to the water supply. See **Figure 1.** for installation layout guidelines.

- Brood grow systems use a 5/8" [1.59 cm] flexible hose assembly to connect to the nylon 3/4" hose adapter.
- Layer systems use a 3/4" [1.91 cm] flexible hose assembly to connect to the nylon 3/4" hose adapter.

Recommended incoming water pressure to the regulator assembly: 30 to 35 psi max [207 to 241 kPa max].

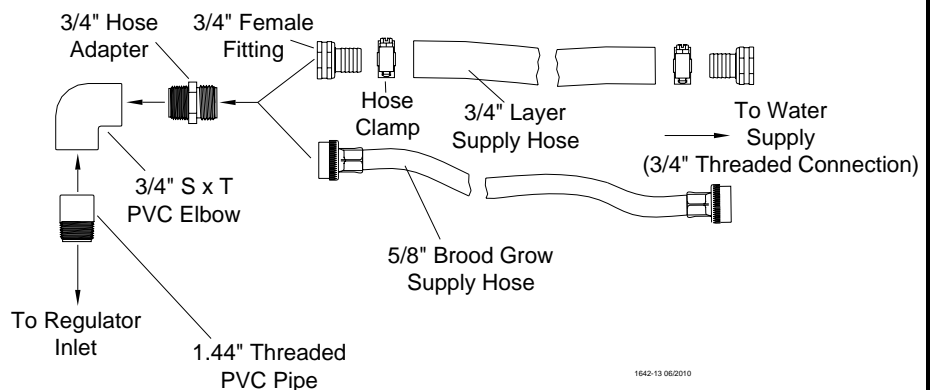


Figure 5. Water Supply Connection

Regulator Operation

Recommended incoming water pressure to the regulator assembly: 30 to 35 psi max [207 to 241 kPa max].

Adjust water column by turning the knob on the bottom of the regulator, see **Figure 6**.

CAUTION STOP turning the adjustment knob as soon as resistance is noticed or damage will occur.

Water column adjustment knob for PDS™ regulators is used to set a *default* water column. This *default* will be the *operating* water column in the event of an air pressure loss to the PDS system.

Set the *default* water column with consideration of the bird age. Lower *default* water column should be used for young birds so the nipple valves do not become hard to operate.

PDS Controllers **CAN NOT** adjust the *operating* water column below the set *default* water column.

Functional Modes:

There are three (3) selectable modes for operating the water regulator (OFF, REGULATE, and FLUSH). These modes are selected by using the individual regulate and flush control knobs.

- PDS™ controlled regulators are to operate in the **REGULATE** mode.
- Flushing the system does not require turning off the regulate control knob.

CAUTION DO NOT FLUSH DRINKER LINES WITH PDS™ CONTROL unless drinker lines are pressurized with water! Product damage may occur if this caution is not followed.

- When flushing the system make sure the outlet line is clear of restrictions. Excessive back pressure can damage the regulator.

Setting Functional Modes:

1. Rotate the control knob to free the latch.
2. Pull up on the control knob. Control knobs: UP position is ON and DOWN position is OFF.

