

TECHNICAL SPECIFICATIONS, DESCRIPTIONS and GENERAL FEATURES

- **Fluids:** Valves are suitable for water, low viscosity oils etc... non-aggressive liquids and Air, Inert Gas etc... gaseous but is not suitable for hazardous fluids
- **Switching Function:** Normally Closed (N.C, Closed when de-energised) (ESV 610 Series) and Normally Open (N.O, Open when de-energised) (ESV 611 Series)
- **Principle of Operation:** Pilot Operated
- **Way Number:** 2/2 (Ports / Positions)
- **Connection and Port Sizes:** G3/8" up to G2"
- **Connection Type:** Thread (Female), G (BSPP / ISO 228-1)
- **Pressure Range:** 0 -10 Bar (ESV 610 Series) , 0-5 Bar (ESV 611 Series)
- **Fluid Temperature:** -10°C to max. 80°C
- **Ambient Temperature:** -20°C to max. 70°C
- **Opening Time:** 200ms up to 1500ms
- **Closing Time:** 500ms up to 2000ms
- **Max Viscosity:** 38 cSt or mm2/s
- **Maximum Allowable Pressure or Design Pressure:** 15 bar (ESV 610 Series), 8 Bar (ESV 611 Series)
- Don't require differential pressure, internal exhaust system (for ESV 611 Series)
- Valve has sealing o-rings
- Suitable AC and DC voltage, high voltage tolerance
- Coil interchangeable without dismantling the valve (don't matter AC or DC)
- High flow rate, high reliability, high mechanical strength
- Various flow rate options, wide range of orifice options
- Mounting position, optional any position but preferably solenoid coil vertical on top
- The fluid passing through the valve must be filtered
- Flow rate (Q) can be usually calculated as a function of pressure, density and flow coefficient
- According 97/23/EC Pressure Equipment Directive (PED), 2006/95/EEC Low Voltage Directive (LVD) and 2004/108/EC Electromagnetic Compatibility Directive (EMC)



Stainless Steel	Don't Require Differential Pressure	Coil Rotatable 360°	High Reliability
Full Orifice	Patented Enclosing Tube Design	High Performance	Long Life



Model No	Position	Connection and Port Size	Orifice Size	Flow Factor / Coefficient Kv		Operating Pressure Differential				Fluid Temperature		Seal	Approximate Weight	Reference Figure
						Min. (For AC)	Min. (For DC)	Max. (For AC)	Max. (For DC)	Min.	Max.			
ESV		G	mm	L / m	m³/h	Bar	Bar	Bar	Bar	°C	°C		kg	
ESV 610.02	N.C	3/8"	16	69	4.00	0	0	10	6	-10	+120	VITON	0,8	Fig.1
ESV 610.03	N.C	1/2"	16	69	4.00	0	0	10	6	-10	+120	VITON	0,85	Fig.1
ESV 610.04	N.C	3/4"	20	108	6.50	0	0	10	6	-10	+120	VITON	1,1	Fig.1
ESV 610.05	N.C	1"	25	172	10.30	0	0	10	6	-10	+120	VITON	1,45	Fig.1
ESV 610.06	N.C	1 1/4"	32	315	18.90	0	0	10	6	-10	+120	VITON	2,3	Fig.1
ESV 610.07	N.C	1 1/2"	40	430	25.80	0	0	10	6	-10	+120	VITON	2,9	Fig.1
ESV 610.08	N.C	2"	50	690	41.40	0	0	10	6	-10	+120	VITON	4,8	Fig.1
ESV 611.02	N.O	3/8"	16	69	4.00	0	0	5	3	-10	+120	VITON	1,1	Fig.2
ESV 611.03	N.O	1/2"	16	69	4.00	0	0	5	3	-10	+120	VITON	1,05	Fig.2
ESV 611.04	N.O	3/4"	20	108	6.50	0	0	5	3	-10	+120	VITON	1,2	Fig.2
ESV 611.05	N.O	1"	25	172	10.30	0	0	5	3	-10	+120	VITON	1,6	Fig.2
ESV 611.06	N.O	1 1/4"	32	315	18.90	0	0	5	3	-10	+120	VITON	2,6	Fig.2
ESV 611.07	N.O	1 1/2"	40	430	25.80	0	0	5	3	-10	+120	VITON	3,2	Fig.2
ESV 611.08	N.O	2"	50	690	41.40	0	0	5	3	-10	+120	VITON	5,2	Fig.2

