

Data sheet

# Indirect servo-operated 2/2-way solenoid valves

## Type EV220W 10 - EV220W 50



EV220W is a range of compact indirect servo-operated 2/2 way solenoid valves with connections from 3/8" to 2", especially designed for industrial use within a limited space.

This range has been designed specially for the maintenance, repair and operations markets, which demand an easy and reliable valve that is easy to setup and use.

### Features and versions

- For water, oil, compressed air and similar neutral media
- DN 10 – 50
- Differential pressure: From 0.3 – 16 bar
- Media temperatures: From -10 – 80 °C
- Viscosity: Up to 50 cSt
- Ambient temperatures: From -30 – 50 °C
- Clip-on coil
- Enclosure: IP65
- Power consumption: 6 W AC / 14 W DC
- NO version, standard for 3/8" – 2" valve sizes
- NC version, standard for 3/8" – 2" valve sizes
- Complete coil voltage: 230 V AC, 24V AC, 24 V DC

**Data sheet | Indirect servo-operated 2/2-way solenoid valves, Type EV220W 10 - EV220W 50**
**Brass valve body, NC and AS clip on coil**


Connection ISO228/1	Seal material	Orifice size	K <sub>v</sub> - value [m <sup>3</sup> /h]	Differential pressure min. to max. [bar]	Coil voltage/power consumption AS coil	Media temperature min. to max. [°C]	Code number
G 3/8	NBR	10	1.6	0.2 – 16	230V 50/60Hz 6W	-10 – 80	042U426132
					24V 50/60Hz 6W		042U426119
					24V DC 14W		042U426102
G 1/2		14	4	0.3 – 16	230V 50/60Hz 6W		042U426432
					24V 50/60Hz 6W		042U426419
					24V DC 14W		042U426402
G 3/4		18	7	0.3 – 16	230V 50/60Hz 6W		042U426532
					24V 50/60Hz 6W		042U426519
					24V DC 14W		042U426502
G 1		22	7	0.3 – 16	230V 50/60Hz 6W		042U426632
					24V 50/60Hz 6W		042U426619
					24V DC 14W		042U426602
G 1 1/4	32	15	0.3 – 16	230V 50/60Hz 6W	042U426732		
				24V 50/60Hz 6W	042U426719		
				24V DC 14W	042U426702		
G 1 1/2	40	18	0.3 – 16	230V 50/60Hz 6W	042U426832		
				24V 50/60Hz 6W	042U426819		
				24V DC 14W	042U426802		
G 2	50	32	0.3 – 16	230V 50/60Hz 6W	042U426932		
				24V 50/60Hz 6W	042U426919		
				24V DC 14W	042U426902		

**Brass valve body, NO and AS clip on coil**


Connection ISO228/1	Seal material	Orifice size	K <sub>v</sub> - value [m <sup>3</sup> /h]	Differential pressure min. to max. [bar]	Coil voltage / power consumption AS coil	Media temperature min. to max. [°C]	Code number
G 3/8	NBR	10	1.6	0.2 – 16	230V 50/60Hz 6W	-10 – 80	042U436132
					24V 50/60Hz 6W		042U436119
					24V DC 14W		042U436102
G 1/2		14	4	0.3 – 16	230V 50/60Hz 6W		042U436432
					24V 50/60Hz 6W		042U436419
					24V DC 14W		042U436402
G 3/4		18	7	0.3 – 16	230V 50/60Hz 6W		042U436532
					24V 50/60Hz 6W		042U436519
					24V DC 14W		042U436502
G 1		22	7	0.3 – 16	230V 50/60Hz 6W		042U436632
					24V 50/60Hz 6W		042U436619
					24V DC 14W		042U436602
G 1 1/4	32	15	0.3 – 16	230V 50/60Hz 6W	042U436732		
				24V 50/60Hz 6W	042U436719		
				24V DC 14W	042U436702		
G 1 1/2	40	18	0.3 – 16	230V 50/60Hz 6W	042U436832		
				24V 50/60Hz 6W	042U436819		
				24V DC 14W	042U436802		
G 2	50	32	0.3 – 16	230V 50/60Hz 6W	042U436932		
				24V 50/60Hz 6W	042U436919		
				24V DC 14W	042U436902		

