

# INSTALLATION GUIDE FOR NEXGEN80R

**Reference I&O Manual for more complete information**

## PLAN AHEAD

The NEXGEN is intended to be installed indoors and protected from direct elements. It is imperative to have prior knowledge of the facility in which the unit is to be installed. Evaluate space requirements, electrical requirements, and plumbing requirements. Determine what type of tools and hardware will be needed to make the installation as problem free as possible.

## Items Included for this Installation

- NEXGEN80R On-Site Generator
- Booster Pump, optional
- pH Probe Assembly
- Saturated Salt Feeder
- Chemical pump boxes containing spare tubes and additional parts



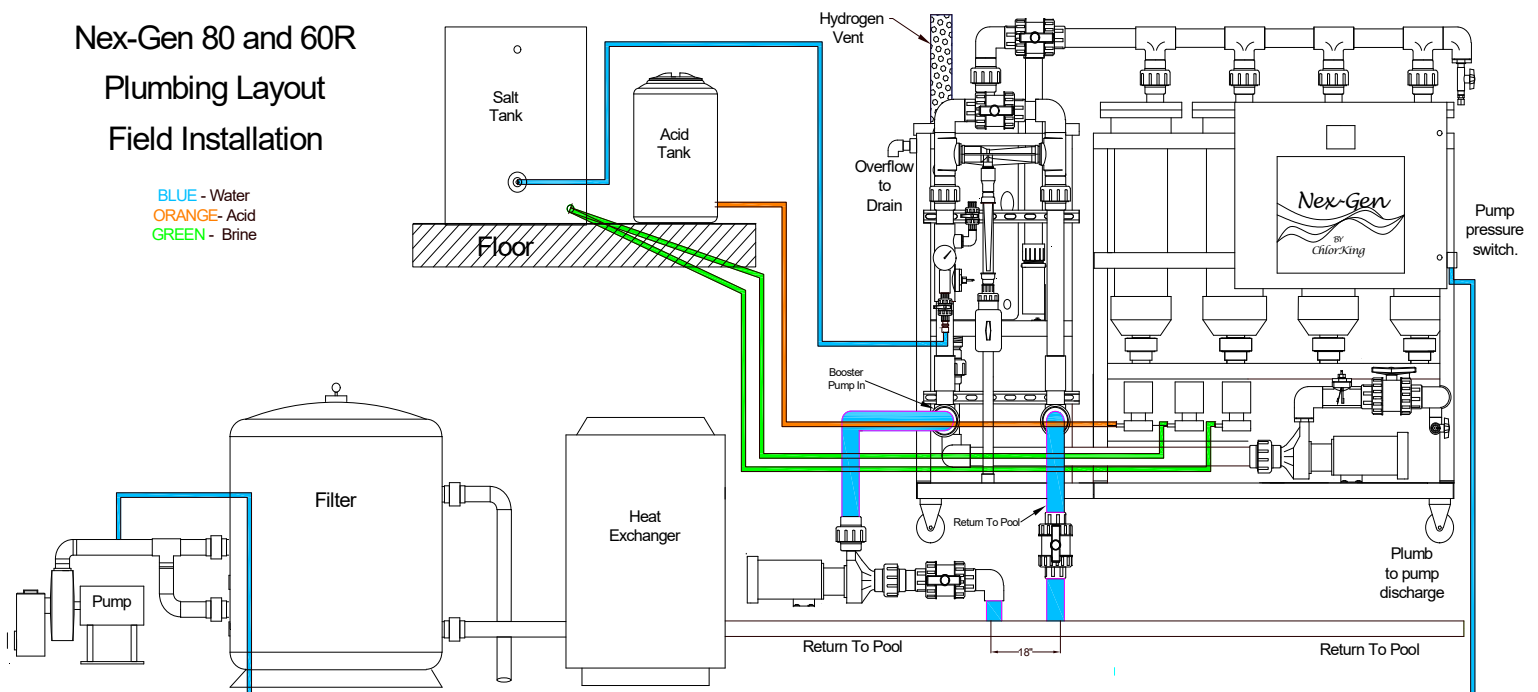
## ADDITIONAL ITEMS REQUIRED FOR INSTALLATION

- A 240-volt single phase connection @ 100 amps to the NEXGEN
- A 120-volt connection minimum 1 amp from pool controller or wall outlet
- ½ inch polypropylene or polyethylene tubing for Saturated Salt Feeder
- ¼ inch polypropylene or polyethylene tubing for Pressure Switch and the Chemical Pumps
- 2" PVC pipe for the Booster Pump plumbing
- Additional PVC needed to make circulation system connection
- 3" PVC pipe and fittings for the hydrogen vent
- Container specified for muriatic acid solution
- 8awg bond wire, per code
- Multimeter with DC amp clamp
- All installations must comply with local codes and regulations

