INITIAL SETUP:

1. Connect fluid lines to pump inlets.
2. Connect solvent flush hose to the ¼-20 mnpt fitting on the solvent flush valve.

3. If using pressure pots or transfer pumps, apply enough air pressure to feed material into the metering pumps.
4. Place waste cups under the purge valves of the (A) and (B) pumps.

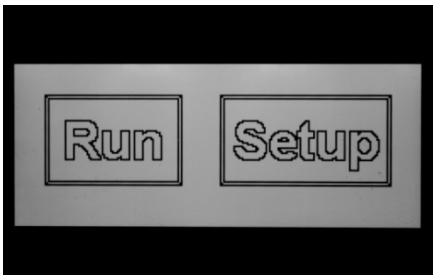
5. Open the (A) and (B) purge valves until material is flowing through the valves.
   NOTE: IF MATERIAL DOES NOT FLOW THROUGH THE PURGE VALVES INCREASE THE AIR PRESSURE TO THE FEED SUPPLY.
   WARNING: NEVER RUN THE PUMPS DRY!
6. Apply 120vac power to the system.

PRIMING THE PUMPS:

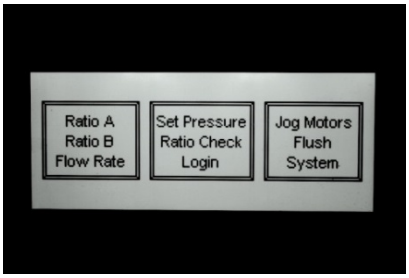
From the TechValve home page:

1. Press the START keypad.

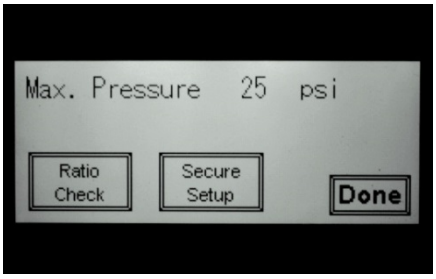
2. Press the SETUP keypad.



3. Press the SET PRESSURE/RATIO CHECK/LOGIN keypad.



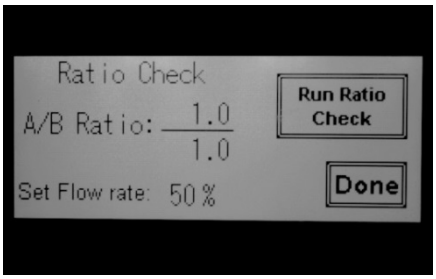
4. Press the RATIO CHECK keypad. If the system has just been powered up the ratios will be set at the default setting of 1:1. Leave the ratios at 1:1.



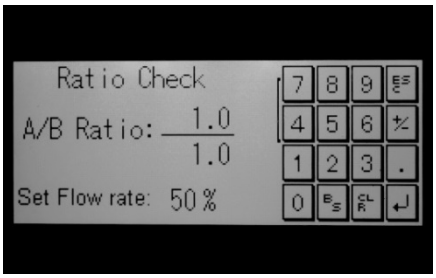
5. Set the RATIO CHECK FLOW RATE to 50%.
   NOTE: AWALYS PRIME THE PUMPS THROUGH THE RATIO CHECK NOZZLES.

TO SET THE (RATIO CHECK) FLOW RATE:

1. Next to the box with the words SET FLOW RATE you will see the current flow rate setting.



2. Tap the flow rate number with the % sign next to it and a numeric keypad will appear.



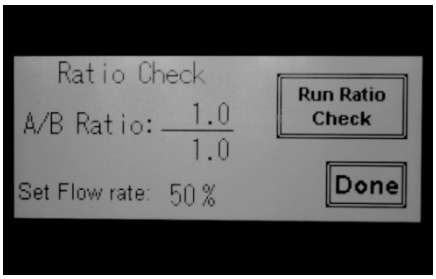
3. Enter 50 as a starting point and press return. If you need higher flow, increase the number.

NOTE: THE FLOW RATE SET IN "RATIO CHECK MODE" IS ONLY ACTIVE IN RATIO CHECK MODE.

