# HANS™ Premium Water Appliance

# The Owner's Manual



HANS

Point-of-Entry System Certified by IAPMO R & T under NSF/ANSI 61 for Materials Safety Requirements only.



Certified by IAPMO R & T to LEC 2006 for contaminants outlined on the performance sheet.



This system has been evaluated by ASSE international for Halal compliance.

ASSE Evaluation Services Program site: Asse-plumbing.org/es Evaluation report number: R-0005 – S2 Equipment LLC

HPW-3300 California Registration Number: 3510 HPW-5000 California Registration Number: 3511

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# **GENERAL INFORMATION**

Please refer to the **HANS<sup>™</sup> Premium Water Appliance** website for most current version of this manual as well as the Performance Data Sheets.

## HANS<sup>™</sup> Premium Water Appliance

The **HANS<sup>™</sup> Premium Water Appliance** unit is a durable piece of equipment, which, with proper care, will last for many years. This User and Operator Manual outlines operation, maintenance, and troubleshooting details vital to its sustained performance.

If the system is altered at the site of operation or if the feed water conditions change, please contact your local dealer or distributor to determine proper recovery for your use.

Prior to operating or servicing the **HANS<sup>™</sup> Premium Water Appliance**, this manual must be read and understood. Keep this and all associated documentation for future reference and for new operators or qualified personnel near the system.

## Safety

The various safety headings used throughout this manual's text are defined below:



**NOTE:** Identifies statements that provide further information and clarification.



**CAUTION:** Identifies conditions or practices that could result in equipment or other property damage.



**WARNING:** Identifies conditions or practices that could result in injury or loss of life. Failure to follow warnings could result in serious injury or death.

# DO NOT REMOVE UNDER ANY CIRCUMSTANCE, CAUTION, WARNING, OR OTHER DESCRIPTIVE LABELS FROM THE UNIT.

Read this manual and the Installation Manual before installing and using your **HANS™ Premium Water Appliance**. Follow steps exactly to install the unit correctly. Failure to do so could cause personal injury or property damage. Use this manual to help provide you with all the benefits of the **HANS™ Premium Water Appliance**.

Do not use the **HANS<sup>™</sup> Premium Water Appliance** to create safe, drinkable water that is from non-potable water sources. Do not use this appliance on microbiologically unsafe water or water of unknown quality without disinfecting.

Check with local public works department for plumbing and sanitation codes. Follow their guides as you install the **HANS™ Premium Water Appliance**. Follow local codes if they differ with guides in this manual.



**NOTE:** In Massachusetts, plumbing code 248-CMR 3.00 and 10.00 shall be adhered. Consult with a licensed plumber.

Avoid installing this appliance in direct sunlight. Excessive heat may cause distortion or other damage to non-metallic parts.

If installing the **HANS<sup>™</sup> Premium Water Appliance** outdoors, do not locate where it will be exposed to wet weather, direct sunlight, or extreme hot or cold temperatures. The alternative is to house it within a **HANS<sup>™</sup> Premium Water** shed.

This **HANS<sup>™</sup> Premium Water Appliance** has a non-metallic valve system. Installing it on metal plumbing will break electrical continuity, which may interrupt grounding for your home. You must restore electrical continuity in your metal plumbing system. Please refer to the Installation Manual for further information.



**WARNING:** Air gap device should be plumbed to state and regional codes to be used to connect the reject water outlet to a drain connection.

**WARNING:** While this Reverse Osmosis system contains replaceable treatment components to raise pH, RO water can lower pH. As this can be corrosive to some plumbing materials, care should be taken to properly maintain your system.



It is the user's responsibility to heed all alerts and warnings from the system concerning calcite cartridge from the onboard display and the mobile app, as these replaceable treatment components are critical to proper system performance.

The manufacturer also recommends that the user periodically test the product water to verify the system is performing correctly.

## **California Proposition 65 Warning**

**WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information and questions, please refer to The Office of Environmental Health Hazard Assessment for California at: *oehha.ca.gov/proposition-65/about-proposition-65*.

## Warranty/Terms of Use

Please refer to the **HANS<sup>™</sup> Premium Water** website for Terms of Sale and Warranty Information. This information can be found at:

www.HansPremiumWater.com



# **Terms and Definitions**

TERMS	DEFINITIONS
Ambient temp	Air Temperature of the immediate area of the <b>HANS<sup>™</sup> Premium</b> Water Appliance
Bypass	System to divert feed water around the HANS <sup>™</sup> Premium Water Appliance
Chlorine	Water additive in feed water; may be used as a disinfectant
Dual Filter	Mount that holds Stage 1 and Stage 2 filters
Feed Water	Unfiltered water from municipal or well that is plumbed into the HANS <sup>™</sup> Premium Water Appliance
Filtered Water	Clean water output from the HANS <sup>™</sup> Premium Water Appliance
gpg	Grains per gallon, a unit of measure of calcium carbonate
Hardness	Scale in grains per gallon rating amount of water impurities
Jet	Metered orifice used to control amount of waste water from the HANS <sup>™</sup> Premium Water Appliance
Element	Reverse Osmosis "filter"
ppm	Parts per million , unit of measure for small concentrations of substances in water
рН	Scale of acidity from 0-14, with 7 being neutral
Pressurized Storage Tank	Tank used to store Filtered water from the HANS <sup>™</sup> Premium Water Appliance
Stage 1 Filter	Well – 10 micron sediment filter used as the 1 <sup>st</sup> filter of feed water to remove debris Municipal/Chloramine – Granular activated carbon filter used as the first filter to remove chlorine
Stage 2 Filter	Well – Granular activated carbon filter used as the 2nd filter to remove chlorine Municipal – Granular activated carbon filter used as the 2nd filter to remove chlorine Chloramine – Catalytic carbon filter used as the 2nd filter to remove chloramines
Stage 3 Element	Reverse osmosis Elements used as final stage to clean feed water
Stage 4 Filter	Raises pH and re-mineralized filtered water