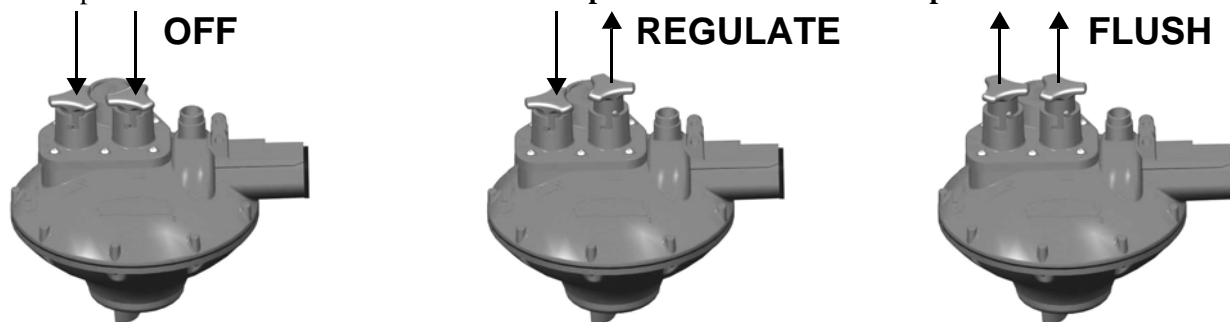


Figure 7. Functional Mode Settings

3. Always lock the control knob into position by rotating knobs into the shown positions, see **Figure 8**.

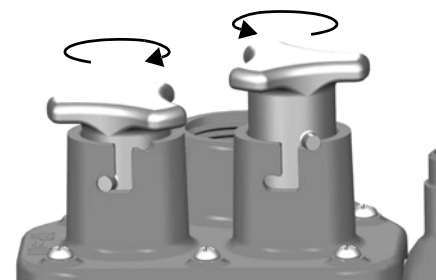


Figure 8. Control Knob Locked Position

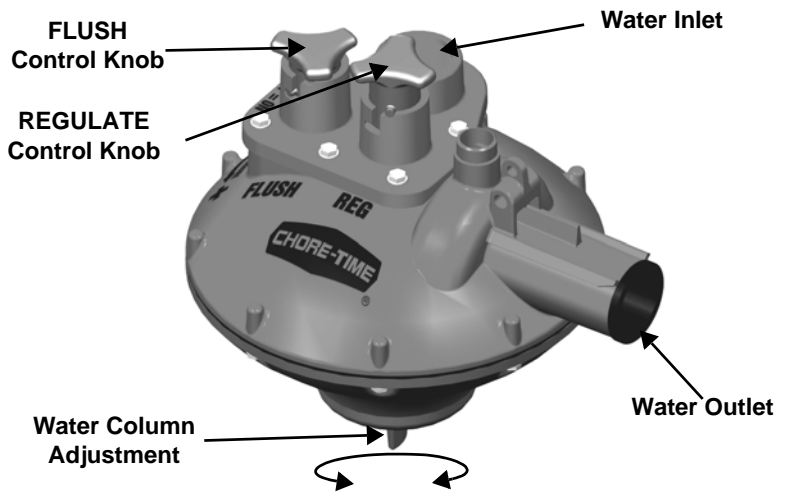
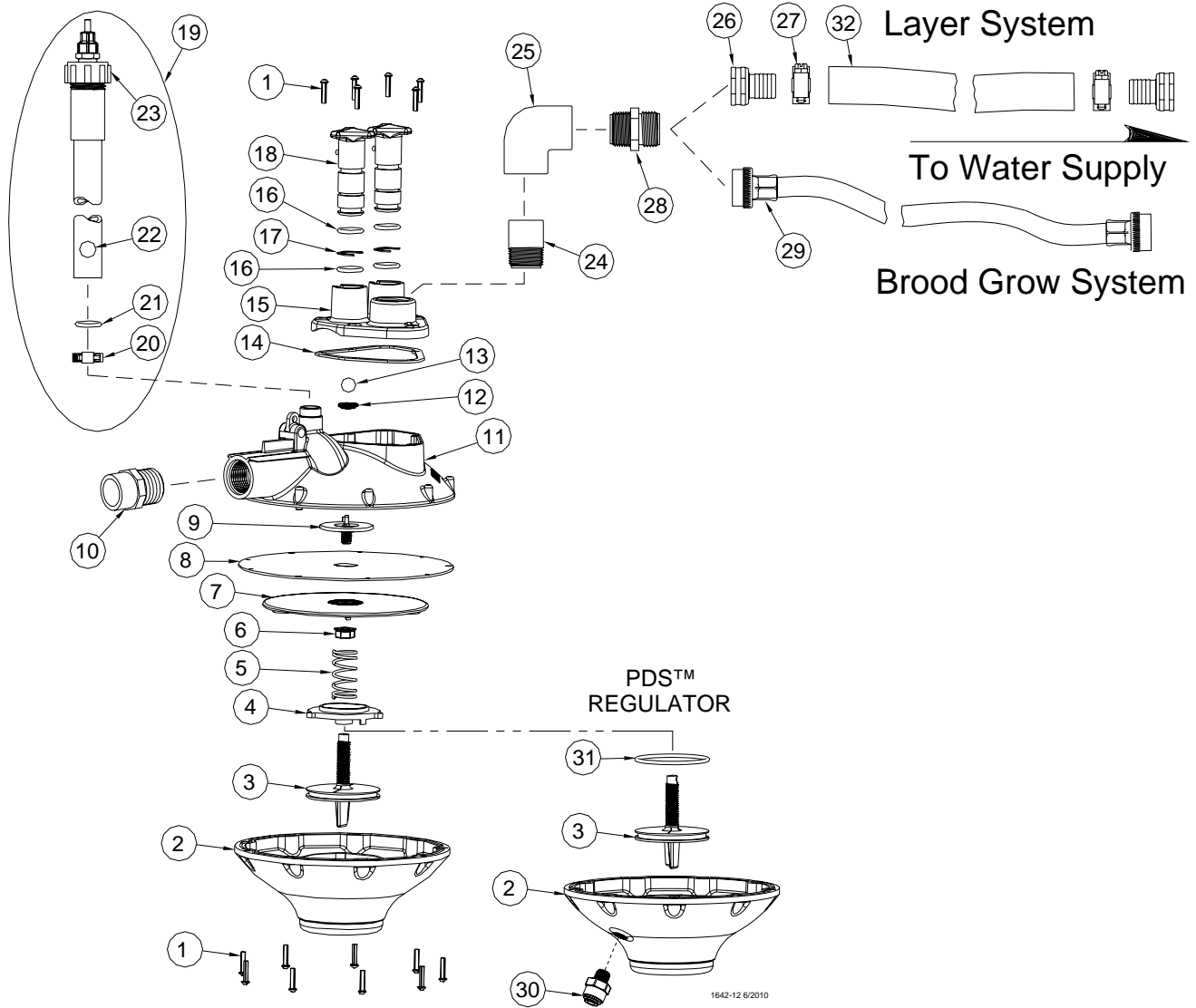