6. Place cups under the ratio check nozzles.

7. Rotate the (A) and (B) ratio check valve handles until the arrows point at the nozzles.

8. Press the RUN RATIO CHECK keypad to start the pumps, press again to stop the pumps.



9. Allow the system to run until an air free stream of (A) and (B) material is observed.
   NOTE: BE SURE THE PUMPS HAVE ADEQUATE MATERIAL SUPPLY.
   WARNING: NEVER RUN THE PUMPS DRY!

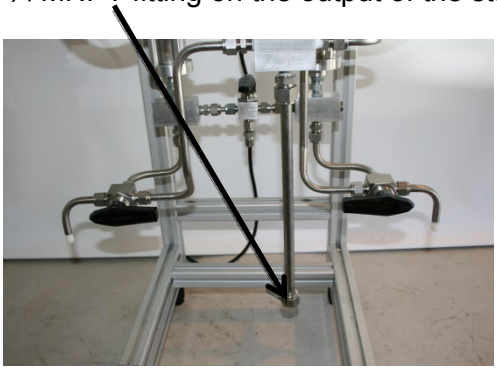
10. Press the RUN RATIO keypad several times to start and stop the pumps until all air is out of the system.
    NOTE: IF YOU CONTINUE TO SEE "GAPS" IN ANY OF THE FLUID STREAMS, THIS MEANS THAT THE PUMPS ARE BEING STARVED OF MATERIAL. INCREASE THE FLUID FEED PRESSURE UNTIL THE GAPS GO AWAY.
    NOTE: THE ABOVE ALSO APPLIES WHEN SETTING PRODUCTION FLOW RATES.

11. Press the RUN RATIO keypad to stop the pumps.

12. Rotate the (A) and (B) ratio check valves back to the off position (arrow pointing away from nozzles).

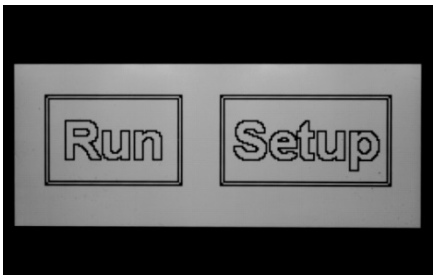
13. Press the DONE keypad to take you back to the RUN/SETUP page.

14. Attach the paint hose to the ¼ MNPT fitting on the output of the static mixer.

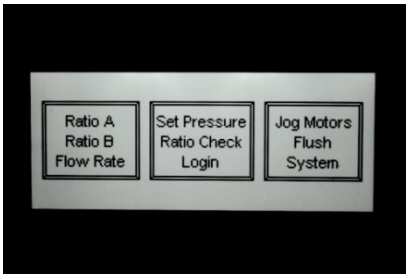


SETTING RATIOS:

1. From the RUN/SETUP page press the SETUP keypad.

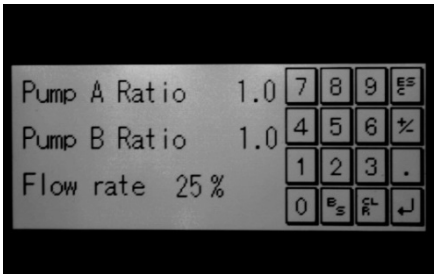


2. Press the RATIO A/RATIO B/FLOW RATE keypad.

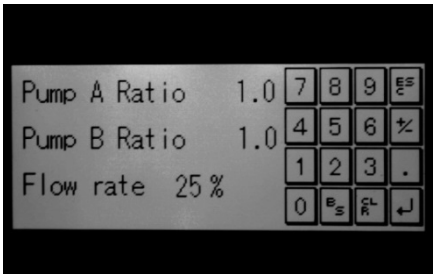


3. The ratio settings page will appear.

4. Tap the current (A) ratio number and a numeric keypad will appear.



5. Enter the desired (A) ratio and press return.



6. Repeat 4 & 5 for the (B) ratio.

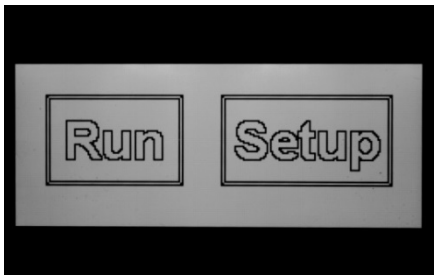
7. Press DONE to return to the RUN/SETUP page.

