



VOLUMATIC™ WATER REGULATOR

For Cage Systems - PDS™ and Manual Adjustment
Part Number 42400-11, 42400-12, 42400-14

Introduction

The Chore-Time VOLUMATIC™ Water Regulator is designed to regulate the water pressure for the Chore-Time Cage Nipple Watering Systems. There is a version for manual adjustment of the regulator and one for automatic adjustment.

Cage Regulator Assembly

Apply thread sealant (one approved for plastic fittings) or Teflon tape to the 3/4 inch threaded outlet of the regulator and thread on the Part no. 8160 adapter. Use PVC cement to attach the P/N. 8074 adapter or P/N 25098 flexible hose attachment to the inlet of the regulator (positioned as necessary for connection to the inlet water supply pipe). Also attach the P/N. 9062 adapter to the stand tube/air breather port on the top of the regulator (be careful not to get glue inside the regulator). Cut a piece of P/N. 8083 pipe long enough to extend the P/N. 8137 union out past the regulator body. This allows the regulator, with the stand tube removed, to be unscrewed from the P/N. 8160 adapter, should removal be necessary. Glue the pipe into the adapter and the P/N. 8137 union. After the regulator assembly is attached to the nipple line the connection can be completed from the P/N. 8137 union to the inlet water supply. See Figure 1.

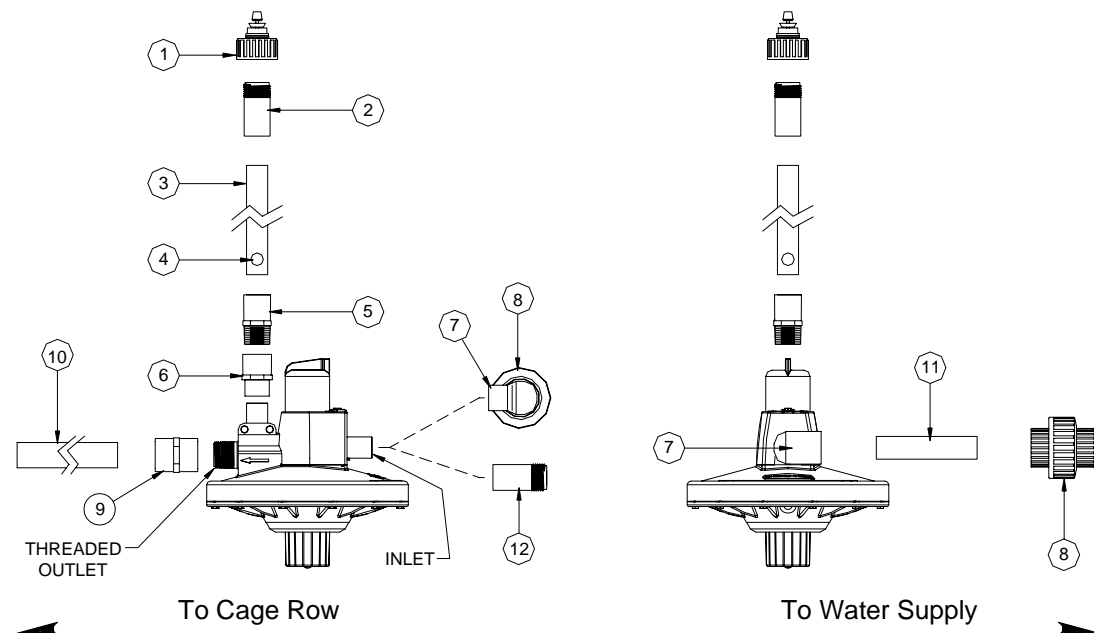


Figure 1. Cage Regulator Assembly

Item	Description	Part No.
1	Cap, Ass'y Breather	45703
2	Fitting, .75-11.5 NH Adapt	25098
3	Pipe, .50 x 19.88 Clear PVC	38250-1
4	Ball,.50 Blue Polypropylene	37142
5	Adapt, PVC Male .75 x .50 MTXS	9063
6	Adapt, Female .75 x .50 S x S	9062
7	Ell, PVC .75 X .50 S X S	8074
8	Union, .75 PVC S x FT	8137
9	Adapt, Female PVC .75 S x FT	8160
10	Nipple Line	*****
11	Pipe, .75 PVC SDR (Cut to length)	8083-10
*12	Fitting, .75-11.5 NH Male Adapt	25098

Installation

(See Figure 2.)

Each pressure regulator is capable of supplying one tier (two lines) up to 600 feet (182.8 meters). Systems over 600 feet (182.8 meters) require two inlet assemblies per tier (one per line).

