

ProMix C,S & M Inline/"A" Controls

Quickstart Guide

1. Before plugging unit in be sure breakers are off! (see Fig. 3)
2. Check unit thoroughly to be sure all fittings and wire connections are tight, and all ball valves are open (except for the small valves located on the chamber and the valve below calibration column; they must remain closed)
3. Be sure polymer is up to the inlet of the unit (must be to the pump for PC type pumps)
4. Before powering the unit on
 - a. Be sure 'SYSTEM START' switch (Fig. 1) on the control box door is in the 'OFF' position and 'POLYMER PUMP' switch (Fig. 2) in 'LOCAL'

Fig. 1



'SYSTEM START' Switch defines where the 'Enable' comes from. (Leave 'OFF' until step 8 below)

- Switching to 'ON' starts the unit locally
- Switching to 'REMOTE' the unit waits for a dry contact between terminals TB2-3 and TB2-4

Fig. 2



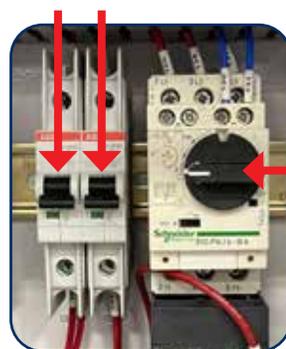
'POLYMER PUMP' Switch defines where the polymer pump 'Speed Control' comes from.

- Switching to 'LOCAL' the % of speed from your Polymer Calc. is entered in the 'POLYMER PUMP' menu under 'Local Setpoint' on the control box
- Switching to 'Remote' the % speed is controlled via 4-20 mA signal from TB3-1(+) and TB3-2(-)

- b. fully open the needle valve that controls the water going into the mixing chamber (Primary Dilution)
- c. close the needle valve for the water that joins with the flow after the mixing chamber (Secondary/Post Dilution)

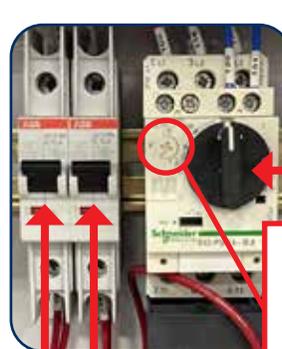
5. Inside the control box power on both breakers and rotary switch (See Fig. 4)

Fig. 3



Here the 2 breakers are down and the motor overload switch is off to the 9 0'clock position

Fig. 4



Here the 2 breakers are up and the motor overload switch is rotated up to the 12 0'clock position

This is the adjustment for the current trip point. It should be 10% above the FLA of the motor at maximum.

Usually set at factory

(Continued on reverse page ►)

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6. See 'ProMix Calculation' calculate water flow and neat POLYMER PUMP Local Setpoint %
(Made down polymer concentration must not exceed 1% in chamber for emulsion Polymers)

Polymer pump flow ÷ Total water flow = Desired concentration of activated polymer

Therefore

Desired concentration of activated Polymer x Total water flow = **Polymer pump flow (needed)**

Polymer pump max flow GPH ÷ 60 = **Polymer pump flow GPM**

$\frac{\text{Polymer pump flow (needed)}}{\text{Polymer pump flow GPM}} \times 100 = \text{Polymer \% needed to achieve}$

'Desired concentration of activated Polymer'

For example: If we know we have 5 GPM of water flow, we want 0.5% of activated Polymer and our Polymer pump max flow is 5 GPH

.005 activated Polymer x 5 GPM water flow = .025 GPM Polymer pump max flow (needed)

5 GPH ÷ 60 = .083 GPM is Polymer pump max flow per minute

$\frac{.025 \text{ GPM polymer (needed)}}{.083 \text{ GPM max}} \times 100 = 30\%$

7. See 'How to adjust Local Setpoint' below and enter results into control box menu

a. Press **DOWN** arrow to 'Polymer Pump' menu.

b. Press **ENTER** @ 'Polymer Pump' to view or adjust the 'Local Setpoint'.

c. The present 'Local Setpoint' is 25%. Press **ENTER** to adjust.

d. Key **RIGHT** to move the cursor & **UP** or **Down** to change the digit. Key **EXIT** to abort or **ENTER** to execute.

e. Displays new, adjusted Local Setpoint. Press **EXIT** to return to main menu.

If the Polymer Pump switch is in the Local position, any adjustment takes effect immediately, modifying the 4-20 mA output to the pump.



8. Turn 'SYSTEMS START' switch 'ON'
- Watch the 'FILL TIME' countdown and the static mixer on the outlet of the chamber
 - If the 'FILL TIME' countdown reaches 3 seconds and there is still significant air coming through the static mixer turn the 'SYSTEM START' switch back to 'OFF' immediately and return to step 8.
9. Adjust additional dilution water in Secondary Dilution down to what you used in your calculations
- Using 4mm hex head wrench, adjust the Flow Switch on the primary dilution rotameter so that if flow drops and the concentration exceeds 1% in the chamber it stops neat polymer pump from feeding

$\frac{\text{Polymer Pump GPH}/60 \text{ mins per hr}}{0.01} = \text{minimum switch setting in GPM}$

9. Adjust additional dilution water in Secondary Dilution rotameter as needed. Remember this lowers your concentration even further

10. Set up switches and wired connections as you intend to run the unit (see wiring diagram included in the panel)

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