KRO - 1500

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REVERSE OSMOSIS MACHINE
SPECIFICATIONS

1500 GPD R.O.

Model	»	KRO-1500
Performance	»	at 25°C, 2000ppm TDS
Permeate Rate	»	237Lph, at 35% Recovery
Concentrate Rate	»	237Lph, at 35% Recovery
Feed Rate	»	474Lph, at 35% Recovery
Operating Pressure	»	700KPa - 1100KPa (100 - 160psi)
Typical Ion Rejection	»	95% to 98%
Membrane	»	(1) 4.0" x 40" TFC
Membrane Housing	»	(1) 304SS, End Entry
Array	»	1 (1 element per housing)
High Pressure Piping	»	20mm OD PVC
Pump	»	Nan Fang, Multi-Stage Centrifugal Stainless Steel Pump
Motor	»	1.5KW, 220VAC/50Hz, (Optional Three Phase)
Frame	»	Stainless Steel Powder Coated
Approximate Weight	»	75Kgs
Dimensions	»	150cm H x 65cm W x 65cm D
Connections	»	¾" Inlet, ½" Permeate, ½" Concentrate
Installed Features	»	Permeate Flow Meter Concentrate Flow Meter Recycle Flow Meter Raw Water Pressure Gauge Pre-membrane Pressure Gauge Concentrate Pressure Gauge One & Five Micron Pre-filters Low Inlet Pressure Switch (Adj) Inlet Shut Off Solenoid Valve Conductivity Meter Main Machine On/Off Switch Feed Water Pump On/Off Switch (Pump not included) RO Pump On/Off Switch Permeate Pump On/Off Switch (Pump not included) Main Machine Indicator Light RO Pump Indicator Light Auto Flush Indicator Light Tank Full Indicator Light Low Pressure Indicator Light Check Valve in Recycle Line Gate Valve on Discharge of Pump

Table of Contents

Please read this operating manual prior to use and store in a safe place for referral at a later date.

1.0 Principles of Reverse Osmosis

The heart of the system is a semi-permeable membrane that will allow small molecules to pass through, such as water (H_2O) and reject larger molecules such as sodium Chloride (NaCl). At atmospheric pressure, if a membrane separates two of different solution strengths, ions from the stronger solution tend to flow into the weaker solution until equilibrium is attained.

As the name suggests, "Reverse Osmosis," reverses this natural tendency by exerting an *"Osmotic pressure"* on the membrane.

Now the concentrated side of the membrane forces the smaller water molecules through the membrane to the permeate collection manifold. The concentrated water becomes more concentrated and the diluted water becomes more pure.

The most important aspect of reverse osmosis operation is to ensure the raw feed is correctly treated to prevent fouling and possible irreversible damage to the reverse osmosis membrane.

2.0 Pre Treatment

Rarely, in fact, almost never is water suitable for direct entry to the membrane housing.

Table 1 shows a number of contaminants present in raw water capable of causing a permanent damage to the membranes. Please note these are the main contaminants. However, other salts or metals may be encountered and would require a specific treatment.

Table 1.- Main Contaminants

Contaminant	Membrane Effect	Treatment Options
Chlorine (Cl)	Oxidation Membrane Destruction	Sodium Metabisulphite (SMBS) dosing/ Activated Carbon Filter
Chloramines	Oxidation Membrane Destruction	Sodium Metabisulphite (SMBS) dosing/ Activated Carbon Filter
Iron (Fe)	Fouling	Aerating/chlorination (followed by dechlorination) Ozone(followed by de-ozonation)
Manganese	Fouling	Manganese Greensand Filtration
Calcium Bicarbonate	Scaling	Base Exchange Water Softening Proprietary Antiscalants
Magnesium Sulphate	Scaling	Base Exchange Water Softening Proprietary Antiscalants
Biological Activity	Biological Fouling	Aerating/chlorination (followed by dechlorination) Ozone(followed by de-ozonation)
Suspended Solids	Colloidal Fouling	Coagulation and or Filtration

Table 2.- KRO Models

Item	Model			
	800GPD	**1500GPD** (1)	3000GPD	6000GPD
Minimum Feed Flow Capacity	270 LPH	500 LPH	1000LPH	2000LPH
Minimum Feed Pressure	280 kPa			
Water Temperature	5 45 °C			
pH	6.5 – 9			
Total Hardness	Nominally 17ppm as $CaCO_3$			
Turbidity	< 1 NTU's			
Silt Density Index	SDI < 5			
Total Dissolved Solids (TDS)	< 1000ppm			
Iron (Fe)	< 0.1ppm			
Manganese (Mn)	< 0.05ppm			
Dissolved Oxygen	< 0.1ppm			
Organics	< 1ppm			

