



HP Series Pump Manager Selection Guide

BEST PRACTICES
GUIDE

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Introduction

This guide is for selecting the high pressure pump skid for the HP system in Help. (See Figure 1)

There are two main components to select:

1. The Humidifier - High pressure nozzle grid and droplet separator
2. The Pump Skid - High pressure pump skid (with integrated RO System if applicable)

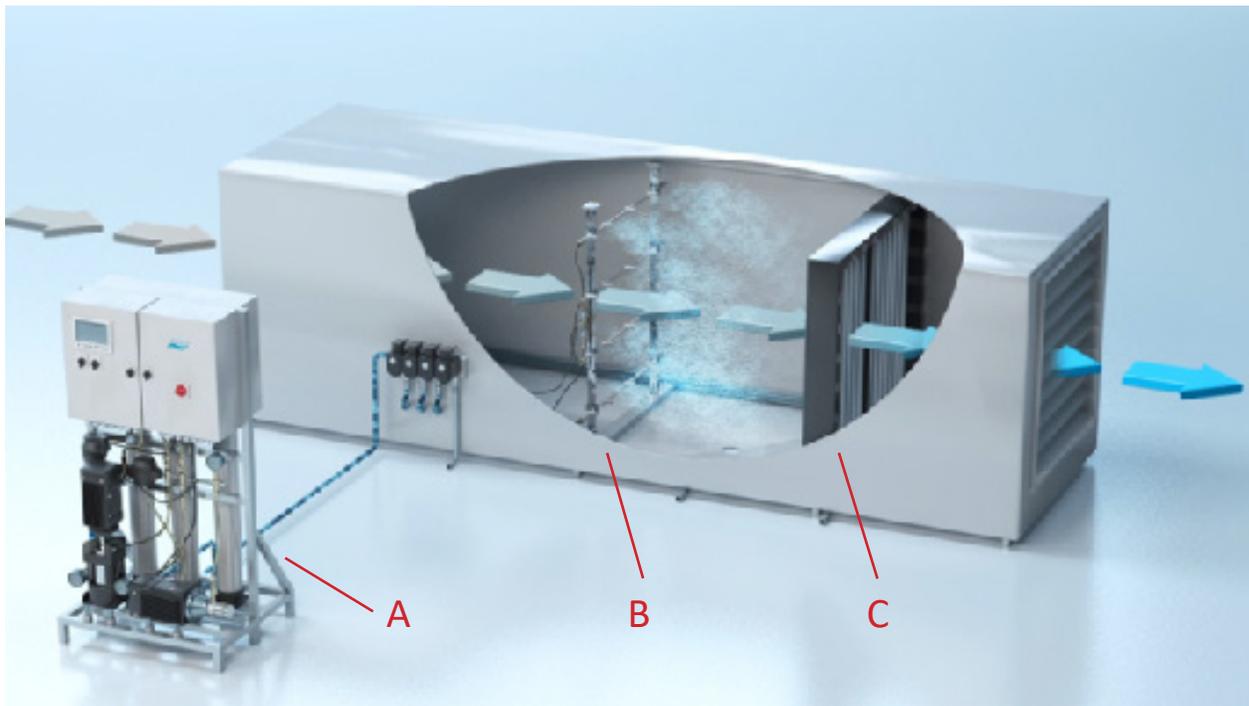


Figure 1: HP Series system: A) High Pressure Pump Skid B) High Pressure Nozzle Grid C) Droplet Separator

When to Integrate Reverse Osmosis

The HP humidifier requires the use of RO or DI water.

