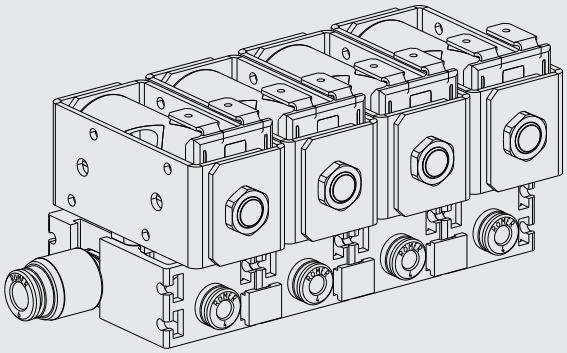
MAGMA 2/2-way Solenoid Valve Battery Type ETV Series 200

MAGMA the special valve principle by AVS-Römer



An innovative high quality valve series with a coaxial flow in 2/2 and 3/2-way version, particularly for the use in the food and medical technology.

The electromagnet actuates a pivot mounted lever on which a diaphragm is fitted against a spring force. The valve interior is therefore spatially and thermally separated from the magnet system.

A particularly effective ratio of electric power to flow rate and allowable operating pressure is obtained by the optimisation of lever and spring in conjunction with the low friction transmission.

Further features:

- minimal dead space
- easily disassembled, e.g. for cleaning
- insensitive to contamination (1 mm hub at seat)
- thermal insulation between the electro-magnet and the medium (no calcification!)
- emergency manual override and position indication as standard
- materials and design are particularly suited for food applications

Versions/Options:

- distributor connections left, right, dual-sided
- valves with different nominal diameters in the same battery
- NC and NO valves in the one battery

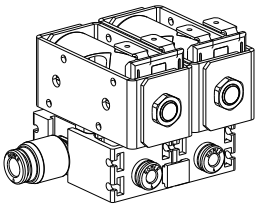
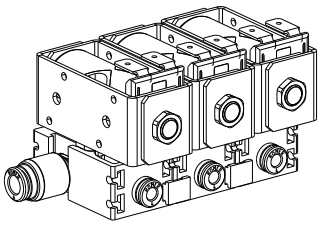
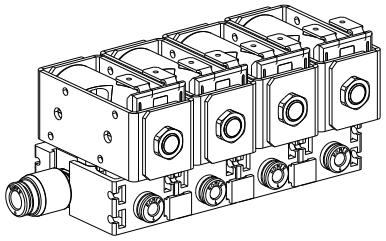
CHARACTERISTICS

GENERAL		
Constructional design	Lever actuated seat valve with separating membrane	
Product name	2/2-way solenoid valve, battery	
Actuation	Electric, direct acting or by emergency manual override with position indicator	
Type	ETV-2221/V.-A.	ETV-2221/V.-B.
Functions	Function "A" normally closed (closing with the flow)	Function „B“ normally open (closing with the flow)
Nominal diameters	DN 1.0 to DN 2.5	DN 1.0 to DN 2.5
Connections	ELSA push-in connectors for pipe/tube OD 4 mm or OD 6 mm	
Ambient temperature	0 °C to +60 °C	
Medium temperature	0 °C to +130 °C	
Medium viscosity	up to approx. 35 mm^2/s	
Valve body and inserts material	PPA and PPSU plastic (KTW and NSF approved)	
Membrane material	EPDM or FKM (each FDA compliant)	
O-ring material	EPDM (FDA compliant and KTW approved) or FKM (FDA compliant)	
Solenoid housing material	PPS plastic (UL94-V0)	
Mounting method	via two M3 threaded inserts for each individual valve	
Mounting position	optional	
Approvals	NSF/ANSI 169	
PNEUMATIC-HYDRAULIC		
Nominal pressure	Up to PN 16 in accordance with the specification table	
Pressure range	0 bar up to the permitted excess pressure PB in accordance with the table dependent on ED, PB 50% applies for max. SD 60 s	
Flow rate	Kv value according to the table	
Medium	Gaseous or liquid mediums which do not attack the materials present	
Response time	Opening time: 10 to 25 ms Closing time: 10 to 25 ms	
ELECTRICAL		
Nominal voltage	24 V DC	
Voltage tolerance	± 10%	
Power consumption P_{nom}	6 W	
Duty cycle	100% ED (DB) , according to the duty cycle in each case, the power consumption can be decreased by up to 30 %	
Electrical connection	Spade terminals for spade connectors 6.3 x 0.8 DIN 46247	