TERMS	DEFINITIONS
Recovery rate	Amount of filtered water recovered compared to waste water in %
TDS	Unit of measure for total dissolved solids in water in ppm
Waste Water	Water carrying away contaminants from the Elements to the drain

# **SPECIFICATIONS**



**NOTE:** Failure to meet minimum water requirements may cause the Elements to foul and void the manufacturer's warranty.

**NOTE:** Combinations of TDS, Iron, Arsenic, hardness and other contaminants will change maximum specifications.

## **Operating Limits**

Maximum Feed Water Temperature °F (°C)	90/32	Maximum Operating Pressure psi (bar)	200/13 .8
Minimum Feed Water Temperature °F (°C)	35/1.67	Maximum Input Free Chlorine ppm	4
Maximum Ambient Air Temperature °F (°C)	120/48.9	Maximum TDS ppm	750
Minimum Ambient Air Temperature °F (°C)	35/1.67	Maximum Hardness gpg	30
Maximum Feed Pressure psi (bar)	80/5.52	Maximum Feed Water pH (Standard)	9
Minimum Feed Pressure psi (bar)	30/2.06	Minimum Feed Water pH (Standard)	6
Maximum Feed Water Total Iron	2.5 ppm		



**NOTE:** Higher feed TDS and/or lower temperatures will reduce the system's water production output.



**NOTE:** For optimal performance if your system is on a well, make sure the feed water pressure switch is set to turn on at a minimum of 45 psi for best performance.



**NOTE:** For feed pressure that exceeds 80 psi, a pressure reducing valve (PRV) must be installed.

- See Performance Data Sheet (*https://hanspremiumwater.com/faqs/*) for further information.
- This system conforms to LEC 2006 for specific performance claims as verified and substantiated by test data.
- This Reverse Osmosis system contains replaceable treatment components critical for effective performance. It is the users responsibility to heed all alerts and warning from the system concerning filter, calcite cartridge and element replacement from the on board display and the mobile app. The manufacturer also recommends that the user periodically test the product water to verify the system is performing correctly.

- This system is acceptable for treatment of influent concentrations of no more than 27 mg/L nitrate and 3 mg/L nitrite in combination measured as N and is certified for nitrate/nitrite reduction only for water supplies with a pressure of 210 kPa (50 psig) or greater.
- This system has been tested for the treatment of water containing pentavalent arsenic [also known as As(V), As(+5), or arsenate] and trivalent arsenic [also known as As(III), As (+3), or arsenate] at concentrations of 0.050 mg/L or less. This system reduces pentavalent and trivalent arsenic, but may not remove other forms of arsenic. This system is to be used on water supplies containing a detectable free chlorine residual or on water supplies that have been demonstrated to contain only pentavalent and trivalent arsenic. Treatment with chloramine (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic.

Please see the Arsenic Facts section of the Performance Data Sheet (*https://*hanspremiumwater.com/faqs/) for further information.

• Genuine HPW replacement filters, cartridges, and elements must be used. Use of other components will invalidate all claims for health and performance. Use only HANS Premium Water Replacement treatment components: 7304 Sediment Filter, 7303 Carbon Filter, 7858 Chlorine Stage 2 Filter, 7953 Chloramine Stage 2 Filter, 7256 RO Membrane, and 7516 Calcite Filter.

# **QUICK START INSTRUCTIONS**



**NOTE:** Refer to **Touch Screen Instructions** for full explanation of **HANS™ Premium Water Appliance** touch screen operation.

The initial startup sequence is critical to ensure correct setup, check for any leaks and ensure proper flow of the unit. Read all steps before proceeding.



CAUTION: Do not turn on water supply to the unit.

Upon power up, the pump will enter the automatic sequence. The pump may run shortly before the 'low inlet pressure' safety shutoff engages.

- 1. Plug the unit in to AC power.
- 2. Press Setup (see Figure 1) from the Home screen



Figure 1. Setup

3. Press **Manual Override** (see Figure 2) to enter **Manual Override** mode. This allows manual operation of the pump and flush valve.



Figure 2. Manual Override

The Entering Manual Override Mode! prompt (see Figure 3) displays.



Figure 3. Manual Override prompt

To exit the message, touch anywhere on the screen.

#### 4. Press Pump (see Figure 4).



5. **Pump** screen (see Figure 5) displays.



Figure 5. Capacities

6. Close valve on captive air tank tee that leads to home supply. Leave open the valve leading to the tank (see Figure 6).



