Ref.	Name	Part Number														
		ECV250			ECV312			ECV375			ECV500			ECV750		
		1044 Brass	1045 303SS	1076 316SS	1052 Brass	1059 303SS	1077 316SS	1046 Brass	1047 303SS	1078 316SS	1067 Brass	1068 303SS	1079 316SS	1080 Brass	1081 303SS	1082 316SS
1	Motor	10003												10535		
2	Screw	10413												10629		
3	Platform	10389												10600		
4	Coupling	10009												10536		
5	Nut	10011												10510		
6	Plate	10498												10605		
7	Bonnet	10568A	10568C	10568B	10568A	10568C	10568B	10559A	10559C	10559B	10559A	10559C	10559B	10607A	10607C	10607B
8	Bonnet-Body O-ring	10014						10323								
9	Stem O-ring	10015												10347		
10	TFE Stem Washer	10016						10324						10466 (2)		
11	Stem	10017C		10017B	10017C		10017B	10325C		10325B	10325C		10325B	10608C		10608B
12	Plunger Assembly	10093C		10093B	10093C		10093B	10326C		10326B	10326C		10326B	10627C		10627B
13	Plunger Guide	10385A	10385C	10385B	10385C	10385C	10385B	10386A	10386C	10386B	10520A	10520C	10520B	10482A	10482C	10482B
14	Body	10383A	10383C	10383B	10523A	10523C	10523B	10384A	10384C	10384B	10591A	10591C	10591B	10621A	10621C	10621B

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	Back-flush 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. Disassembly no required.

Figure 4. Troubleshooting Table.

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PN 10497

Electronic Control Valve

INSTRUCTIONS

INSTALLATION

Mechanical Connections

Connect the ECV 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 ECV valve body.

Electrical Connections

Wire Color	Function
White (A)	4-20mA or 1-5VDC
Black (B)	4-20mA or 1-5VDC return
Red (C)	12 to 24 VDC power, 3 Amp minimum
Red/White (D)	Ground
Green (E)	Open Full input, dry contact closure
Green/White (F)	Close Full input, dry contact closure
Blue (G)	Common for Open and Close inputs

OPERATION

The ECV closes on power-up. If closed, the motor will stall. This is normal. Immediately after closing, the valve will track the control signal. **Power must be off when setting jumpers and switches.**

SWITCH SETTINGS (default 3,5,7 on)

Switch	Function
1 Close	ON: Close Full. 50% if Switch 2 also on. Overrides control signal.
2 Open	ON: Open full. 50% if Switch 1 also on. Overrides control signal.
3 Filter	ON: Adaptive noise filter on. OFF: Light static noise filter on.
4 DDR	ON: Reverses Jumpers 1 and 2. OFF: No action.
5 Fail	ON: Fail closed on loss of signal. OFF: Fail open on loss of signal.
6 Range	Active if Switch 7 is OFF. ON: High range. 12-20mA or 3-5 VDC. OFF: Low range. 4-12mA or 1-3 VDC.
7 Split	ON: Full range. 4-20mA or 1-5 VDC. OFF: Split range.
8 ADR	ON: Reverse action for analog signal. Large signal causes valve to close. OFF: Direct action for analog signal. Small control signal causes valve to close.

Put shunt on left two pins of jumper JP2 for 4-20mA signal, right two for 1-5 VDC. Put shunt on both pins of jumper JP3 for high speed, and on one pin for low speed. Low speed for 750 size valves. Put shunt on both pins of jumper JP1 to ground 250 Ohm resistor.

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 ECV must be disassembled to replace the seat seals.

Disconnect the ECV 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 Control 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. Warranty does not cover normal wear and tear.

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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
ECV250B	10842
ECV250-316SS	10854
ECV312B	10741
ECV312-316SS	10855
ECV375B	10841
ECV375-316SS	10856
ECV500B	10852
ECV500-316SS	10857
ECV750B	10853
ECV750-316SS	10858

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

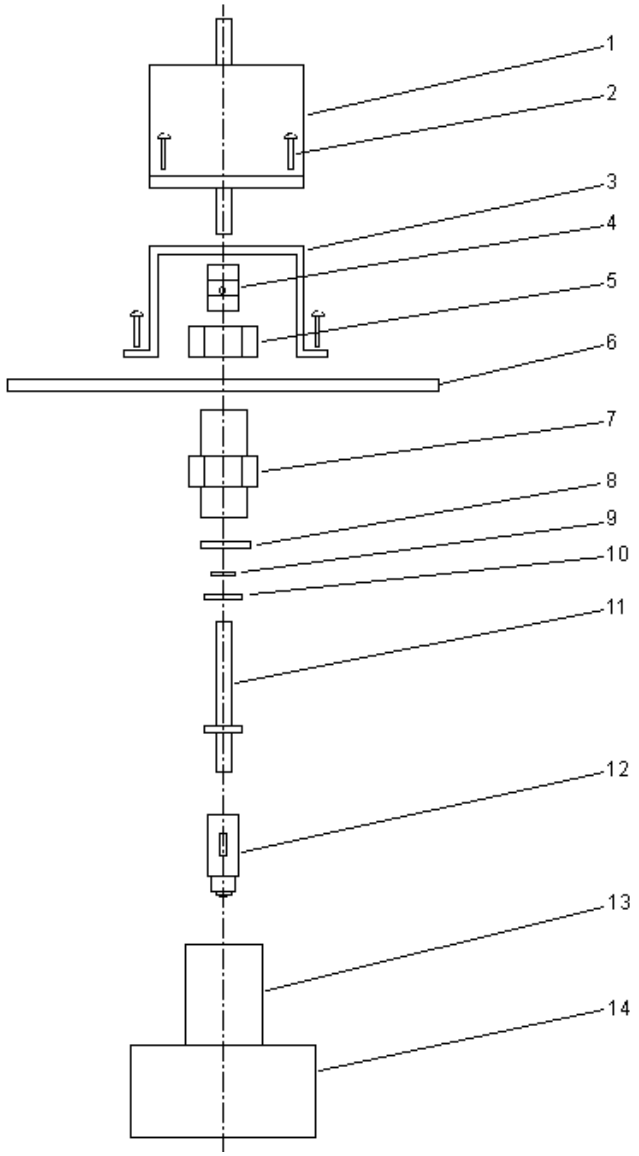

Figure 2. ECV Exploded Diagram