NOTE: THE PC 2K SERIES IS A VOLUMETRIC METERING SYSTEM. ALL RATIO SAMPLES ARE MEASURED BY VOLUME. IF A WEIGHT SAMPLE IS REQUIRED YOU MUST CONVERT VOLUME TO WEIGHT.
NOTE: WHENEVER THE AC POWER IS CYCLED THE A/B RATIOS WILL DEFAULT TO 1:1.

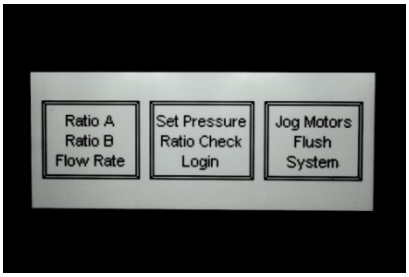
PREFORMING A RATIO CHECK:

WARNING: BEFORE PREFORMING A RATIO CHECK BE SURE THAT THERE IS NO TRAPPED AIR IN ANY OF THE TUBING, THE FLUSH VALVE OR THE RATIO CHECK VALVES.

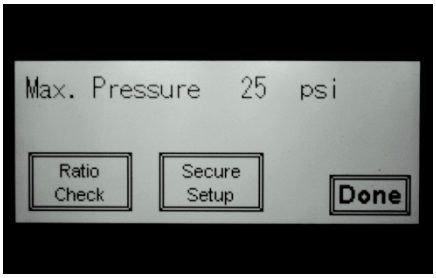
1. From the RUN/SETUP page press the SETUP key pad.



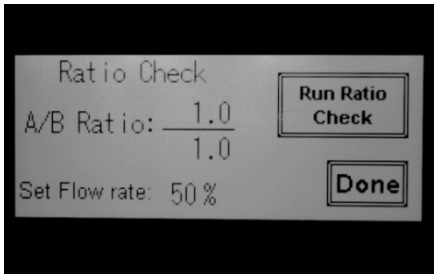
2. Press the RATIO A/RATIO B/FLOW RATE keypad.



3. Press the RATIO CHECK key pad.

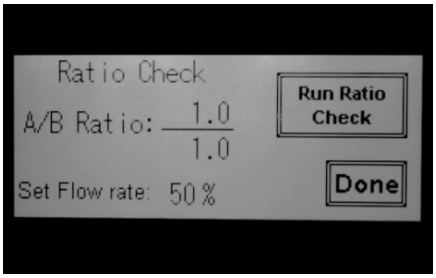


The RATIO CHECK page appears.



4. Place graduated cups under the (A) and (B) ratio check nozzles.
5. Rotate the (A) and (B) ratio check valve handles to the ratio check position (pointing at the nozzles).

6. Press the RUN RATIO CHECK to start the pumps.



7. Dispose of this first samples as there could be air trapped in the nozzles.
8. Place new cups under the ratio check nozzles and repeat step 6.
9. Check the ratio samples.

IF CORRECT:

Rotate the ratio check valve handles back to their original positions and press the DONE keypad.

IF NOT CORRECT:

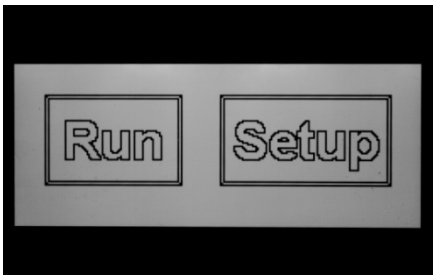
1. Take a few more samples to verify the results.
2. Run a calibration routine and re-check the ratios.
   NOTE: SEE CALIBRATION IN THIS MANUAL.
3. Adjust the ratios on the RATIO SETTINGS PAGE and re-check the ratios.

WHEN DONE:

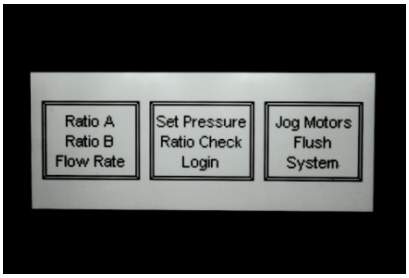
Rotate the ratio check valve handles back to their original positions and press the DONE keypad.

