Aqua Magic
WATER CONDITIONING

2900 SERIES

MAKING WATER SOFT FOR OVER 40 YEARS

THE AUTOMATIC WATER CONDITIONER THAT GIVES YOU MORE!

2900 SERIES

- ■ 2" control valve ideal for commercial/industrial applications

- ■ Fully adjustable 5 cycle control delivers controlled upflow backwash, downflow brining, slow rinse, rapid rinse and downflow service

- ■ Time tested hydraulically balanced pistons, seal and spacer concept to pilot service flow, regeneration and bypass water during regeneration

- ■ No need for additional diaphrams and/or solenoids on multiple tank systems (Available with hard water or no hard water bypass piston)

- ■ Solid, lead free brass valve body for superior strength and durability

- ■ Consistent brining regardless of salt levels with timed brine refill

- ■ Choice of 7 or 12 day clock, mechanical or electronic meter (shown) (Meter option information on page 4)

- ■ 100% non metallic pressure vessel will not chip or corrode

- ■ Salt storage tank features a blow molded one piece design with a one piece blow molded cover

Model Specifications	FC 75-2900	FC 90-2900	FC 120-2900	FC 150-2900	FC 180-2900	FC 210-2900	FC 240-2900	FC 300-2900	FC 450-2900	FC 600-2900
Exchange Capacity Per Tank Grain @ lb. Salt	Min. 50,000 @ 15	Min. 60,000 @ 18	Min. 80,000 @ 24	Min. 100,000 @ 30	Min. 120,000 @ 36	Min. 140,000 @ 42	Min. 160,000 @ 48	Min. 200,000 @ 60	Min. 300,000 @ 90	Min. 400,000 @ 120
	Med. 60,000 @ 20	Med. 72,000 @ 24	Med. 96,000 @ 32	Med. 120,000 @ 40	Med. 144,000 @ 48	Med. 168,000 @ 56	Med. 192,000 @ 64	Med. 240,000 @ 80	Med. 360,000 @ 120	Med. 480,000 @ 160
	Max. 75,000 @ 38	Max. 90,000 @ 45	Max. 120,000 @ 60	Max. 150,000 @ 75	Max. 180,000 @ 90	Max. 210,000 @ 105	Max. 240,000 @ 120	Max. 300,000 @ 150	Max. 450,000 @ 225	Max. 600,000 @ 300
Resin (CU Ft) Per Tank	2.5	3.0	4.0	5.0	6.0	7.0	8.0	10.0	15.0	20.0
Mineral Tank Size	13" x 54"	14" x 65"	16" x 65"	18" x 65"	21" x 62"	21" x 62"	24" x 71"	24" x 71"	30" x 72"	36" x 72"
Brine Tank Size Salt Storage	18" x 40" 350 lbs.	24" x 41" 550 lbs.	24" x 50" 700 lbs.	24" x 50" 700 lbs.	24" x 50" 700 lbs.	24" x 50" 700 lbs.	24" x 50" 700 lbs.	24" x 50" 700 lbs.	30" x 50" 1000 lbs.	39" x 48" 1200 lbs.
Pipe Size	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
Flow Rate (Cont. 15 psi) (Peak 25 psi)	40 / 56	39 / 54	47 / 64	52 / 72	60 / 77	60 / 77	74 / 97	68 / 91	84 / 105	87 / 110
Backwash Rate	4.0 gpm	5.0 gpm	7.0 gpm	9.0 gpm	12.0 gpm	12.0 gpm	15.0 gpm	15.0 gpm	25.0 gpm	30.0 gpm

SOLD BY:

PSI
PRESSURE SERVICES, INC.

2361 S Plaza Drive, Rapid City, SD 57702-9385
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Model XT

System 4 (Single Tank XT)

The XT advanced electronic controller is available for single control valve operation.

In Time Clock Delay mode, the XT will display the number of days until the next scheduled regeneration. Some meter delayed types will display the volume remaning (SRV) minus the reserve. Once the volume remaining is zero, the display will start counting down the reserve volume and queue (RGQ) regeneration.