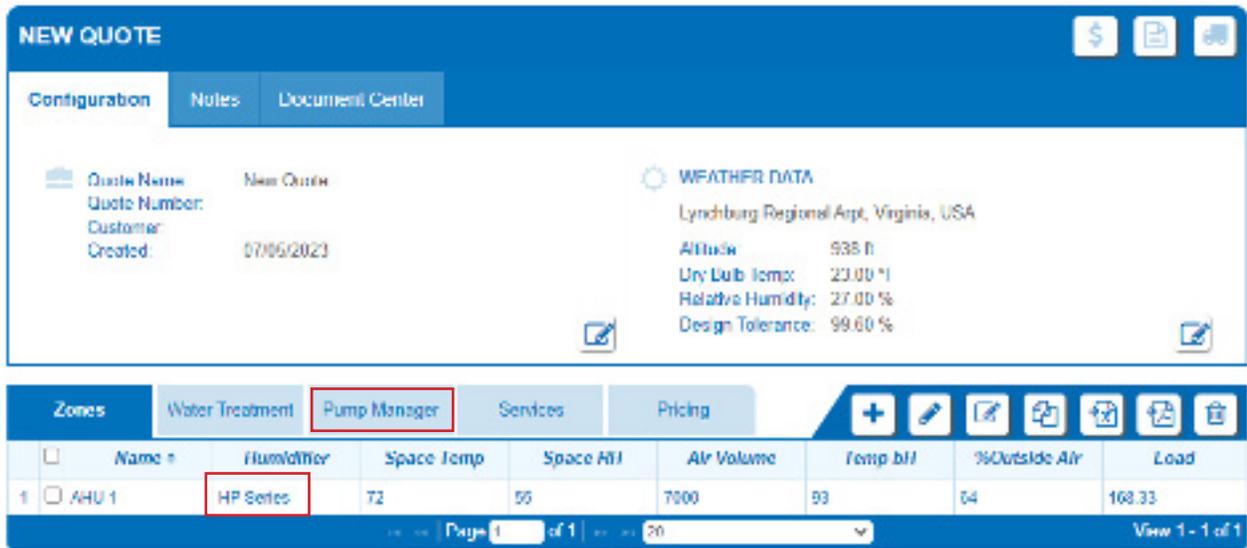
If the client does not have an RO system on site, an RO system can be integrated into the high pressure pump skid.

If there is an RO system already on site, it must provide the required flow pressure of ~40-50 psi in order to supply the system. The RO water quality should be between 5-50 micro siemens.

Making the Correct Selection

3.1 Navigating to the Pump Manager Tab

The Pump Manager Tab (PMT) will only appear after you have selected an HP in-duct humidifier. Once you have an HP in the quote BOM, you will be able to select the pump skid. (See *Figure 2*)



The screenshot shows the 'NEW QUOTE' interface. The 'Configuration' tab is active, and the 'Pump Manager' sub-tab is highlighted with a red box. Below the configuration area, a table lists the components in the quote:

	Name	Humidifier	Space Temp	Space RH	Air Volume	Temp diff	%Outside Air	Load
1	AHU 1	HP Series	72	55	7000	93	54	168.33

The 'HP Series' cell in the table is also highlighted with a red box. The interface includes navigation tabs for 'Zones', 'Water Treatment', 'Pump Manager', 'Services', and 'Pricing'. A toolbar with various icons is visible on the right side of the configuration area.

Figure 2: The PMT only appears after you have selected an HP in-duct humidifier.

3.2 Selecting the Pump Skid

1. When first navigating to the PMT, each HP humidifier will appear as an *unassigned zone*. (See *Figure 3*)
2. Add a pump to begin the selection. Any pumps that have been added will appear along the blue ribbon in the PMT (See *Figure 4*)
3. Drag any unassigned zones to the pump you will use to feed them. Spray capacity of the units in relation to the capacity of the pump skid is shown. (See *Figure 5*) Input the distance starting from the pump skid to the first unit and then from the first unit to the second and so on. These distances will determine:

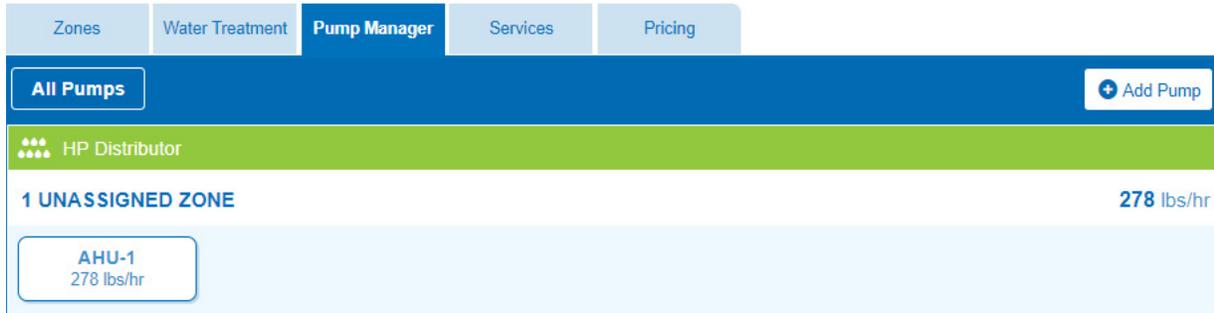


Figure 3: The HP Distributor appears as an unassigned zone. Note that the capacity listed is the spray capacity, not the humidification load.