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**Technical data, NC and NO**

Type	EV220W 10	EV220W 14	EV220W 18	EV220W 22	EV220W 32	EV220W 40	EV220W 50
Time to open [ms] <sup>1)</sup>	50	100	200	200	2500	4000	5000
Time to close [ms] <sup>1)</sup>	300	400	500	500	4000	6000	10000
Capacity, K <sub>v</sub> [m <sup>3</sup> /h]	1.6	4	7	7	15	18	32
Max.test pressure	50 bar	25 bar					

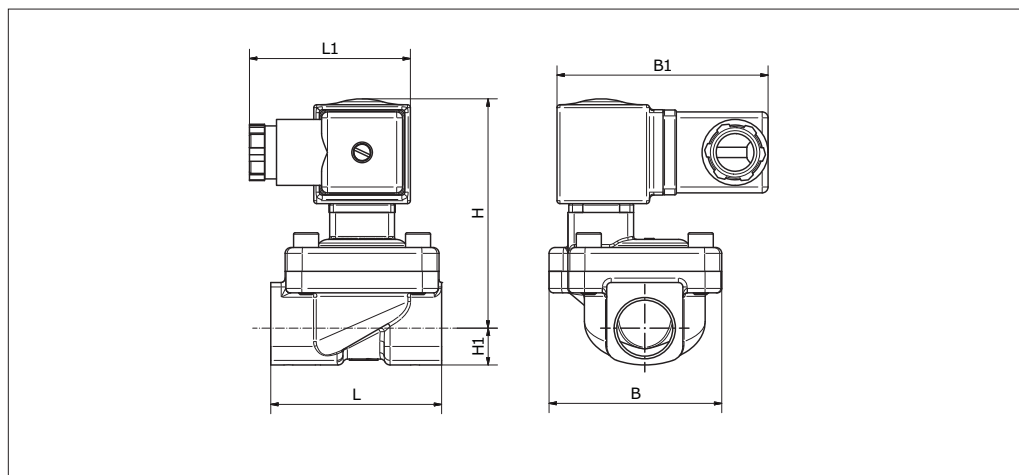
<sup>1)</sup> Times are indicative and apply to water. Exact times will depend on pressure conditions.

Ambient temperature	-30 – 50 °C		
Media viscosity	Max. 50cSt		
Materials	Valve body	Brass	W. no. 2.0401
	Armature	Stainless steel	W. no. 1.4105 / AISI 430FR
	Armature stop	Stainless steel	W. no. 1.4105 / AISI 430FR
	Armature tube	Stainless steel	W. no. 1.4303 / AISI 305
	Spring	Stainless steel	W. no. 14310 / AISI 301
	O-ring	NBR	
	Valve plate	NBR	
Diaphragm	NBR		