(1) This manual is applicable for model KRO1500

3.0 System Configuration

3.1 The KRO1500 is completed with the following items:

- RO membrane and Stainless Steel membrane Housing.
- Stainless Steel frame.
- Carbon / 5-Micron &1 Micron cartridge filters.
- Horizontal Booster Pump.
- Low-pressure protection switch.
- Solenoid valve.
- Permeate, Reject and Recycle Rotameters.
- Digital controller.
- CM-230 Conductivity meter.
- Feed water pressure gauge.
- Pre-membrane pressure gauge.
- System (reject) pressure gauge.

3.2 Pre Treatment is completed with the following items:

- Water Softener complete with automatic valve to control service, backwash and regeneration cycles.

4.0 Process Description and System Components

4.1 General Process

This is to be read in conjunction with the General Arrangement drawing (Figure 1).

The raw water is pre treated before entering the KRO1500. The first stage of pre treatment is a water softener which eliminates hardness to prevent scaling problems.

The softened water flows to a carbon filter to remove the chlorine which is detrimental to RO membranes. Following the carbon filter the water passes through a 5 and 1 micron filters arrangement to remove suspended material.

Filtered water is pumped via a high pressure (boost) pump through the RO housing, containing the membrane. *Permeate* (treated water) is sent to a break tank and the *Reject* (brine) is sent to the drain.

A *Recycle* line is also provided, this line goes from the reject line to the pump suction line. The purpose of the recycle is to create a hydraulic equilibrium, correct recovery rate and system pressure.

The system is completed with an inlet solenoid valve. This valve automatically turns off the water supply between the feed water and the membrane. A level control inside the tank sends a signal to the valve to close when the tank is full. Once the level in the tank is low, the level control sends another signal to the solenoid valve to permit the flow of raw water into the system. Every time the valve opens/closes the system will start/stop automatically.

A Flush solenoid valve is also provided with the unit. This valve is under the control of a timer. Periodically the valve opens to flush the membrane at low pressure. This extends the periods between membrane cleans.

4.2 System Components

4.2.1 Water Softener

The water is *Hard* when Calcium and Magnesium are dissolved in it. These salts precipitate out of the water causing scaling problems. To prevent this situation the water is pre treated using a water softener.

Raw water flows through a *media (small plastic beads or chemical zeolite)* covered in sodium ions. The calcium and magnesium ions are replaced with sodium ions. As sodium does not precipitate out of the water, the scaling problem is eliminated.

However, the media is exhausted after certain amount of water has been treated. This is because no more sodium ions are available to swap places with calcium and magnesium. Consequently, the media needs to be regenerated.

The regeneration process is very simple. The media is soaked with a Sodium Chloride (brine tank) solution. The sodium ions change places with the calcium and magnesium trapped in the media. In this way the media is being regenerated and is ready to exchange the sodium ions again. The remaining brine plus all of the calcium and magnesium is flushed through a drain.

The regeneration cycles on the KRO1500 systems are programmed based on the hardness of the inlet water.

Caution: THE SALT USED FOR REGENERATION OF THE WATER SOFTENER MUST BE "CROWN HG WATER SOFTENER SALT". NO OTHER SALT CAN BE USE FOR REGENERATION.

4.2.2 Carbon Filter & Cartridge Filters

The carbon filter is designed to remove the chlorine from the water. Cartridge filters are designed to remove suspended material greater than 5-Micron @ 1-Micron prior to the pre treated water flows into the membrane. This protects the membrane from significant colloidal contamination. The cartridges should be renewed every 4 months, as minimum. If the raw water is significantly polluted then the cartridges should be changed in a shorter period of time.

Caution: It is EXTREMELY important to renew the cartridges. Mainly the carbon filter. If any trace of chlorine goes into the housing, the membrane will be permanently damaged.

4.2.3 High-Pressure Pump

High-pressure pump is one of the key components, to boost the pressure for correct membrane operating conditions.

4.2.4 RO Membrane Housing

RO membrane housing is to guarantee the RO membrane can work under the conditions of normal pressure and seal arrangement.

Caution: The operator should apply silicon grease on the "Y' type plastic ring in order to ensure proper sealing of the membrane brine seal.