Figure 6. Tank tee valve

7. Press Flush is OFF (see Figure 7) to turn the valve on.



- 8. Slowly open the inlet valve to supply water to the HANS<sup>™</sup> Premium Water Appliance. This should be done over a 30 second period.
- 9. Allow the system to flush for 10 to 15 minutes.
- 10. Visually inspect the **HANS<sup>™</sup> Premium Water Appliance** for any leaks.
- 11. Press Flush is OPEN to turn off flush.
- 12. Press PUMP is OFF to turn the pump on (see Figure 8).



Figure 8. Pump is OFF

13. Let the pump run for 10 minutes. Check that pump turns on and pressure exists on Inlet, Discharge, and Outlet



**NOTE:** You may hear additional noise coming from the pump and lines. This is air in the lines that will get pushed out of the system during the 10-minute run.

14. Re-enter the Setup screen and turn Manual Mode to OFF.

The system will now run in automatic mode. The tank will fill and shutoff automatically when **Outlet** is approximately 80 psi.



**CAUTION:** Check the unit, installation, and tank for leaks.

- 15. Open tank valve to home.
- 16. Open multiple taps in home and let run for 15 minutes.
- 17. Close taps and fill tank.



CAUTION: Check the unit, installation, and tank for leaks.

- 18. Check **TDS (in)** and **TDS (out)** on the home screen to verify total dissolved solids that are filtered out.
- 19. Press Setup (see Figure 9).



Figure 9. Home screen

20. Setup screen (see Figure 10) displays.



21. Press Set Capacities (see Figure 11).



Figure 11. Set filters

22. Set Capacities of all connected filters/elements (see Figure 12).(Refer to Appendix C.)



Figure 12. Capacities

23. Press Close (see Figure 13).



Figure 13. Set filters

24. Press Apply (see Figure 14).



Figure 14. Apply to save all changes

The HANS<sup>™</sup> Premium Water Appliance is now ready to use.



**NOTE:** Download the app or access the URL and follow instructions for set up.

# **OPERATION**

## Pump

Follow these guidelines to ensure proper operation of the pump:

• The pump must NEVER be run dry. Operating the pump without sufficient feed water will damage the pump.

## **Bypass**

Place the handle in the Bypass position if:

- servicing unit.
- high water flow of non-filtered water is needed.

#### **Operation of the Bypass Assembly**

The Bypass is used to stop flow of water to **HANS<sup>™</sup> Premium Water Appliance** and allow it to flow to tank.

• Handle in Service position (see Figure 15) feed water is allowed to flow to system

 Handle in Bypass position (see Figure 16) bypasses water around HANS<sup>™</sup> Premium Water Appliance.



Figure 15. Service position



Figure 16. Bypass position



NOTE: When in bypass, water WILL NOT BE FILTERED!

## **Touch Screen Instructions**

The touch screen that provides information regarding the filtration unit (see Figure 17).

The system information and buttons display on the touch screen.

By touching the buttons displayed on the screen, you can directly access the corresponding feature.



Figure 17. Home screen

#### **Home Screen**

The **Home** screen (see Figure 18) is the main screen of your **HANS<sup>™</sup> Premium Water Appliance**. This screen provides information about the current TDS values, flow, remaining filter life, and the total clean water.

Connected to default NGT connected to cloud	Home		9/26/	18 09:56:36
TDS (in) - 14 ppm TDS (out) - 14 ppm	Filter: Element Clean w	377 da : 2511 ater to	ys left days lef tal: 225	t g
Output 0.00 gpm		Filters	Normal Parts	Setue

Figure 18. Home screen

The Home interface has four (4) icons located at the bottom of the screen.

- The **Pump** icon accesses the **Pump** screen.
- The Filters icon accesses the Filters screen.
- The Accessories icon accesses the Accessories screen.
- The Setup icon accesses the Setup screen.













— replaces the icon of the screen that displays.

An error pop-up message (see Figure 19) displays if the pressure of the feed water fed into the unit is too low. This error displays if there is no water hooked up to the unit or any valves up to the system are closed.



Figure 19. Error message



**NOTE:** While the inlet pressure is low, the pump shuts off to prevent the system from harm. Once the pressure is restored, the pump will automatically turn back on.

#### **Pump Screen**

The **Pump** screen (see Figure 20) displays the flow rates and pressures for the inlet, discharge, and outlet phases of the system. This screen also displays the percentage of water that entered the system and was recovered from the outlet phase as clean water.



Figure 20. Error message



**NOTE:** Some water is lost carrying contaminants out of your water. This percentage will be less than 100%.

#### **Filter Screen**

The **Filters** screen (see Figure 21) displays the total usage and remaining life span of the Filter and Element (reverse osmosis) filter.



Figure 21. Filter screen



**NOTE:** When the life span of a filter has dropped to 0 days, it is time to replace the filter.

After physically replacing the filter with a new one, press the corresponding button to track the usage of the new filter.

- Press Replace Filter and usage resets.
- Press Replace Element and usage resets.

The zeroing usage prompt (see Figure 22) displays.

Fil	ters
	Flement
Zeroing usage c Are you sure you	annot be undone. want to proceed?
Cancel	App1y
HOT	E Pump Accessories Setup
Figure 22.	Filter screen

- Press Cancel if you did not replace the filter.
- Press **Apply** to reset the filter usage back to zero.



**CAUTION:** Once the filter usage has been set back to zero, it cannot be undone. Make sure that your new filter has successfully been installed prior to pressing **Apply**.

