

GeoCHEM
Incorporated

THE VARI-FLO POLYMER DISPENSER



Low-Pressure, Variable-Flow Rate Polymer Dispenser
for use with our rapid repair polymers.

PARTS LIST



1. Manifold	1/8"	7432218
2. Elbow-swivel	1/8"	5340K51
3. Elbow	1/8"	50925K181
4. Nipple	1/8"	5232T312
5. RNUT	.531"	7701113 (165-37N)
6. Mini valve	1/8"	4912K76
7. Reducer	1/4-1/8"	9171K213
8. Check valves	1/4"	8549T21
9. Reducer	1/8-1/4"	50925K318
10. JIC	1/4"	6-6-F6XS
11. Swivel	1/4"	4-4-FTXS
12. Potentiometer	5K	9114
13. Hose assembly	AB-4	55545K83

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START UP

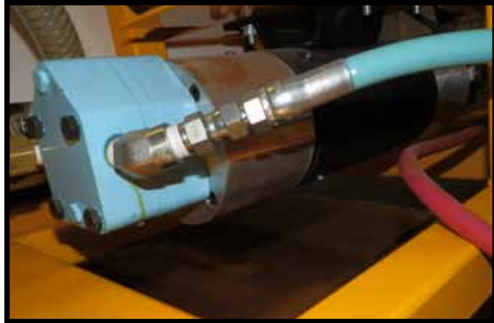
*** Do Not plug machine into outlet and operate without fluid materials attached to pumping unit. Never operate pumps dry. This can cause severe damage to the pumps.**

1. Check that all fluid and air hose fittings are securely attached. Make sure there are no kinks in the hoses.
2. Do not over-tighten JIC hose swivel fittings. It is not necessary to apply thread tape to JIC fittings.
3. Attach drum hose and clamp to A and B containers, remove any air bubbles by loosening the clamps at the pump inlet and bending the clear tubing.
4. Speed dial on remote should be set at "0". Plug in the main power source. Have a bucket ready for the discharging material. Turn to on and slowly adjust speed dial to 25 to allow pumps to be primed and fill the hoses. After a few seconds, the speed dial may be increased. Check for consistent flow. Close gun valves back into closed position.



(Start Up Continued)

5. Ensure that both drums have equal amounts.
6. Attach a static mixer to the gun end and secure with the mixer retaining nut and hand tighten.
7. Open gun valve handle. Turn the machine back to on, increase speed dial to desired flow rate.

**SHUTDOWN**

1. Turn speed dial down to zero.
2. Flip switch to "off".
3. Close gun valves.
4. *If mixer has solidified material, never open air purge. Always remove mixer. Air purging with a clogged mixer will cause material to cross over, reverse back into the gun block, and solidify in the fluid ports and hoses. Always remove and replace mixer at next start up. Be sure all fluid ports are clear prior to attaching new mixer.*
5. When finished, remove static mixer. *Note: static mixers are disposable and usage is limited.*
6. Open air purge slowly to clean out port. If blocked, clean the port. The air purge port can get clogged if not regularly purging mixer.
7. Point gun downward. Wipe the threads on the gun block and the retaining nut.
8. Store gun pointing down. Wipe off any fluid residue.

TROUBLESHOOTING**Insufficient flow rate**

- Increase Speed Dial.
- Check for blocked fluid ports and clean.
- Open all valves completely, then restart.
- Replace Static Mixer.

Material spitting

- Check for air bubbles.
- Tighten material hose.
- Check polymer level in drums.
- Air purge valve open. Close Valve completely.

No Material Flow

- Be sure all fluid valves are open completely.
- Check all AC Plugs.
- When turning on the drive be sure to click switch upward.
- Be sure speed dial is increased from "0".
- Check fluid levels of containers.
- Pumps mounted too tightly to mounts. Maximum is 11 lbs of torque or just a quarter turn from snug tight if no torque wrench available.
- Check that speed dial is functional. Unplug power cord, remove four screws from the gun handle and check wires are connected. If yes, then re-assemble gun control box and check inside main control box for the P1, P2 and P3 connections.

NEVER open KBPC 240 D drive controller with power plugged in.

Material flows from only one side then shuts off drive

- Check for blocked fluid ports on gun manifold and clean if blocked. If clear, then check hoses.
- To check for blocked hose:
 - Remove hoses from gun manifold first and open both valves into a container to relieve pressure, then close valves.
 - Next, remove hoses from pumps, place a container under each outlet of pumps to catch material and restart unit at a very low (5-10) speed for a few seconds.

Air in feed line

- See Start up # 3

(Troubleshooting Continued)**Gun Valve stuck or fails to open completely**

- Replace Valve.

Drive Controller shuts off at start up

- Be sure all fluid valves are open.
- Clean blocked inlet or outlet fluid ports on gun manifold.
- Inadequate electrical supply source, need a minimum 15 AMP 115 V supply.
- If red light comes on then the motor is on overload.

Motor Overload

- Remove both pumps with hoses attached and turn on unit at a low speed to ensure motor operates. If working properly then turn the pump shaft by hand. If unable to turn, then the pump needs to be replaced or rebuilt.
- *Note:** Pumps turn simultaneously from the dual-shaft motor. If one is frozen, the motor will not turn and subsequently overload.