4.2.5 RO Membrane

RO membrane is the key component of the RO main unit and has a determinative effect on the quantity and quality of water produced. The RO membrane utilizes pressure-energy to separate larger contaminant molecules from the body of water.

For a given Temperature, Pressure and feed Total Dissolved Solids (TDS), if the quantity of water produced decreases by 10%, please consult your supplier of the unit.

4.2.6 Conductivity Monitor

The function of conductivity monitor is to measure conductivity condition of the permeate water.

Caution: Please do not clean with strong acid and strong alkali to prevent the electrodes from being damaged.

4.2.7 Reject Control Valve

The main function of the reject valve is to adjust the reject flow from the membrane. Adjust the reject valve to attain the correct recovery rate and systems pressure in conjunction with the recycle valve.

Caution: Please do not turn off the reject valve. The high pressure in the membrane housing may cause irreversible damage to membrane and/or housing.

4.2.8 Recycle Control Valve

The main function of the recycle valve is to adjust the flow from the membrane brine port to the booster pump suction. Adjust the recycle valve to attain the correct recovery rate and systems pressure in conjunction with the reject valve.

Caution: Please do not turn off the recycle valve. The high pressure in the membrane housing may cause irreversible damage to membrane and/or housing.

4.2.9 Flush Solenoid Valve

The flush solenoid valve is under the control of a timer. Periodically the valve opens to flush the membrane at low pressure. This tends to extended the periods between membrane cleans.

4.2.10 Rotameters

Rotameters are provided to indicate the permeate and reject flow rates

4.2.11 Pressure Gauges

Pressure gauges are provided to monitor operating conditions and facilitate the adjustment of the recycle and reject valves

4.2.12 Low-Pressure Switch

Low-pressure switch is a safety device that in conjunction with the controller shuts down the unit in the event of low feed pressure.

4.2.13 Float Switch

.A facility is provided to connect an external float switch in the permeate storage tank. When the circuit is broken between the, “HIGH-LEVEL,” contacts (no volt) the unit automatically stops. The unit will remain on standby until the level in the tank drops, remaking the circuit.

4.2.14 Pressure Reducing Valve (PRV)

If no break tank and set pump is available for the raw water supply, then a PRV is provided to guarantee the correct operating feed pressure going into the system. The PRV also protects the unit from over pressure situations that may cause damage to the equipments.

The feed pressure must be between 250 to 500kPa.

5.0 Installation Guide

Installation Environment and Technical Requirements

5.1 The operator should install the unit in a covered dry place, shielded from the elements to protect the electrical components and equipments generally from damage and premature deterioration.

5.2 Sufficient room should be allowed to conveniently operate and service the unit.

5.3 Consideration should be given to any additional pre treatment that may be required prior to operating the unit.

5.4 The influent water temperature must be between 5 and 45°C.

5.5 Permeate and reject lines must be no smaller than the unit outlet size. In the event of long pipe runs, increasing the pipe size diameter may be necessary.

Ask for our suppliers engineer to consult on any item above that may be of concern.

Caution: Please check the power supply is the correct voltage and current rating. Refer to the circuit diagram of RO main unit.

6.0 Description of Operation

6.1 Starting Up the Unit

6.1.1 Open the reject valve and recycle valves fully

6.1.2 Open feed water valve

6.1.3 Turn on the power supply.

6.1.4 Depress the RO Pump button

6.1.5 If the HIGH contacts are closed, after a short time delay the inlet valve will open and allow water to enter the system. This first stage will expel air to prevent damage to the membrane(s) [telescoping].

6.1.6 The flush valve will be open (the high reject flow rate will not be visible in the reject rotameter).

6.1.7 After a few minutes the flush valve will close. The reject flow rate should be at the maximum rate in the rotameter.

6.1.8 Slowly close in the reject valve and the recycle valve to attain the correct operating pressures and reject flow rates*.

The correct operating conditions depend on:

- Feed Temperature
- Feed water analysis
- Calculated recovery
- Pre-treatment conditions

Caution: Do not start or operate the unit with either the recycle or reject valve closed. Severe damage to the membrane and other component may result.

Caution: Do not operate the system at excessive pressures. If over a period:

- The permeate conductivity increases by 15% or
- The permeate production decrease by 10% or
- The HP pump discharge pressure increases by 15%

The influent water quality has changed or membranes require periodic cleaning. Do not increase the membrane pressure beyond 115% or permanent damage to the membranes may result. When using the unit for the first time, discard the first hour of production to drain. This will rinse out any preservative chemical used in membrane storage.

