# MAGMA Solenoid Valves Type ETV Series 400

**MAGMA** the valve principle from AVS Römer

MEDIUM SEPARATED · ELSA Push-in Fittings · NSF COMPONENT



High quality valve series with coaxial flow or 90° flow, in 2/2-way and 3/2-way version, especially for use in the food industries and medical technology.

The solenoid operates against spring force a pivot mounted lever to which a membrane is attached. The interior of the valve is spatially and thermally separated from the solenoid 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.

**Other features:**
- minimal dead space
- easily disassembled, e.g. for cleaning
- insensative to contamination
- thermal insulation between the elec-tro-magnet and the medium
- emergency manual override with position indicator as standard
- materials and constructional design especially optimised for food applications
- IP class 65 possible

**Variations / options:**
- other tube connector
- other material for seal
- other nominal diameter or other pressure range
- version for vacuum
- other function (e.g. 3/2-way distribution valve
- other nominal voltage
- 230 V AC using a bridge rectifier (see under cable sockets)

| CHARACTERISTICS | | |
|---|---|---|
| **GENERAL** | | |
| Constructional design | Lever actuated seat valve with separating membrane | |
| Product name | 2/2-way solenoid valve | 3/2-way solenoid valve |
| Actuation | Electric, direct acting or by emergency manual override with position indicator | |
| Product type | ETV-422-A . | ETV-419-F . |
| Function | “A“ in 0-position closed | “F“ in 0-position “1“ to “2“ closed, “1“ to “4“ open |
| Nominal diameter | DN 4 (DN 1,5 - 6 on demand) | |
| Connection | ELSA push-in connectors for pipe/tube OD 6 (OD 4 I OD 8 on request) | |
| 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 insert material | PPA, PPSU | |
| Membrane and O-ring material | FKM and EPDM | |
| Solenoid housing material | PPS, EPDM (UL94-V0) plastic, insulation class “F” | |
| Mounting method | with M14x1 locknut | |
| Mounting position | optional | |
| Approval | NSF/ANSI 169 | |
| **PNEUMATIC - HYDRAULIC** | | |
| Nominal pressure | in accordance with the specification table | |
| Pressure range | 0 bar up to allowable operating pressure OP in accordance with the specification table | |
| Flow rate | Kv-value in accordance with the specification table | |
| Medium | Gases or liquids which do not corrode the materials specified | |
| Response time | Opening time 10 to 25 ms; Closing time: 10 to 25 ms | |
| **ELECTRIC** | | |
| Nominal voltage | 24 V DC | |
| Voltage tolerance | ±10 % | |
| Nominal power $P_{20}$ | 6 W | |
| Duty cycle | 100 %, depending on the duty cycle the power consumption decreases by up to 20 % | |
| Electrical connection | 11 mm - industry standard form B (DIN EN 175301 - 803) | |
| Protection class according to EN 60529 | IP 00 | |

## 2/2-Way Coaxial Solenoid Valve - Type ETV Series 200

Price group **56**

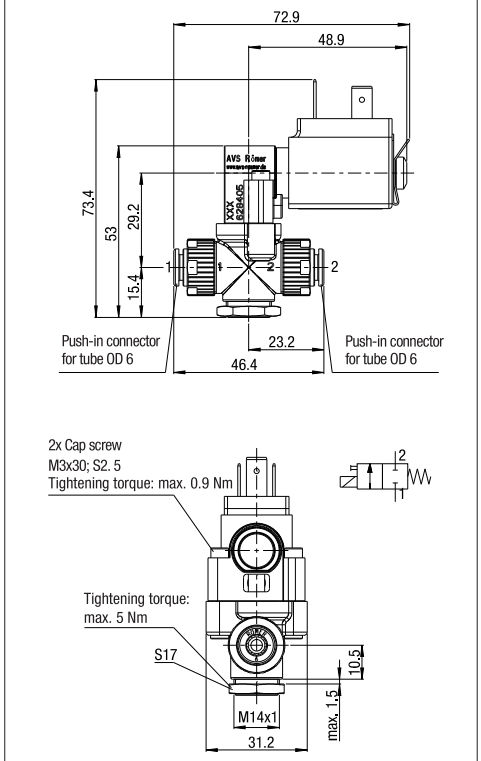
"A" in 0-position closed (closing with the flow)

NSF **Plastic PPA**

Irrespective of the information in the solenoid valve tables a housing temperature of +155 °C may not be exceeded.
The value is limited to +120 °C with use of a cable socket. In case of doubt we are pleased to advise you.

| DN | Kv-value water [l/min] | for tube OD | PN | Allow. OP [bar] | Seal material | Voltage / current | Type | Order number | Price |
|---|---|---|---|---|---|---|---|---|---|
| 4 | 5 | 6 | 2 | 0-2 | FKM | 24 V DC | ETV-422-A40-6FF-024/=-H0 | 628407 | o. r. |
| 4 | 5 | 6 | 2 | 0-2 | EPDM | 24 V DC | ETV-422-A40-6PF-024/=-H0 | 628417 | o. r. |

