

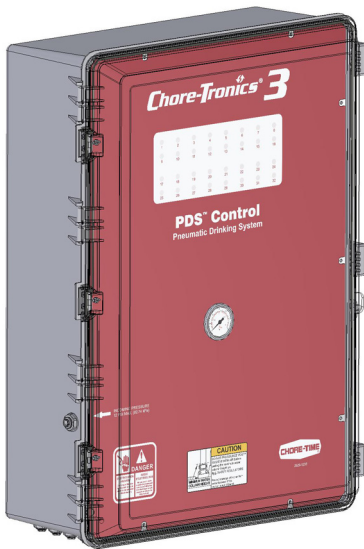


Pneumatic Drinking System (PDS) Control Installation and Operators Manual

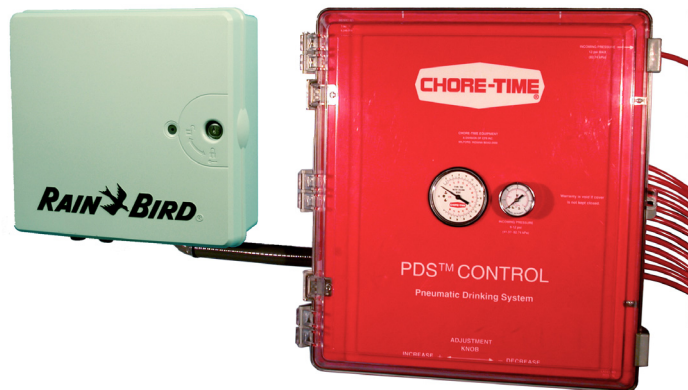
PDS™ 4 & 8 Station
(Part No. 52430-X)



4-32 Station
Chore-Tronics® 3 PDS™
(Part No. 56039-X)



12-40 Station PDS™
(Part No. 54373-X)



Installation and Operators Manual

Installation and Operators Manual

Limited Warranty

Chore-Time Group, a division of CTB, Inc. (“Chore-Time”) warrants new CHORE-TIME Cage and Cage Watering Components manufactured by Chore-Time to be free from defects in material or workmanship under normal usage and conditions, for One (1) year from the date of installation by the original purchaser (“Warranty”). If such a defect is determined by Chore-Time to exist within the applicable period, Chore-Time will, at its option, (a) repair the Product or Component Part free of charge, F.O.B. the factory of manufacture or (b) replace the Product or Component Part free of charge, F.O.B. the factory of manufacture. This Warranty is not transferable, and applies only to the original purchaser of the Product.

CONDITIONS AND LIMITATIONS

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, INCLUDING, WITHOUT LIMITATION, WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSES. CHORE-TIME shall not be liable for any direct, indirect, incidental, consequential or special damages which any purchaser may suffer or claim to suffer 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. *Some jurisdictions prohibit limitations on implied warranties and/or the exclusion or limitation of such damages, so these limitations and exclusions may not apply to you. This warranty gives the original purchaser specific legal rights. You may also have other rights based upon your specific jurisdiction.*

Compliance with federal, state and local rules which apply to the location, installation and use of the Product are the responsibility of the original purchaser, and CHORE-TIME shall not be liable for any damages which may result from non-compliance with such rules.

The following circumstances shall render this Warranty void:

- Modifications made to the Product not specifically delineated in the Product manual.
- Product not installed and/or operated in accordance with the instructions published by the CHORE-TIME.
- All components of the Product are not original equipment supplied by CHORE-TIME.
- Product was not purchased from and/or installed by a CHORE-TIME authorized distributor or certified representative.
- Product experienced malfunction or failure resulting from misuse, abuse, mismanagement, negligence, alteration, accident, or lack of proper maintenance, or from lightning strikes, electrical power surges or interruption of electricity.
- Product experienced corrosion, material deterioration and/or equipment malfunction caused by or consistent with the application of chemicals, minerals, sediments or other foreign elements.
- Product was used for any purpose other than for the care of poultry and livestock.

The Warranty and Extended Warranty may only be modified in writing by an officer of CHORE-TIME. CHORE-TIME shall have no obligation or responsibility for any representations or warranties made by or on behalf of any distributor, dealer, agent or certified representative.

Effective: **April, 2014**

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About This Manual

The intent of this manual is to help you in two ways. One is to follow step-by-step in the order of assembly of your product. The other way is for easy reference if you have questions in a particular area.

Important: Read **ALL** instructions carefully before starting construction.

Important: Pay particular attention to all **SAFETY** information.

- *Metric measurements are shown in millimeters and in brackets, unless otherwise specified. “ ” equals inches and “ ’ ” equals feet in English measurements.*

Examples:

1" [25.4]

4' [1.219]

- Optional equipment contains necessary instructions for assembly or operation.
- Very small numbers near an illustration (*i.e.*, 1257-48) are identification of the graphic, not a part number.

Note: The original, authoritative version of this manual is the English version produced by CTB, Inc. or any of its subsidiaries or divisions, (hereafter collectively referred to as "CTB"). Subsequent changes to any manual made by any third party have not been reviewed nor authenticated by CTB. Such changes may include, but are not limited to, translation into languages other than English, and additions to or deletions from the original content. CTB disclaims responsibility for any and all damages, injuries, warranty claims and/or any other claims associated with such changes, inasmuch as such changes result in content that is different from the authoritative CTB-published English version of the manual. For current product installation and operation information, please contact the customer service and/or technical service departments of the appropriate CTB subsidiary or division. Should you observe any questionable content in any manual, please notify CTB immediately in writing to: CTB Legal Department, P.O. Box 2000, Milford, IN 46542-2000 USA.

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 decals immediately.

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.

Understanding 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.



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



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

Safety Instructions

Follow Safety Instructions

Carefully read all safety messages in this manual and on your equipment safety signs. Follow recommended precautions and safe operating practices.

Keep safety signs in good condition. Replace missing or damaged safety signs.

Decal Descriptions

DANGER: Electrical Hazard

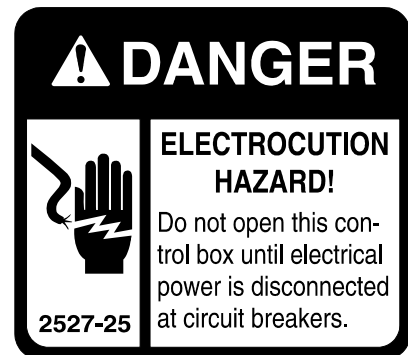
Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise.

Ground all electrical equipment for safety.

All electrical wiring must be done by a qualified electrician in accordance with local and national electric codes.

Ground all non-current carrying metal parts to guard against electrical shock.

With the exception of motor overload protection, electrical disconnects and over current protection are not supplied with the equipment.



General

Support Information

All Pneumatic Drinking System (PDS™) Controls are designed to control water line regulators in a Chore-Time Nipple Watering System. Using this equipment for any other purpose or in a way not within the operating recommendations specified in this manual will void the warranty and may cause personal injury.

This manual is designed to provide comprehensive planning and installation information. The Table of Contents provides a convenient overview of the information in this manual.

Product Configurations

The Chore-Tronics 3 Auto Adjust PDS™ Control (Part No. 56039-X) is available in 4, 8, 16, and 32 Station.

The 12-40 PDS Controls (Part No. 54373-X) are available up to 40 Stations in station increments of 4 (ie. 12, 16, 20...).

The 4 and 8 Station PDS Controls (Part No. 52430-X) are available in a 4 and 8 Station.

For all PDS Control Models, each station is capable of controlling up to two (2) individual Chore-Time water regulators. For example a 4 station control can regulate and flush up to 8 individual water regulators.

System Layout

Multiple House Layout

Air can be run from a central location to supply multiple houses. Air lines can consist of Chore-Time tubing (Part number 45895-500), which will supply a sufficient air supply, or PVC plumbing.

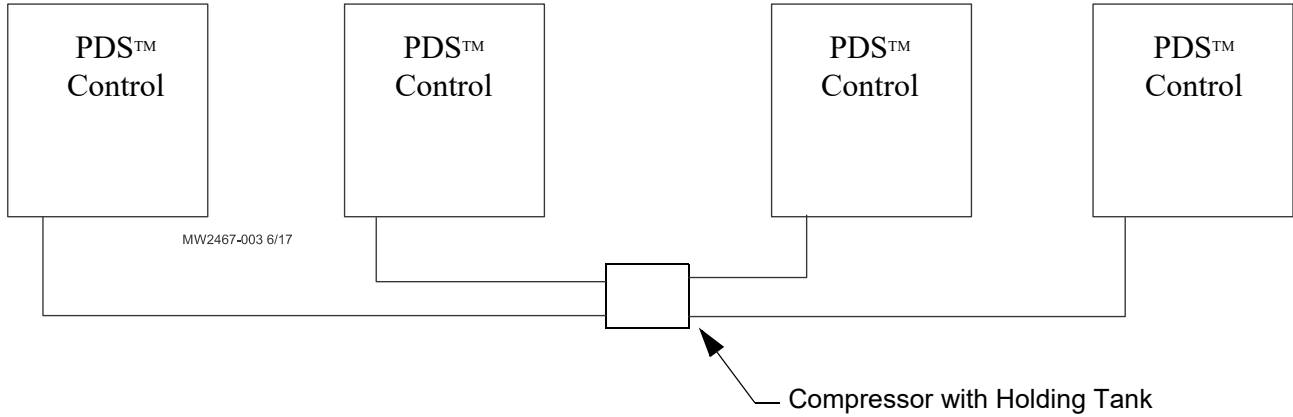


Figure 1.(4 House Layout)

Below are examples of the Chore-Time Nipple Watering system layouts. These are to be used to show different methods for installing the PDS™ system.