SETTING (PRODUCTION) FLOW RATES:

1. From the RUN/SETUP page press the SETUP key pad.

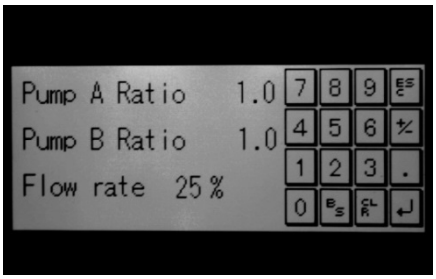


2. Press the RATIO A/RATIO B/FLOW RATE keypad.



3. And the RATIO/FLOW RATE page will appear.
   NOTE: WHENEVER THE AC POWER IS CYCLED THE FLOW RATE WILL DEFAULT TO 25%.

4. Tap the current flow rate % number and a numeric keypad will appear.



5. Enter the desired flow rate and press return.

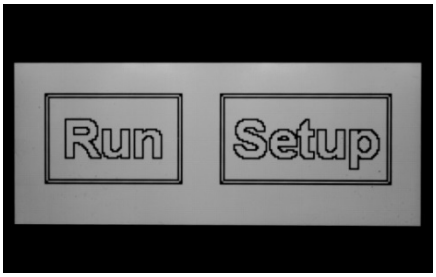
6. Press the DONE keypad to return to the RUN/SETUP page.

MAX FLUID PRESSURE:

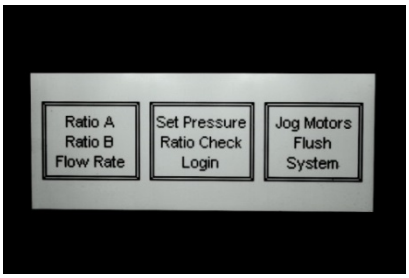
The MAX FLUID PRESSURE is the pressure that will cause all of the pumps to stop and go into standby mode when the spray gun/valve is closed. When the spray gun/valve is triggered, the fluid pressure will drop to the ON SET POINT and all pumps will start.

SETTING MAX FLUID PRESSURE:

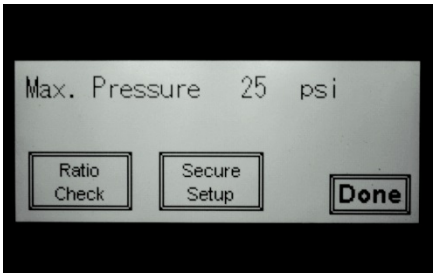
1. From the RUN/SETUP page press the SETUP key pad.



2. Press the SET PRESSURE/RATIO CHECK/LOGIN keypad.

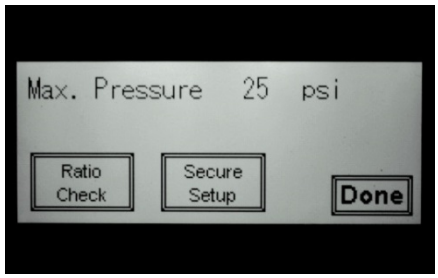


3. Press the SECURE SETUP keypad and a numeric keypad will appear.



4. Enter the pass code ___ ___ ___ and press return.

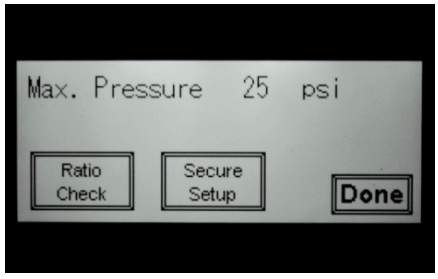
5. The current MAX PRESSURE (in psi) will appear.



6. Tap the current MAX PRESSURE number and a numeric keypad will appear.

7. Enter the desired MAX PRESSURE and press the return keypad.
NOTE: START AT ABOUT 25 PSI AND ADJUST UP OR DOWN AS NESSARY.

8. Press the DONE keypad to return to the RUN/SETUP page.
NOTE: WHENEVER THE AC POWER IS CYCLED THE FLOW RATE WILL DEFAULT TO 25%.



Max fluid pressure setup tips:

When the max fluid pressure and the flow rate are setup correctly and the spray gun/valve is triggered open the system should automatically cycle on/off every second or so.

FAN PATTERN COLLAPSE:

If the fan pattern drops off/collapses and the system runs continuously when the spray gun/valve is triggered INCREASE THE MATERIAL FLOW RATE.

