

Data sheet

Solenoid valves 2/2-way servo operated type EV220B 15–50



EV220B 15–50 is a universal indirect servo-operated 2/2-way solenoid valve program. Valve body in brass, dezincification resistant brass and stainless steel ensures that a broad variety of application can be covered.

Built-in pilot filter as standard, adjustable closing time and enclosures up to IP67 ensures optimal performance even under critical working conditions.

Features and versions:

- For water, steam, oil, compressed air and gases
- Flow range for water: 1.3 – 160 m³/h
- Differential pressure: 0.3 – 16 bar
- Media temperature from -30 – 140 °C
- Ambient temperature: Up to 80 °C
- Coil enclosure: Up to IP67
- Thread connections: From G ½ – G 2
- DN 15 – 50
- Viscosity: Up to 50 cSt
- Water hammer damped
- Built in filter for protection of pilot system
- Adjustable closing time available
- EV220B NC and NO brass version for neutral liquids and gasses
- EV220BD NC DZR version for neutral and slightly aggressive liquids and gases
- EV220BSS NC Stainless steel version for neutral and aggressive liquids and gases
- Also available with NPT thread.

Solenoid valves, type EV220B 15–50

Brass valve body, NC



| Connection ISO228/1 | Seal material | Orifice size | k_v - value [m ³ /h] | Differential pressure min. to max. ⁶⁾ [bar] | Media temperature min. to max. [°C] | Code number |
|---------------------|--------------------|--------------|-----------------------------------|--|-------------------------------------|-----------------|
| G ½ | EPDM ¹⁾ | 15 | 4 | 0.3 – 16 | -30 – 120 ⁴⁾ | 032U7115 |
| | NBR ²⁾ | | | 0.3 – 16 | -10 – 90 | 032U7170 |
| | FKM ³⁾ | | | 0.3 – 10 | 0 – 100 ⁵⁾ | 032U7116 |
| G ¾ | EPDM ¹⁾ | 20 | 8 | 0.3 – 16 | -30 – 120 ⁴⁾ | 032U7120 |
| | NBR ²⁾ | | | 0.3 – 16 | -10 – 90 | 032U7171 |
| | FKM ³⁾ | | | 0.3 – 10 | 0 – 100 ⁵⁾ | 032U7121 |
| G 1 | EPDM ¹⁾ | 25 | 11 | 0.3 – 16 | -30 – 120 ⁴⁾ | 032U7125 |
| | NBR ²⁾ | | | 0.3 – 16 | -10 – 90 | 032U7172 |
| | FKM ³⁾ | | | 0.3 – 10 | 0 – 100 ⁵⁾ | 032U7126 |
| G 1 ¼ | EPDM ¹⁾ | 32 | 18 | 0.3 – 16 | -30 – 120 ⁴⁾ | 032U7132 |
| | NBR ²⁾ | | | 0.3 – 16 | -10 – 90 | 032U7173 |
| | FKM ³⁾ | | | 0.3 – 10 | 0 – 100 ⁵⁾ | 032U7133 |
| G 1 ½ | EPDM ¹⁾ | 40 | 24 | 0.3 – 16 | -30 – 120 ⁴⁾ | 032U7140 |
| | NBR ²⁾ | | | 0.3 – 16 | -10 – 90 | 032U7174 |
| | FKM ³⁾ | | | 0.3 – 10 | 0 – 100 ⁵⁾ | 032U7141 |
| G 2 | EPDM ¹⁾ | 50 | 40 | 0.3 – 16 | -30 – 120 ⁴⁾ | 032U7150 |
| | NBR ²⁾ | | | 0.3 – 16 | -10 – 90 | 032U7175 |
| | FKM ³⁾ | | | 0.3 – 10 | 0 – 100 ⁵⁾ | 032U7151 |