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## STEP 1: SYSTEM UNPACKING and PLACEMENT

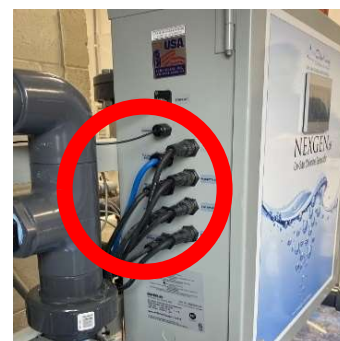
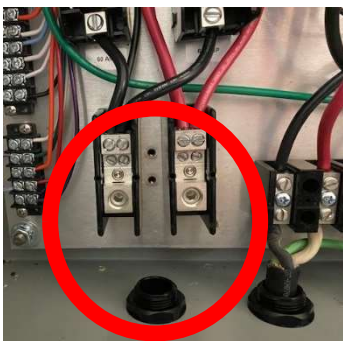
- The NEXGEN80R ships in a crate. Unpack and dispose of packing material.
- The NEXGEN80R is designed for installation in an area protected from direct elements.
- The NEXGEN80R is 76" L x 32" W x 69" H and is outfitted with castors for ease of movement. These castors are designed to remain in place for future accessibility and require the surface be flat & level. Castors can be removed if required by code.
- The NEXGEN is designed for 3ft of open area around the machine to access equipment, this can be managed by supplying union fittings which would allow access as needed.
- The NEXGEN should be placed near the disconnect box and the return system plumbing. The NEXGEN comes equipped with a **blue cord** for the pool controller, this cord length is 10ft.



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## STEP 2: Install Incoming Power on NEXGEN80R Power Supply

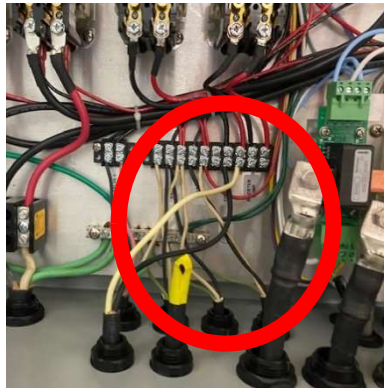
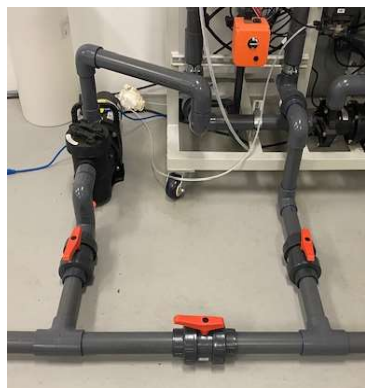
- Connect 240-volt single phase @ 100 amps to the NEXGEN power supply.
- Ensure 8awg bond wire is connected in accordance with local code.
- The NEXGEN is equipped with a **blue cord** to receive power from the pool controller or a 110v outlet to dispense chemical.



## STEP 3: Install Booster Pump

The 1 hp booster pump is powered by the NEXGEN with an internal 12-amp breaker. Larger pumps will require changing the breaker.

- The Booster Pump is equipped with an 8ft cord, place pump to ensure cord reaches.
- Using 2" PVC, plumb the Booster Pump inlet from the pool return line and the Booster Pump outlet to the NEXGEN inlet.
- Plumb the NEXGEN outlet to the return line of the pool, place unions and isolation valves as needed. **Note: the inlet and outlet are to be 18" apart.**
- Wire booster pump inside the NEXGEN power supply and make connections to pump.
- Ensure 8awg bond wire is connected in accordance with local code.