Broiler System Layout

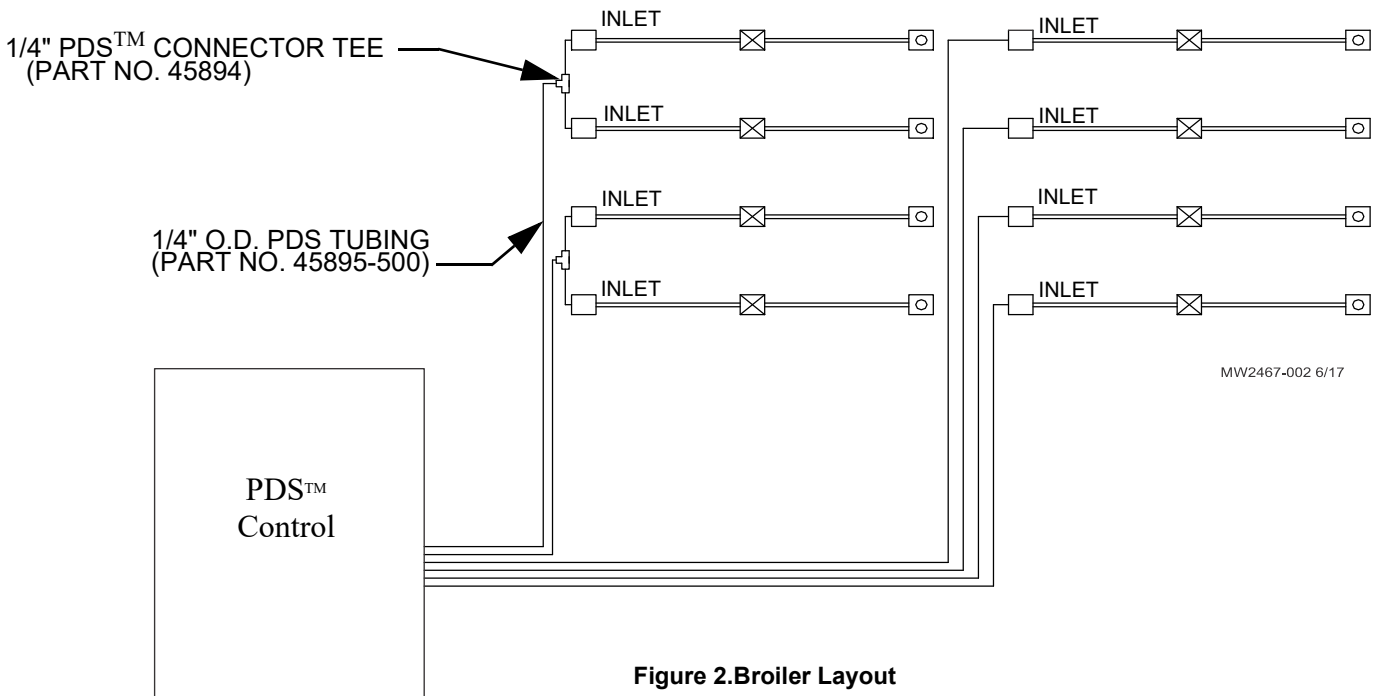


Figure 2.Broiler Layout

Layer System Layout

One Water Line Per Tier, One Regulator Per Tier

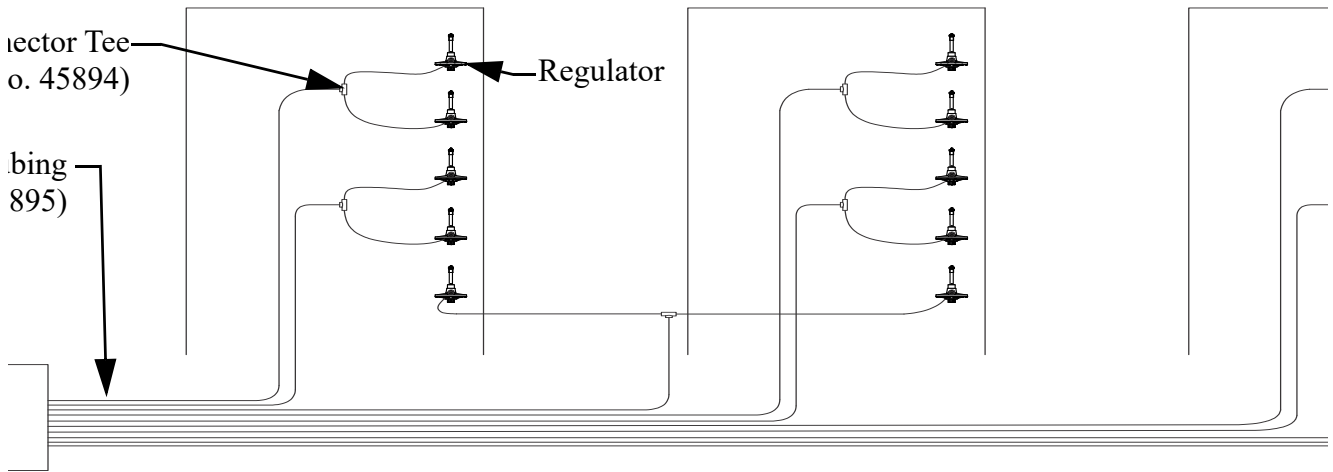


Figure 3. One Line/One Regulator

Two Water Lines per Tier, Two Regulators Per Tier

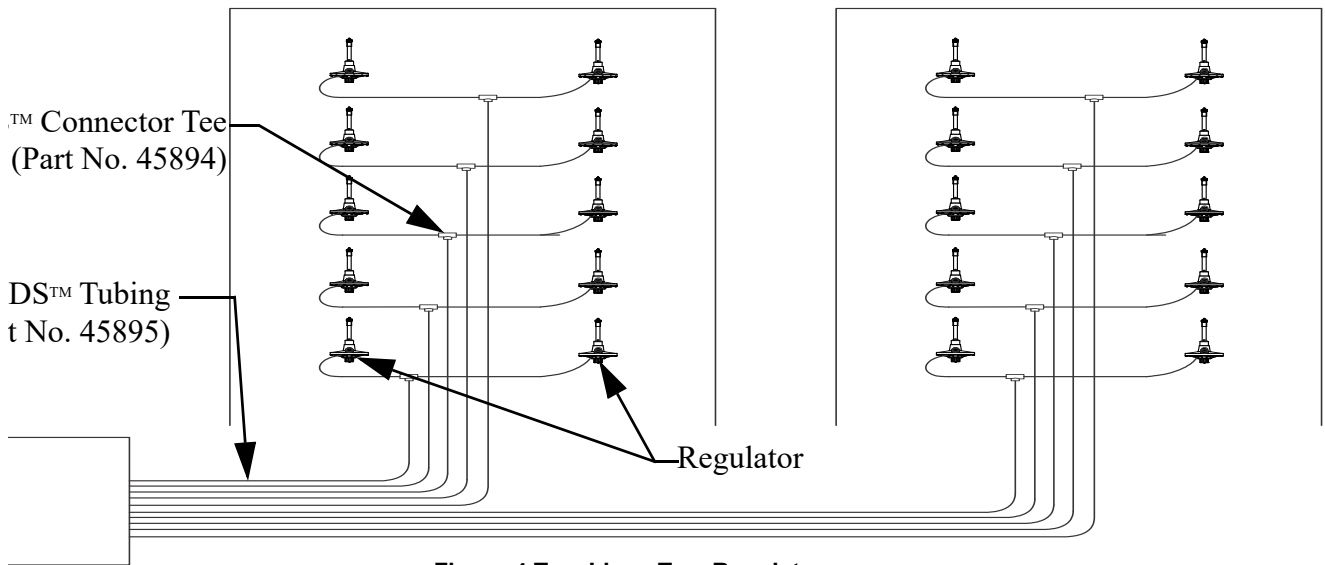


Figure 4. Two Lines Two Regulators

Two Lines Per Tier, One Regulator Per Tier (Versa[®] Plus and Vike[™] Systems)

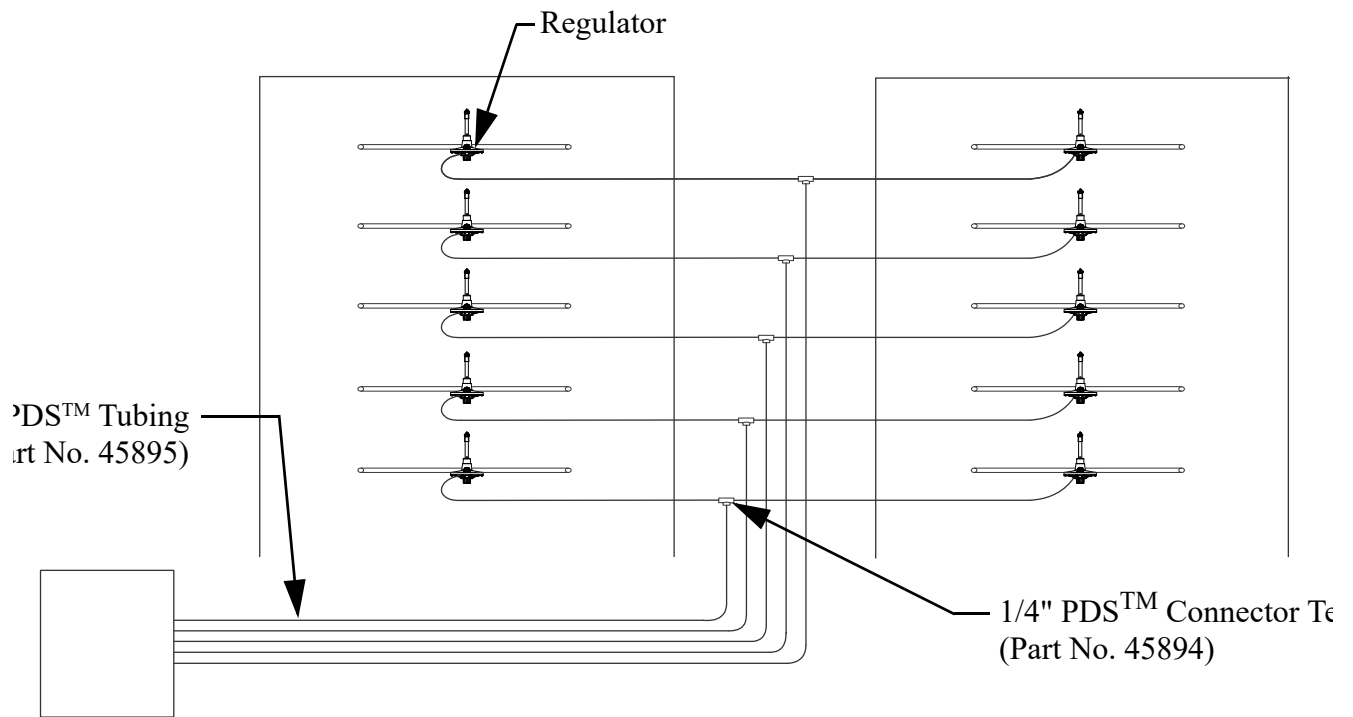


Figure 5. Versa[®] Plus and Vike[™] Systems

Installation

Pressure Sensor location (for 56039-X PDS™ Systems)

There should be one Pressure Sensor installed per PDS™ Control.

The Pressure Sensor should be installed close to a Stand Tube, preferably no more than one Nipple Pipe away. This will help ensure an accurate reading.

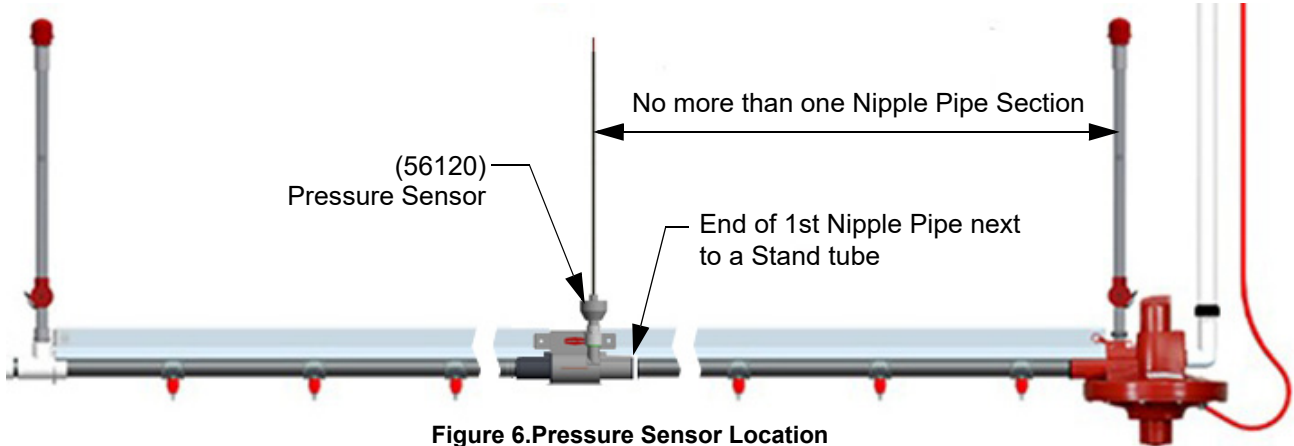


Figure 6. Pressure Sensor Location

Mounting

Chore-Tronics® 3 Auto-Adjust PDS™ (56039-X) Control Mounting

Locate the control in a convenient location where it can easily be seen and adjusted.

Fasten the control to the wall through the four holes in the corners with #10 Flat Head Wood Screws. (Not Supplied).

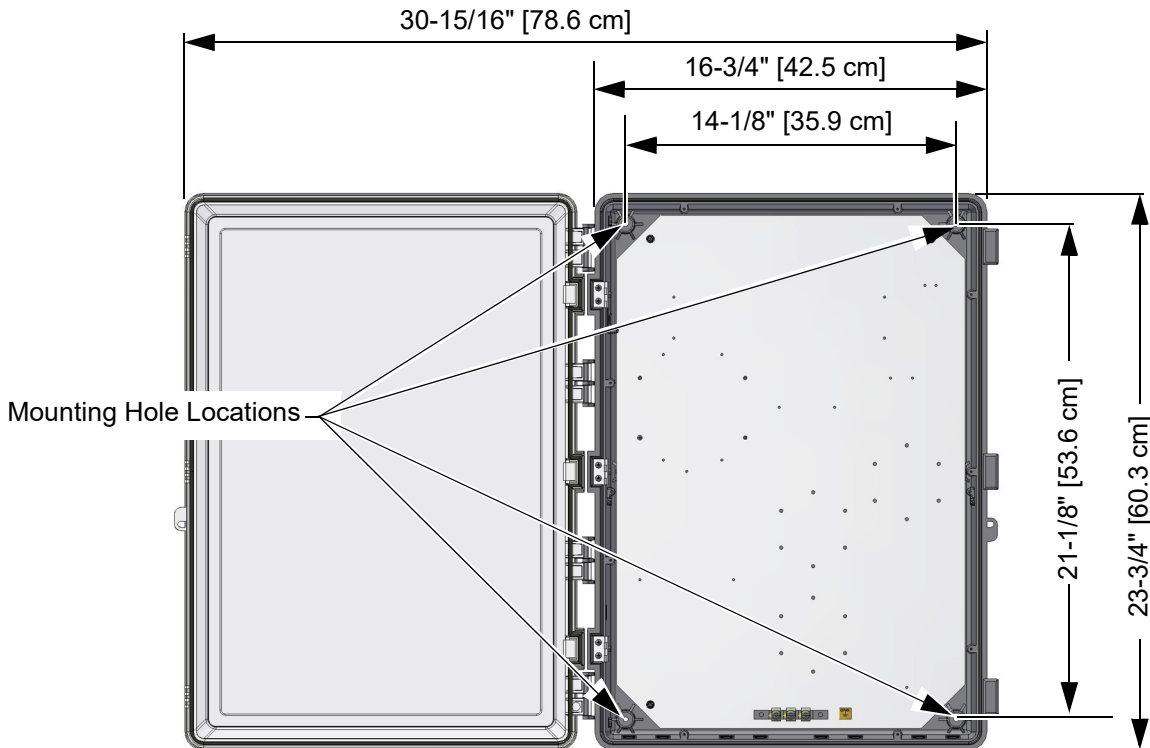


Figure 7. Chore-Tronics 3 PDS™ Mounting

12-40 Station PDS™ (54373-X) Control Mounting

Locate the control in a convenient location where it can easily be seen and adjusted.