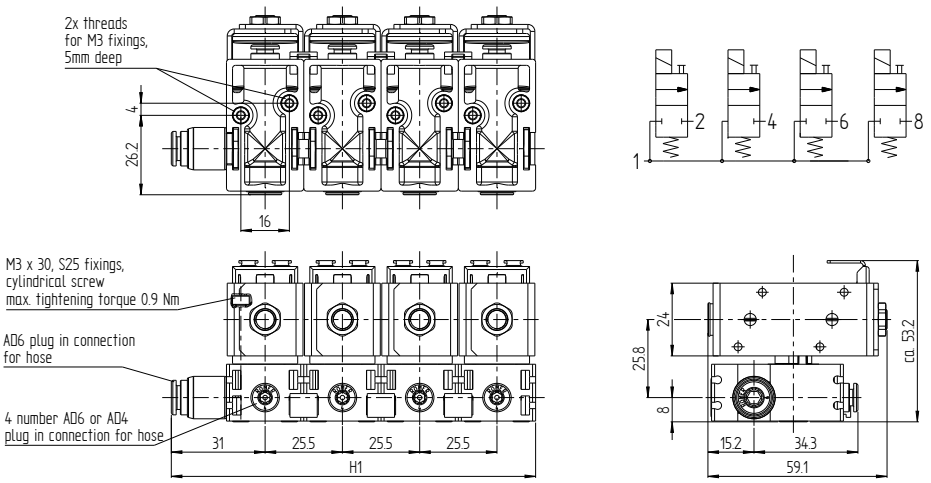
2/2-way Solenoid Valve Battery Type ETV Series 200

Product group **55** | Function „A“ normally closed (NC) (closing with the flow)