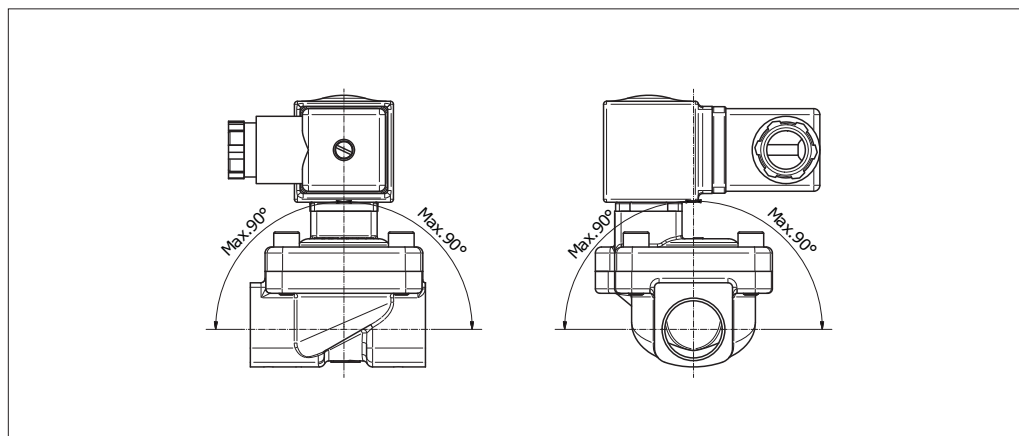
**Dimensions and weight:**

Type	Weight with AS coil [kg]	L [mm]	L <sub>1</sub> [mm]	B [mm]	B <sub>1</sub> [mm]	H <sub>1</sub> [mm]	H [mm]	
					Coil AS		NC	NO
EV220W 10	0.56	51	50	50	70	13	77	81
EV220W 14	0.62	58	50	58	70	13	78	82
EV220W 18	0.84	90	50	58	70	18	79	83
EV220W 22	1.12	90	50	58	70	22	84	84
EV220W 32	2.12	120	50	82	70	27	96	96
EV220W 40	3.32	130	50	95	70	32	106	106
EV220W 50	4.42	162	50	113	70	37	112	112


**Dimensions**




**Mounting angle**



Below coil can be used with EV220W 10 - EV220W 50:

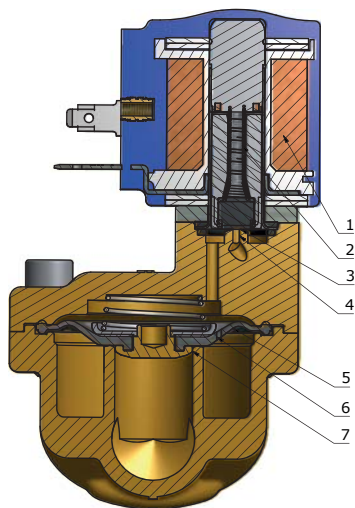
Coil	Type	Power consumption	Enclosure	Features
	AS	6 W AC 14 W DC	IP00 with spade connector, IP65 with cable plug	

Accessories

Coil	Type	Voltage / Power consumption	Enclosure	Cable length	Code number
	AU Coil with cable	115V 50/60Hz 6W	IP67	1 metre	<b>042N7662</b>

Function, NC

- 1. Coil
- 2. Armature spring
- 3. Armature
- 4. Pilot orifice
- 5. Diaphragm
- 6. Equalising orifice
- 7. Main orifice



**Coil voltage disconnected**

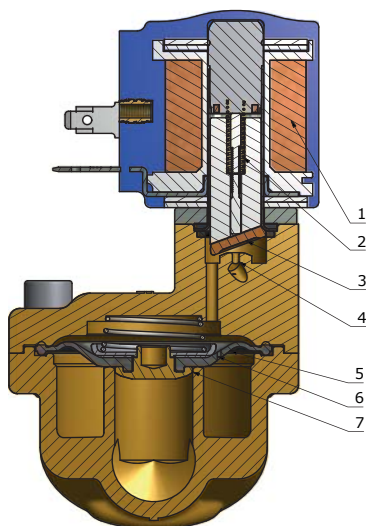
When voltage is disconnected, the armature spring (2) presses the armature (3) down against the pilot orifice (4). Pressure builds up over the diaphragm (5) via the equalising orifice (6). The diaphragm closes the main orifice (7) as soon as the pressure over the diaphragm equals the inlet pressure. The valve stays closed for as long as voltage remains disconnected.

**Coil voltage connected (open)**

When voltage is applied to the coil (1), the pilot orifice (4) is opened. Since the pilot orifice is larger than the equalising orifice (6), pressure over the diaphragm (5) falls and the diaphragm is lifted clear of the main orifice (7). The valve stays open for as long as the required minimum differential pressure is present and voltage is applied to the coil.

Function, NO

- 1. Coil
- 2. Armature spring
- 3. Armature
- 4. Pilot orifice
- 5. Diaphragm
- 6. Equalising orifice
- 7. Main orifice



In principle the function involves the opposite valve positions to those above for applied and disconnected voltage respectively.

### Capacity diagram

Example for water:  
Capacity for EV220W at a  
differential pressure of 3 bar:  
Approx. 7 m<sup>3</sup>/h