Fasten the PDS™ Control and the Rain Bird® Control to the wall. Use #10 Flat Head Wood Screws. **(Not Supplied)** to Mount the boxes using the four holes in the corners as shown.

Connect the PDS™ Control and the Rain Bird® Control together with liquid tight connectors and conduit (not supplied), to allow wires to be run between them.

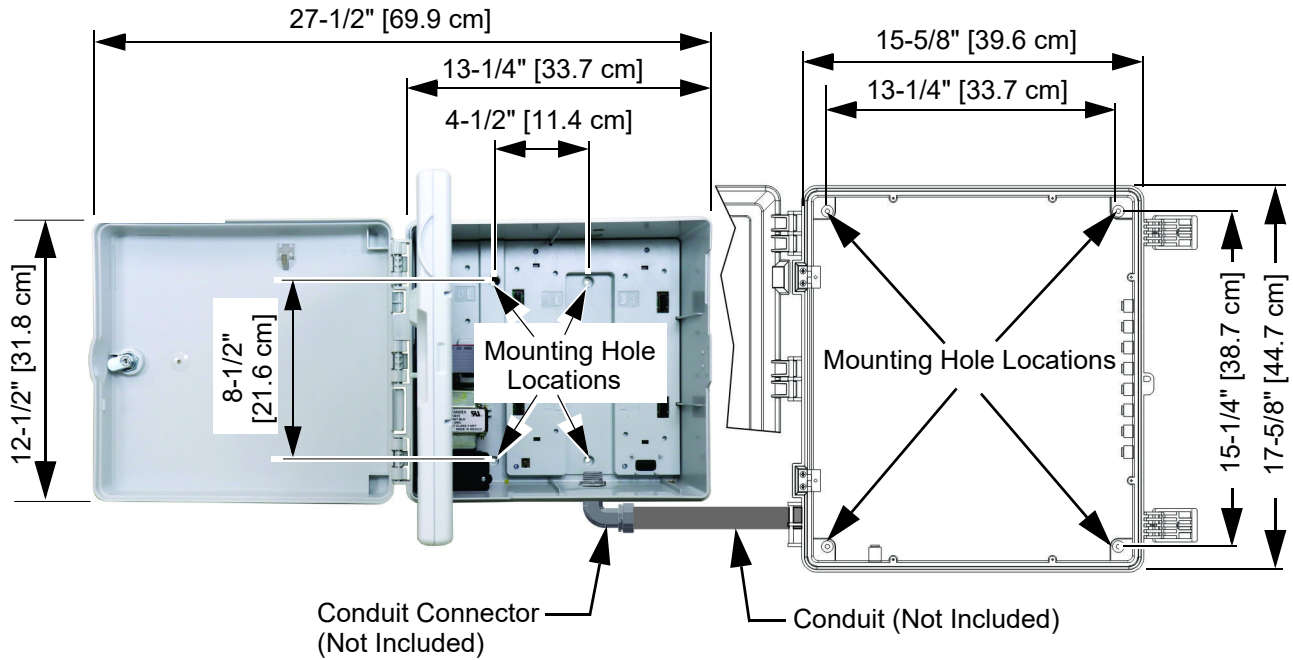


Figure 8.Chore-Tronics 3 PDS™ Mounting

4 and 8 Station (52430-X) PDS™ Control Mounting

Locate the control in a convenient location where it can easily be seen and adjusted.

Fasten the control to the wall through the four holes in the corners with #10 Flat Head Wood Screws. **(Not Supplied)**

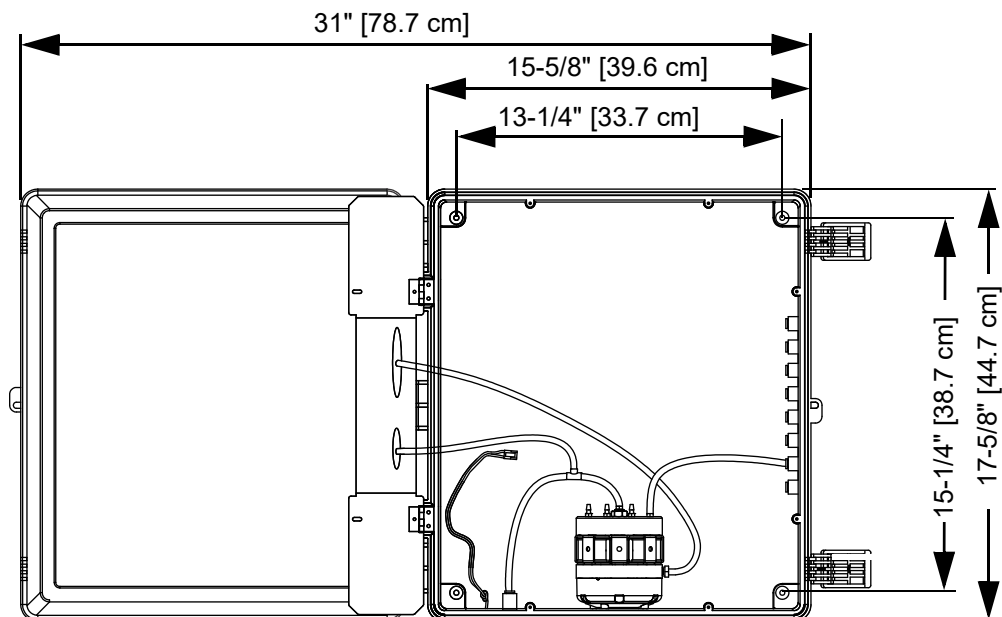


Figure 9.4 & 8 Station PDS™ Mounting

Air Supply

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

Connecting the compressed air supply (All Models)

Air compressor (not supplied) guidelines to operate the system.

- All air compressors must have a minimum rating to run 4 times per hour for 5 minutes each run.
- One (1) PDS™ Control - 2 gallon minimum recommended air supply tank.
- Two (2) - four (4) PDS™ Controls - 5 gallon minimum recommended air supply tank.
- Five (5) - six (6) PDS™ Controls - 10 gallon minimum recommended air supply tank.
- Air regulator with 1/4" fitting.
- Air /water separator.

Note: The PDS™ Control operates between 6 & 12 psi [41.37 kPa & 82.74 kPa]. Most air Regulators supplied with air compressors will not effectively regulate air pressure at this low pressure. Failure to regulate pressure will result in damage to components.

1. Install an Air Regulator and an Air Separator after the Air Compressor.
2. Connect the air supply to the incoming pressure line on the PDS™ control.
3. Verify that the PDS™ Control has an Air Pressure reading between 6 & 12 psi [41.37 kPa & 82.74 kPa] (See Figure 10.)



Figure 10. Pressure Gauge

Air supplied to the 52430-X & 54373-X PDS™ Controls

- **BEFORE** connecting the compressed air supply to the Control, turn the red adjustment knob clockwise (Decrease) until the knob stops turning (See Figure 11.)

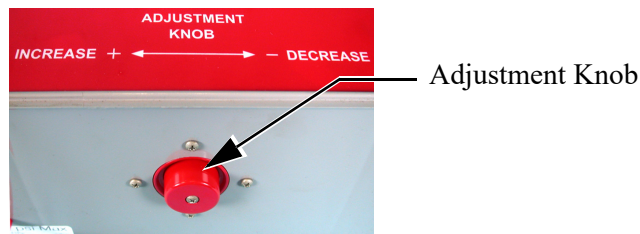


Figure 11. Adjustment Knob

Tubing

See **Figure 3. on page 8** through **Figure 5. on page 9** for typical tubing diagrams.

Note: For Versa® Plus and Vike™ Systems with two pipes per tier Chore-Time recommends two regulators per station of the PDS control split between two cage rows as shown in **Figure 5.** to prevent overflow of the drain when flushing.

Each Station may be used to supply air to two regulators. Controlling more than 2 regulators per station may overdraw water supply.

1. Remove the Air Station Plugs (See **Figure 12.**) and attach the Tubes to the stations.
2. Route the regulator tubing with a drip loop so any condensation in the air lines will not run into the control. (See **Figure 13.**)
3. Route the Tubing across the ceiling and down the water supply hoses that supply the regulators.

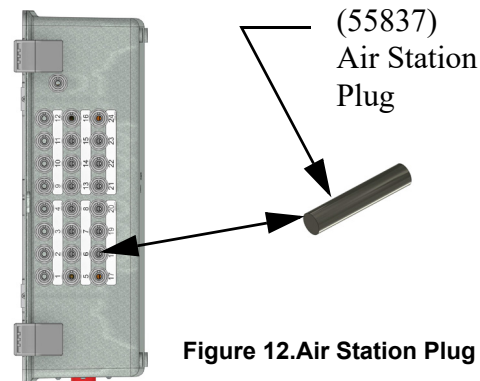


Figure 12. Air Station Plug

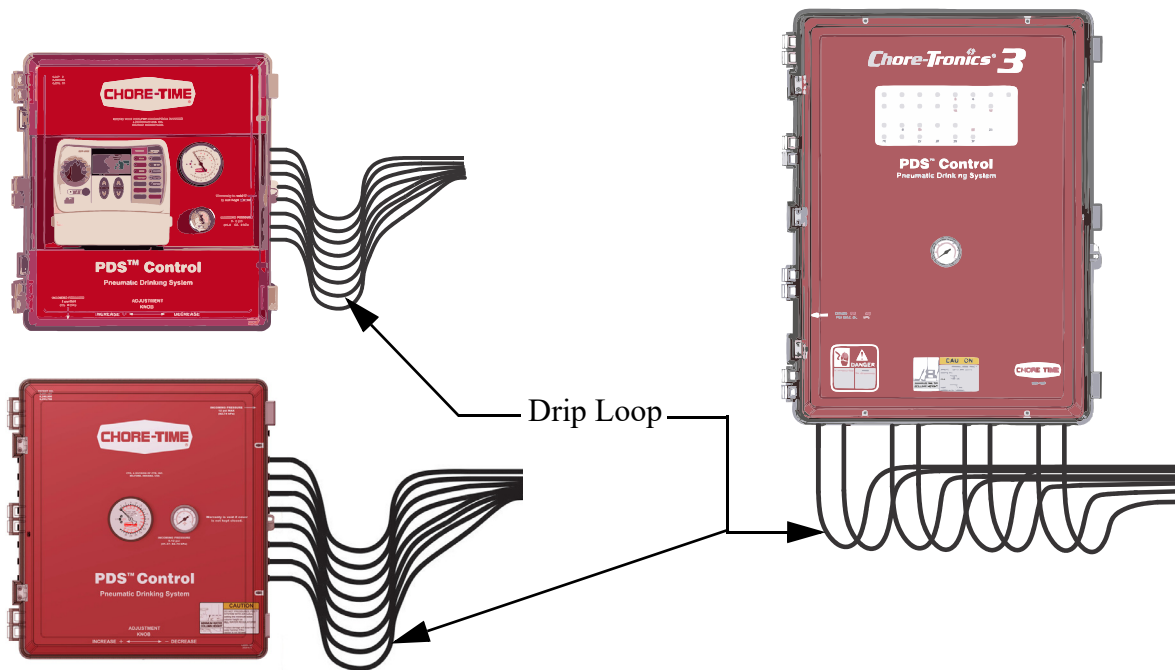


Figure 13. Regulator Tube Leads

4. Connect the Tubing to the air supply connection of the regulators (See **Figure 14.**)

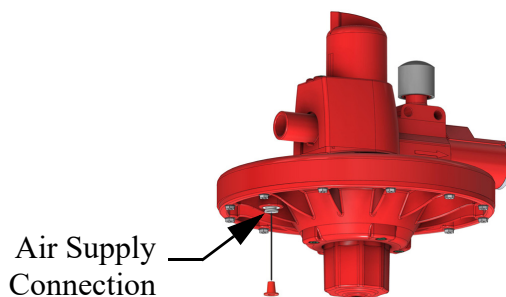


Figure 14. Air Supply to Regulator

Note: If not all stations are being used, ensure that the un-used stations are plugged or compressor over cycling may result.