#### **Accessories Screen**

The **Accessories** screen (see Figure 23) displays the total usage and remaining life span of the **Pre-treatment** and **Stage 4** filters. When the life span of a filter has dropped to 0 days, it is time to replace the filter.



Figure 23. Accessories screen

After physically replacing the filter with a new one, press the corresponding button to track the usage of the new filter.

• Press Replace Pre-treatment and usage resets.

Press Replace Stage 4 and usage resets.

The Zeroing usage prompt (see Figure 24) displays.



Figure 24. Accessories screen

- Press **Cancel** if you did not replace the filter.
- Press Apply to reset the filter usage back to zero.



**CAUTION:** Once the filter usage has been set back to zero, it cannot be undone. Make sure that your new filter has successfully been installed prior to pressing **Apply**.

#### **Setup Screen**

The **Setup** screen (see Figure 25) displays, which allows you to establish a Wi-Fi connection, tell the system the capacity of the installed filters, and place your device into Manual Override Mode. The **Setup** screen also displays the Device ID, firmware version, and the current status of the system's connection to the internet and cloud.



Figure 25. Setup screen

Press **Set Capacities** (see Figure 26) to set the maximum usable capacities for each of the filters installed. The maximum usable filtering capacity of each filter depends on the quality of water going into your system.



Figure 26. Set Capacities



**NOTE:** Capacities need to be set to the amounts from **Appendix D**; these numbers are based on amount of contaminants in your input water.

Press **Filter** (see Figure 27) to open a list of available options for the Filter capacity. From the list, choose the corresponding value for the Filter installed. The options are 60,000, 80,000, and 100,000 gallons.



Figure 27. Filter

Press **Element** (see Figure 28) open a list of available options for the Element filter capacity. From the list, choose the corresponding value for the Element filter in place. The only possibility for your Element filter is a capacity of 500,000 gallons.



Figure 28. Element

Press **Pre-treatment** (see Figure 29) to open a list of available options for the Pre-treatment filter capacity. From the list, choose the corresponding value for the Pre-treatment filter in place. The options are 30,000, 40,000, and 60,000 gallons. If there is no Pre-treatment filter installed select the **Not Installed** option.



Figure 29. Pre-treatment

Press **Stage 4** (see Figure 30) to open a list of available options for the Stage 4 filter capacity. From the list, choose the corresponding value for the Stage 4 filter in place. The options are 30,000, 40,000, and 60,000 gallons.



Figure 30. Stage 4



If there is no Stage 4 filter installed, select the **Not Installed** option (see Figure 31).

Figure 31. Not installed option

Apply to save all changes prompt (see Figure 32) displays.



Figure 32. Apply all changes

- Press Cancel to keep original filter capacities. •
- Press **Apply** to save updates to the filter capacities. •

Press **Manual Override Press for ON** (see Figure 33) to manually control the pump and flush functions.



Figure 33. Manual Override

Once in **Manual Override Mode**, the pump and flush is controlled from the **Pump** screen. Automatic operation will remain on hold during **Manual Override Mode**.



**CAUTION:** Never place your device in **Manual Override Mode** unless instructed by a Customer Service Technician.

The **Entering MANUAL OVERRIDE MODE!** pop-up message displays to indicate Manual Override Mode.

To exit the message, touch anywhere on the screen.



NOTE: Manual Override Mode turns off after being on for 30 minutes.

From Manual Override Mode, you can control the pump and flush from Pump screen.

**Pump** in **Manual Override Mode** (see Figure 34) permits you to turn the pump off and close flush.



Figure 34. Pump screen

- Press **Pump is OFF** to turn the pump on.
- Press Flush is OFF to turn the flush on.

**Pump** in **Manual Override Mode** (see Figure 35) permits you to turn the pump on and open flush.



Figure 35. Pump screen

• Press **PUMP is ON** to turn the pump off.

Press **Manual Override Press for OFF** (see Figure 36) to exit manual override mode and return to automatic operation.



Figure 36. Manual override exit

The **Resuming Automatic Mode!** pop-up message displays to indicate the resumption of automatic mode.

To exit the message, touch anywhere on the screen.

**NOTE:** There are two methods for connecting your device to the internet: through the **HANS<sup>™</sup> Premium Water Appliance** app or through a web browser.

If you are using a smartphone or tablet to connect your device to the internet, we recommend installing the app.

Use of **HANS<sup>™</sup> Premium Water Appliance** app is recommended.

# Wi-Fi Set-up Using the HANS<sup>™</sup> Premium Water Appliance App

The **HANS<sup>™</sup> Premium Water Appliance** app can be downloaded from the iOS App Store or Google Play Store.



**NOTE:** Use of the **HANS<sup>™</sup> Premium Water Appliance** app is recommended.

In order for your **HANS<sup>™</sup> Premium Water Appliance** to share data with your phone app, it must connect to the internet.

#### Creating an Account for the Smart Phone app

If you don't already have an account, you will need to set one up.

 Open the HANS<sup>™</sup> Premium Water Appliance (see Figure 37) app from your smart phone.



2. Press Create Account (see Figure 38).



Figure 38

 Enter your email address (see Figure 39, Item 1), username (see Figure 39, Item 2), and password (see Figure 39, Item 3).