The regulator assemblies should be mounted on one side of the cage row in a location where it can be easily reached for adjustment from the aisle and does not interfere with the other equipment (DBS system, egg belts, belt take ups, feeding system etc.). Installation of the regulator assemblies should not be attempted until the location of all other equipment is established. Also the regulator assemblies should be located so they are protected from damage.

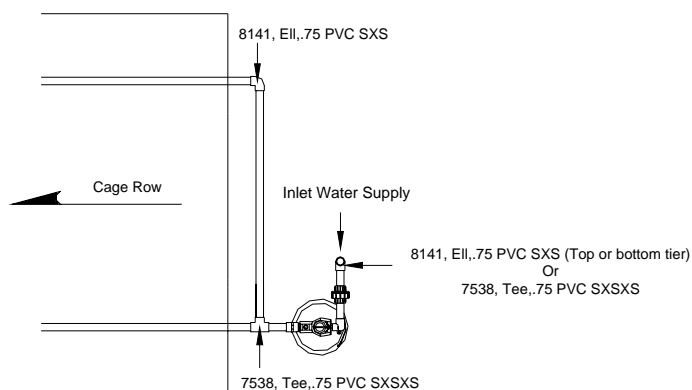
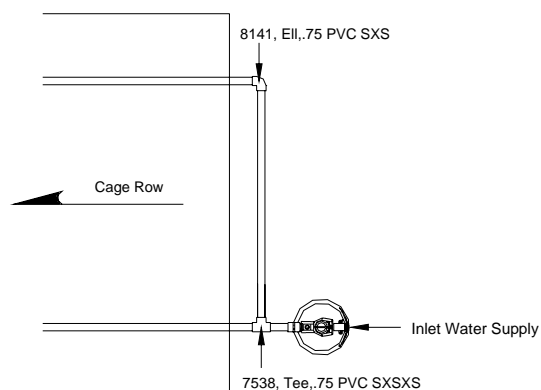
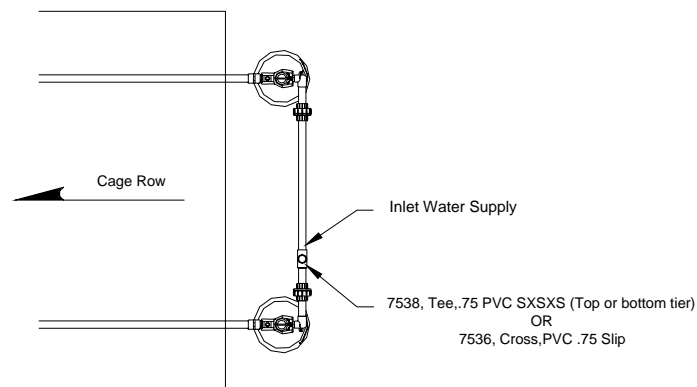
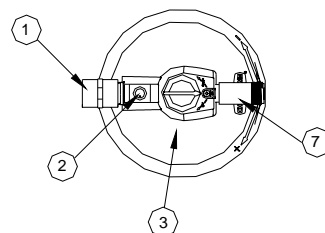
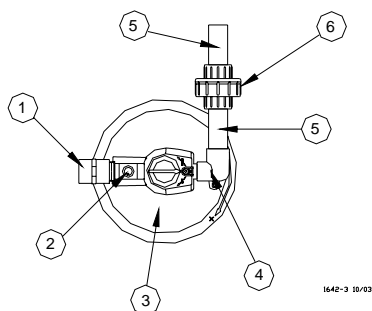
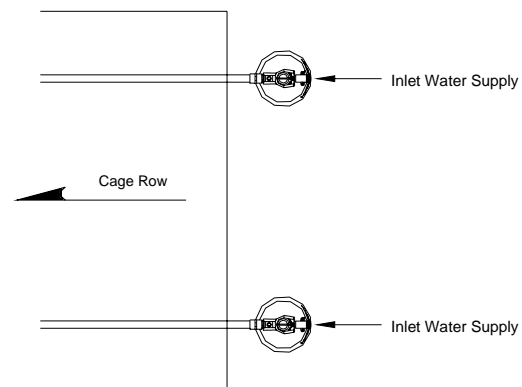
The height of the stand tube/air breathers must also be taken into consideration when positioning the regulator assemblies. It is important to be able to maintain this height so that the full operating range of the regulator can be utilized.

It is important to install the regulator in a manner which, with the stand tube/air breather removed, will allow the regulator assembly to be turned off the nipple pipe line, should removal become necessary.

The regulator assemblies may be located in a variety of locations depending on the installation, operation and location of other equipment. Additional plumbing components may be required.

It is also recommended that the regulator assembly is equal to or slightly higher than the nipple water line to aid in the removal of unwanted air.