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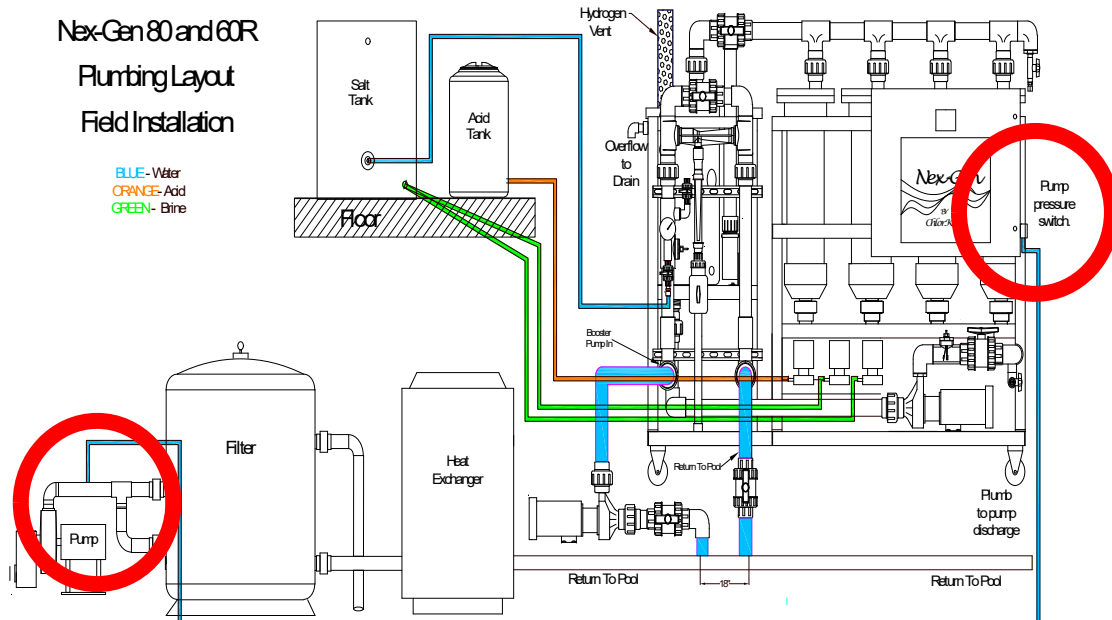
## STEP 4: Install Hydrogen Vent

- Hydrogen vent pipe must be rigid plastic (PVC) and installed in a continuous upward gradient of at least 1/8 inch per foot. The pipe must be vented to outside atmosphere. Use a minimum of 3" pipe for the vent. The vent pipe should not be longer than 100 feet. The NEXGEN80R comes equipped with a union for future tank access. No screen or vent cover to be placed over vent outlet.



## STEP 5: Install Pressure Switch

- Plumb the pressure switch to the pressure side of the main circulation pump using 1/4 tubing and the 1/4 inch valve. The tubing is not provided.
- Do **NOT** install the Pressure Switch to the NEXGEN Booster Pump.



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## STEP 6: Install Saturated Salt Feeder

- Using ½ tubing, plumb the Saturated Salt Feeder to the NEXGEN port labeled **SALT TANK FEED**.
- Plumb the Salt Pump suction line to the salt outlet on the Saturated Salt Feeder using the ¼ tubing supplied with the peristaltic pumps.



Model	Capacity (Pounds of Salt)	Rated Pressure	Maximum Brine Flow Rate	Inlet Diameter	Outlet Diameter
SSFEEDER55S	550	50 psi	85 gpd	1/2"	1/4"

## STEP 7: Install Production Tank Overflow

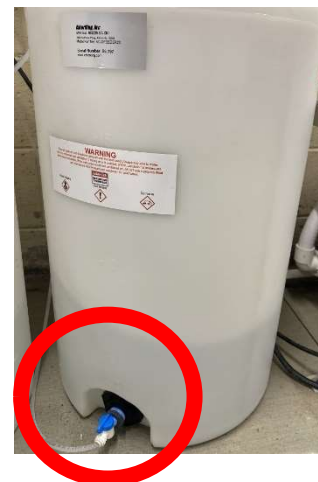
- Install the overflow with the T provided in the installation kit. This T will remain open on top to prevent syphoning in case of tank overflow. The bottom of the T receives a 1.5" FPT low pressure connection with hose directed to a floor drain, drain tube is not provided.



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## STEP 8: Install pH Neutral System

- The NEXGEN arrives with a pH probe assembly zip tied to the machine. This probe should not be installed until water is present in the production tank. **Remove cap and crown before installation.**
- Using ¼ tubing, plumb the suction of the pH/ACID Pump to a container specified for diluted Muriatic Acid. We recommend a 50% dilution.
- The acid container is not provided, but is available for purchase.