Figure 39

4. Press Create Account (see Figure 40).



Figure 40

#### **Configuring New System to Connect to the Cloud**



**NOTE:** To proceed, you will need to have the network Name (SSID) and password for your router.

Write this information below for future reference:

Network (router) name: \_\_\_\_\_

Password: \_\_\_\_\_



**NOTE:** Be sure to have the HANS phone app installed and logged in to your account before proceeding.

5. Press Setup (see Figure 41) on the HANS<sup>™</sup> Premium Water Appliance.



Figure 41. Setup screen

6. Setup screen displays. Press **Setup WiFi** (see Figure 42) to connect your device to the internet and cloud.



Figure 42. Setup WiFi

**Setup WiFi** displays as green **Setting up** ... while the system is preparing to communicate with the phone app (see Figure 43).



Figure 43. Setting up communication with phone app

The Preparing to talk to phone app pop-up message displays.



**NOTE:** It may take 30 to 40 seconds for this message to display.

The rest of the configuration process is performed using the **HANS**<sup>™</sup> phone app. Start the app now, if it is not already running.

7. If app has never been configured, this screen displays (see Figure 44).



Figure 44

Press **Setup New HANS™ Device** (see Figure 45).



Figure 45

— or —

If app has been configured, this screen displays (see Figure 46).



Figure 46

Press **Setup New HANS™ Device** (see Figure 47).



Figure 47

8. Press **Join** (only on iOS) (see Figure 48).



Figure 48

The text in the upper left hand corner will change to **Connected to HANS<sup>™</sup> network** (see Figure 49).



Figure 49

If successful, the ID will be displayed (see Figure 50).



Figure 50



**NOTE:** Every system has a different ID.

Occasionally, the phone will have difficulty determining the unique Device ID of the HANS<sup>™</sup> Premium Water Appliance.

If **Device not found** displays (see Figure 51, item 1) on your smart phone, press **Try Again** (see Figure 51, item 2).

If still unsuccessful, try again 1 or 2 more times.



Figure 51



NOTE: Each try may take up to 30 seconds.

If this fails, press **Enter Device ID Manually Again** (see Figure 52) and enter the unique Device ID when prompted.





You can find the unique Device ID at the top center of the Setup screen on the **HANS™ Premium Water Appliance**.



**NOTE:** The unique Device ID is a mixture of letters and numbers, generally beginning with f8f05e.....



**NOTE:** Record your unique Device ID for future reference.

 Enter WiFi Name (see Figure 53, Item 1) and Password (see Figure 53, Item 2). Press Set WiFi Credentials (see Figure 55, item 3).





**NOTE:** The terms WiFi router name, router name, network name and SSID all mean the same thing in this context.



**NOTE:** Both WiFi name and password are case-sensitive. Neither the WiFi name nor the password may contain a plus sign (+).

 After you have entered your WiFi name and password, press the Set WiFi Credentials (see Figure 54).



Figure 54.

The screen on the **HANS<sup>™</sup> Premium Water Appliance** will flash on and off several times, then the system will connect with your WIFI system.



**NOTE:** It make 2 to 3 minutes for the connection to be established for the first time.

Once the **HANS<sup>™</sup>** Premium Water Appliance communicates with the internet, the **Connection to WiFi successful!** pop-up message displays (see Figure 55).



Figure 55. Connection to WiFi successful

Your phone app with your **HANS<sup>™</sup> Premium Water Appliance**.

## Wi-Fi Set-up Using Web Browser

1. Press Setup WiFi (see Figure 56).



Figure 56. Setup screen

After pressing **Setup WiFi**, your device will either search for a WiFi connection from your smartphone app or web browser for up to five minutes.



**NOTE:** For security reasons, the device will stop searching for a WiFi connection after 5 minutes and you will need to press **Setup WiFi** again.

The **Preparing to talk to phone app** pop-up message (see Figure 57) displays.



Figure 57. Setup screen

2. On your WiFi compatible computer, go to your WiFi settings and press **Connect** (see Figure 58) for the **HANS™** network.



Figure 58. WiFi setting

Make sure your computer has successfully connected to the **HANS<sup>™</sup> WiFi Network** (see Figure 59).



3. Open your web browser and type **192.168.1.1** into the URL. Once the URL loads, you must enter the network name (SSID), which is case sensitive, and password into the corresponding textboxes and press **Submit** (see Figure 60).

	D W/Ti Network Credentials x +		-	a	×
	← → C © Not secure   192.168.1.1	\$	EI E	. 0	÷
(	HANS Premium Water Selar Will Connection Price De Biblio Tel Price De	H			
			× 10	91.44	
			10	18/2018	***

Figure 60. Setup WiFi

Confirmation that your device is now connected to the internet (see Figure 61) displays.



Figure 61. Confirmation

Once a successful is connection, the upper left-hand corner text will change to white and state **Connected to (WiFi Name) Connected to cloud** (see Figure 62).



Figure 62. WiFi connection

Connection to WiFi successful! pop-up message (see Figure 63) displays.







**NOTE:** The process of connecting your device to the internet may take 1 to 2 minutes. Flickering of the screen during this connection is normal.

4. Press **WiFi Connected (press to disconnect)** to disconnect from your current WiFi connection. Once you have successfully, the text in the upper left-hand corner will change to yellow and state **NOT connected to internet NOT connected to cloud** (see Figure 64).