Figure 6. Water Regulator

Parts List

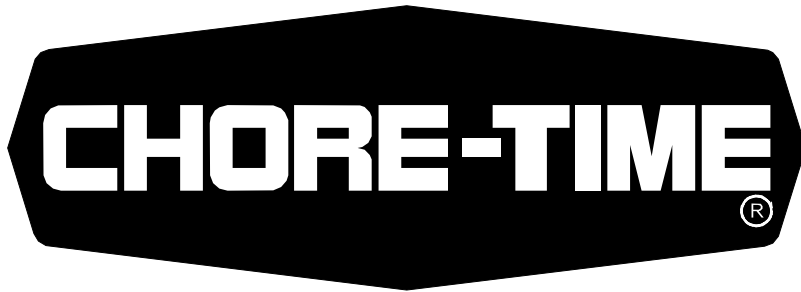


Item	Description	Manual Adjust	PDS™ Adjust
		52410-6	52410-7
Item	Description	Part No	Part No
1	#6 X 5/8" Screw	52025	52025
2	Bottom Housing	51558	52089
3	Adjustment Knob	51564	51564
4	Spring Support Plate	51563	51563
5	Spring	52031	52031
6	5/16-18 SS Nut	46764	46764
7	Diaphragm Support	51562	51562
8	Diaphragm	51565	51565
9	Trigger	51561	51561
10	Male PVC Adapter	9229	9229
11	Top Housing	52088	52088
12	Seat	52027	52027
13	Ball	52026	52026
14	Valve Body Gasket	51566	51566
15	Valve Body	51559	51559
16	O-Ring	52029	52029

Item	Description	Manual Adjust	PDS™ Adjust
		52410-6	52410-7
Item	Description	Part No	Part No
17	C-Clip	52028	52028
18	Mode Selection Knob	51560	51560
19	Rigid Stand Tube Assy	52532-7	52532-7
20	Hose Clamp	49529	49529
21	O-Ring	48325	48325
22	Blue Ball	37142	37142
23	Breather Cap Assy	45703	45703
24	3/4 x 1 7/16" PVC Pipe	7531-5	7531-5
25	3/4 SxT PVC Ell	7558	7558
*26	3/4" Female Fitting	50401	50401
*27	Hose Clamp	7187	7187
28	3/4" Hose Adapter	7543	7543
*29	5/8 x 36" Supply Hose	50800-2	50800-2
30	1/4" PDS Tube Conn.	---	50820
31	O-Ring	---	52030
**32	3/4" ID Supply Hose	47820-0	47820-0

*Items must be ordered separately.

**Item available in bulk lengths 47820-50 (50 Ft), 47820-100 (100 Ft), 47820-200 (200 Ft)



MADE TO WORK.

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

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