6.2 Shutting Down the Unit

6.2.1 Normally the unit will stop when the permeate tank if full. However, should the unit be required to be stopped manually depress the RO PUMP button.

6.2.2 If the unit is not to be used for a period longer than 48 hours please consult your supplier for advice regarding preservation of the membrane (membrane fouling will occur if the unit is idle for long periods).

7.0 Maintenance

7.1 The membranes should be cleaned about every six months or whenever performance diminishes as set out above.

7.2 Please consult your supplier to arrange cleaning of the membrane(s).

7.3 The filter cartridge should be replaced every four months as minimum.

7.4 Additional pre treatment should be serviced in accordance with the manufacturer's recommendations.

7.5 Should any component such as the HP pump not be performing according to specifications, consult your supplier for servicing.

8.0 Trouble Shooting

Table 3.- Trouble Shooting

Symptoms	Cause	Remedies
Unit will not start	• No power • Insufficient Water Pressure • Permeate Tank Full • Digital Controller damaged	• Check power supply • Check inlet valve is open/ and Check solenoid valve is operational/Check cartridge filter • Reset float switch • Service/Replace
HP Pump will not start	• Circuit breaker Off • Overload Tripped • Pump Motor High Temperature	• Switch on • Reset check current setting • Allow to cool
HP Pump starts but water Pressure low	• Flush Valve Open • Recycle valve fully open • Reject valve fully open • Pump fault • Pump cavitation	• Wait until flush cycle completes • Close valve in • Close valve in • Inspect pump • Bleed air from pump
HP Pump starts but Trips	• Motor Overload	• Check motor and pump/Check overload setting/Check controller
Excessive Membrane Pressure	• Reject Valve Closed • Recycle Valve Closed • Membrane(s) fouled • Excessive feed Pressure	• Open • Open • Replace/clean membrane(s) • Check feed PRV setting
Permeate water quality poor	• Membrane perforated by chlorine attack	• Replace carbon cartridge and membrane

9.0 Servicing

Table 4 shows the basic steps maintenance personnel should follow when servicing a KRO1500 unit. This will allow them to identify if the unit is operating correctly.

Table 4.- Servicing KRO1500

Steps	Yes	No
1. Check pressure and flow rates against values in table 5.		
2. Check brine tank is full (Recommended level 50% of full capacity).		
3. Check that no hard layer of salt has been formed on the surface of the brine tank.		
4. Keep record of the last change of filters		
5. If a problem is identified please refer to the Trouble Shooting section (Section 8.0) or call your supplier of the unit.		

Caution: THE SALT USED FOR REGENERATION OF THE WATER SOFTENER MUST BE "CROWN HG WATER SOFTENER SALT". NO OTHER SALT CAN BE USE FOR REGENERATION.

10.0 Expected Values

Table 5 shows the expected flow rates and pressures for KRO1500 unit.

Table 5.- Expected values for KRO1500

Parameter	Value
Feed Pressure	30 – 40 psi
RO Pressure	105 – 115 psi
Concentrate Pressure	110 – 120 psi
Permeate Flow	3 – 5 LPM
Recycle Flow	17 – 19 LPM
Concentrate Flow	5.5 – 7.5 LPM

