

PUL KLEAN CONTROLLER PLUMBING & WIRING

FILTER

When selecting filter sizes, if the filter requirements fall in between available sizes, select the next larger filter. Refer to Equipment Spec Chart for required rate.

EQUIPMENT SPECIFICATION CHART

	Single pump	Dual pump
Flow rates	65 GPM @ 70 TDH	60 GPM @ 60 TDH
Minimum filter	4.9 Sand Cartridge 200 sq ft [Cartridge filters are rated at .25 GPM per square foot of filter area.] 48 sq ft. [D.E. filters are rated at 2 GPM per sq. ft. foot of filter area]	3.1 Sand 36 sq ft DE Cartridge 200 sq ft
Notes	Bypass on heater / ozone	Debris canister recommended No bypass on heater / ozone req

- Anytime the valve is further than 30 ft. from the pump/controller or booster system to the 8-port valve and all suction and return lines, the pipe sizes must be increased to min. 2½".
- GPM stated are the requirements of the in-floor system only.
- Additional equipment such as chlorine generators, spa overflows, water features, and solar systems etc. will require additional flow, adjust GPM requirements accordingly

SAND FILTER NOTE: Rates in excess of 20 GPM per sq. ft. can cause channeling of the filter bed.

CARTRIDGE NOTE: Excess flow rates of over 125 GPM per sq. ft. can cause the fibers of a cartridge to become impacted.

NOTE: External conditions may affect cleaning system effectiveness and require increased run time and [pressure, cycles]. External conditions include weather conditions, landscaping, and debris load.

PUMP

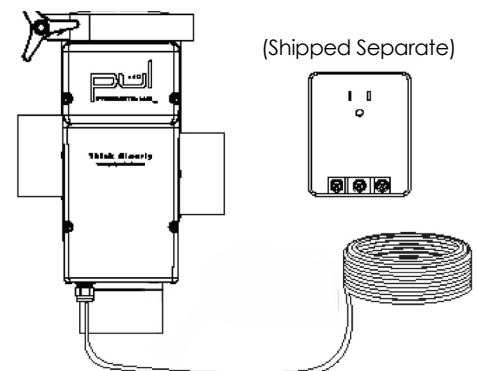
In order to determine the appropriate pump size for your pool application, the gallons per minute and total dynamic feet per head need to be calculated.

The HP required for the pump can be calculated as follows:

1. Determine GPM and Ft./Head. requirements from Equipment Specification Chart.
2. Refer to manufacturer's pump curve of equipment you use. Mark where the both the lines for both the required GPM and Ft./Head intersect. This will give you the pump HP required
3. Compare Part # and Model #. Ensure you use the THP value for sizing your pump.

POWER SOURCE & AUTOMATION

Provide 120V power source within 10 feet of controller in weather proof enclosure between controller and valve, either Install ½" conduit with wire or cable. The Klean Controller requires a 120V power source within 10 feet of controller. The Klean Controller will arrive pre-wired with a 15' wire whip for future power connection and should be left coiled as delivered until start up. The transformer required for final connection will be delivered as part of the Equipment Trim Out shipment.



KLEAN CONTROLLER PLUMBING

The Klean Controller body is ready for installation once it is removed from packaging, no prep is required.

The Klean controller is used to control water flow to the Klean 8-Port Valve. A bypass line is required per the system diagram for the system type being provided.

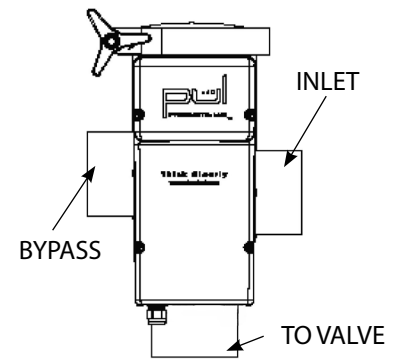
IMPORTANT: CPVC COMPATIBLE GLUE MUST BE USED TO GLUE CONTROLLER TO PVC PIPES

PLUMBING THE PRESSURE GAUGE

Use PVC primer and PVC glue on the ports and pipes.