## Illustration




## 3/2-Way Coaxial Solenoid Valve - Type ETV Series 200

Price group **56**

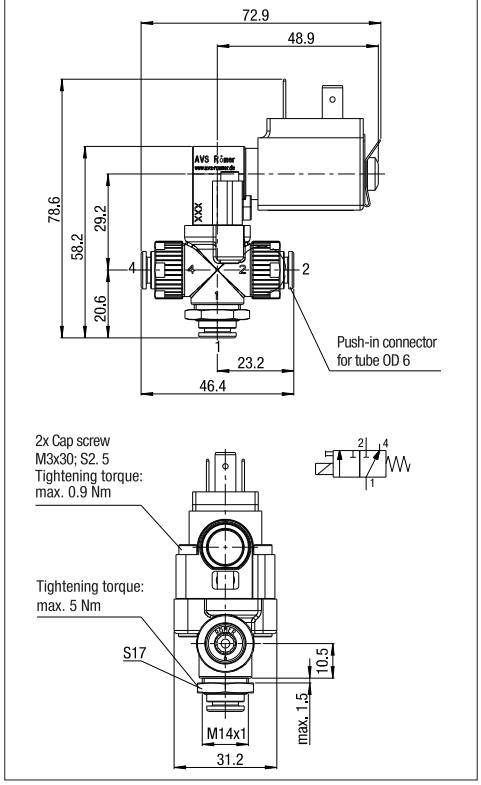
"F" in 0-position "1" to "2" closed, "1" to "4" open

NSF **Plastic PPA**

Irrespective of the information in the solenoid valve tables a housing temperature of +155 °C may not be exceeded.
The value is limited to +120 °C with use of a cable socket. In case of doubt we are pleased to advise you.

| DN | Kv-value water [l/min] | for tube OD | PN | Allow. OP [bar] | Seal material | Voltage / current | Type | Order number | Price |
|---|---|---|---|---|---|---|---|---|---|
| 4 | 5 | 6 | 1.5 | 0-1.5 | FKM | 24 V DC | ETV-429-F40-6FF-024/=-H0 | 628537 | o. r. |
| 4 | 5 | 6 | 1.5 | 0-1.5 | EPDM | 24 V DC | ETV-429-F40-6PF-024/=-H0 | 628547 | o. r. |

## Illustration



# DIGMA Solenoid Valves Type EAV Series 700

ELSA Push-in Fittings · NSF COMPONENT





Further development based on the EAV series 200.

This stainless steel valve series is suitable for many aggressive medium and thanks to the use of high-quality magnetic steels, offers a reliable solution for applications with the highest demands on corrosion resistance.

Another characteristic of this type of construction is the welded stainless steel plunger guide which ensures increased pressure and leakage assurance.

Solenoid coils with different performance classes enable a favourable adaptation to the diverse requirements with regard to nominal size, operating pressure, power consumption, type of voltage or permissible self-heating.

**Features**

- Unbeatable price-performance ratio
- Individual product developments
- Inexpensive MIM valve body
- Extremely high material strength
- NSF certified
- Flexibility in design
- Lightweight
- Smallest dimensions
- Highest product quality
- Fail-safe and durable

## CHARACTERISTICS

| GENERAL | | | | |
|---|---|---|---|---|
| **Constructional design** | Seat valve, rubber seals | | | |
| **Product name** | 2/2-way solenoid valve | | 3/2-way solenoid valve | |
| **Actuation** | electric, direct-acting | | | |
| **Product type** | EAV-7..-A.. | EAV-7..-B.. | EAV-7..-C.. | EAV-7..-D.. |
| **Function** | “A” normally closed (closing with flow) | “B” normally open (closing against current) | “C” normaly closed with “1”, “2” to “3” discharged (closing against current) | “D” in 0 position “1” to “2” open, “3” closed (closing against current) |
| **Nominal diameter** | DN 1.2 to DN 3 | DN 1.2 to DN 1.8 | DN 1.2 to DN 3 | DN 1.2 to DN 1.8 |
| **Connection** | ELSA push-in connection for tube/pipe 6 | | | |
| **Ambient temperature** | 0 °C to +60 °C | | | |
| **Medium temperature** | 0 °C to +120 °C (Special designs for higher temperatures on request) | | | |
| **Medium viscosity** | up to approx. 20 mm²/s | | | |
| **Valve body material** | 1.4404 (AISI 316L) | | | |
| **Other inner component material** | Stainless steel | | | |
| **Seal material** | FKM (Flour-Rubber) (others on request) | | | |
| **Mounting method** | 2 M4 tapped holes in valve body or using rigid pipework | | | |
| **Mounting position** | optional, preferably upright | | | |
| **Approval** | NSF/ANSI 169 | | | |
| PNEUMATIC - HYDRAULIC | | | | |
| **Nominal pressure** | up to PN 20 According to Type table. The numerical value of the nominal pressure PN signifies the permitted excess operating pressure OP in bar at 60 °C ambient temperature and 60 °C medium temperature. Insofar as two values are given, the first value refers to solenoid coils with highest electrical power consumption, the second value to that with lowest power consumption. | | | |
| **Pressure range** | Technical vacuum up to permitted operating pressure OP. For exceptions which refer to minimum permitted operating pressure see table. | | | |
| **Flow rate** | Kv-value and QNn-value according to Type table | | | |
| **Medium** | gaseous or liquid | | | |
| **Response time** | opening time: 7 - 20 ms closing time: 12 - 20 ms | | | |
| **Electrical** | see solenoid coils | | | |