Appendices

Appendix I

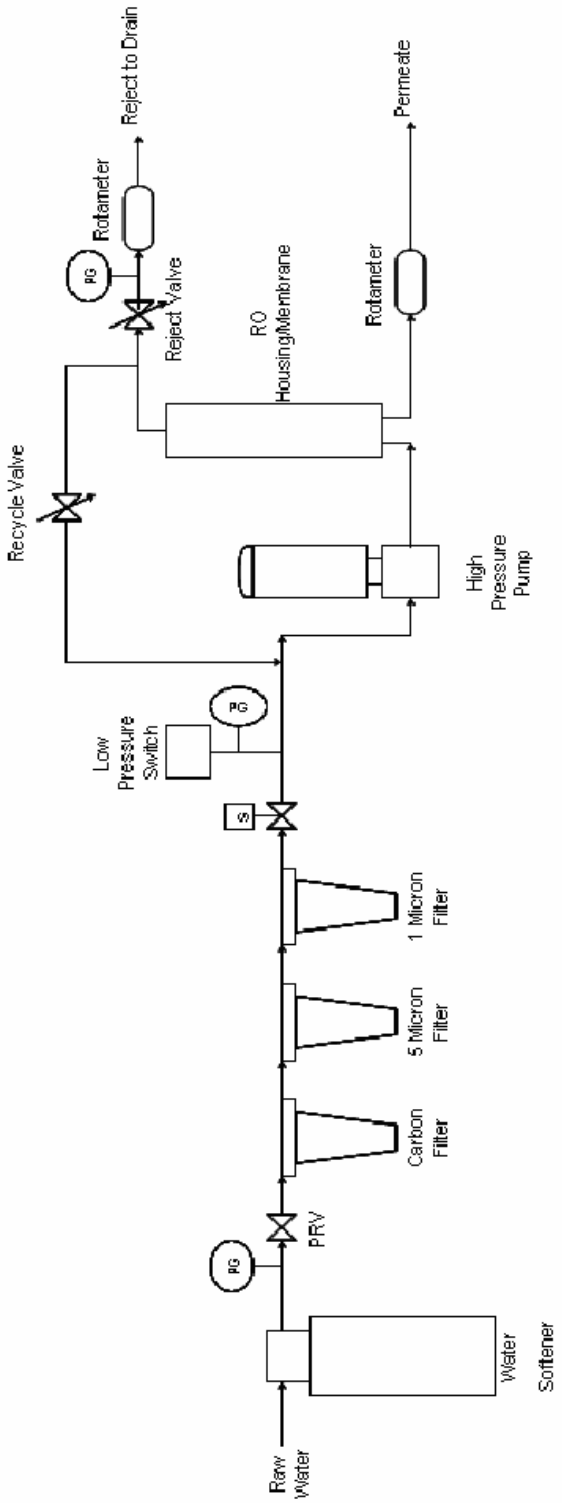
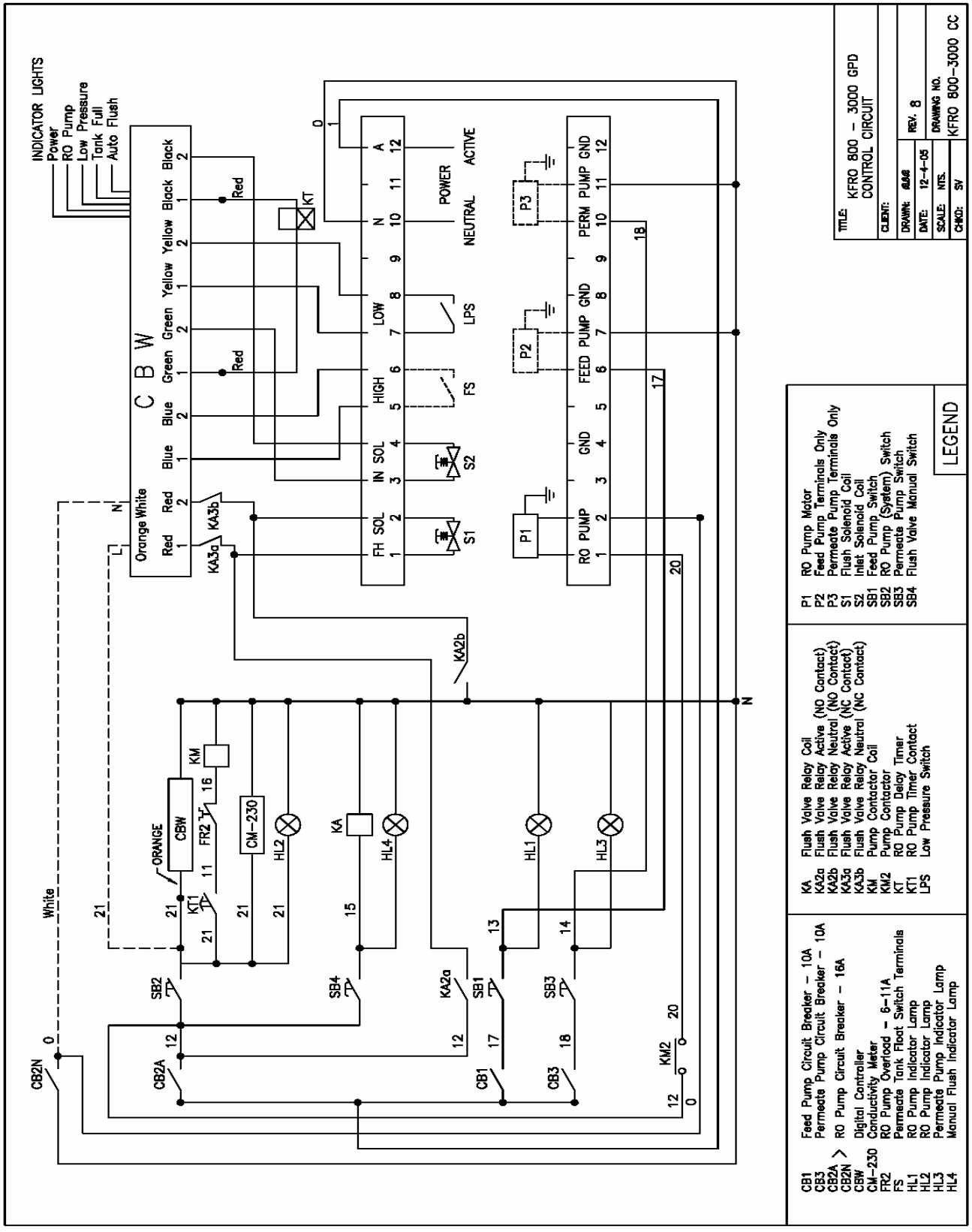