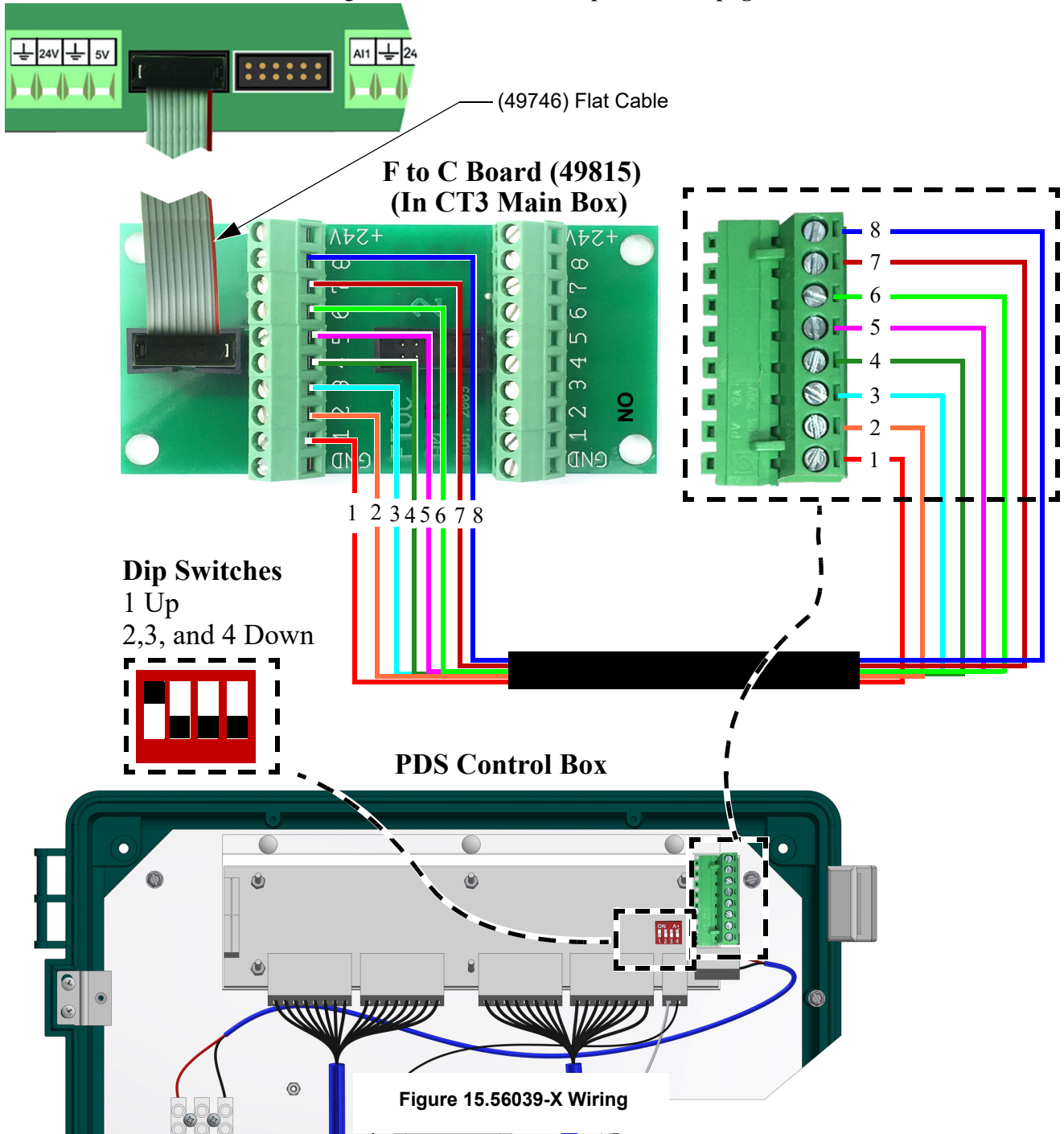
Wiring

Chore-Tronics® 3 Auto-Adjust PDS™ Control (56039-X) Wiring

Warning: Electric shock can cause severe injury or death. Make sure power supply is turned OFF before connecting power wires. All electrical connections and wiring runs must be made according to local building codes.

Note: No backup battery needed! All timer settings are stored indefinitely in memory.

Note: Do Not move Relay Switches to "Manual" or "Auto" for the PDS™ Regulator Increase/Decrease until you have checked all the PDS™ Settings and finished the **Startup** section on page 20.



PDS™ Outputs (Regulator) Wiring

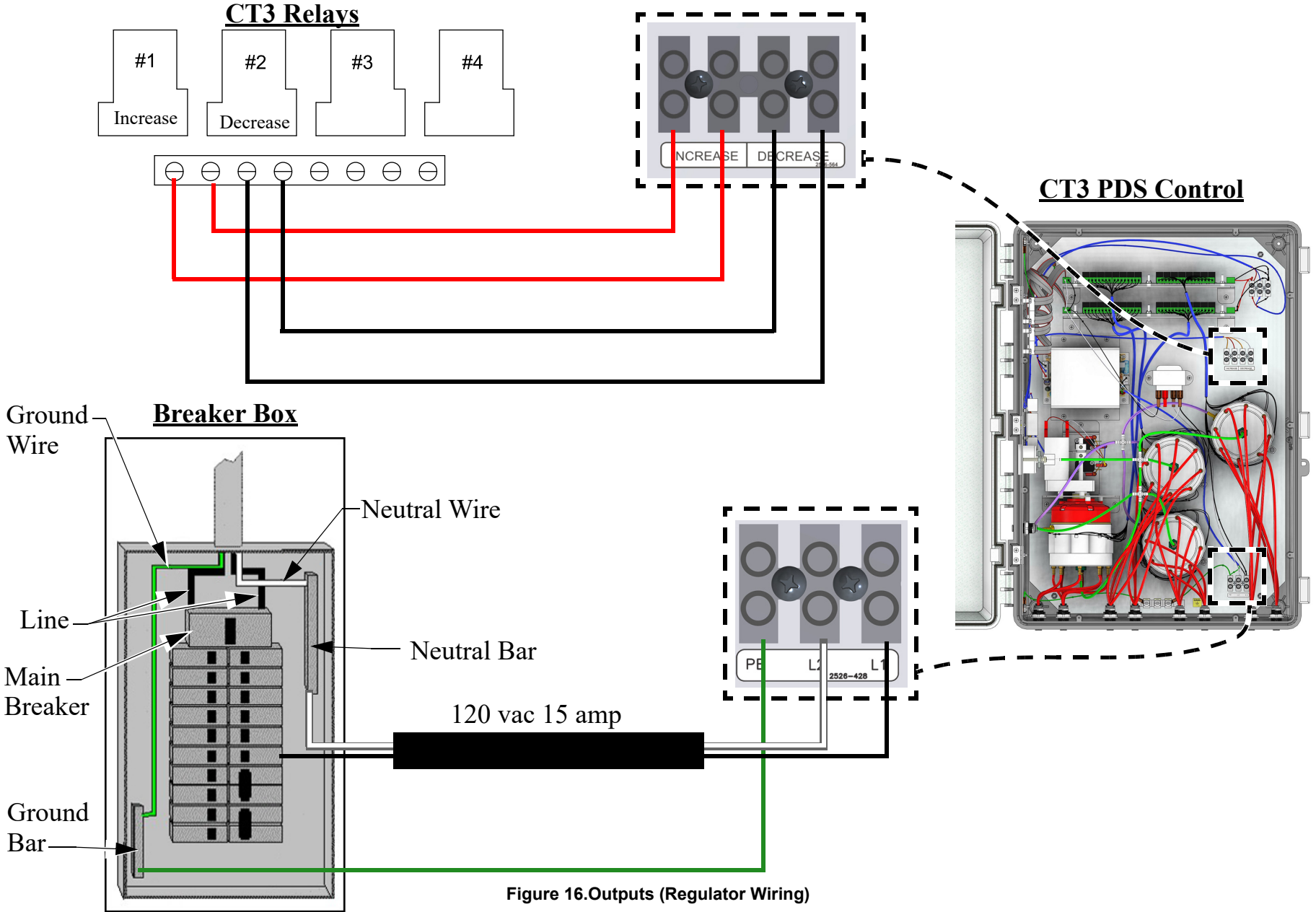


Figure 16. Outputs (Regulator Wiring)

Pressure Sensor Wiring

The Pressure Sensor can be connected to any one of the Analog Inputs on the CT3 I/O Board.

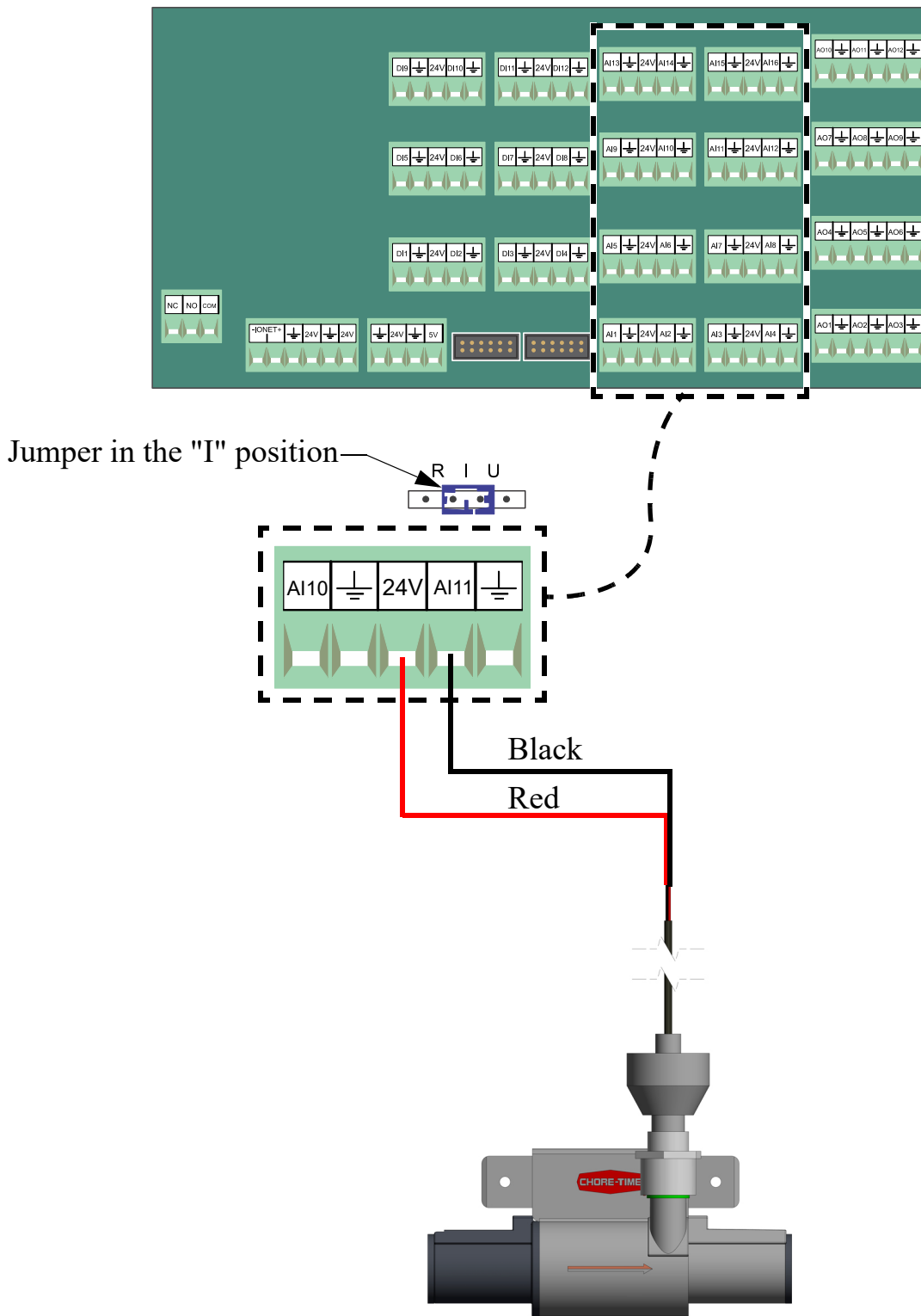


Figure 17. Pressure Sensor Wiring

4 and 8 Station PDS™ (52430-X) Control to CHORE-TRONICS®

Warning: Electric shock can cause severe injury or death. Make sure power supply is turned OFF before connecting power wires. All electrical connections and wiring runs must be made according to local building codes.