FAN PATTERN SURGE:

If the fan pattern has a surge (wider than normal) then drops to normal when the spray gun/valve is opened LOWER THE MAX FLUID PRESSURE.

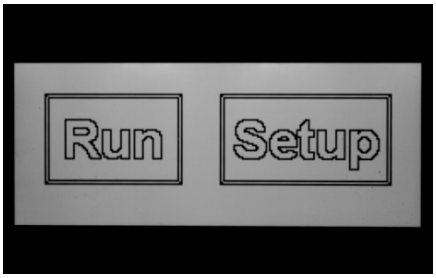
PUMP ON SET POINT:

When the spray gun/valve is triggered the fluid pressure will drop. The drop in fluid pressure will cause all pumps to start. The pressure point where the pumps start is called the ON SET POINT.

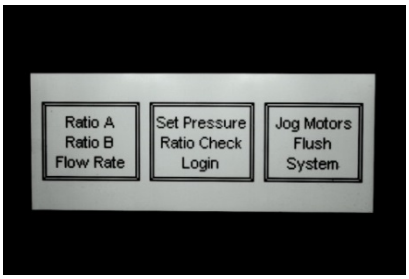
NOTE: THE DEFAULT ON SET POINT IS 5 PSI. TRY THIS SETTING FIRST AND ADJUST AS NECESSARY.

SETTING THE ON (PRESSURE DROP) SET POINT PRESSURE:

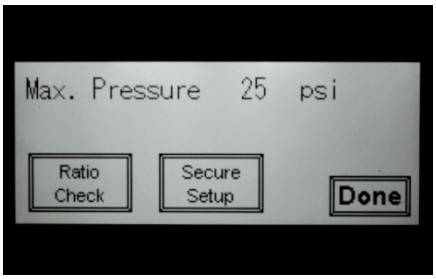
1. From the RUN/SETUP page press SETUP keypad.



2. Press the SET PRESSURE/RATIO CHECK/ LOGIN keypad.



3. Press the SECURE SETUP keypad and a numeric keypad appears.

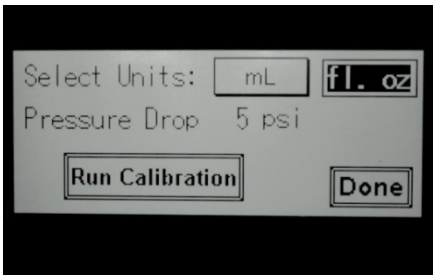


Enter the passcode ___ ___ ___ if asked and press return.

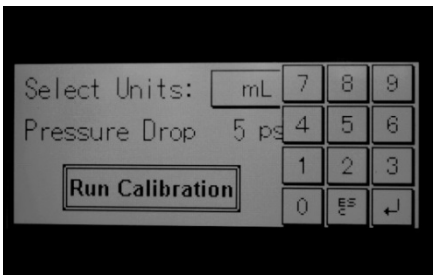
NOTE: IF THE PASSCODE HAS BEEN PREVIOUSLY ENTERED IT MAY NOT BE NECESSARY TO REENTER.

4. Press the SECURE SETUP keypad again and the PRESSURE DROP setting will appear.
   NOTE: THE DEFAULT PRESSURE DROP SETTING IS 5 PSI.

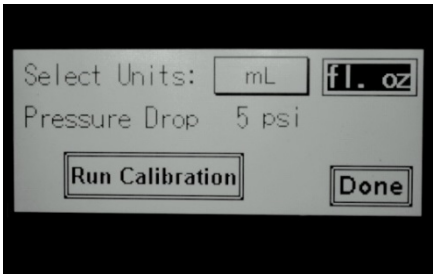
5. Tap the current PRESSURE DROP psi set point number and a numeric keypad will appear.



6. Enter the pressure you would the like the system to start at and press return.



7. Press the DONE keypad to return to the RUN/SETUP page.



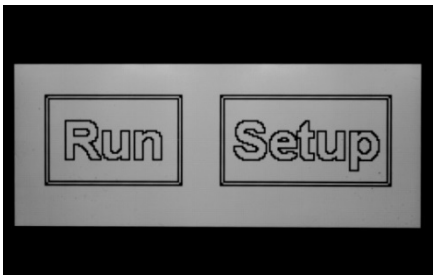
JOG THE PUMPS:

The jog control is used whenever you need to run one pump without the other.