- How much hosing will be supplied
- If a slave box is required (if the pump skid is >65ft (19.8m) from the first HP, a slave 0 box is required)

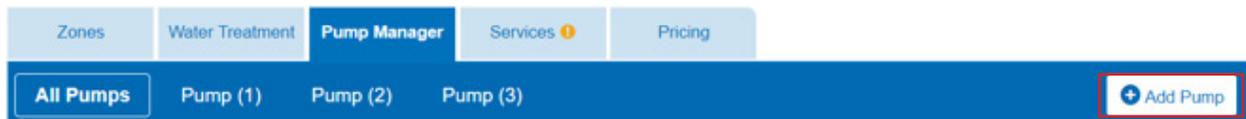


Figure 4: The 'Add Pump' feature appears in the top righthand corner. Any pumps that have already been added will appear along the blue pump ribbon.

In Help, you can add up to (4) HP units to (1) pump skid. If you wish to pair more than (4) units to (1) skid, please reach out to na.applications@condair.com.

4. Use the model dropdown to select the desired pump model. (See Figure 6) It is recommended to Include the VFD. The VFD regulates the amount of electrical power the motor is receiving based on demand.

HP - Skid only (RO water available on site)
 HP VFD - Skid with VFD only (RO water available on site)
 HPRO - Skid with an integrated RO system
 HPRO VFD - Skid with an integrated RO system and VFD

5. Use the voltage dropdown to select the desired voltage of the pump

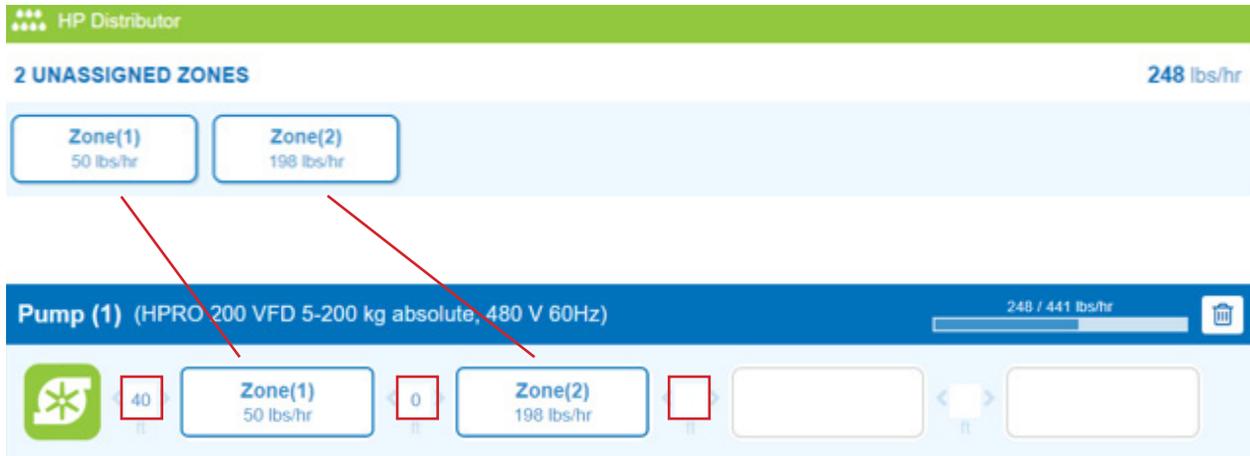


Figure 5: Drag any unassigned zones to the pump you will use to feed them. Red boxes indicate where to enter distances between components.

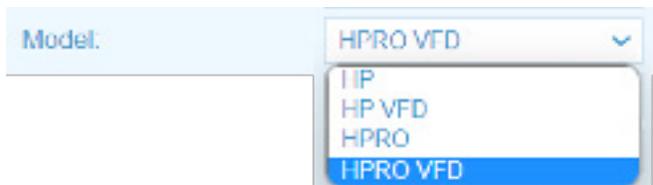


Figure 6: Dropdown to select desired pump model.

6. Select the correct capacity to feed all of the humidifiers, and adjust

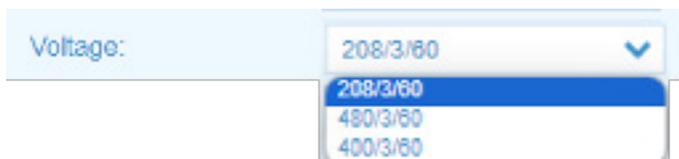


Figure 7: Dropdown to select desired pump voltage.

the capacity as needed. (See Figure 8) Integrating the RO directly onto the pump skid will save on the footprint of the system—Only (1) skid instead of (2) separate skids. (See Figure 9)

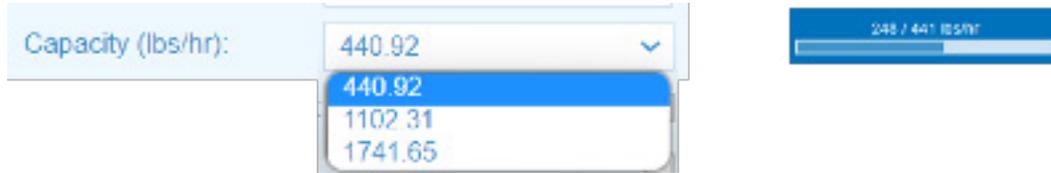


Figure 8: Dropdown to select the correct capacity.