Figure1.- General Arrangement

Appendix II


INDICATOR LIGHTS
Power
RO Pump
Low Pressure
Tank Full
Auto Flush
C B W
Orange White
Red
Blue
Green
Yellow
Black
KT
KA3a
KA3b
KA2b
KA2a
KA
KM
CBW
CM-230
FR2
KT1
HL1
HL2
HL3
HL4
SB1
SB2
SB3
SB4
CB1
CB2A
CB2N
CB3
KM2
FH SOL
IN SOL
HIGH
LOW
N
POWER
NEUTRAL
ACTIVE
LPS
FS
S1
S2
RO PUMP
GND
FEED PUMP
PERM PUMP
P1
P2
P3
ORANGE
White
LEGEND
TITLE: KFRO 800 – 3000 GPD CONTROL CIRCUIT
CLIENT:
DRAWN: AMB
DATE: 12-4-05
SCALE: NTS.
CHKD: SV
REV. 8
DRAWING NO. KFRO 800-3000 CC

Appendix III

LOGIX™ SERIES INSTALLER QUICK-START SHEET

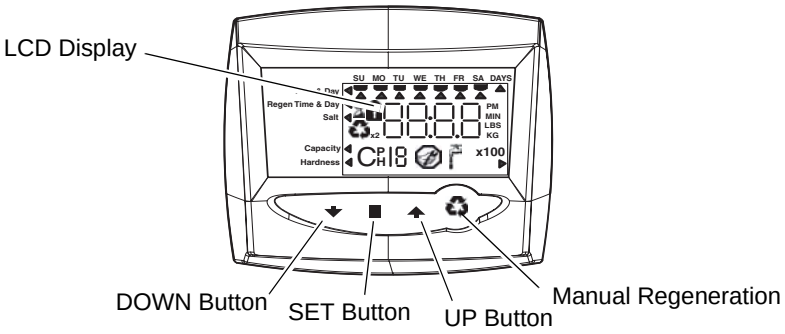
This sheet is intended for use by the water treatment system installer. This sheet is not intended for use by the end user. A separate sheet (PN 1240200) is available for the end user.

LOGIX SERIES CONTROLLERS

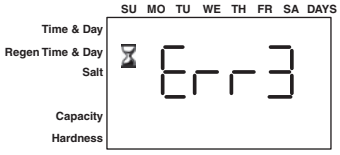
740 Controller - Electronic time clock control capable of doing 7-day (day of week) regeneration, or up to a 99 interval day regeneration. This control will operate both in a conditioner (softener) or 3-cycle filter mode with the same controller.

760 Controller - Electronic metered-demand (volumetric) controller which regenerates based on the water usage of the installation site. A calendar override is a standard feature on this controller.

The Logix Series will operate on both the 255 and Performa valve body series.



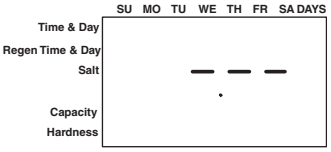
INITIAL POWER-UP



Initial Power Up - (CAMSHAFT proceeds to HOME position)

- At initial power-up, the camshaft will need to rotate to the HOME (in service) position.
- Camshaft may take 1-2 minutes to return to home position.
- Err 3 will be displayed until the camshaft returns to home.
- If more than 2 minutes elapses, verify that the motor is turning the camshaft. If it is not turning, see the troubleshooting section in *Dealer Installation and Service Manual*.