Figure 64. WiFi disconnection

 After initial WiFi setup, the device should automatically connect after a reboot. For security reasons, after multiple unsuccessful attempts to connect the device automatically will stop trying. If this happens, press **Press to connect WiFi** (see Figure 65) to reconnect manually.



Figure 65. Connect WiFi

# MAINTENANCE



**NOTE:** If a Warning displays on touch screen or app, refer to this section of manual.

## **Drain system**

- 1. Turn off the main water supply to the **HANS<sup>™</sup> Premium Water Appliance**.
- 2. Isolate pressure tank.

Close line in and line out on plastic pressure tank tee (see Figure 66).



Figure 66. Pressure tank tee

- 3. Go to the set-up screen on the display.
- 4. Press Manual Override to engage manual mode.
- 5. Select Pump.
- 6. Select **Flush is OFF** to relieve internal pressure.
- Open the drain valves at the bottom of the filter housings and drain filters into container. This will alleviate pressure by draining the water around each filter (see Figure 67).





NOTE: Drain one valve at a time.

## Changing the Stage 1, Stage 2 and Stage 4 Filters

- 1. Use the "Drain System" instructions above to prepare the HANS Premium Water Appliance for the filter change.
- 2. Turn filter housing wrench counterclockwise to remove the large blue filter housings (see Figure 68).





**CAUTION:** Use caution because filter may be slippery, wet, and heavier than expected.

- 3. Remove the old filter from the housing.
- 4. Verify replacement filters are the correct size and type.



**NOTE:** Only **HANS<sup>™</sup> Premium Water** replacement filters should be used. Use of filters other than **HANS<sup>™</sup> Premium Water** can alter performance of unit.

- 5. Replace the O-ring at the same time you are replacing the filter. Verify that the O-ring is properly seated in the groove of the filter housing. Apply silicone lubricant to new O-ring.
- 6. Tighten the filter housings by hand until snug, then tighten another 1/8 turn using the filter wrench.

#### **Reset Stage 1 and 2 Filters**

- 7. Select **Filters** on the home screen.
- 8. Select Replace Filters.
- 9. A confirmation screen will pop-up. Select **Apply** to reset stage 1 and 2 filter usage.

— or —

#### **Reset Stage 4 filter**

- 7. Select Accessories from the home screen.
- 8. Select Replace Stage 4.
- 9. A confirmation screen will pop-up. Select **Apply** to reset Stage 4 filter usage.

## **Operating DOs and DON'Ts**

DO	DON'T
<ul> <li>Change the cartridge filters regularly.</li> </ul>	<ul> <li>Shut down the system for extended periods.</li> </ul>
	<ul> <li>Operate the system with insufficient feed flow.</li> </ul>
	• Operate the pump dry.

### **Service Assistance**

If service assistance is required, please contact your local dealer or distributor. Prior to making the call, have the following information available:

- System installation date
- Serial number- (Located on top of the Calcite filter assembly)
- Current operating parameters (e.g. flow, operating pressures)
- Detailed description of the problem

# **APPENDIX A**

# **Unit Options**

Electrical Options	Mechanical Options	Drain Valve Assembly	Optional Filters (Stage 1 and Stage 2)
120V @ 60hz	2 Element with 1/2 HP Pump 3 Element with 1/2 HP Pump 2 Element with 3/4 HP Pump 3 Element with 3/4 HP Pump	Jet # 2 Jet # 3 Jet # 4	Chlorine Municipal Filters Chloramine Municipal Filters
		Special jets available for unique water conditions contact customer support	

# **APPENDIX B**

The **HANS<sup>™</sup> Premium Water Appliance** is designed to operate with a wide range of feed water; however, feed water should never be out of the following parameters:

**NOTE:** Combinations of TDS, Iron, Arsenic, hardness and other contaminants will change maximum specifications.

- Chlorine > 4 ppm (with optional Chlorine filters) Chlorine levels > 3 will drastically reduce your stage 2 filter capacity.
- Chloramines > 4 ppm (with optional Chloramine filters) Chloramine levels > 3 will drastically reduce your stage 2 filter capacity.
- Hardness > 30 gpg
- Iron > 2.5ppm Levels over 2.5ppm it is required to have an Iron Reduction System.
- TDS > 750
- Turbidity < 1 nephelometric turbidity unit (NTU)
- Surface Water

If any of your water parameters fall outside of this range, a pre filter system will be needed to pretreat the feed water to the **HANS™ Premium Water Appliance**. Please contact Customer Service if you have any questions

### **Jet Sizing**

To determine Jet size needed, have feed water tested for hardness in GPG, TDS, and iron in ppm. Use test numbers to determine which jet the system requires.