Pump is Noisy

- Check and secure all fittings.

Pump Leaking out from bottom hole in pump mount

- Stop unit immediately and DO NOT RUN! Lip seals need to be replaced. Material can and will suck inside motor and motor will require replacement.
- Cause: Blown or failed lip seal(s). A side pump has two seals. This is due to the reverse rotation or trying to force material at high speeds when an obstruction is present. Pump can be repaired sometimes by replacing the lip seals.

Part#: CR 6HDOV

**OPERATING TIPS**

Always vent the drums prior to application. If not vented they will collapse. Always store material closed tightly to prevent moisture contamination.

Before going out to the job site prepare and run the unit with material to ensure proper operation.

Always use a new static mixer when restarting after any break or interruption.

When applying the material be sure to close the gun valves before you air purge the mixer. Regularly purge the mixer when shutting off for more than a minute.

With temperature increases, the material set time will increase. Colder temperatures will reduce it as well. Sand temperature and surface temperature can also be a factor.

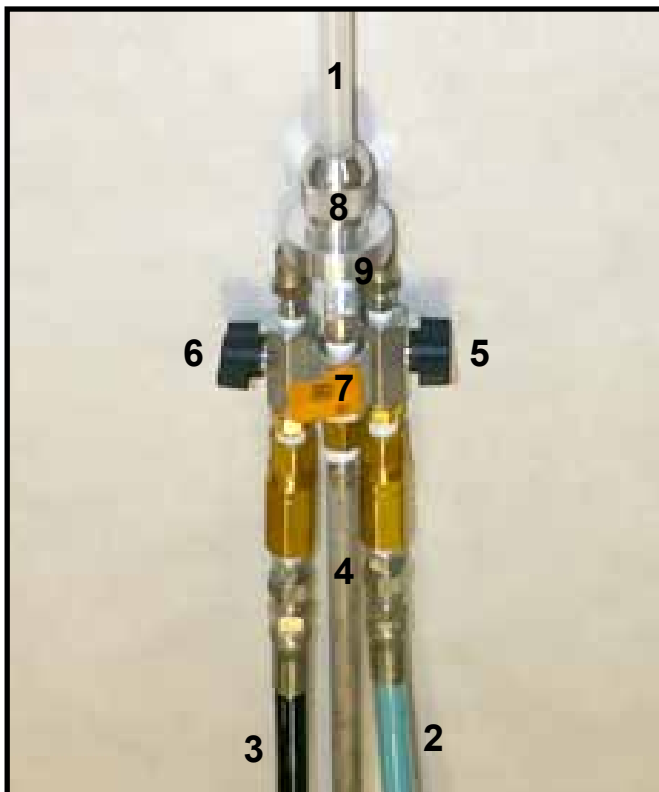
Do not use wet sand or aggregates.

Always be sure gun valves are closed first to clean and remove the gun manifold at the end of the day.

Always store the unit indoors at temperatures above 50°F. For more than a week, flush A-side hose with hydraulic oil. Before restarting, flush A-side hose for 2 minutes at a speed of 30.

Replacement parts for the pumps are available. Any work done by unauthorized personnel will negate any warranties.

GUN ASSEMBLY



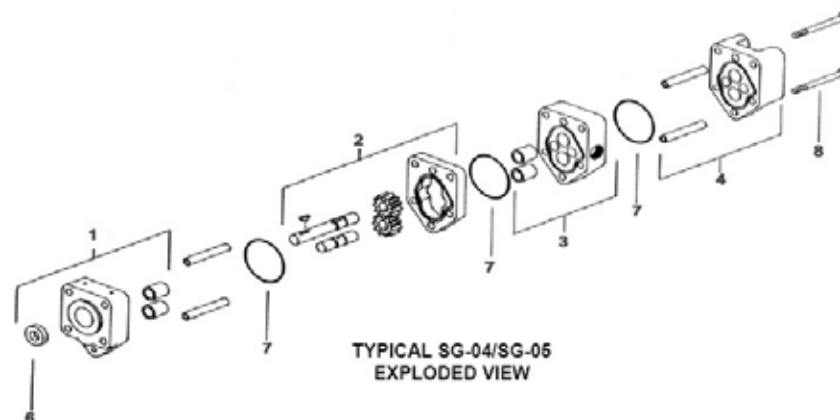
1. Static Mixer
2. B-Side Feed Line
3. A-Side feed Line
4. Air Line
5. B-Side Flow Valve
6. A-Side Flow Valve
7. Air Flow Valve
8. Static Mixing Tube Retaining Nut
9. Manifold

SPEED DIAL

The Speed Dial controls the flow of polymer to the static mixing tube. It will always deliver polymer in an even ratio to the static mixing tube. Should polymer go off-ratio, check that the A-and B-side flow regulators (numbers 5 and 6 in the gun assembly diagram) are in the fully-opened position or that there is no obstruction in the polymer lines.



PUMP DIAGRAMMS AND CUTAWAYS





For more information on the
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