

Ref.	Name	Part Number							
		EPV250		EPV312		EPV375		EPV500	
		1161 Brass	1162 316SS	1163 Brass	1164 316SS	1165 Brass	1166 316SS	1167 Brass	1168 316SS
1	Motor	10978							
2	Screw	10413							
3	Coupling	10009							
4	Nut	10011							
5	Platform	10974							
6	Bonnet	10568A	10568B	10568A	10568B	10559A	10559B	10559A	10559B
7	Bonnet-Body O-ring	10014 EPR 10014N Neoprene				10323 EPR 10323N Neoprene			
8	Stem O-ring	10015 EPR 10015N Neoprene							
9	TFE Stem Washer	10016				10324			
10	Stem	10017C	10017B	10017C	10017B	10325C	10325B	10325C	10325B
11	Plunger Assembly	10093C	10093B	10625C	10625B	10326C	10326B	10462C	10462B
12	Plunger Guide	10385A	10385B	10385A	10385B	10386A	10386B	10520A	10520B
13	Body	10383A	10383B	10523A	10523B	10384A	10384B	10591A	10591B

Figure 3. Part Number Reference Table

Symptom	Cause	Solution
Valve does not open and makes stuttering noise	Valve was overtightened	Loosen by hand with screwdriver in motor shaft slot, then close gently
Nothing happens	Power not connected	Check cabling
	Fuses blown in power supply	Replace fuses
Valve does not shut off fluid flow tightly	Obstruction between seat seal and seat	Backflush valve or disassemble valve and remove obstruction
	Worn out seat seal	Replace plunger assembly
Process fluid leaks out of weep hole in bonnet	O-ring failure	Replace O-ring
Valve does not follow control signal	Noisy control signal	Turn off noise filter
Sticky valve	Mineral and/or rust deposits	Soak internal parts with mild acid solution.

Figure 4. Troubleshooting Table.

Electronic Proportional Valve

DIP SWITCH SETTINGS

INSTRUCTIONS

INSTALLATION

Mechanical Connections

Connect the EPV to your pipes by screwing the pipes into the unit. If you use Teflon tape, make sure there are no loose pieces in the fluid stream. Use unions when possible for easy removal for maintenance or repair. Use hangers to support the weight of the unit and to eliminate stress on your pipes. The direction of fluid flow should match the arrows stamped on the side of the EPV valve body.

Electrical Connections

Wire Color	Function
White	4-20mA or 1-5VDC
Black	4-20mA or 1-5VDC return
Red	12 to 24 VDC power
Red/White	Ground

Power supply must be able to supply at least 3 Amps

OPERATION

The EPV closes on power-up. If closed, the motor will stall. This is normal. Immediately after closing, the valve will track control signal.

Power must be off when setting switches.

Switch	Function
1	ON – Adaptive digital filter. Prevents dithering and excessive travel with noisy control signals. Monitors performance and dynamically adjusts filter parameters. Cycle power to reset learned parameters. OFF – Minimal static filter.
2, 3	Speed control. 150Hz: 2 on, 3on. 100Hz: 2 off, 3 on 75Hz: 2 on, 3 off 60Hz: 2 off, 3 off
4, 5	Turns control. 1 turn: 4 on, 5 on 2 turns: 4 off, 5 on 4 turns: 4 on, 5 off 8 turns: 4 off, 5 off Resolution is 1/8% at 4 and 8 turns, 1/4% at 2 turns and 1/2% at 1 turn
6	ON – Fast close mode. Doubles motor speed on power-up. Reduces torque for use with needle valves. OFF – Constant speed.
7	ON – Connects 250 Ohm resistor to ground. OFF – Disconnects 250 Ohm resistor from ground.
8	ON – 4-20mA signal mode. Controller measures voltage drop across 250 Ohm resistor. OFF – 1-5VDC signal mode

MAINTENANCE AND REPAIR

Seat Seal Replacement

The seat seal and plunger are replaced as a unit called the plunger assembly. When replacing the plunger assembly, replace the stem seal O-rings. Rebuilding kits are available from HMC. The EPV must be disassembled to replace the seat seals.

Disconnect the EPV from the power supply. Remove the cover. Remove the 3/4-16 jam nut (1 1/8" wrench). Lift the motor and platform assembly off the valve. The coupling will separate.

Remove the bonnet-stem assembly. Hold the stem to keep it from rotating. Unscrew the plunger assembly from the stem. This is a left hand thread. Loosen the set screws holding the coupling to the stem. Slide stem out of bonnet. Thoroughly clean all parts. Discard stem o-ring.