Features
- Time of day backup for up to 12 hours of power loss
- Calculating Reserves:
    Daily Variable - adjusts reserve based on previous day's water usage
    Day of Week - adjusts reserve for each day of the week based on an average of the last three weeks
- LED Status Indicator:
    Blue: In Service
    Green: In Regeneration
    Red: Error with codes
- New shift key (left arrow) for digit selecting, allows faster programming
- 2 Line/16 character LCD backlit display
- Defaults for all valve, piston, and cam types are stored
- Diagnostics:
    Current Flow Rate
    Peak Flow Rate (can be reset)
    Totalizer (can be reset)
    Hours between Last two Regenerations
    Hours between Last Regeneration
    Volume Remaining (Adjustable)
    Previous Days Usage
    Reserve Volume
    Software Version
- *Uses same mounting hardware and cable harness as the 3200NXT and 3214NXT*
- *Easy installation with plug-in wiring harnesses*

Options
- Programmable auxiliary relay output:
    - Dry contact Relay (fused at 3 amps)
    - Program entire Regeneration
    - Two programmable time windows during regeneration
- Remote Lock
- Programmable for Fleck® or generic meters

System Type

Meter Delayed Weekly Reserve	Single Valve
Meter Delayed Variable Reserve	Single Valve
Meter Delayed Fixed Reserve	Single Valve
Meter Immediate	Single Valve
Remote Signal Start Delayed	Single Valve
Remote Signal Start Immediate	Single Valve
Time Clock Delayed	Single Valve
Twin Tank	Single Valve
Volume Override Delayed	Single Valve
Volume Override Immediate	Single Valve

Generic Meter Guidelines

Meter power supply is +19V DC, up to 10 mA. 01-150 pulses per gallon/liter output. Open collector output, board will sink up to 10mA at 5V DC. Pulse rate generated must not exceed 100 pulses per second (100 Hz) or 6,000 pulses per minute

Electrical Rating

24V Pentair transformers:
115V AC +/- input, 24V AC output

Humidity

95% RH, Non-condensing

Two Programming Levels

User Mode:
    Water Hardness
    Regeneration Day Override
    Regeneration Time
Master Programming:
    System Type
    Valve Type
    Regenerant Flow
    Display Format
    Unit Capacity
    Capacity Safety Factor
    Water Hardness
    Regeneration Day Override
    Regeneration Time
    Cycle Steps
    Auxiliary Relay Outputs
    Flow Meter Sizes

System 5, 6, or 7 (Duplex 3200 NXT or 3214 NXT Progressive)

The 3200NXT Network Controller uses on-board communication capabilities to link multiple commercial valves (via off-the-shelf CAT3, CAT5, or better cables) for a variety of system types.

Features

- 2x16 character backlit LCD display
- Networks up to four valves
- Field-configurable for System Types 4, 5, 6, 7, and 9
- Auxiliary inputs and outputs
  - Remote signal start input
  - Remote lockout input
  - Programmable relay output/chemical pump output
- Easy installation with plug-in wiring harnesses
- Front panel diagnostics button
  - Flow rate
  - Peak flow rate
  - Totalizer
  - Hours between last two regenerations
  - Hours since last regenerations
  - Adjustable volume remaining
  - Valve position
  - Software version
- Easy time of day adjustment
  - Simply push the up or down button on the lead (#1) controller; time of day is automatically copied to the remaining controllers
- Five configurable cycle steps
- Remote signal start can be used simultaneously with time clock, meter immediate, or meter delayed regeneration triggers
  - Allows monitoring of flow and volume information in RSS applications