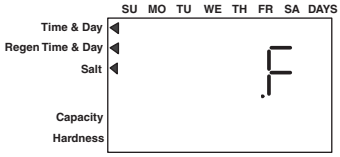
INITIAL START-UP STEP-BY-STEP INSTRUCTIONS



Step 1: Program System Size

This step may have been performed by your system's OEM manufacturer. In this case, proceed to step 2

- Input system size - resin volume - in cubic feet or liters.
- Use UP and DOWN buttons to scroll through resin volume choices.
- Choose the nearest volume to your actual system size.
- To choose a 3-cycle filter operation - press DOWN until an "F" is displayed.
- Press SET to accept the system size you've selected.
- If incorrect setting is programmed, see "Resetting the Control" section below.



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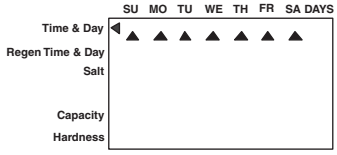
Step 2: Program Time of Day

- While "12:00" is blinking, set the correct time of day.
- Use the UP and DOWN buttons to scroll to the correct time of day.
- "PM" is indicated, "AM" is not indicated.
- Press SET to accept the correct time of day and advance to the next parameter.

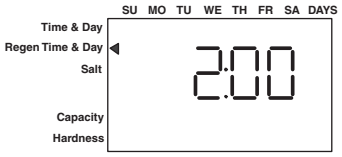


Step 3: Set Day of Week

- Press SET to make the arrow under SU flash.
- Use the UP and DOWN buttons to advance the arrow until it is under the correct day of week.
- Press SET to accept and advance to the next parameter.

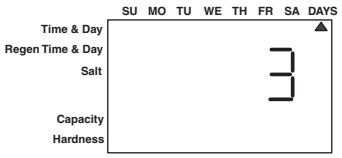
After steps 1-3, the controller will operate most systems. Proceed to step 4 if further adjustments to your system's programming is needed.

To exit the programming state, wait 30 seconds and the controller will automatically put you into the normal operating mode.



Step 4: Set Regen Time

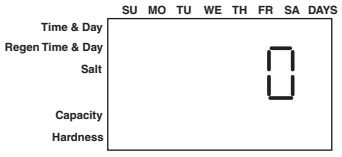
- 2:00 (AM) is the default time of regeneration. To accept this time, press the DOWN button to move to step 5.
- To change the regen time, press SET - causing 2:00 to flash.
- Use the UP and DOWN buttons to advance to the desired regen time.
- Press SET to accept the time and advance to the next parameter.



Step 5: Set Days to Regenerate (740 Time-clock Control Only)

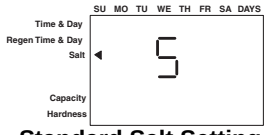
- If using 760 control - proceed to step 5a
- Set number of days between time-clock regeneration (regen frequency).
- Default time is 3 days.
- Days can be adjusted from 1/2 (.5) to 99 days.
- To change, press SET to make the "3" flash.
- Use the UP and DOWN buttons to change to the number of days desired.
- Press SET to accept the regen frequency, and advance to the next cycle.

To use the 7-day timer option - see full Dealer Installation Manual.

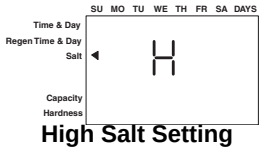


Step 5a: Set Calendar Override (760 Demand Control Only)

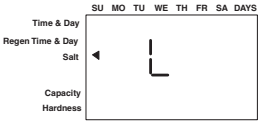
- If using 740 control - proceed to step 6
- Set number of days for calendar override on demand control.
- "0" days is the default for calendar override.
- Days can be adjusted from 1/2 (.5) to 99 days.
- To change, press SET to make the "0" flash.
- Use the UP and DOWN buttons to change to the number of days desired.
- Press SET to accept the regen frequency, and advance to the next cycle.



Standard Salt Setting



High Salt Setting



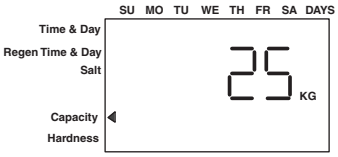
Low Salt Setting

Step 6: Set Salt Amount (Regenerant Amount)

- Set desired salt amount.
- Default setting is "S" standard salting.
- 3 salt settings are available on 740 and 760 controls:

  S - Standard Salt - 9 lbs/cubic foot of resin (120 grams/liter of resin)
  H - High Salt - 15 lbs/cubic foot of resin (200 grams/liter of resin)
  L - Low Salt - 3 lbs/cubic foot of resin (40 grams/liter of resin)
- Low Salt is the "Highly Efficient Mode".
- To change salt setting, press the SET button and use the UP and DOWN buttons to change to the desired setting.
- Press SET to accept the setting and advance to next parameter.