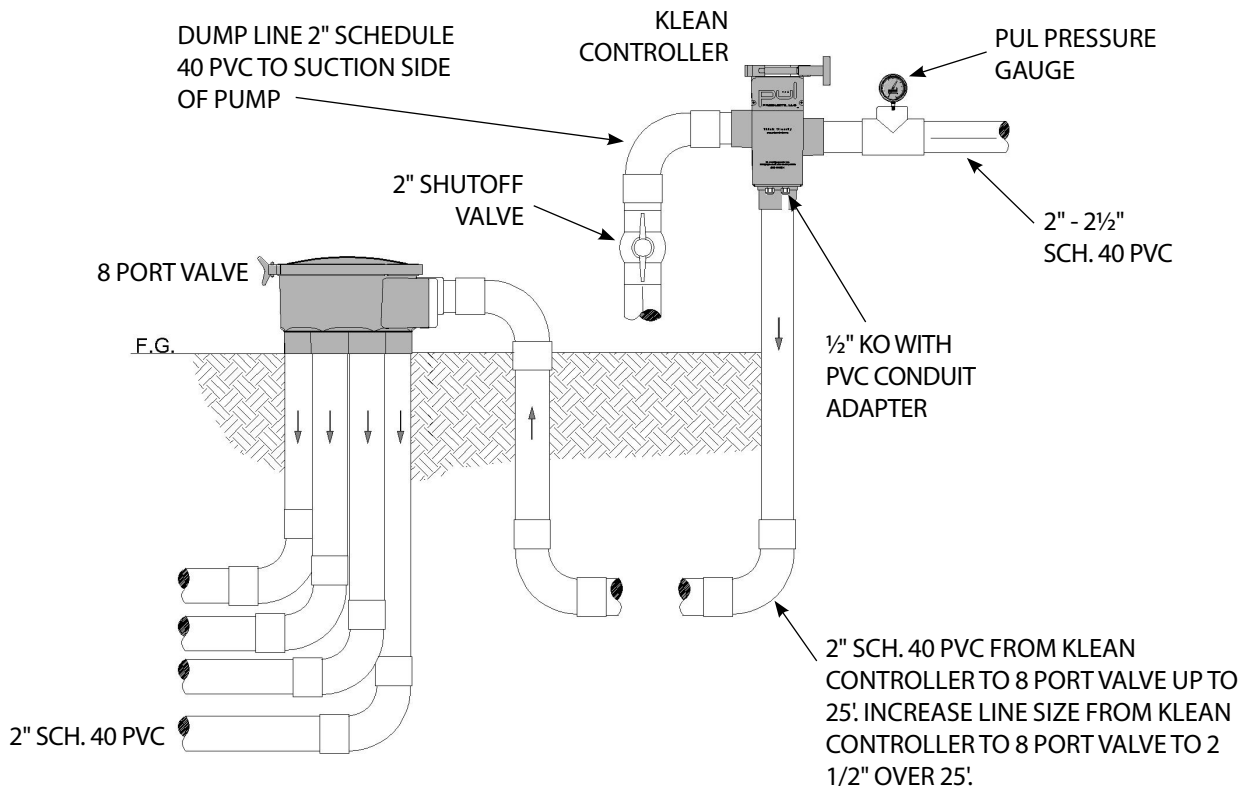
(IPS WELD-ON P68 Primer and 711 Glue or 705 Glue or equivalent).

Install pressure gauge prior to the PUL Klean Controller with a 2" x 1/2" or 2 1/2" x 1/2" SCH. 40 tee socket. Optimal operating pressure for the PUL in-floor cleaning system is indicated by the green zone on the pressure dial (between 18 - 24 psi).



2 1/2" O.D. / 2" I.D. FOR RETURN LINE, INLET, AND TO VALVE

NOTE: The Controller should be plumbed down stream to any chlorinator/ozone generator and/or heater, must be installed within 8 feet of the system pump, and plumbed in bypass configuration eliminate pressure drop.