Three programming levels

- User mode
- Master programming
- Diagnostics mode

System Types

System 4	Single Valve	Time Clock	No Meter
		Delayed	One Meter
		Immediate	One Meter
		Remote Signal Start	Optional Meter
System 5 (Interlock)	2 - 4 Valves	Immediate	All Meters
		Remote Signal Start	Optional Meter
System 6 (Series)	2 - 4 Valves	Immediate	All Meters
		Remote Signal Start	Optional Meter
System 7 (Alternating)	2 Valves	Immediate	One Meter
		Remote Signal Start	Optional Meter
System 9 (Alternating)	2 - 4 Valves	Immediate	All Meters
		Remote Signal Start	Optional Meter

Generic Meter Guidelines

Open collector output.
Pulse rate generated must not exceed 100 pulses per second (100 Hz), or 6,000 pulses per minute.
Support for meter outputs in the range of 1-255 gallons (25.5 m^3) for every 1-255 pulses. Example: 35 gallons/100 pulses (= 3.5 gallons/10 pulses, = 0.35 gallons/1 pulse).
Meter must operate at 5 VDC.

Electrical Rating

24 VAC Pentair® Transformers: 115 VAC +/- 20% input, 24 VAC output

Humidity

95% RH, Non-condensing

System 9 (Triplex 3200 NXT or 3214 NXT Progressive)

This demand flow system can be programmed to bring multiple units to the service position and back to standby based on system demand flow.

The 3214NXT Demand Flow Network Controller uses on-board communication capabilities to link multiple valves via standard CAT3, CAT5, or better communication cables.

Features

- Network two to four valves
- Simple, on-site network programming
- Easy installation with plug-in wiring harnesses
- Shift key allows digit selecting in programming
- 2x16 character LCD backlit display (letter or digit codes not needed)
- Valve, piston, and cam type default storage
- User and master programming modes
- Diagnostic mode:
  - Current flow rate
  - Peak flow rate (can be reset)
  - Totalizer (can be reset)
  - Hours between last two regenerations
  - Hours since last regenerations
  - Adjustable volume remaining (adjustable)
  - Valve addresses

Options

- CAT 3 networking cable kit
- Remote lock
- Programmable for Fleck® and generic meters
- Programmable auxiliary relay output:
  - Dry contact relay (fused at 3 amps)
  - Program entire regeneration or during any part of regeneration
  - Chemical pump output (volume and time)

Three programming levels

- User mode
- Master programming
- Diagnostics mode

System Type

System Type 14	2 - 4 Valves (meter on each valve)

Regeneration Type

Meter Immediate

Generic Meter Guidelines

Open collector output.
Board will sink up to 1-mA @ 5 V DC.
Support for meter outputs in the range of 1-255 gallons (25.5 m³) for every 1-255 pulses. Example: 35 gallons/100 pulses (=3.5 gallons/10 pulses, = 0.35 gallons/1 pulse).

Electrical Rating

24 VAC Pentair® Transformers: 115 VAC +/- 20% input, 24 VAC output

Humidity

95% RH, Non-condensing

Clack 2" Electronic Meter

Fleck 2" Electronic Meter

Meter Specifications — Mechanical

METER SIZE	Connections Inlet/Outlet	ACCURACY (±5%) RANGE (gpm)	CAPACITY RANGE STANDARD (gallons)	CAPACITY RANGE EXTENDED (gallons)
1-1/2" Mechanical (Fleck)	1-1/2"F x 1-1/2"M	1.50 - 75.0	625 - 10,625	3125 - 53,125
1-1/2" Electronic (Fleck)	1-1/2"F x 1-1/2"M	1.50 - 75.0	1 - 999,999 (grains)	
1-1/2" Electronic (Clack)	1-1/2"F x 1-1/2"M	0.50 - 75.0	1 - 999,999 (grains)	
2" Mechanical (Fleck)	2"M x 2"M	3.00 - 150.0	1,250 - 21,250	6,250 - 106,250
2" Electronic (Fleck)	2"F x 2"M	3.00 - 150.0	1 - 999,999 (grains)	
2" Electronic (Clack)	2"F x 2"M	1.50 - 150.0	1 - 999,999 (grains)	