The connection between the regulator and the supply can be “rigidly plumbed” with the 3/4 inch (P/N. 8083-10) hook up pipe provided. Flexible hose can also be used for this connection but it and the connectors must be of high quality and rated for the incoming water pressure.

Rigidly Plumbed Water SupplyUnder 600 Ft (182.9 M) One
Regulator Per Tier**Flexible Hose Water Supply**Under 600 Ft (182.9 M) One
Regulator Per TierOver 600 Ft (182.9 M) Two
Regulators Per TierOver 600 Ft (182.9 M) Two
Regulators Per Tier

Item	Part No.	Description
1	8160	Adapt, Female PVC .75 S X FT.
2	----	Stand Tube Port
3	42400-11	Reg, Cage Watering Man Std.
4	8074	Ell, PVC .75 X .50 S X S
5	8083-10	Pipe, .75 X 120 PVC SDR (Cut To Length)
6	8137	Union, .75 PVC S X S
7	25098	Fitting, .75-11.5 NH Male Adapter

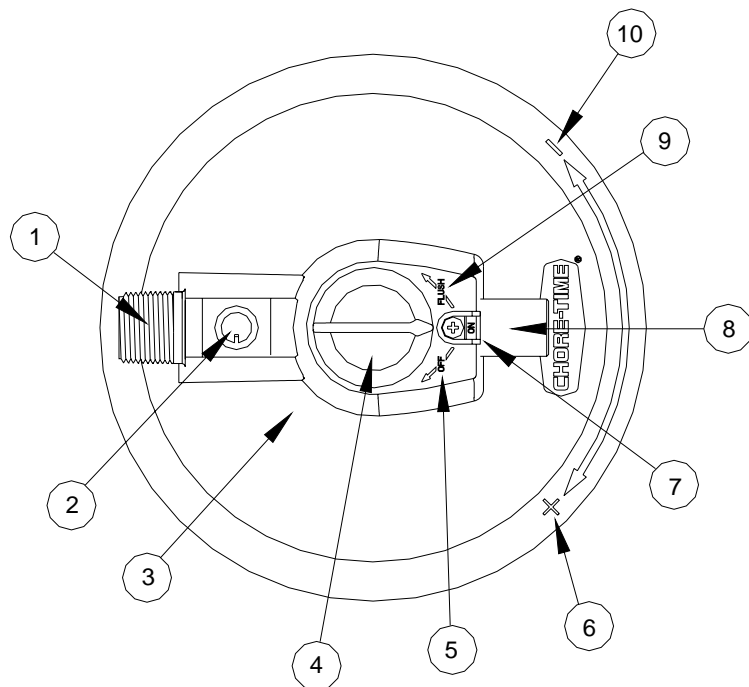
Figure 2. Installation Layout.

Operation

The VOLUMATIC™ Water Regulator can be shut off by turning the selector knob clockwise until it stops. To turn on the regulator (normal operation) turn the selector to the center position. To put the regulator into Flush Mode, turn the selector knob counter clockwise until it stops. To adjust the water column turn the manual adjustment knob on the bottom of the regulator clockwise (+) to increase the pressure and counter-clockwise (-) to decrease the pressure.

Caution: When using a hose end flush arrangement be sure the outlet valve at the end of the nipple line is opened before flushing the regulator. Excessive back pressure can damage the regulator.

Caution: When increasing the water column, as soon as resistance is noted, stop turning the manual adjustment knob or damage to the regulator will occur.



Item	Description
1	Outlet
2	Stand Tube Port
3	Adjustment Knob (On Bottom)
4	Selector Knob
5	Regulator "Off" Indicator
6	Water Column Increase Indicator (+)
7	Regulator "On" Indicator
8	Inlet
9	Regulator "Flush" Indicator
10	Water Column Decrease Indicator (-)

Figure 3. Regulator Operations

Optimum incoming pressure is 25 - 35 PSI (172 - 241 kPa). Operation of the Volumatic™ water regulator at higher pressures can shorten the life of the regulator seat. For pressures higher than the recommended range a water pressure reducing valve should be installed on the inlet water supply.

PDS™-Pneumatic Drinking System Regulators

The Chore-Time PDS™, Volumatic™ regulators are designed so that if the air pressure to the regulators is lost, a "default" water column is maintained and the water supply to the birds is uninterrupted.

The PDS regulator's water column height is adjusted at the PDS control unit and therefore does not have a manual adjustment knob but all the other functions discussed above for the standard Volumatic regulator apply to the PDS unit (on, off and flush).

The #42400-12 regulator uses the #42394 spring, which provides a default water column of approximately 3 to 4 inch (7.6 to 10.2cm). This regulator is used for Chore-Time brood-grow nipple installations using the PDS system.