See Dealer Installation Manual for more complete information on salt settings for different system sizes, capacities and expected efficiencies.



Step 7: Estimated Capacity

- System capacity is displayed in total kilograins or kilograms of hardness removed before a regeneration is necessary.
- Value is derived from the system's resin volume input, and salt amount input.
- The capacity displayed is a suggested value - as recommended by resin manufacturers.
- Capacity is only displayed for information purposes on 740 control - it does not (and cannot) need to be changed.
- To change capacity on 760 control, press SET to make the default capacity flash. Use the UP and DOWN buttons to increment to the desired capacity.
- Press SET to accept the setting and advance to the next parameter.

If using 740 control, programming is complete. The control will return you to the normal operation mode.

Step 8: Enter Hardness (760 Demand Control Only)

- Enter inlet water hardness at installation site.
- Default hardness setting is 10 grains (ppm for metric)
- To change hardness, press SET to make the setting flash. Use the UP and DOWN buttons to scroll to the correct hardness.
- Press SET to accept the entered hardness value.
- The control will return you to the normal operation mode.

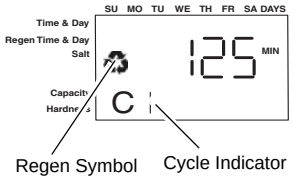
Initial system programming is now complete. The control will return to normal operation mode.

For system start-up procedure, including: purging the mineral tank, refilling the regenerant tank, and drawing regenerant, see the system startup procedure in the *Dealer Installation & Service Manual*.

MANUAL REGENERATION PROCEDURES

To Initiate a Manual Regeneration:

- Press REGEN once for delayed regeneration.
  System will regenerate at next set regen time (2:00 AM).
  A flashing regen (recycle) symbol will be displayed.
- Press and hold REGEN for 5 seconds to initiate immediate manual regeneration. A solid regen symbol will be displayed.
- After immediate regeneration has begun, press REGEN again to initiate a second manual regeneration. An X2 symbol will be displayed, indicating a second regeneration will follow the first regeneration.



During a Regeneration:

- A "C#" is displayed to show current cycle.
- Total regen time remaining is displayed on screen.
- Press and hold SET to show current cycle time remaining.

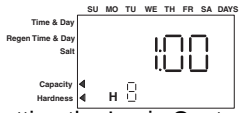
To Advance Regeneration Cycles:

- Press and hold SET - showing current cycle time.
- Simultaneously press SET and UP to advance cycle.
  An hourglass will display while cam is advancing.
  When cam reaches next cycle, "C2" will be displayed.
- Repeat SET and UP to advance through each cycle.
- Press and hold SET and UP buttons for 5 seconds to cancel regen.
  Hourglass will flash once cancelled.
  Camshaft will advance to home - may take 1-2 minutes.

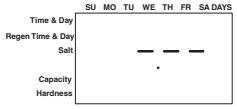
Regeneration Cycles:

- C1 - Backwash
- C2 - Regenerant Draw/Slow Rinse (not used in filter mode)
- C3 - Slow Rinse (not used in filter mode)
- C4 - System Pause (to repressurize tank)
- C5 - Fast rinse cycle 1
- C6 - Backwash cycle 2 (not used in filter mode)
- C7 - Fast Rinse cycle 2 (not used in filter mode)
- C8 - Regenerant refill (not used in filter mode)

RESETTING THE CONTROL



Resetting the Logix Controller



Unprogrammed control after reset

To reset the control:

1. Press and hold SET and DOWN simultaneously for 5 seconds.
2. H0 and the system's set resin volume (or "F" mode) will be displayed.
3. If a history value other than "H0" is displayed, use the up arrow to scroll through the settings until "H0" is displayed.
4. To reset the control, press and hold SET for 5 seconds.
5. The control will be reset to an unprogrammed state.
6. Go to "Initial Set-up" section of this sheet to reprogram control.

WARNING: Resetting the control will delete all information stored in its memory. This will require you to reprogram the control completely from the initial power up mode.

All further programming or set-up instructions can be found in the *Dealer Installation and Service Manual*.