NSF | **FDA compliant plastic**

Constructional design	DN	Kv Value for water [l/min]	For tube OD	PN	Allow. OP [bar]	Allow. OP by 50 % duty [bar]	Allow. OP by 100 % duty [bar]	Seal material	Voltage/ current type	Type	Order number	Price
	1.0	0.8	4 / 6	16	16	16	10	FKM	24 V DC	ETV-2221/V2-A10-4FF-024/=-U0	627901	on req.
								EPDM	24 V DC	ETV-2221/V2-A10-4PF-024/=-U0	627902	on req.
								FKM	24 V DC	ETV-2221/V2-A10-6FF-024/=-U0	627903	on req.
								EPDM	24 V DC	ETV-2221/V2-A10-6PF-024/=-U0	627904	on req.
	1.5	1.4	4 / 6	16	16	12.5	6	FKM	24 V DC	ETV-2221/V2-A15-4FF-024/=-U0	627905	on req.
								EPDM	24 V DC	ETV-2221/V2-A15-4PF-024/=-U0	627906	on req.
								FKM	24 V DC	ETV-2221/V2-A15-6FF-024/=-U0	627907	on req.
								EPDM	24 V DC	ETV-2221/V2-A15-6PF-024/=-U0	627908	on req.
	2.0	2.4	4 / 6	12.5	12.5	10	5	FKM	24 V DC	ETV-2221/V2-A20-4FF-024/=-U0	627909	on req.
								EPDM	24 V DC	ETV-2221/V2-A20-4PF-024/=-U0	627910	on req.
								FKM	24 V DC	ETV-2221/V2-A20-6FF-024/=-U0	627911	on req.
								EPDM	24 V DC	ETV-2221/V2-A20-6PF-024/=-U0	627912	on req.
	2.5	3.4	4 / 6	8	8	6	3	FKM	24 V DC	ETV-2221/V2-A25-4FF-024/=-U0	627913	on req.
								EPDM	24 V DC	ETV-2221/V2-A25-4PF-024/=-U0	627914	on req.
								FKM	24 V DC	ETV-2221/V2-A25-6FF-024/=-U0	627915	on req.
								EPDM	24 V DC	ETV-2221/V2-A25-6PF-024/=-U0	627916	on req.
	1.0	0.8	4 / 6	16	16	16	10	FKM	24 V DC	ETV-2221/V3-A10-4FF-024/=-U0	627917	on req.
								EPDM	24 V DC	ETV-2221/V3-A10-4PF-024/=-U0	627918	on req.
								FKM	24 V DC	ETV-2221/V3-A10-6FF-024/=-U0	627919	on req.
								EPDM	24 V DC	ETV-2221/V3-A10-6PF-024/=-U0	627920	on req.
	1.5	1.4	4 / 6	16	16	12.5	6	FKM	24 V DC	ETV-2221/V3-A15-4FF-024/=-U0	627921	on req.
								EPDM	24 V DC	ETV-2221/V3-A15-4PF-024/=-U0	627922	on req.
								FKM	24 V DC	ETV-2221/V3-A15-6FF-024/=-U0	627923	on req.
								EPDM	24 V DC	ETV-2221/V3-A15-6PF-024/=-U0	627924	on req.
	2.0	2.4	4 / 6	12.5	12.5	10	5	FKM	24 V DC	ETV-2221/V3-A20-4FF-024/=-U0	627925	on req.
								EPDM	24 V DC	ETV-2221/V3-A20-4PF-024/=-U0	627926	on req.
								FKM	24 V DC	ETV-2221/V3-A20-6FF-024/=-U0	627927	on req.
								EPDM	24 V DC	ETV-2221/V3-A20-6PF-024/=-U0	627928	on req.
	2.5	3.4	4 / 6	8	8	6	3	FKM	24 V DC	ETV-2221/V3-A25-4FF-024/=-U0	627929	on req.
								EPDM	24 V DC	ETV-2221/V3-A25-4PF-024/=-U0	627930	on req.
								FKM	24 V DC	ETV-2221/V3-A25-6FF-024/=-U0	627931	on req.
								EPDM	24 V DC	ETV-2221/V3-A25-6PF-024/=-U0	627932	on req.
	1.0	0.8	4 / 6	16	16	16	10	FKM	24 V DC	ETV-2221/V4-A10-4FF-024/=-U0	627933	on req.
								EPDM	24 V DC	ETV-2221/V4-A10-4PF-024/=-U0	627934	on req.
								FKM	24 V DC	ETV-2221/V4-A10-6FF-024/=-U0	627935	on req.
								EPDM	24 V DC	ETV-2221/V4-A10-6PF-024/=-U0	627936	on req.
	1.5	1.4	4 / 6	16	16	12.5	6	FKM	24 V DC	ETV-2221/V4-A15-4FF-024/=-U0	627937	on req.
								EPDM	24 V DC	ETV-2221/V4-A15-4PF-024/=-U0	627938	on req.
								FKM	24 V DC	ETV-2221/V4-A15-6FF-024/=-U0	627939	on req.
								EPDM	24 V DC	ETV-2221/V4-A15-6PF-024/=-U0	627940	on req.
	2.0	2.4	4 / 6	12.5	12.5	10	5	FKM	24 V DC	ETV-2221/V4-A20-4FF-024/=-U0	627941	on req.
								EPDM	24 V DC	ETV-2221/V4-A20-4PF-024/=-U0	627942	on req.
								FKM	24 V DC	ETV-2221/V4-A20-6FF-024/=-U0	627943	on req.
								EPDM	24 V DC	ETV-2221/V4-A20-6PF-024/=-U0	627944	on req.
	2.5	3.4	4 / 6	8	8	6	3	FKM	24 V DC	ETV-2221/V4-A25-4FF-024/=-U0	627945	on req.
								EPDM	24 V DC	ETV-2221/V4-A25-4PF-024/=-U0	627946	on req.
								FKM	24 V DC	ETV-2221/V4-A25-6FF-024/=-U0	627947	on req.
								EPDM	24 V DC	ETV-2221/V4-A25-6PF-024/=-U0	627948	on req.