When using CHORE-TRONICS® to monitor water consumption, flush water can be omitted from the total. To do this connect one wire to common and one wire to MV both in the Rain Bird Timer. Run these two wires to a 24VAC Coil Relay (not supplied), from the relay run the two wires to the Chore-Tronics control, (See Figure 18.) Chore-Time has a 3 pole (only one pole is needed), 24 Volt relay available. (Part No. 56577-24)

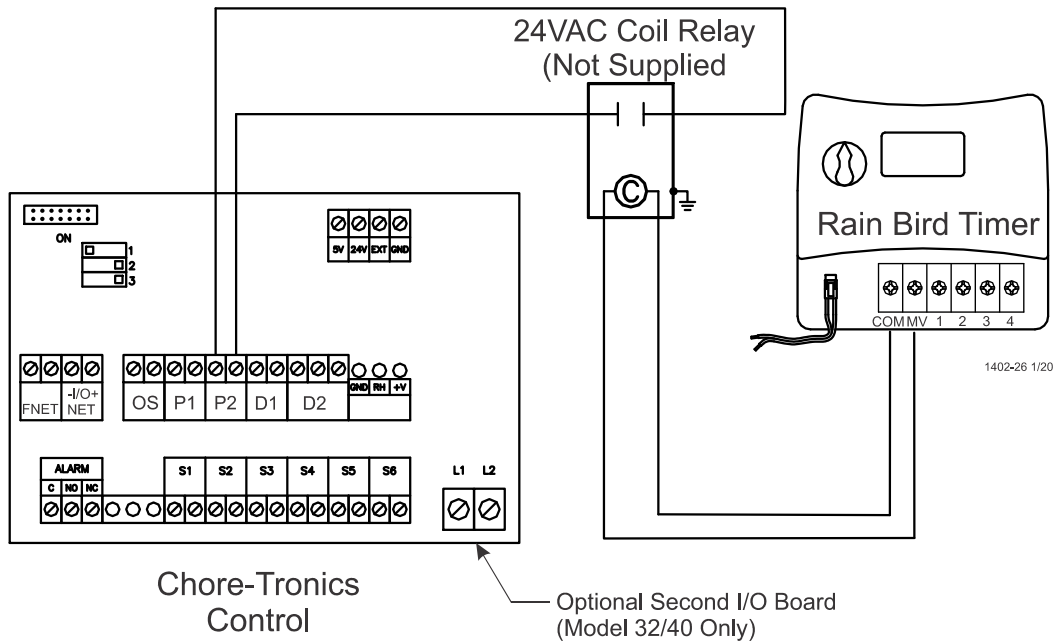


Figure 18. Rain Bird/Chore-Tronics Wiring

Internal Wiring

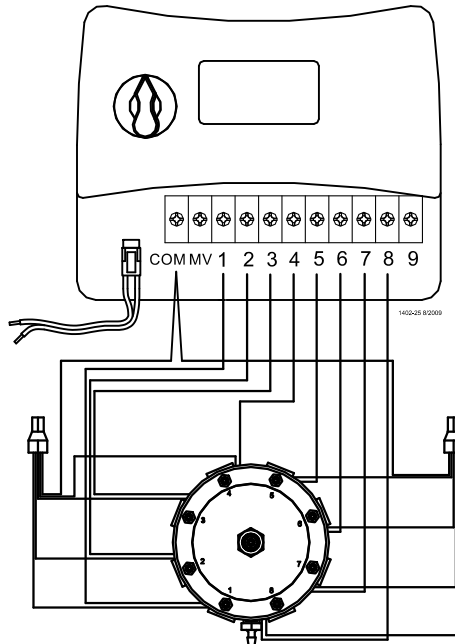


Figure 19. 4 and 8 Station Internal Wiring

12-40 Station PDS™ Control (Part No.54373-X) Wiring



Warning: Electric shock can cause severe injury or death. Make sure power supply is turned OFF before connecting power wires. All electrical connections and wiring runs must be made according to local building codes.

RainBird® Control Wiring

Connect the power source to the RainBird® Control according to the RainBird® Control Installation Manual.

Surge Protection and Grounding: The ESP-LXME Controller is equipped with built-in electrical surge protection. For this system to function, you must properly ground the Controller.



Warning: The ESP-LXME Controller must be properly surge protected and grounded. Failure to do so could result in failure of the Controller and voiding the warranty.

Connect Power Source: The ESP-LXME Controller has an internal transformer that reduces supply voltage (120 VAC in U.S. models; 230 VAC in international models to 24 VAC. You will need to connect power supply wires to the transformer's three wires. (Line, Neutral, Ground)

RainBird® Control to PDS™ Control Wiring

The RainBird® Modules are connected to the Terminal Strip in the PDS™ Control by wires (18AWG minimum) routed through the connecting conduit (Not Supplied) (See **Figure 20.**) Connect each Module in turn to the appropriate terminal in the PDS™ Control. Number 1 on the first RainBird® Module will be connected to the number 1 on the PDS™ Control. This will be repeated until all the module terminals are connected to the PDS™ Terminals.

Note: "Valve" in the RainBird® Manual is the "Solenoid Connection" in the PDS™ Control.

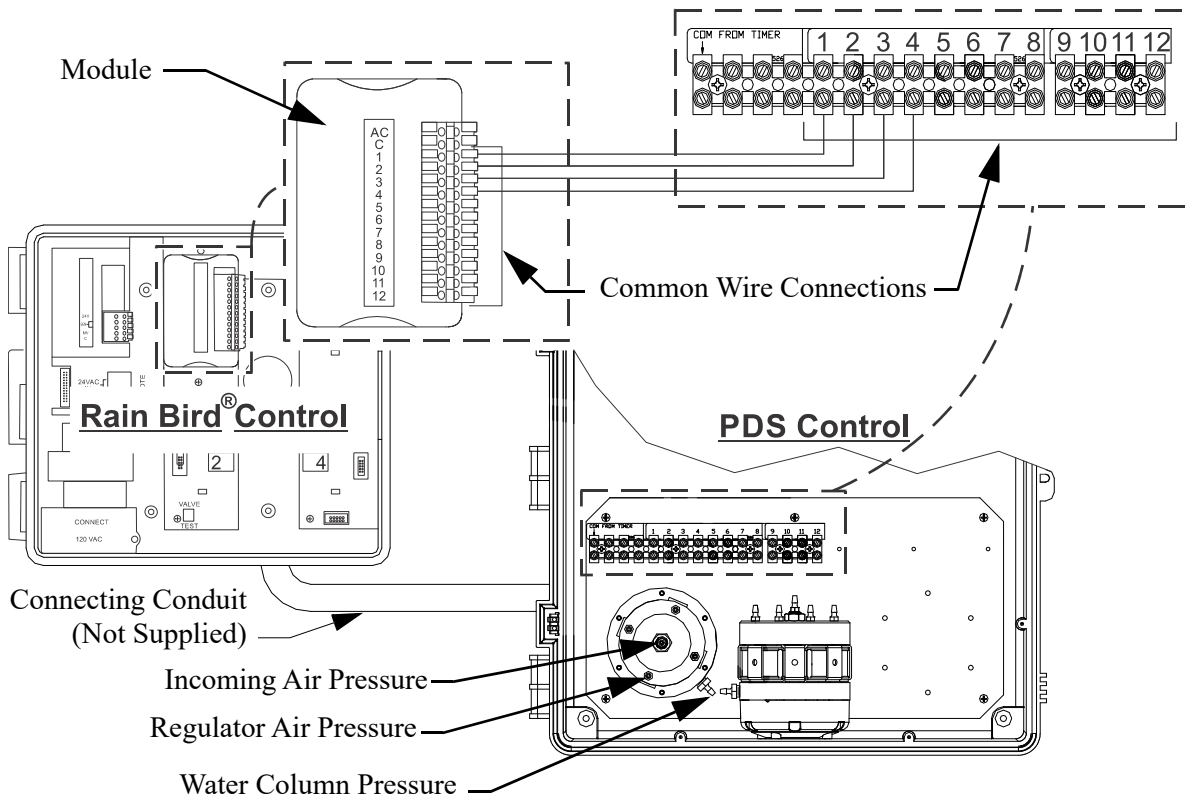


Figure 20.RainBird® Control to PDS™ Wiring

Connection to Chore-Tronics®

When using Chore-Tronics® to monitor water consumption, flush water can be omitted from the total. To do this connect one wire to common and one wire to MV both in the Rain Bird® Control. Run these two wires to a 24VAC Coil Relay (not supplied), from the relay run the two wires to the Chore-Tronics® Control, (See Figure 21.). Chore-Time has a 3 pole (only one pole is needed), 24 Volt relay available. (Part No. 56577-24)

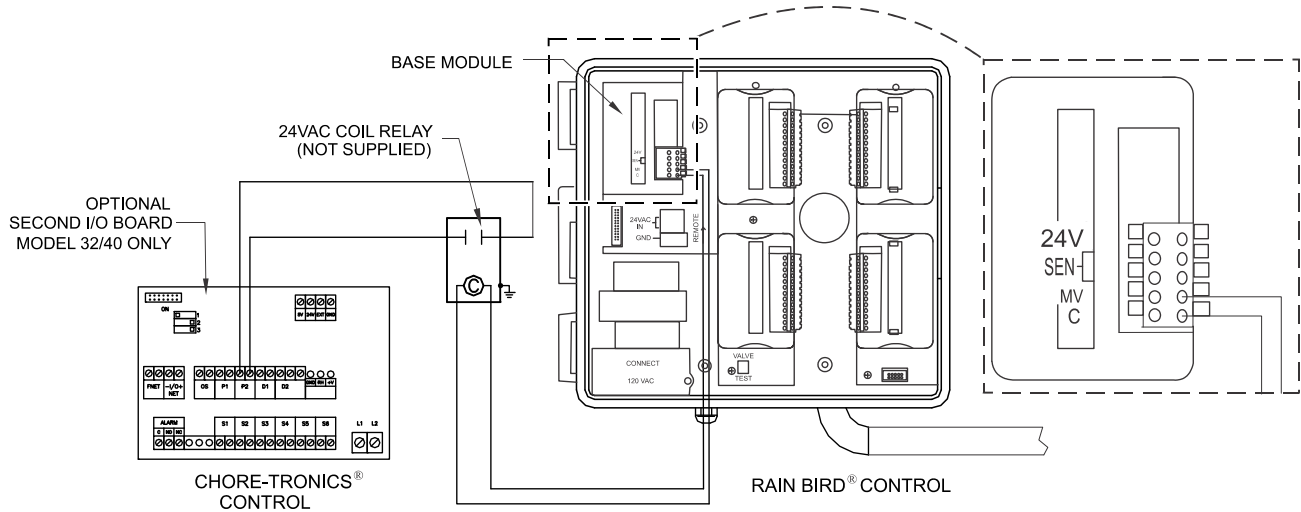


Figure 21. RainBird® to ChoreTronics® Wiring

Start Up

Step 1: Charging the Lines

⚠ Caution: DO NOT FLUSH DRINKER LINES WITH PDS™ CONTROL unless drinker lines are filled with water! Damage may occur if this caution is not followed.

Before compressed air is connected to the Regulator, the drinker lines should be charged with water. This can be done by turning the selector knob on each Regulator to the "ON" position.

Step 2: Water Column Gauge Calibration (52430-X, & 54373-X PDS Control Models)

- Using the PDS Control Adjustment Knob (See Figure 11. on page 12), bring the line to 14" water column as measured at regulator stand tube.
- Pop off plastic cover and turn calibration screw till arrow points to 14" (See Figure 22.). Re-attach Cover.
- Chore-Time recommends to verify calibration after each flock.

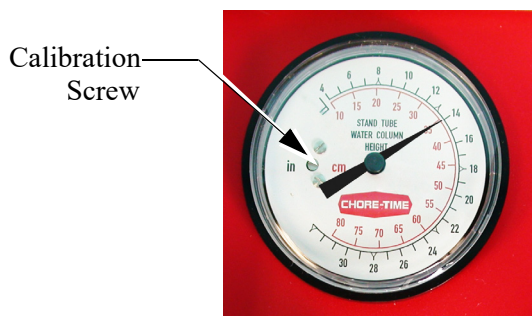


Figure 22. Water Column Gauge

Step 3: Air Leak Test

Check each PDS control for air leaks with the water column gauge at 14 inches [35.6 cm].

To check for air leaks:

- Pinch the incoming air supply tube to shut off the incoming air pressure.
- Watch the air pressure gauge on the control (See Figure 22.). The gauge should not drop any more than 2 psi [13.79 kPa] in 1 minute.
- If the air pressure does drop faster than 2 psi [13.79 kPa] in 1 minute, refer to the “TroubleShooting” on page 27.

Step 4: Setting the Regulators Drinker Line Minimum Water Column

- 1.Disconnect the Main Air Hose from the air compressor.
- 2.Turn on the water to the drinker lines.
- 3.Adjust each Regulator to the water column minimum you want.
- 4.Re-connect the main air hose.