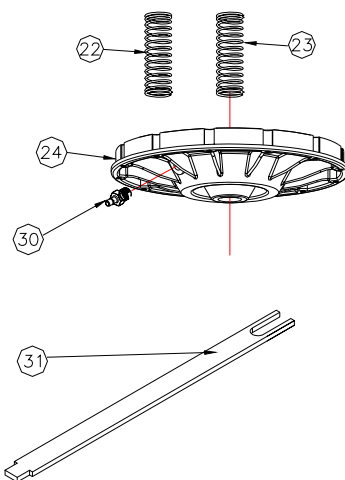
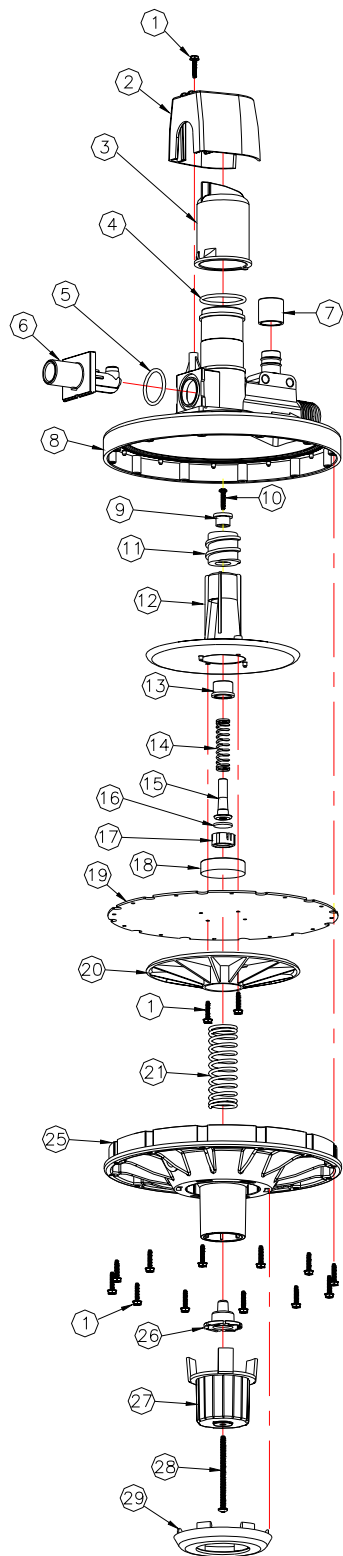
The #42400-14 regulator uses the #47685 spring, which provides a default water column of approximately 7 to 8 inch (17.8 to 20.3cm). This regulator is used for Chore-Time layer nipple installations using the PDS system.

The default water column values above are based on a normal 25-35 psi incoming water pressure and may vary with incoming water pressure.

For more information on the PDS system and for installation and operation instructions refer to the "12-32 Station PDS™ Control Manual" (#MW1812).

Parts Listing

**Volumatic™ Water Regulator For
Cage Systems
PDS™ and Manual Adjustment
Part No. 42400-11, 42400-12, 42400-14**



Item	Description	Part No.
1	#6-20 x 5/8 Hex Washer Head Screw	44946
2	Shroud	42390
3	Selector Knob	42178
4	1.362 I.D. x .103 Wide O-Ring	42389
5	O-Ring	29118
6	Inlet Orifice	42190
7	Bushing	42391
8	Regulator Top Half	42174-1
9	Seat Holder Cap	42176
10	#6-20 x 5/8 Pan Head Screw	42386
11	Barrel	42172
12	Top Diaphragm Plate	42182
13	Seat Holder Sleeve	42187
14	.780 I.D. x 2.8 Long Spring	42392
15	Seat Holder	42189
**16	Seat, CT Regulator Viton	48225
**17	Cup, CT Regulator Seat	42199
18	Diaphragm Center Support	42186
19	Diaphragm	42181
20	Diaphragm Plate	42177
*21	Spring, .780 I.D x 2.77 L x .063	42393
*22	Spring, .780 I.D. x 2.8 L x .105 PDS	42394
*23	Spring, 3.76 Long Layer PDS	47685
24	Regulator Bottom Half (PDS Only)	42179
25	Regulator Bottom Half	42180
26	Follower	42183
27	Adjustment Knob	42184
28	#8-18 x 2-1/2" Pan Head Screw	42387
29	Knob Retainer	42173
30	Hose Barb (PDS Only)	44759
31	CT Regulator Seat Installation Tool	48688

*Item 21 for Part No. 42400-11
(Std.-Manual adj.)

*Item 22 for Part No. 42400-14
(Layer-PDS adj.)

*Item 23 for Part No. 42400-12
(Brood grow-PDS adj.)

**These components may be ordered as an assembly under Part No. 42188.



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