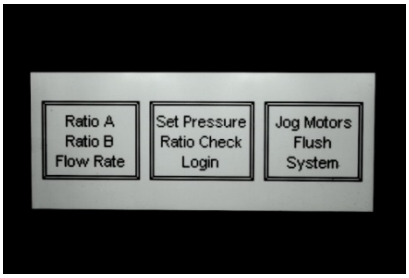
NOTE: IN JOG MODE THE PUMPS RUN AT THE PRODUCTION FLOW RATE.

NOTE: IN JOG MODE THE PRESSURE TRANSDUCER IS DISABLED, BE CAREFUL.

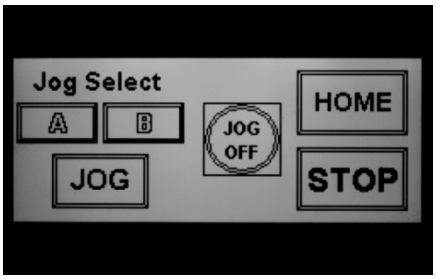
1. From the RUN/SETUP page press the SETUP keypad.



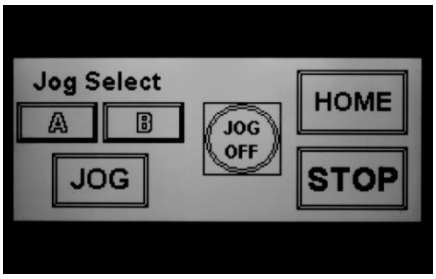
2. Press the JOG MOTORS/FLUSH SYSTEM keypad.



3. To jog the (A) pump press the letter “A” and then press the JOG keypad to run the (A) pump.



4. Press the STOP keypad to stop the (A) pump jog.
5. To jog the (B) pump press the letter “B” and press the JOG keypad to run the (B) pump.
6. Press the STOP keypad to stop the (B) pump.

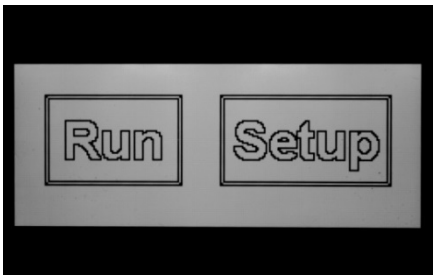


7. Press the HOME keypad to return to the RUN/SETUP page.

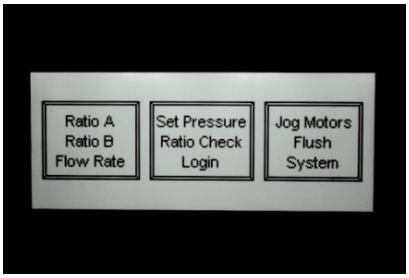
CALABRATION:

Calibration is done to compensate for pump wear and to convert from ml. to oz. units of measure.

1. From the RUN/SETUP page press the SETUP keypad.



2. Press the SET PRESSURE/RATIO CHECK /LOGIN keypad.

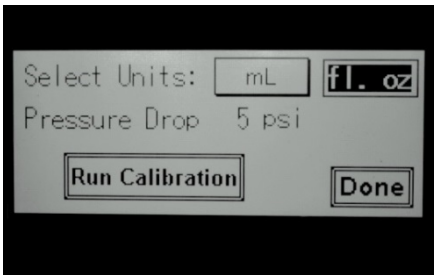


3. Press the SECURE SETUP keypad and a numeric keypad will appear.
   NOTE: IF THE PASSCODE HAS BEEN PREVIOUSLY ENTERED THE KEYPAD MAY NOT APPEAR.

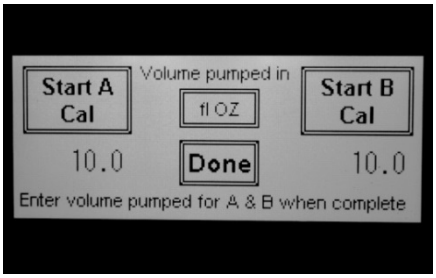
4. Enter the passcode ___ ___ ___ if asked and press return.
   NOTE: IF THE PASSCODE HAS BEEN PREVIOUSLY ENTERED IT MAY NOT BE NECESSARY TO REENTER.