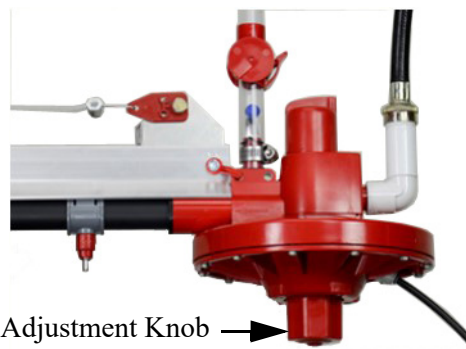


Figure 23.Regulator Adjustment

Flushing The System

Minutes to Flush and Total Line Capacity

The time it takes to completely change the water in a 3/4" drinker line is dependent on the flush flow rate. This flow rate can easily be estimated by putting the regulator into flush and timing how long it takes to fill a container of known volume at the drain end of the line. Once this time is determined use the formula below to calculate the flow rate in gallons or liters per minute and see Tables below to determine the estimated flush time in minutes for your specific line length.

$$\frac{\text{Volume of Container (Gallons or Liters)}}{\text{Seconds to Fill Container Divided by 60}} = \text{Flow Rate in Gallons or Liters per Minute}$$

For example, if it takes 185 seconds to fill a 5 gallon container the resulting flow rate would be 1.6 GMP.

$$\frac{5 \text{ Gallons}}{185/60} = \frac{5}{3.08} = 1.6 \text{ Gallons per Minute.}$$

		Water Line Length in feet							
		100'	200'	300'	400'	500'	600'	700'	800'
Gallons per Minute Flow Rate	1	3.4	6.8	10.2	13.6	17.0	20.4	23.8	27.2
	2	1.7	3.4	5.1	6.8	8.5	10.2	11.9	13.6
	3	1.1	2.3	3.4	4.5	5.7	6.8	7.9	9.1
	4	0.9	1.7	2.6	3.4	4.3	5.1	6.0	6.8
	5	0.7	1.4	2.0	2.7	3.4	4.1	4.8	5.4
	6	0.6	1.1	1.7	2.3	2.8	3.4	4.0	4.5
	7	0.5	1.0	1.5	1.9	2.4	2.9	3.4	3.9
	8	0.4	0.9	1.3	1.7	2.1	2.6	3.0	3.4
Estimated Flush Time in Minutes									
		Total Line Capacity 3.4 Gallons	Total Line Capacity 6.8 Gallons	Total Line Capacity 10.2 Gallons	Total Line Capacity 13.6 Gallons	Total Line Capacity 17.0 Gallons	Total Line Capacity 20.4 Gallons	Total Line Capacity 23.8 Gallons	Total Line Capacity 27.2 Gallons

Gallons of water in one foot of 3/4" Chore-Time water pipe=.034

		Water Line Length in Meters							
		30m	60m	90m	120m	150m	180m	210m	240m
Liters Per Minute Flow Rate	4	3.2	6.3	9.5	12.7	15.8	19.0	22.2	25.3
	6	2.1	4.2	6.3	8.4	10.6	12.7	14.8	16.9
	8	1.6	3.2	4.7	6.3	7.9	9.5	11.1	12.7
	10	1.3	2.5	3.8	5.1	6.3	7.6	8.9	10.1
	12	1.1	2.1	3.2	4.2	5.3	6.3	7.4	8.4
	14	0.9	1.8	2.7	3.6	4.5	5.4	6.3	7.2
	16	0.8	1.6	2.4	3.2	4.0	4.7	5.5	6.3
	18	0.7	1.4	2.1	2.8	3.5	4.2	4.9	5.6
	20	0.6	1.3	1.9	2.5	3.2	3.8	4.4	5.1
	22	0.6	1.2	1.7	2.3	2.9	3.5	4.0	4.6
	24	0.5	1.1	1.6	2.1	2.6	3.2	3.7	4.2
	26	0.5	1.0	1.5	1.9	2.4	2.9	3.4	3.9
	28	0.5	0.9	1.4	1.8	2.3	2.7	3.2	3.6
30	0.4	0.8	1.3	1.7	2.1	2.5	3.0	3.4	
Estimated Flush Time in Minutes									
		Total Line Capacity 12.7 Liters	Total Line Capacity 25.3 Liters	Total Line Capacity 38.0 Liters	Total Line Capacity 50.6 Liters	Total Line Capacity 63.3 Liters	Total Line Capacity 76.0 Liters	Total Line Capacity 88.6 Liters	Total Line Capacity 101.3 Liters

Liters of water in one meter of 3/4" (1.90 cm) Chore-Time water pipe=.422

Estimated flush times above are to completely exchange the water in the pipe. The water line length must include the length of the supply line from the water source to completely exchange the water. The flush time to stimulate bird drinking may be less, depending on the frequency of flushes.

Flushing Recommendations

Multiple House Application:

Well capacity typically limits the number of water lines that can be flushed at one time. Flushing should be staggered so 2 lines per well supply are flushed at the same time.

Flushing for Sediment, Air Locks, and Cleaning

Start by flushing several times per flock. Watch the water coming out of the ends of the water lines. If the water is clean with little or no air you can flush less often. If the water is discolored and has sediment, you should ensure a proper filtration treatment is in place and that the filters are replaced regularly. The sediments could react with medications, vaccines, and electrolytes. They will also hamper the effects of disinfectants and cleaners.

Flushing After Introduction of Water Treatment or Bird Health Products

After running any type of medication, disinfectant, electrolyte, vitamin, or vaccine the lines must be thoroughly flushed. See **“Flushing The System” on page 21** for estimated flush times. Some products or treatments may require longer flushing time to be completely removed from the water lines.

Flush to Stimulate Birds to Drink

1. In periods of hot weather flushing will provide cool, fresh water.
2. As birds mature, additional flushing can stimulate the birds to drink more water.

Flushing 4 and 8 Station (52430-X) PDS™

Refer to the Rain Bird Timer manual for specific programming details.

Single stations or multiple stations may be manually flushed at any time. Refer to **Operating the Sprinkler Timer** section in the Rain Bird manual.

When birds go out it is a good idea to turn the Rain Bird® Timer to the off position and turn the adjustment knob on the PDS™ control to the minimum setting.



Figure 24. Operating the control

Flushing 4-40 Station (54373-X) PDS™

Refer to the Rain Bird® Control Instruction Manual for specific programming details.

The Rain Bird® Control has the capacity to have four individual programs: "A", "B", "C" and "D".

Single stations or all stations may be manually flushed at any time. Refer to **Section "B" (Basic Programming)** of the Rain Bird® Control Manual.

When birds go out it is a good idea to turn the Rain Bird® Control to the off position and turn the adjustment knob on the PDS™ Control to the minimum setting.

Each program can have up to eight daily start times. As long as there are start times entered for stations in a particular program that program will run. To maintain multiple programs in the Control without all of them running, all the start times in the undesired programs must be set to off.

The unused programs (except the start times) are retained but will not run until the start times are re-entered. This allows you to program one, two or three separate flushing sequences. For example, one for summer and one for winter or one for brooding and one for finishing.



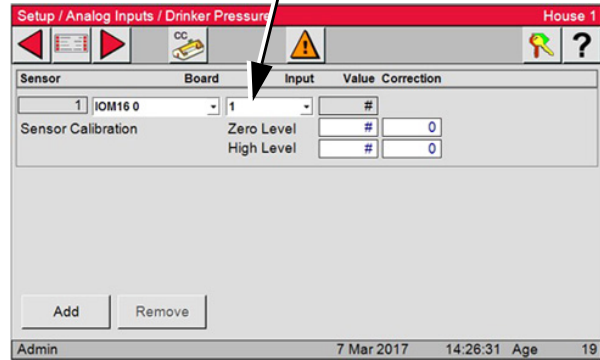
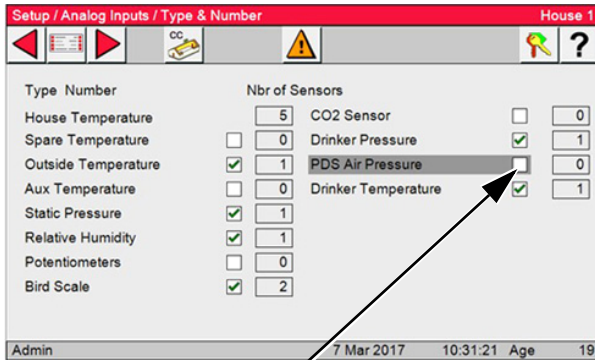
Figure 3. Operating the Control

Chore-Tronics® 3 (56039-X) PDS™ Setup Screens & Operation

Attention! Refer to the Chore-Tronics 3 Manual MT2398 to learn about how to navigate screens of the Chore-Tronics 3 Control.

Analog Inputs Setup Screens

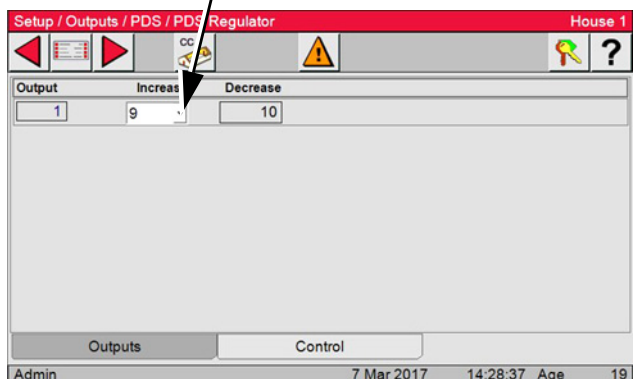
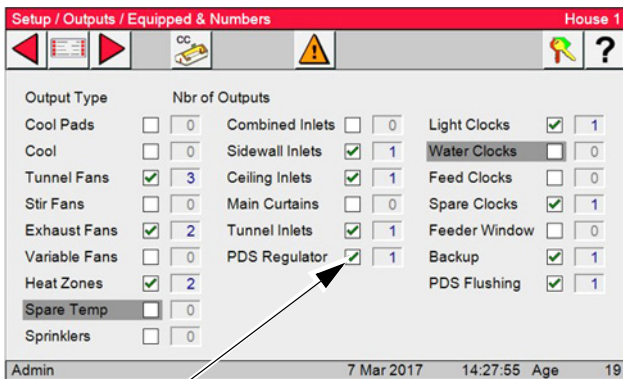
Corresponds to Analog Input chosen in **Figure 17. on page 16**



Drinker Pressure Sensor Setup

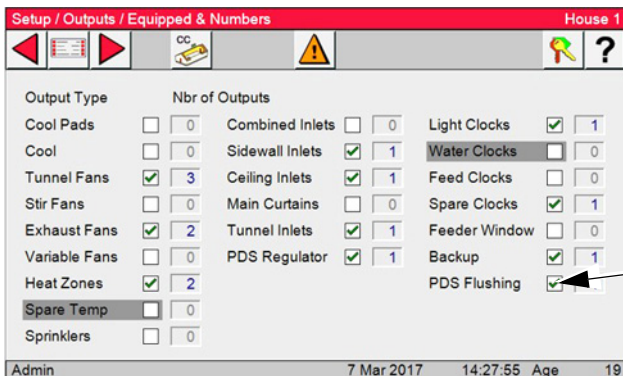
PDS™ Regulator Setup Screen

Corresponds to relay chosen in **Figure 16. on page 15**



Assigning PDS™ Regulator Adjustment Relays

PDS™ Flushing Setup Screen



Flushing water is automatically not included in CT3 water count. No setup or external relay required.

Flushing

1. Number of Stations
2. Enter the time of Flush
3. Run Time per Station

Setup / Outputs / Clock / PDS Flushing House 1

	Start	End
Number of Stations	1	32

Admin 7 Mar 2017 14:29:43 Age 19

Clocks / PDS Flush Clock House 1

ON-at	OFF-at	Run Station	Run Total	Run Enabled
1 14:40	16:01:20	0:05:00	1:21:20	16 of 32

Temp. Event Blocked 1
 Use Curve OFF
 Cur Bendpoint 1
 Pause Time 5

Admin 7 Mar 2017 14:39:02 Age 19

Regulator Set Point

Outputs and Temperatures House 1

On	Off	Output	T-Avg	Timer
73.1	72.1	Tunnel Fan 1	68.7	
73.1	69.1	Tunnel ALLOWED	68.9	
71.1	70.1	Second Static Pressure	68.7	
66.1	67.1	Use Attic Air	68.7	
65.1	64.1	Exhaust Fans 2	68.7	MIN VENT
65.1	64.1	Exhaust Fans 1	68.7	MIN VENT
64.1		Set Temperature	68.7	
63.1	64.1	Heater 2	68.7	

House Drinker

Admin 7 Mar 2017 14:40:06 Age 19

Drinker House 1

Flushing Set Temperature 72.0 68.7 °F Scheduled Flush
 Regulator Set Point 5 554 In

House Drinker

Admin 7 Mar 2017 14:41:19 Age 19

Edit the Regulator Set Point.
 The increase or Decrease Relay will turn on and off until the setting is reached. (+ or - 1 inch).