## STEP 9: START UP OF THE NEXGEN

- Balance pool chemistry before proceeding with NEXGEN start up.
- Ensure all electrical and plumbing connections are secure.
- Open inlet and outlet isolation valves on NEXGEN, if installed.
- Open **SALT TANK FEED VALVE**.
- Open **TANK FILL VALE 3** on the NEXGEN.
- Confirm Saturated Salt Feeder has pure rock or pellet salt, and that the valves are open.
- Confirm muriatic acid container is filled with 50% diluted product.
- Confirm Pressure Switch shut machine off when main circulation pump is off.
- Install pH probe, ensure probe is not installed in a dry environment.
- Power breaker or disconnect box and plug blue cord into the pool controller or 110v outlet.
- Press the ON button. The NEXGEN will go through a series of startup steps and automatically begin generating chlorine. This first process may take up ten minutes.
- Ensure the float in the production tank and the Saturated Salt Tank rises and stops water flow.
- Prime chemical pumps using touchscreen **TEST** screen.

**See Installation Manual, Section 3.0 OPERATION for additional instruction on TEST SCREEN**

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## STEP 10: ADJUST CHLORINE OUTPUT

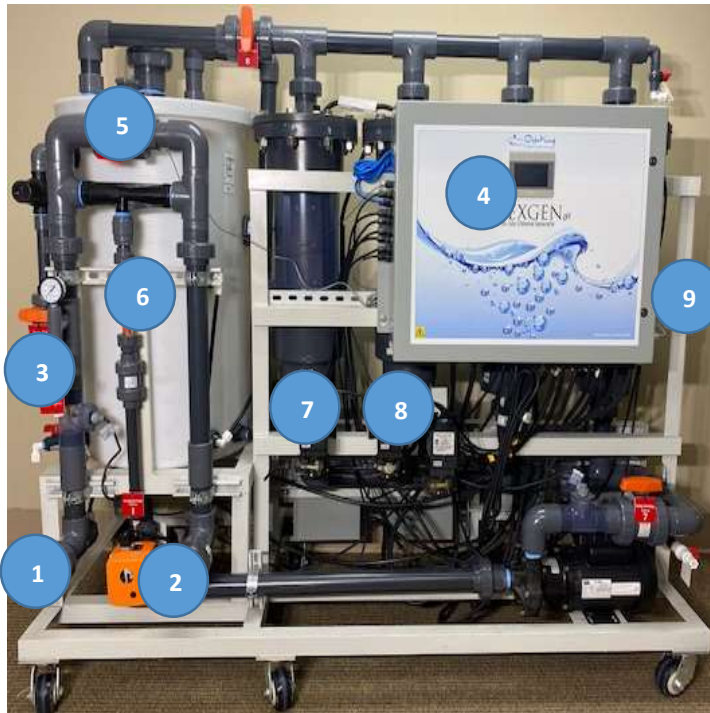
- Adjust the flow through the flow meter using **VALVE 4** on the NEXGEN80R to achieve the following production rates:
  - 4.4 GPM = 96 pounds of chlorine production per day
  - 3.5 GPM = 78 pounds of chlorine production per day
  - 2.9 GPM = 85 pounds of chlorine production per day
  - 1.3 GPM = 54 pounds of chlorine production per day

**NOTE:** The maximum production rate of 96.0 pounds is achieved at 7000 ppm salt setpoint and 4.4 GPM. Adjustments more than 4.4 gallons per minute will not produce more chlorine. Adjustments more than 4.4 gallons per minute will only consume excess salt.



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## SYSTEM IDENTIFICATION



1. **Water Inlet from Booster Pump:** Moves water through the NEXGEN
2. **Water Outlet:** Returns chlorine to the pool
3. **Salt Tank Feed Valve:** Feeds water to the Saturated Salt Tank
4. **Power Supply:** Supplies current to the electrolytic cell
5. **Valve 4:** Flow Control used to manipulate chlorine production
6. **Flow Meter:** Visual indicator
7. **Acid Pump:** Supplies muriatic acid for pH neutral solution
8. **Salt Pumps from Saturated Salt Tank:** Supplies necessary salt to create product
9. **Pressure Switch:** Ensures NEXGEN shuts down with no flow through main pump
10. **Production Tank:** Holds sodium hypochlorite for distribution
11. **Electrolytic Cell:** Converts salt to sodium hypochlorite
12. **Dilution Fan:** Dilutes and vents hydrogen to outside atmosphere