5. Press the SECURE SETUP keypad again.

6. The run calibration keypad will appear.



7. Select ml. or fl/oz.
8. Press the RUN CALIBRATION keypad.
9. Place a graduated cup under the (A) ratio check nozzle or place a cup on a weigh scale under the (A) ratio check nozzle.
10. Rotate the ratio check valve handle to the ratio check position (pointing at the nozzle).
11. Press the START (A) CAL. keypad. The (A) pump will run for a preset amount of encoder counts then stop.

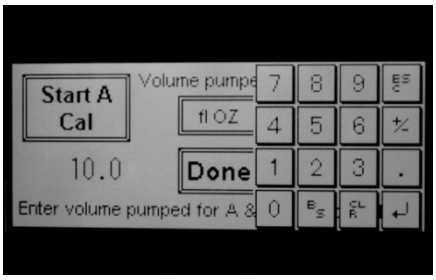


12. Dispose of this first sample as there could be air trapped in the nozzle.
13. Place a new cup under the ratio check nozzle and repeat step 11.

14. Below the start (A) calibrate box there is a number in this example it is10. This is the material quantity of the previous calibration.

15. Measure the material quantity in the (A) cup.

16. Tap the current cal. number and a numeric keypad will appear.



17. Enter the quantity of material measured in the (A) cup and press return.

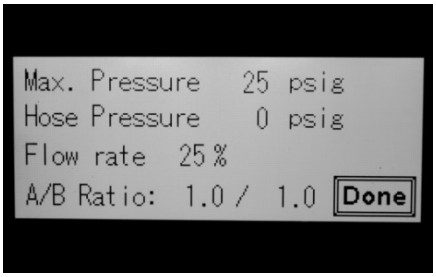
18. Repeat steps 9-17 for the (B) pump.

19. Rotate both of the ratio check valve handles back to the dispense/production position.

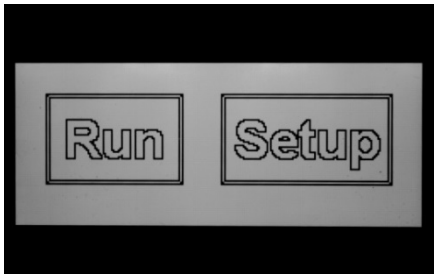
SHUT DOWN PROCEDURES:

Flushing the 2k system, gun and hoses.

1. Press the DONE keypad to stop the pumps.
   WARNING: NEVER FLUSH THE SYSTEM WITH THE PUMPS STILL ACTIVE/RUNNING.

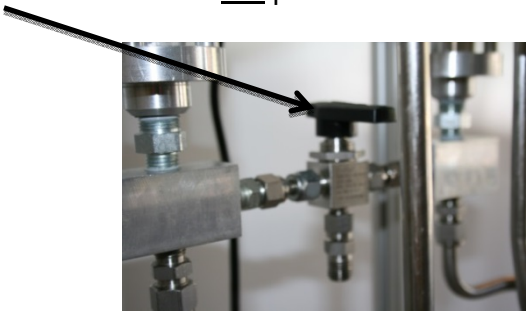


2. The RUN/SETUP page will appear.



3. Disconnect/turn off the air supply to the spray gun.

4. Rotate the solvent flush valve to the ON position.



5. Place waste cups under the ratio check valves.
6. Slowly!!! Rotate the (A) ratio check valve handles until solvent is flowing.
   NOTE: ROTATE THE HANDLE SLOWLY TO AVOID SPLASHING.
7. Allow solvent to flow until clear.
8. Repeat steps 4-6 for the (B) side
9. Point the spray gun/valve into a waste container and squeeze the trigger/open the valve.
10. Allow solvent to flow until clear.
    NOTE: IF THE SYSTEM IS POWERED DOWN AFTER FLUSHING (OR ANYTIME POWER IS CYCLED) THE PRODUCTION FLOW RATE WILL DEFAULT TO 25% THE RATIO CHECK FLOW RATE WILL DEFAULT TO 50% AND THE PUMP ON SET POINT WILL DEFAULT TO 5 PSI. TO AVOID THESE VALUES FROM RESETTING, LEAVE THE SYSTEM POWERED AT ALL TIMES.