Regulator Set Point using Curve

Curves House 1

Set Temp	RunFor Clock
Min. Ventil.	Feeder Wind.
Light Clock	Drinker Pressure
Curves.MainS	Waterflow

Admin 12 Jul 2017 16:32:24 Age 58

Curves / Drinker Pressure House 1

Day	Curve
1	1
2	10
3	15
4	20
5	25
6	30
7	35
8	40
9	45
10	50

Curve OFF Day 19 Curve value 4


Admin 7 Mar 2017 14:42:26 Age 19

If you want to change water column height automatically with bird age you can set that up in this screen.

Maintenance

- Keep the control box lid closed. The control is not capable of operating in a dusty environment. The loading regulator vents into the control box. When the control box is closed, the positive internal air pressure keeps dust out.
- Clean inside and outside of the water line stand tubes at least once a week.

Troubleshooting

Problem	Correction
No water in Stand Tube.	<ol style="list-style-type: none"> 1. Water Off. 2. Defective or plugged Regulator. 3. Regulator plumbed backwards. 4. Stand Tube Cap plugged (not venting).
Water Column does not change.	<ol style="list-style-type: none"> 1. Stand Tube Cap plugged (not venting). 2. Air line to Regulator pinched.
Water Column to top of Stand Tube.	<ol style="list-style-type: none"> 1. Regulator seat worn or foreign object in seat area. 2. Stand Tube Cap plugged (not venting). 3. Air Loading Unit putting out too high pressure (defective solenoid).
Farm Compressor suddenly runs more often than normal.	<ol style="list-style-type: none"> 1. Shut off or pinch off all lines going to the individual controls to find which house is the problem. 2. Open one line at a time until you find one that causes the compressor tank to lose air more quickly. 3. See correction for house leak below.
House seems to lose air too quickly.	<ol style="list-style-type: none"> 1. Shut off the incoming air line to the control and watch the small INCOMING PRESSURE GAUGE. If the control holds pressure, the leak is between the air source and that house. 2. With the incoming air off and the gauge indicates that there is a 2 PSI drop or more within 1 minute, the problem is in the control, lines, or regulators. 3. Shut off or pinch off all lines going out to the regulators and the incoming line. If the control loses pressure, the problem is inside the control. See control unit leak below. 4. If the unit holds pressure, release one line at a time to isolate the cause of the leak. 5. Test line connections and regulator for leaks.
Control unit leaks compressed air.	<p> 1. Warning! Turn Power off at the Breaker!</p> <ol style="list-style-type: none"> 2. Check the vent hole in the red cover of the Air Loading Unit, (See Figure 25.) Put soapy water over the hole. A small amount of air coming out is normal (bubble should grow slowly over several seconds). 3. Put soapy water on all internal hose connections to find leak.

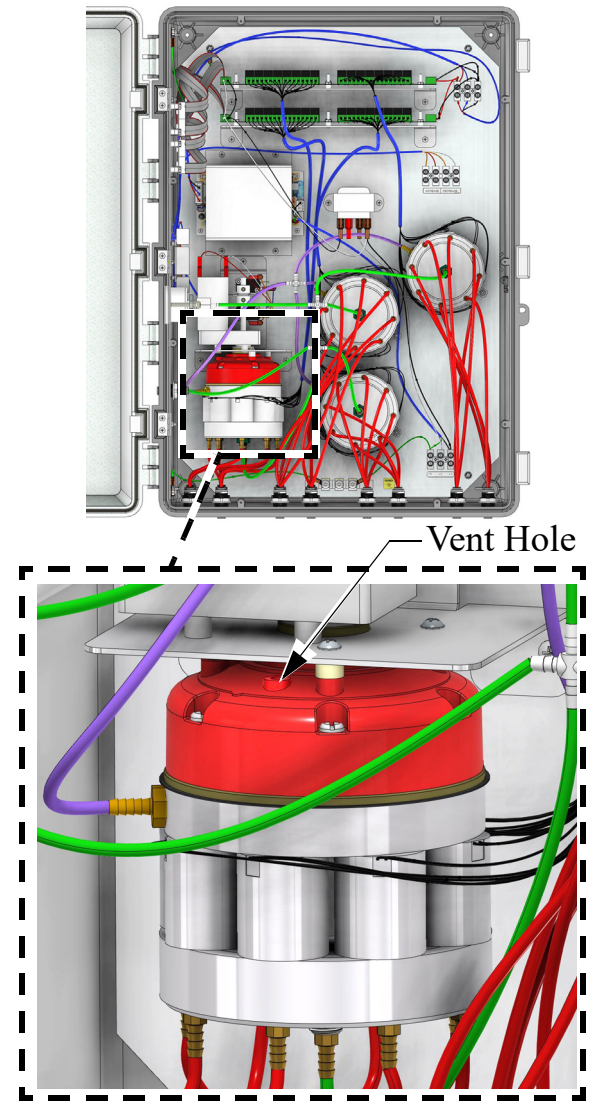
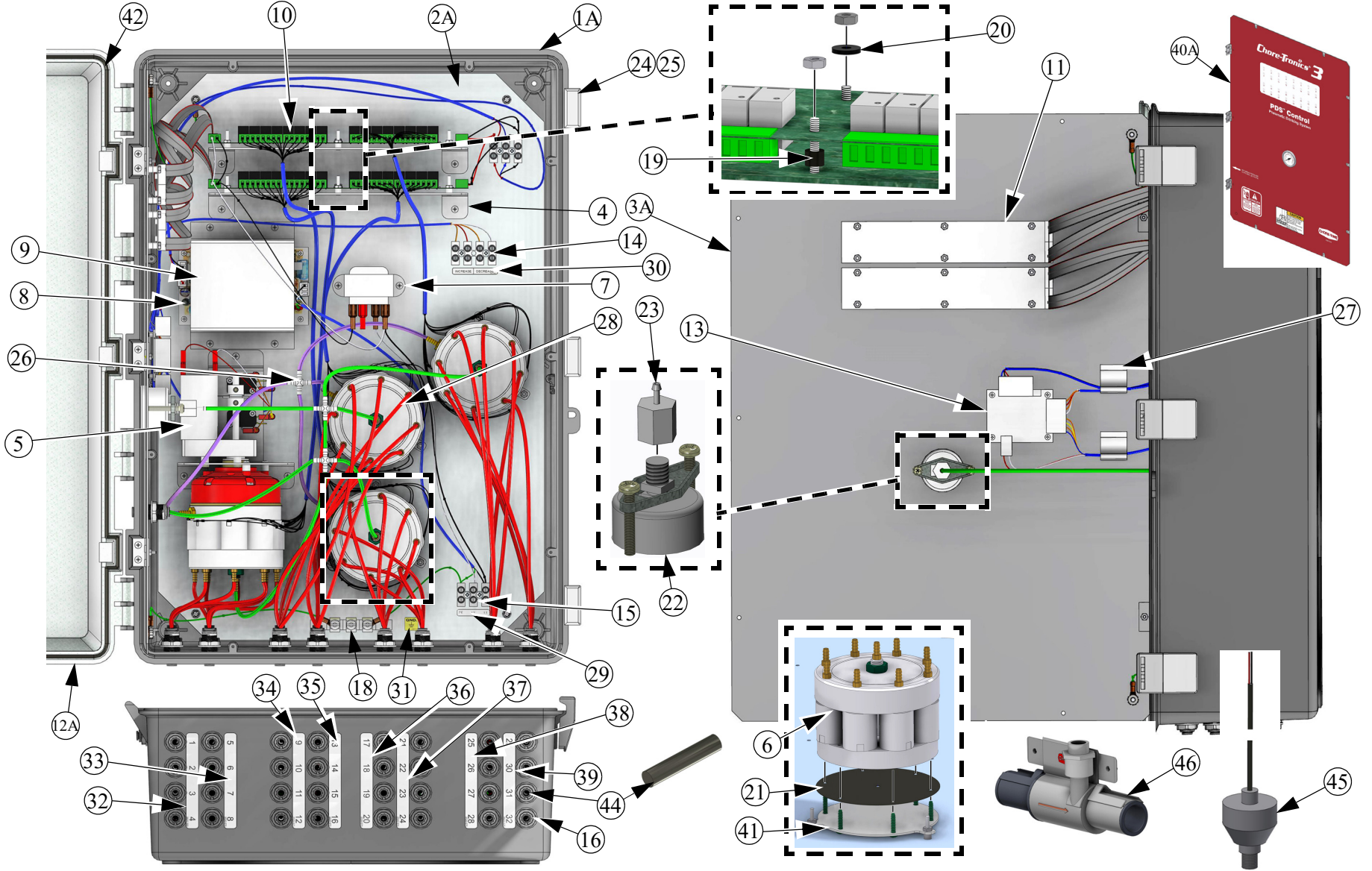


Figure 25. Vent Hole

Part Numbers

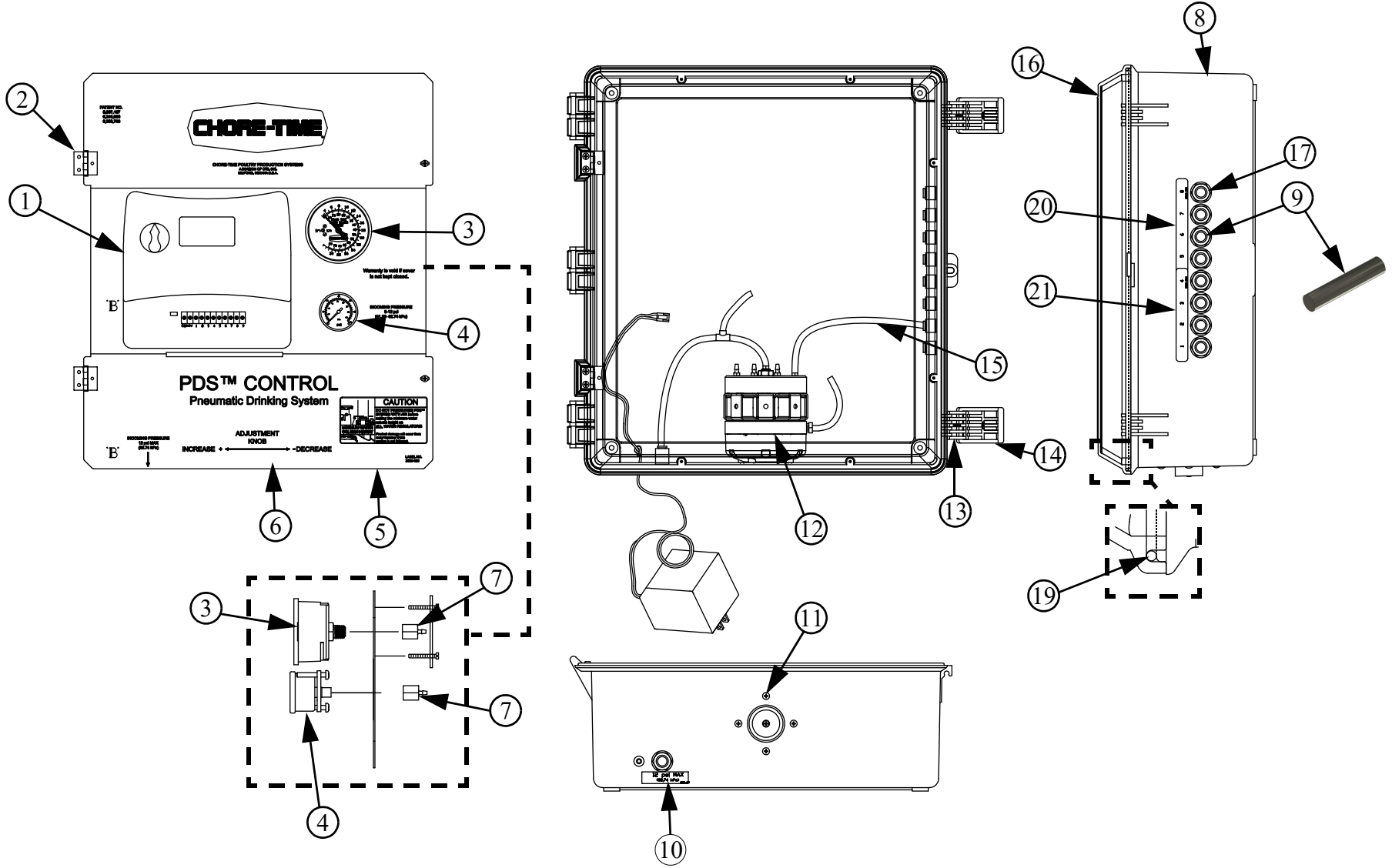
(56039-32) Chore-Tronics® 3 Auto-Adjust PDS™