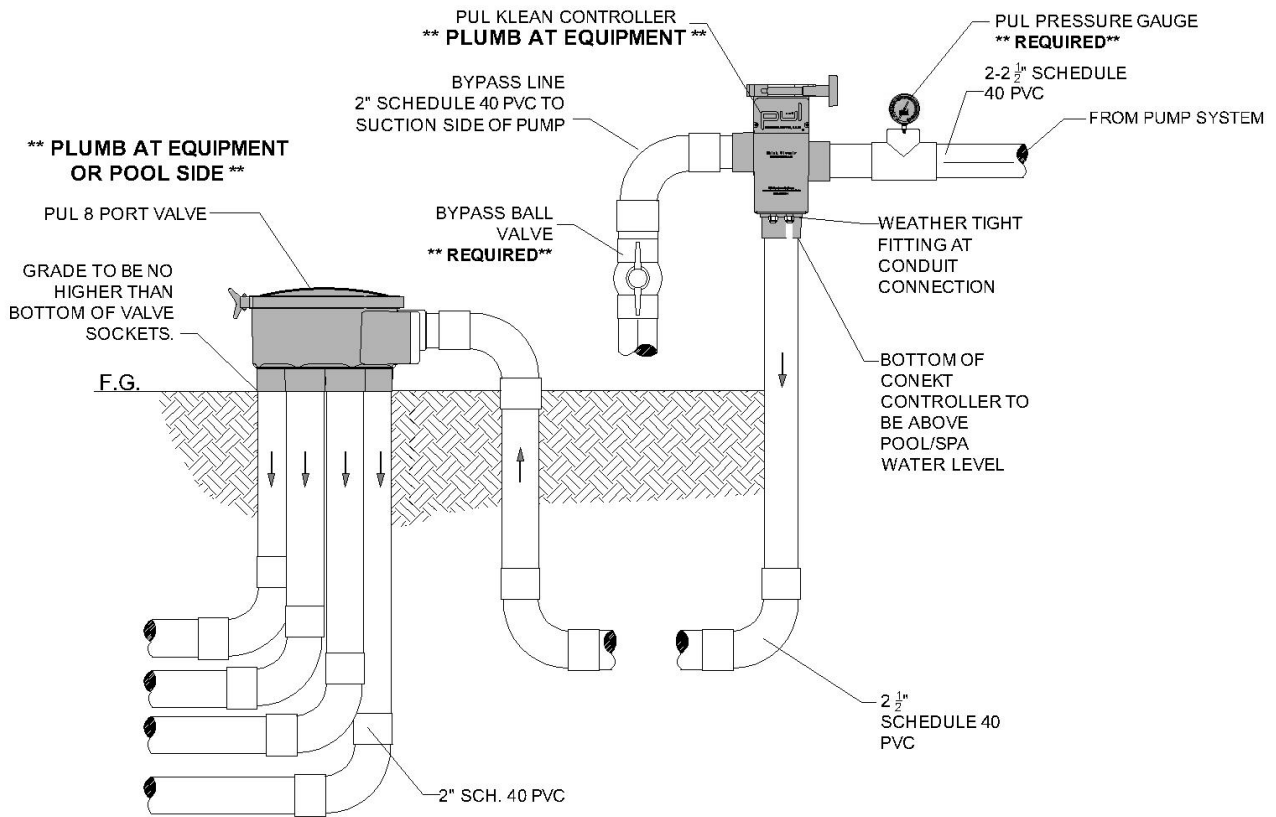
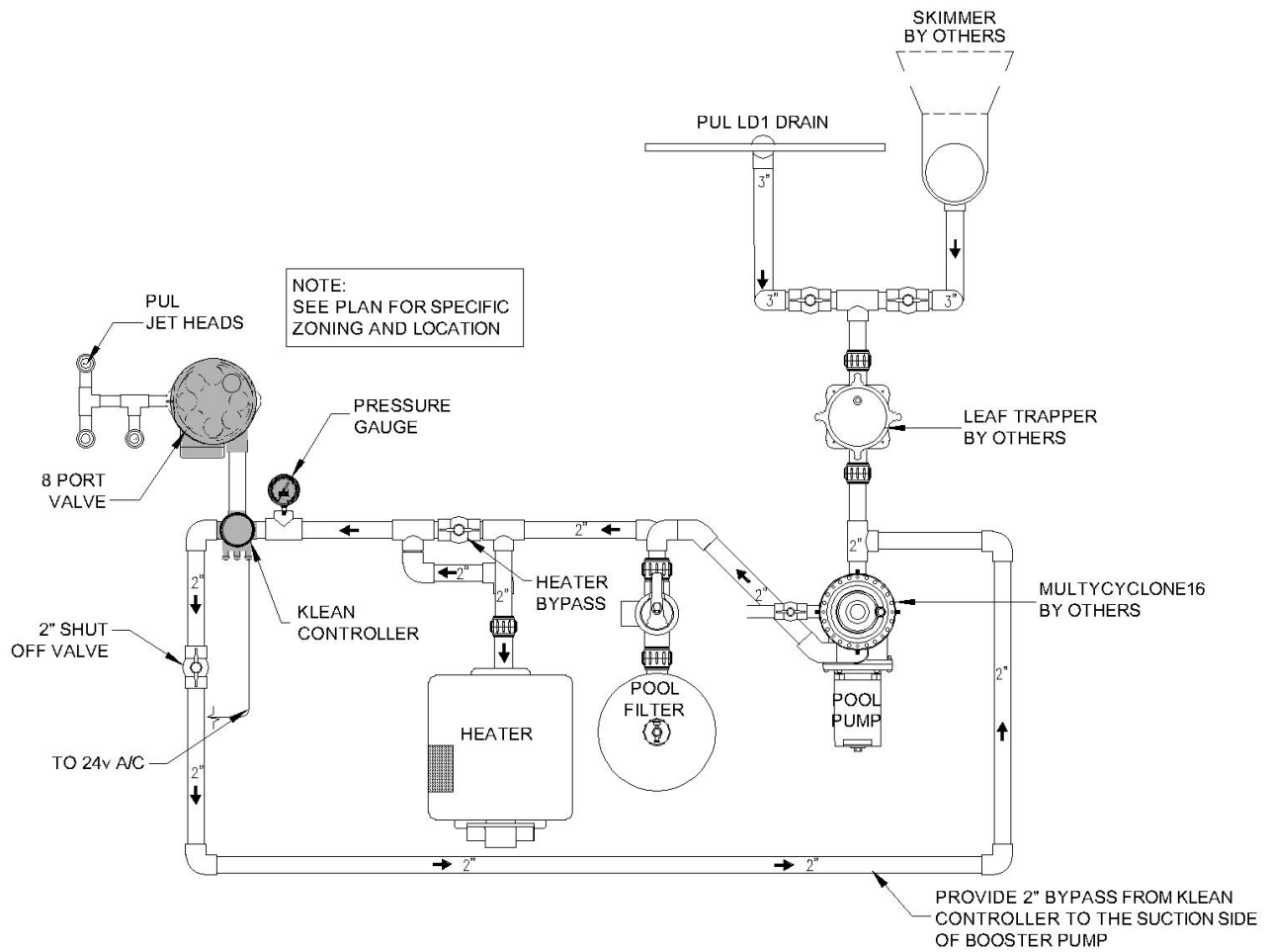


EQUIPMENT PAD APPLICATION

The PUL Klean Controller should be installed at the equipment pad if the proximity to the pool allows. PUL recommends keeping the Klean Valve within 15' of pool to reduce the amount of piping to zones.

NOTE: In-floor system trenches should not be dug by an excavator. The plumber should be responsible for hand digging the trenches within the pool in order to maintain an accurate head layout.

KLEAN - SINGLE PUMP WITHOUT HYDRO-TROUGH SCHEMATIC



KLEAN PRO - DUAL PUMP WITH HYDRO-TROUGH SCHEMATIC