Replace o-ring with new one. Lubricate o-ring and stem with silicone-based clear o-ring lubricant. Lubricate stem threads and outside of plunger with an anti-sieze lubricant compatible with your process fluid. Reassemble in reverse order of disassembly.

NOTE: Make sure seat seal is not seated when tightening bonnet!

LIMITED WARRANTY

Hass Manufacturing Company (HMC) warrants the Electronic Proportional Valve against defects in materials and workmanship for a period of Five (5) years from the date of original retail purchase. If you discover a defect, HMC will, at its option, repair, replace, or refund the purchase price of the product at no charge to you, provided you return it during the warranty period, transportation prepaid, to HMC. Prior to returning the product for warranty consideration, contact Hass Manufacturing Company for a return authorization number and shipping instructions.

This warranty does not apply if the product has been damaged by accident, misuse, abuse or misapplication, has been modified, or if any serial number has been removed or defaced.

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FURTHER INFORMATION

Please contact us if you have any questions or comments regarding our products. You can view all of our product data sheets, as well as owner's manuals, price lists and new product information at our web site, www.hassmfg.com.

Product	Rebuild Kit Part Number
EPV250B	10842
EPV250SS	10854
EPV312B	10741
EPV312SS	10855
EPV375B	10841
EPV375SS	10856
EPV500B	10852
EPV500SS	10857

Figure 1. Rebuild Kits. Kits include: plunger assembly, stem, TFE washer, bonnet-body O-ring, bonnet-stem O-ring, and silicone O-ring lube.

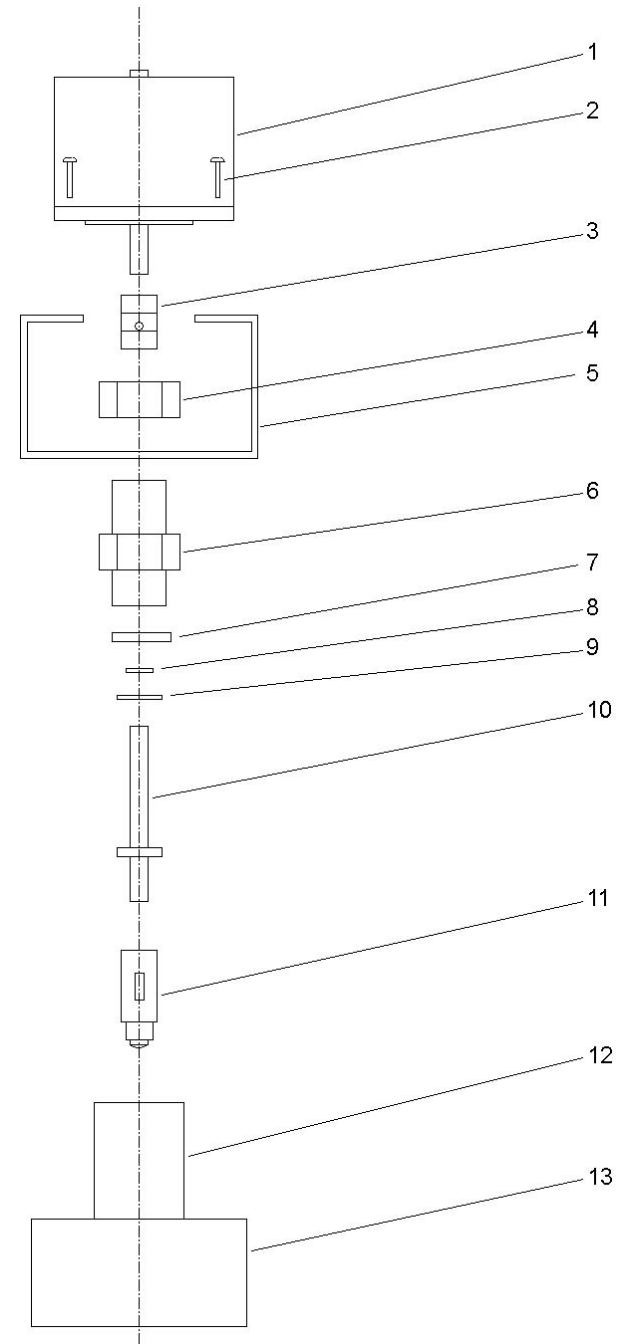


Figure 2. EPV Exploded Diagram.