OPTIONS

- Custom options can be performed for customer's special requests
- On request; NPT (ANSI 1.20.3), R (BSPT / ISO 7-1), W (BSW / Whitworth), M (Metric) etc...
- On request; diaphragm or sealing or o-rings can be , EPDM (-10°C to 140°C)
- Manual override, filter, other pipe connections, flanged body, body material AISI 316, internal parts stainless steel (for ESV 611)
- On request; other special supply voltages, frequencies (60 Hz), other power, coil insulation class : F (155°C), coil duty latching model
- On request; with electronic timer , Explosion-Proof coil for use in zones 1/21-2/22 (Eex em II T4/T5), coil encapsulation material can be fiber glass reinforced (V0 or V1)
- On request; connector with LED or without connector, connector with visual indication and peak voltage suppression, connector with cable length of 2m, Spade plug (Cable Ø 8-10 mm), connector non-flammable
- On request other versions

POWER CONSUMPTION

Power Consumption							
Alternating Current (AC)				Direct Current (DC)			
Model No	Voltage	Inrush (VA)	Holding (VA)	Model No	Voltage	Cold (W)	Hot (W)

DIMENSIONS (mm)

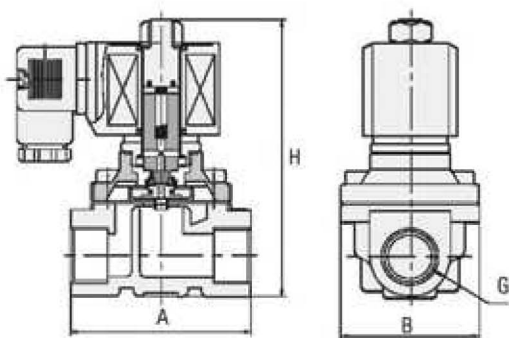


Fig. 2

G	A	B	H
3/8"	69	57	135
1/2"	69	57	135
3/4"	73	57	142
1"	99	77,5	150
1 1/4"	112	86,5	180
1 1/2"	123	94	190
2"	168	123	216

ELECTRICAL CHARACTERISTICS

- **Protection Degree:** IP 65 (EN 60529) (with connector)
- **Plug Connection:** DIN 46340-3 poles connectors (DIN 43650)
- **Connector Specification:** ISO 4400 / EN 175301-803 , Form A, Spade plug (Cable Ø 6-8 mm)
- **Electrical Safety:** IEC 335, EN 60335-1, EN 60204-1
- **Coil Insulation Class:** H (180°C)
- **Coil Impregnation:** Polyester Fiber-Resin Glass
- **Coil Encapsulation Material:** Fiber Glass Reinforced (V2)
- **Supply Voltages:** For AC(−) 12V , 24V , 48V , 110V , 230V
For DC (=) 12V , 24V , 48V , 110 V , 230 V
- **Voltage Tolerances:** For AC (−) or DC (=) %−10 ; %+10
- **Frequency:** 50 Hz
- **Coil Duty Cycle:** %100 ED, Continuously Rated
- Design according to DIN VDE 0580

MATERIALS

- **Body:** Stainless Steel (AISI 304)
- **Plunger Seal:** VITON
- **Enclosing Tube:** Stainless Steel (AISI 430FR and AISI 304) for ESV 610 Series , Stainless Steel (AISI 430FR and AISI 304) and Brass for ESV 611 Series
- **Plunger:** Stainless Steel (AISI 430FR)
- **Springs:** Stainless Steel (AISI 302)
- **Shading Ring:** Copper
- **Seat:** Stainless Steel
- **O-rings:** VITON
- **Internal Metal Parts:** Stainless Steel and Brass
- **Cover:** Stainless Steel
- **Diaphragm/Seat Seal:** VITON
- **Cover Screws:** Stainless Steel

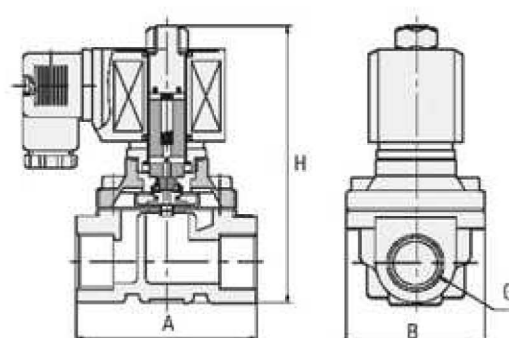


Fig. 1

G	A	B	H
3/8"	69	57	106
1/2"	69	57	106
3/4"	73	57	114
1"	99	77	121
1 1/4"	112	86,5	150
1 1/2"	123	94	160
2"	168	123	183