**NOTE:** Devices come with jets set for the largest range of use, use care when changing to smaller jets that input water is proper quality. Always use the largest jet from the 3 charts; example for a 2 Element system:

Water Hardness	20 GPG	jet size - #3
TDS	140 ppm	jet size - #2
Iron	1.5 ppm	jet size - #3
Jet size required - #3		

Hardness	Jet Size	
(GPG Calcium Carbonate)	2 Element Unit	3 Element Unit
0 - 10	2	2
11 - 15	2	3
16 - 25	3	4
26 - 30	4	4
> 30	Contact HANS customer support	

TDS - ppm	Jet Size		
	2 Element Unit	3 Element Unit	
0 - 100	2	3	
101 - 300	2	3	
301 - 700	3	4	
> 700	Contact HANS customer support		

IRON - ppm	Jet Size			
	2 Element Unit	3 Element Unit		
0.1 - 0.5	2	3		
0.6 - 1.5	3	4		
1.6 - 2.5	4 4			
> 2.5	Contact HANS customer support			
*Iron Levels above 2.5 must use an Iron Reduction System				

Arsenic - ppb	Jet Size			
	2 Element Unit	3 Element Unit		
0	2	2		
0.1 - 5	2	3		
6 - 10	3	4		
10 - 50	4	4		



**NOTE:** Larger Jet sizes will lower filtered water recovery rate.

# **APPENDIX C**

# **Connected Filters/Elements Capacities**

Filter	Level	Gallon Capacity		
	Iron 0.0 – 0.8 ppm	100,000		
	Iron 0.8 – 1.5 ppm	80,000		
Stage 1 & Stage 2	lron 1.5 – 2.5 ppm	60,000		
	Chlorine/Chloramine < 1.0 ppm*	100,000		
	Chlorine/Chloramine 1.0 – 2.0 ppm*	80,000		
	Chlorine/Chloramine 2.0 – 4.0 ppm*	60,000		
Charles A	Input pH 6.8 – 8.0	60,000		
Stage 4	Input pH 6.0 – 6.8	40,000		
(Accessory)	Input pH 5.0 – 6.0	30,000		
* Chlorine or Chloramine Levels > .5 Need to use Hans Chlorine or Chloramine Stage				
1 & 2 Filters If Iron and Chlorine/Chloramine are both present use the lower of the two capacities				

# **APPENDIX D**

## Warnings/Alerts

Various warning and alert messages may pop-up on your touch screen or **HANS<sup>™</sup> Premium Water Appliance** app. The repeat interval indicates how often the messages will repeat if an error has not been corrected.

Warning / Alert	Alert Message	Repeat Interval	Explanation / Solution
Low inlet pressure	Warning! Inlet pressure is too low!	30min	Check the inlet water supply (water being fed to the system) and make sure any necessary valves leading to the system are open. If the valve is closed, please open it to allow water to flow. Additionally, make sure the inlet water is not leaking.
			If you have a well, check for proper pressure in the well tank, making sure that the breaker on the well pump is switched on and ensure water is flowing through the pump properly.
Low pump pressure warning	Warning! Pump pressure is low! Check filters.	1hr	Check to make sure that your Stage 1 filter and Stage 2 filter are not blocked. Clear any blocks, including unnecessarily closed valves. If the pressure drops any lower, the pump will turn off and an alert displays.
Low pump pressure	ALERT!!! Pump pressure is too low! Pump has been turned OFF. Check filters ASAP!	1hr	The warning shown above has now escalated and the pump is unable to produce sufficient pressure. Check to make sure that your Stage 1 filter and Stage 2 filter are not blocked. Clear any blocks, including unnecessarily closed valves. The pressure is too low and the pump has now shut off.
			The pump will stay off for five minutes before checking to see if the pump pressure has been restored. To reset the system, unplug the unit. Then plug the unit back in.

Warning / Alert	Alert Message	Repeat Interval	Explanation / Solution
High pump pressure	Warning! Pump pressure is too high! Pump has been turned off. Contact Customer Service.	10min	Check to make sure that your Stage 3 element and stage 4 filters are not blocked. Clear any blocks, including unnecessarily closed valves. The pressure is too high and the pump has now shut off. If the issue remains, contact Customer Service.
Stage 1 10% life	Warning! Pre- treatment filter has <10% life remaining. Replace soon.	24hrs	This message serves as a reminder to make sure that you have a replacement Stage 1 filter on hand. When the Stage 1 filter drops to 0% life, it will need to be replaced immediately. For an estimated number of days before the Stage 1 filter becomes expired please go to the Filter Screen.
Stage 1 0% life	ALERT!! Pre- treatment filter has expired. Replace IMMEDIATELY!	24hrs	Using an expired filter affects the overall cleanliness of the output water. Please replace the Stage 1 filter right away to keep your water as clean as possible.
Stage 2 Filter 10% life	Warning! Filter has <10% life remaining. Replace soon.	24hrs	This message serves as a reminder to make sure that you have a replacement Stage 2 filter on hand. When the filter drops to 0% life, it will need to be replaced immediately. For an estimated number of days before the Stage 2 filter becomes expired please go to the Filter Screen.
Stage 2 Filter 0% life	ALERT! Filter has expired. Replace IMMEDIATELY!	24hrs	Using an expired filter affects the overall cleanliness of the output water. Please replace the Stage 2 filter right away to keep your water as clean as possible.
Stage 3 Element 10% life	Warning! Element filter has <10% life remaining. Replace soon.	24hrs	This message serves as a reminder to make sure that you have a replacement Stage 3 element filter on hand. When the element filter drops to 0% life, it will need to be replaced immediately. For an estimated number of days before the element filter becomes expired please go to the Filter Screen.
Stage 3 Element 0% life	ALERT!! Element filter has expired. Replace IMMEDIATELY!	24hrs	Using an expired filter affects the overall cleanliness of the output water. Please replace the Stage 3 element filter right away to keep your water as clean as possible.