Illustration



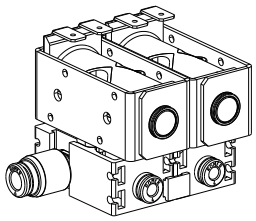
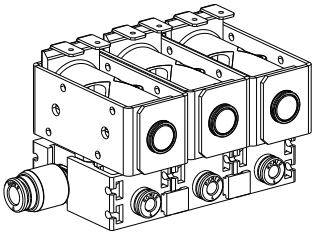
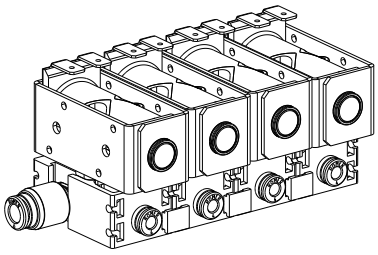
Valve design

Description	H1
2-valve battery	69.2
3-valve battery	94.7
4-valve battery	120.2

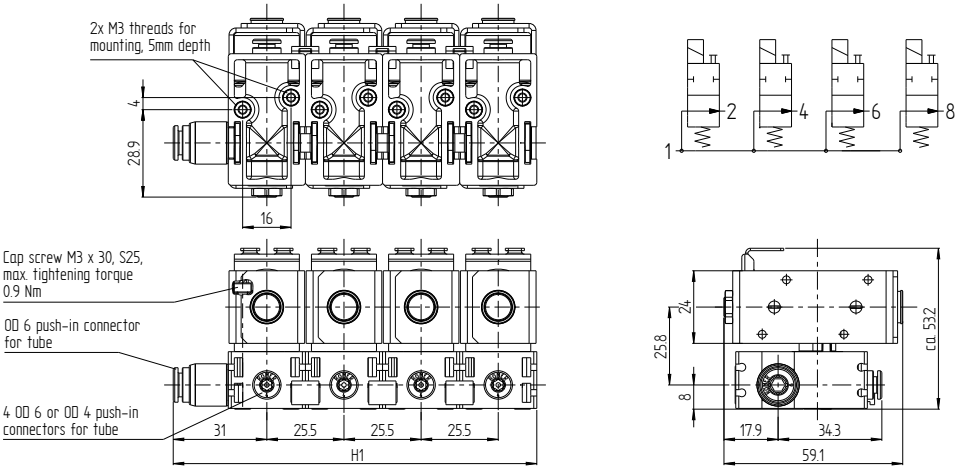
2/2-way Solenoid Valve Battery ETV Series 200

Product group **55** | Function „B“ normally open (N) (closing with the flow)