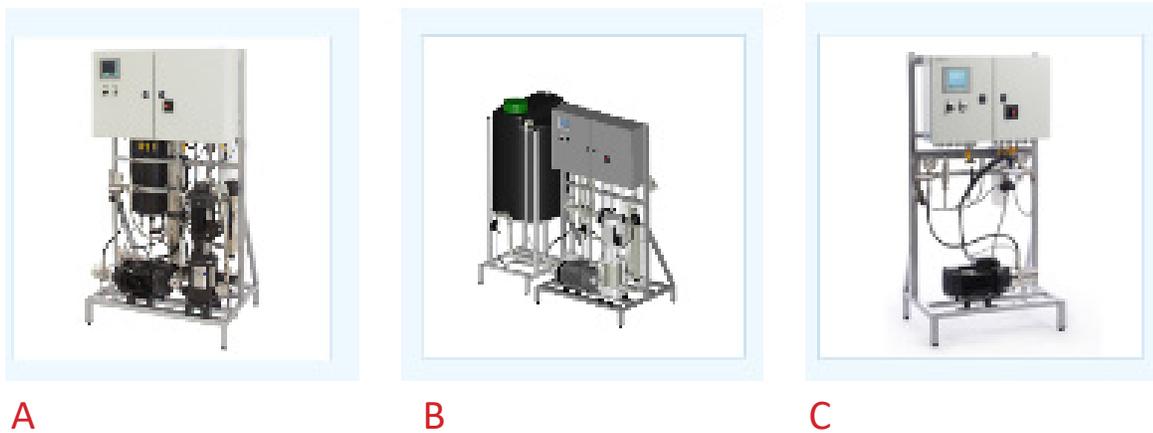


Figure 9: A) HPRO with an internal RO tank (smallest unit capacity) Dropdown to select the correct capacity B) Larger capacity HPRO units have external tanks C) HP units do not have a tank.

- Modbus is included with every pump skid. Check the 'Modbus Communication' box and provide the BMS IP address to be programmed into the PLC at the factory. We also have an offering for BACnet IP. If BACnet is required please reach out to na.application@condair.com. Select 'Use Condair Hoses' to include hosing from the pump skid to the valve block. (See Figure 10)

Modbus Communication:

Use Condair Hoses:

Figure 10: Check boxes to indicate if Modbus communication and/or Condair-supplied hosing is needed.

8. Include any product options as needed. (See *Figure 11*)

- 1) If using an HPRO, always select both the water softener and the dechlorinator to extend the life of the RO membrane.
- 2) Check valve to prevent RO water from going into the supply line. This can either be supplied by Condair or the plumbing contractor.
- 3) Silt filter for small organic matter that doesn't get washed away with the pretreatment.
- 4) Conductivity sensor on the HP pump inlet. If conductivity is high this can indicate a problem with the supply water.
- 5) Conductivity sensor on the RO holding tank. If conductivity is high, the RO membrane needs to be replaced.
- 6) 5-micron water filter.



PRODUCT OPTIONS	
<input checked="" type="checkbox"/>	Name
<input checked="" type="checkbox"/>	HPRO 200 VFD 5-200 kg absolute, 480 V 60Hz
1 — <input type="checkbox"/>	CP 210s OD Softener
<input type="checkbox"/>	Dechlorinator 1100
2 — <input type="checkbox"/>	Vacuum / Check Inlet Valve, HOH 3/4 " max 1800 l/h
3 — <input type="checkbox"/>	Silt Filter, 2 micron, Bag Type, max 3000 l/h
4 — <input type="checkbox"/>	HP Series Inlet Water Conductivity Sensor
5 — <input type="checkbox"/>	HPRO 50L Tank Conductivity Sensor
6 — <input type="checkbox"/>	Filter housing cpl. 20 3/4" connec.

Figure 11: Additional product options.

If further assistance is required for HP Series pump skid selection, please contact na.applications@condair.com.

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