Warning / Alert	Alert Message	Repeat Interval	Explanation / Solution
Stage 4 10% life	Warning! Stage 4 filter has <10% life remaining. Replace soon.	24hrs	This message serves as a reminder to make sure that you have a replacement Stage 4 filter one hand. When the stage 4 filter drops to 0% life, it will need to be replaced immediately. For an estimated number of days before the Stage 4 filter has expired please go to the Accessories Screen.
Stage 4 0% life	ALERT!! Stage 4 filter has expired. Replace IMMEDIATELY!	24hrs	Using an expired filter affects the overall cleanliness of the output water. Please replace the Stage 4 filter right away to keep your water as clean as possible.
Flush valve stuck open	ALERT!! Flush valve may be stuck open. Check IMMEDIATELY!	10min	This alert indicates that very little water is coming out of the system compared to what entered. This may indicate that there is a leak or the flush valve is stuck open. Please check the flush valve and make sure that water is not draining when the system is not actively flushing. Also, look for any loose pipes or hoses and tighten accordingly.
High output TDS	ALERT!! Output TDS too high! WATER MAY BE UNSAFE FOR CONSUMPTION!	24hrs	The system has detected high TDS in the output water. Check to see if any of the filters are dirty or damaged. Also, make sure to replace filters that are expired; these can cause high output TDS. If the issue remains, contact Customer Service and do not consume the water.
Cloud contact lost	The device has lost contact with the cloud. Check WiFi.	30min	Make sure that the <b>HANS<sup>™</sup> Premium Water</b> <b>Appliance</b> is connected to the internet. Losing contact with the cloud will prevent the app data from being up-to-date. If your WiFi credentials have changed, make sure to update them on your device. You may need to touch "Press to Connect" on your screen again to connect.
Time for annual service	Time for annual service and water quality check.	none	Every year a service and water quality check should be performed. This is to ensure that the system is working to the best of its ability. Please contact Customer Service.
Low outlet pressure	ALERT!! Low outlet pressure! Check	5min	If outlet pressure is less than or equal to 1 psi after the pump has been running for 1 minute

system IMMEDIATELY!	thi pro to pe ex	nis alert will be triggered. Check outlet ressure sensor. Check device performance o verify permeate output is normal. If ermeate output is normal customer may be exceeding the device performance and
	co	ompletely draining the pressurized tank.

# **APPENDIX E**

## **Removal of Stage 3 Elements**

When you receive a **Change Element** warning from the system, follow these steps to replace Stage 3 elements:



**NOTE:** Draining the unit into a floor drain is recommended.

- Place drip bin with a depth no deeper than 1/2" beneath RO cassette drain plug.
- 2. Use 3/16" hex allen wrench and slowly remove plug (see Figure 69).



Figure 69. Cassette drain plug

If the ceiling where unit is located is 8 feet or more in height, remove the Stage 3 element by lifting it from unit and proceed to Step 7.

- Use two (2) 7/8" wrenches (see Figure 70) to attach three (3) hose fittings (concentrate, feed, and permeate connections) to RO cassette.
- 4. Rotate one wrench at the hose fitting (see Figure 71) to tighten and hold the other wrench stationary at manifold connection.

This will prevent overtightening and possible damage to manifold fittings.

 Apply grease stainless permeate flare connection to permeate hose fitting (see Figure 72).



Figure 70. Hose fittings



Figure 71. Hose fittings



Figure 72. Permeate hose fitting



**NOTE:** If storing membrane for future use, be certain to keep membrane wet/fully submerged in potable water.



**WARNING:** All pressure gauges must read zero before proceeding. Before removing membrane, disconnect power to the system and bleed all water pressure. Failure to do so could result in in serious injury or death.



**CAUTION:** Wear gloves in order to not contaminate the membrane. Failure to do could result in equipment or other property damage.

 Use 3/16" allen wrench, insert and tighten four (4) mounting screws (see Figure 73).



Figure 73. Mounting screws

6. Remove 3 membrane cassette from unit (see Figure 74).

— or —

Remove 2 membrane cassette from unit (see Figure 75).



Figure 74. 3 membrane cassette removal



Figure 75. 2 membrane cassette removal

- Use 3/16" allen wrench to remove (6) screws affixing the manifold to the element end caps (see Figure 76).
- 8. Remove manifold (see Figure 77).

9. Remove locking crescents (see Figure 78).

10. Remove element end caps (see Figure 79).

 Remove element assembly using element removal tool (see Figure 80).



Figure 76. Manifold screws





Figure 78. Locking crescents



Figure 79. Membrane endcaps



Figure 80. RO membrane assembly

\* Figure 80 represents 3 pass membrane removal; a 2 pass membrane removal is the same procedure.

- 12. To reassemble, repeat steps 8 through 12 in reverse.
- Align the four (4) mounting screws. Lift element housing and place onto base frame (see Figure 81).



Figure 81. Base frame



**NOTE:** If storing element for future use, be certain to keep element wet/fully submerged in water.

- 14. Open pressure tank on both sides of the plastic tee.
- 15. Open bypass and home water supply.



**NOTE:** Return elements in need of replacement to **HANS<sup>™</sup> Premium Water** if still within warranty.

# **APPENDIX F**

# Troubleshooting

See Troubleshooting Guide manual P/N 7212

P/N 7688-10 HANS™ Premium Water The Owner's Manual