NSF | **FDA compliant plastic**

Constructional design	DN	Kv Value for water [l/min]	For tube OD	PN	Allow. OP [bar]	Allow. OP by 50 % duty [bar]	Allow. OP by 100 % duty [bar]	Seal material	Voltage/ current type	Type	Order number	Price
	1.0	0.8	4	16	16	16	16	FKM	24 V DC	ETV-2111/V2-B10-4FF-024/=-U0	627951	on req.
								EPDM	24 V DC	ETV-2111/V2-B10-4PF-024/=-U0	627952	on req.
			6					FKM	24 V DC	ETV-2111/V2-B10-6FF-024/=-U0	627953	on req.
								EPDM	24 V DC	ETV-2111/V2-B10-6PF-024/=-U0	627954	on req.
	1.5	1.4	4	12.5	12.5	12.5	12.5	FKM	24 V DC	ETV-2111/V2-B15-4FF-024/=-U0	627955	on req.
								EPDM	24 V DC	ETV-2111/V2-B15-4PF-024/=-U0	627956	on req.
			6					FKM	24 V DC	ETV-2111/V2-B15-6FF-024/=-U0	627957	on req.
								EPDM	24 V DC	ETV-2111/V2-B15-6PF-024/=-U0	627958	on req.
	2.0	2.4	4	8	8	8	8	FKM	24 V DC	ETV-2111/V2-B20-4FF-024/=-U0	627959	on req.
								EPDM	24 V DC	ETV-2111/V2-B20-4PF-024/=-U0	627960	on req.
			6					FKM	24 V DC	ETV-2111/V2-B20-6FF-024/=-U0	627961	on req.
								EPDM	24 V DC	ETV-2111/V2-B20-6PF-024/=-U0	627962	on req.
	2.5	3.4	4	4	4	4	4	FKM	24 V DC	ETV-2111/V2-B25-4FF-024/=-U0	627963	on req.
								EPDM	24 V DC	ETV-2111/V2-B25-4PF-024/=-U0	627964	on req.
			6					FKM	24 V DC	ETV-2111/V2-B25-6FF-024/=-U0	627965	on req.
								EPDM	24 V DC	ETV-2111/V2-B25-6PF-024/=-U0	627966	on req.
	1.0	0.8	4	16	16	16	16	FKM	24 V DC	ETV-2111/V3-B10-4FF-024/=-U0	627967	on req.
								EPDM	24 V DC	ETV-2111/V3-B10-4PF-024/=-U0	627968	on req.
			6					FKM	24 V DC	ETV-2111/V3-B10-6FF-024/=-U0	627969	on req.
								EPDM	24 V DC	ETV-2111/V3-B10-6PF-024/=-U0	627970	on req.
	1.5	1.4	4	12.5	12.5	12.5	12.5	FKM	24 V DC	ETV-2111/V3-B15-4FF-024/=-U0	627971	on req.
								EPDM	24 V DC	ETV-2111/V3-B15-4PF-024/=-U0	627972	on req.
			6					FKM	24 V DC	ETV-2111/V3-B15-6FF-024/=-U0	627973	on req.
								EPDM	24 V DC	ETV-2111/V3-B15-6PF-024/=-U0	627974	on req.
	2.0	2.4	4	8	8	8	8	FKM	24 V DC	ETV-2111/V3-B20-4FF-024/=-U0	627975	on req.
								EPDM	24 V DC	ETV-2111/V3-B20-4PF-024/=-U0	627976	on req.
			6					FKM	24 V DC	ETV-2111/V3-B20-6FF-024/=-U0	627977	on req.
								EPDM	24 V DC	ETV-2111/V3-B20-6PF-024/=-U0	627978	on req.
	2.5	3.4	4	4	4	4	4	FKM	24 V DC	ETV-2111/V3-B25-4FF-024/=-U0	627979	on req.
								EPDM	24 V DC	ETV-2111/V3-B25-4PF-024/=-U0	627980	on req.
			6					FKM	24 V DC	ETV-2111/V3-B25-6FF-024/=-U0	627981	on req.
								EPDM	24 V DC	ETV-2111/V3-B25-6PF-024/=-U0	627982	on req.
	1.0	0.8	4	16	16	16	16	FKM	24 V DC	ETV-2111/V4-B10-4FF-024/=-U0	627983	on req.
								EPDM	24 V DC	ETV-2111/V4-B10-4PF-024/=-U0	627984	on req.
			6					FKM	24 V DC	ETV-2111/V4-B10-6FF-024/=-U0	627985	on req.
								EPDM	24 V DC	ETV-2111/V4-B10-6PF-024/=-U0	627986	on req.
	1.5	1.4	4	12.5	12.5	12.5	12.5	FKM	24 V DC	ETV-2111/V4-B15-4FF-024/=-U0	627987	on req.
								EPDM	24 V DC	ETV-2111/V4-B15-4PF-024/=-U0	627988	on req.
			6					FKM	24 V DC	ETV-2111/V4-B15-6FF-024/=-U0	627989	on req.
								EPDM	24 V DC	ETV-2111/V4-B15-6PF-024/=-U0	627990	on req.
	2.0	2.4	4	8	8	8	8	FKM	24 V DC	ETV-2111/V4-B20-4FF-024/=-U0	627991	on req.
								EPDM	24 V DC	ETV-2111/V4-B20-4PF-024/=-U0	627992	on req.
			6					FKM	24 V DC	ETV-2111/V4-B20-6FF-024/=-U0	627993	on req.
								EPDM	24 V DC	ETV-2111/V4-B20-6PF-024/=-U0	627994	on req.
	2.5	3.4	4	4	4	4	4	FKM	24 V DC	ETV-2111/V4-B25-4FF-024/=-U0	627995	on req.
								EPDM	24 V DC	ETV-2111/V4-B25-4PF-024/=-U0	627996	on req.
			6					FKM	24 V DC	ETV-2111/V4-B25-6FF-024/=-U0	627997	on req.
								EPDM	24 V DC	ETV-2111/V4-B25-6PF-024/=-U0	627998	on req.

Illustration



Valve design

Description	H1
2-valve battery	69.2
3-valve battery	94.7
4-valve battery	120.2