Item	Description	56039-4	56039-8	56039-16	56039-32
		Part No			
1A	CT3 PDS Electric Box (Large Box)	--	--	--	56398
1B	CT3 PDS Electric Box (Small Box)	56043-2	56043-2	56043-2	--
2A	CT3 PDS Bottom Plate (Large Box)	--	--	--	56400
2B	CT3 PDS Bottom Plate (Small Box)	55744-1	55744-1	55744-1	--
3A	CT3 PDS Cover Plate (Large Box)	--	--	--	56399
3B	CT3 PDS Cover Plate (Small Box)	55743	55743	55743	--
4	90 deg. Tip Plate	--	--	--	56401
5	Motorized 8 Station Airloader	56380-4	56380-8	56380-16	56380-32
6	8 Station Airloader	--	--	44452	44452
7	24 Volt 12 AC Transformer	56045	56045	56045	56045
8	65W Power Supply	49649	49649	49649	49649
9	Power Supply Cover	56111	56111	56111	56111
10	CT3 PDS Flush Relay Board	56047	56047	56047	56047
11	CT3 PDS Flush LED Board	56049	56049	56049	56049
12A	15 x 22 Electrical Box Lid	--	--	--	51467
12B	Electrical Box Lid	42683	42683	42683	--
13	Motor Control	56048	56048	56048	56048
14	4 Pole 1.71 Terminal Strip	34925-4	34925-4	34925-4	34925-4
15	3 Pole Terminal Strip	34925-3	34925-3	34925-3	34925-3
16	Bulkhead Fitting	56382	56382	56382	56382
17	1x1 Aluminum Hinge	49482	49482	49482	49482
18	3.15 Grounding Rail	43384-2	43384-2	43384-2	43384-2
19	Nylon Display Spacer	43383	43383	43383	43383
20	Compressible .05" Spacer	43381	43381	43381	43381
21	Diaphragm	--	--	35891	35891
22	30 PSI Pressure Gauge	56095	56095	56095	56095
23	1/8 Female Pipe Adapter	48586	48586	48586	48586
24	Control Box Pivot	30863	30863	30863	30863
25	Control Box Latch	30862	30862	30862	30862
26	1/8" PDS Cross Connector	--	--	56397	56397
27	Ribbon Cable Clamp	50130	50130	50130	50130
28*	1/4" OD x 1/8" ID Flex. Tubing	48574	48574	48574	48574
29	Input Power Decal	2526-428	2526-428	2526-428	2526-428
30	PDS Direction Decal	2526-564	2526-564	2526-564	2526-564
31	Ground Symbol Decal	2527-63	2527-63	2527-63	2527-63
32	Terminal Strip Decal 1-4	2526-569	2526-569	2526-569	2526-569
33	Terminal Strip Decal 5-8	--	2526-570	2526-570	2526-570
34	Terminal Strip Decal 9-12	--	--	2526-571	2526-571
35	Terminal Strip Decal 13-16	--	--	2526-572	2526-572
36	Terminal Strip Decal 17-20	--	--	--	2526-573
37	Terminal Strip Decal 21-24	--	--	--	2526-574
38	Terminal Strip Decal 25-28	--	--	--	2526-575
39	Terminal Strip Decal 29-32	--	--	--	2526-576
40A	CT3 PDS Decal (Big Box)	--	--	--	2529-1203
40B	CT3 PDS Decal (Small Box)	2529-1176	2529-1176	2529-1176	--
41	Airloader Standoff Plate				56556
42*	Neoprene Seal	34767	34767	34767	34767
43	Pressure Sensor	56120	56120	56120	56120
44	Air Station Plug	55837	55837	55837	55837
45	Pressure Sensor	56120	56120	56120	56120
46	Midline Air Remover	52273-5	52273-5	52273-5	52273-5

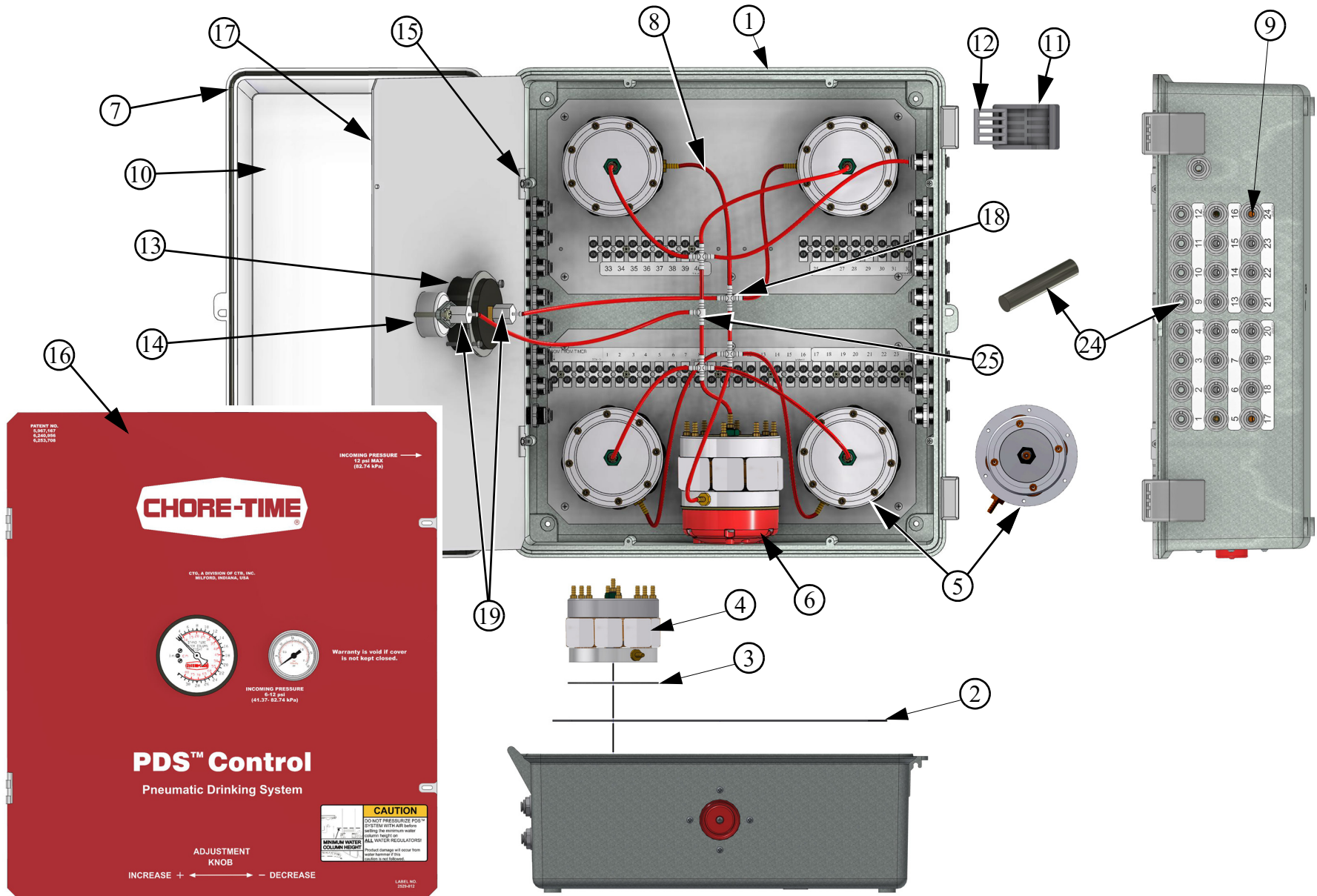
*These Items sold in feet.

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		52430-4	52430-8
Item	Description	Part No	Part No
1	120V Timer Control	52412-1	52412-2
2	Hinge	49482	49482
3	Water Column Gauge	44029	44029
4	Air Pressure Gauge	56095	56095
5	Control Plate	52411	52411
6	Control Decal	2529-939	2529-939
7	1/8" Female Pipe Adapter	48586	48586
8	Control Box (14 x 16)	52455	52455
9	Air Station Plug	55837	55837
10	Max Pressure Decal	2526-437	2526-437
11	#6-20 x 5/8" Pan Hd Screw	48577	48577
12	Airloader W/Adjustment Knob	48837	48584
13	Control Box Latch Pivot	30863	30863
14	Control Box Latch	30862	30862
*15	1/4" O.D. Tubing	48574	48574
16	Control Box Lid	42683	42683
17	Bulkhead Fitting	56382	56382
18	Station Number Decal	2526-430	2526-430
*19	1/8" Diameter Seal	34767	34767
20	PDS™ Terminal Strip Decal (5-8)	--	2526-570
21	PDS™ Terminal Strip Decal (1-4)	2526-569	2526-569
*Item sold in Feet.			

4-40 (54373-X) Station PDS™



CHORE-TIME
 C.T.S. A DIVISION OF C.T.I. INC.
 MILFORD, INDIANA, U.S.A.

INCOMING PRESSURE
 12 psi MAX
 (82.74 kPa)

Warranty is void if cover is not kept closed.

INCOMING PRESSURE
 0-12 psi
 (41.37-82.74 kPa)

PDS™ Control
 Pneumatic Drinking System

ADJUSTMENT KNOB
 INCREASE + ← → - DECREASE

CAUTION
 DO NOT PRESSURIZE PDS™ SYSTEM WITH AIR before testing the maximum water column height of ALL WATER REGULATORS! Product damage will occur from water hammer if this warning is not followed.

PATENT NO. 6,261,022
 6,260,998
 6,255,704

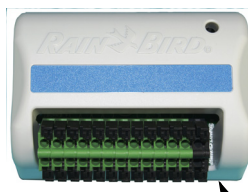
LABEL NO. 2129-412



21*



22*



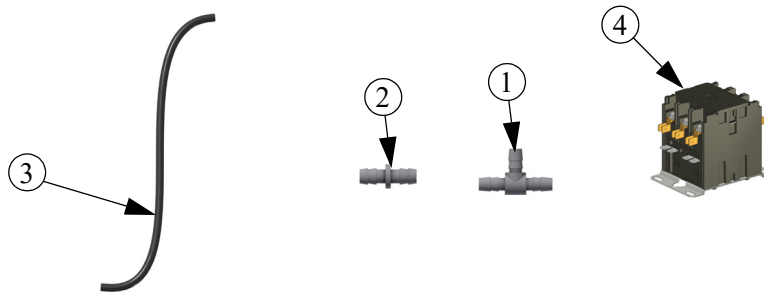
23*

Item	Description	Part No.
1	Control Box	48583
		48583-1
2	Lower PDS™ Plate	46333-1
3	Diaphragm	35891
4	8 Station Airloader	44452
5	4 Station Airloader	44451
6	8 Station Airloader W/Knob	48584
7	Seal	34767
8	Flexible Hose	48574
9	Caplug	48588
10	Control Box Lid	42683
11	Control Box Latch	30862
12	Control Box Latch Pivot	30863
13	PSI Gauge	48585
14	Water Column Gauge	44029
15	Panel Hinge	49482
16	PDS™ Control Decal	2529-812
17	Front Plate	46334-1
18	1/8" Cross Connector	56397
19	Hose Adapter	48586
20*	12 Station Rain Bird® Control	54371-12
	12 Station Rain Bird® Control (International)	54371-12IN
21*	4 Station Module	54372-4
22*	8 Station Module	54372-8
23*	12 Station Module	54372-12
24	Air Station Plug	55837

*These components are individually boxed.

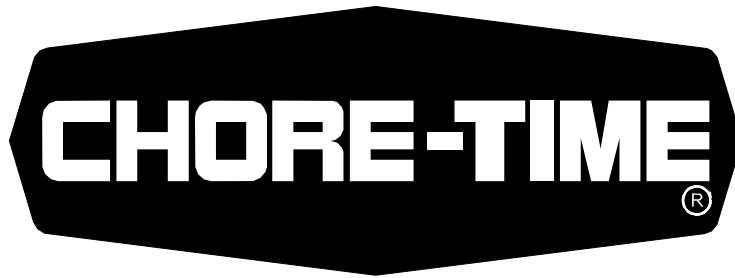
Contact your nearby Chore-Time distributor or representative for additional Rain Bird® Control parts and information.

Miscellaneous Parts



Item	Description	Part No
1	1/8" PDS Tee Connector	45894
2	1/8" Coupling	45893
3	1/4" PDS Tubing	45895-500
4	24 Volt Relay	56577-24

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MADE TO WORK.

BUILT TO LAST.®

Revisions to this Manual

Page No.	Description of Change	Eco
Various	Combined PDS Manuals. Various Updates.	32501

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

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E-mail: poultry@choretime.com • Internet: www.choretimepoultry.com**