Brass valve body, NO



| Connection ISO228/1 | Seal material | Orifice size | k_v - value [m ³ /h] | Differential pressure min. to max. ⁶⁾ [bar] | Media temperature min. to max. [°C] | Code number |
|---------------------|--------------------|--------------|-----------------------------------|--|-------------------------------------|-----------------|
| G ½ | EPDM ¹⁾ | 15 | 4 | 0.3 – 16 | -30 – 120 ⁴⁾ | 032U7117 |
| | NBR ²⁾ | | | 0.3 – 16 | -10 – 90 | 032U7180 |
| | FKM ³⁾ | | | 0.3 – 10 | 0 – 100 ⁵⁾ | 032U7118 |
| G ¾ | EPDM ¹⁾ | 20 | 8 | 0.3 – 16 | -30 – 120 ⁴⁾ | 032U7122 |
| | NBR ²⁾ | | | 0.3 – 16 | -10 – 90 | 032U7181 |
| | FKM ³⁾ | | | 0.3 – 10 | 0 – 100 ⁵⁾ | 032U7123 |
| G 1 | EPDM ¹⁾ | 25 | 11 | 0.3 – 16 | -30 – 120 ⁴⁾ | 032U7127 |
| | NBR ²⁾ | | | 0.3 – 16 | -10 – 90 | 032U7182 |
| | FKM ³⁾ | | | 0.3 – 10 | 0 – 100 ⁵⁾ | 032U7128 |
| G 1 ¼ | EPDM ¹⁾ | 32 | 18 | 0.3 – 16 | -30 – 120 ⁴⁾ | 032U7134 |
| | NBR ²⁾ | | | 0.3 – 16 | -10 – 90 | 032U7183 |
| | FKM ³⁾ | | | 0.3 – 10 | 0 – 100 ⁵⁾ | 032U7135 |
| G 1 ½ | EPDM ¹⁾ | 40 | 24 | 0.3 – 10 | -30 – 120 ⁴⁾ | 032U7142 |
| | NBR ²⁾ | | | 0.3 – 10 | -10 – 90 | 032U7184 |
| | FKM ³⁾ | | | 0.3 – 10 | 0 – 100 ⁵⁾ | 032U7143 |
| G 2 | EPDM ¹⁾ | 50 | 40 | 0.3 – 10 | -30 – 120 ⁴⁾ | 032U7152 |
| | NBR ²⁾ | | | 0.3 – 10 | -10 – 90 | 032U7185 |
| | FKM ³⁾ | | | 0.3 – 10 | 0 – 100 ⁵⁾ | 032U7153 |

¹⁾ EPDM is recommended for water.

²⁾ NBR is suitable for oil, water and air

³⁾ FKM is suitable for oil and air. For water at max. +60 °C

⁴⁾ Low pressure steam, 4 bar: Max. +140 °C

BA a.c./d.c. and BB/BE d.c. coils: Max. +100 °C

BO and BP coils: Max. +90 °C

⁵⁾ For water: Max. +60 °C

BO and BP coils: Max. +90 °C

⁶⁾ Only 10 bars on liquids (NO)

Solenoid valves, type EV220B 15–50

Technical data, brass valve body, NC and NO

| Main type | EV220B 15B | EV220B 20B | EV220B 25B | EV220B 32B | EV220B 40B | EV220B 50B |
|----------------------------------|------------|------------|------------|------------|------------|------------|
| Time to open [ms] ¹⁾ | 40 | 40 | 300 | 1000 | 1500 | 5000 |
| Time to close [ms] ¹⁾ | 350 | 1000 | 1000 | 2500 | 4000 | 10000 |

¹⁾The times are indicative and apply to water. The exact times will depend on the pressure conditions.
Closing times can be changed by replacement of the equalising orifice.

| | | | |
|--------------------|--|------------------|--------------------------|
| Installation | Optional, but vertical solenoid system is recommended. | | |
| Max. test pressure | 25 bar | | |
| Viscosity | Max. 50 cSt | | |
| Materials | Valve body: | Brass | W.no. 2.0402 |
| | Armature: | Stainless steel | W.no. 1.4105/AISI 430 FR |
| | Armature tube: | Stainless steel | W.no. 1.4306/AISI 304 L |
| | Armature stop: | Stainless steel | W.no. 1.4105/AISI 430 FR |
| | Springs | Stainless steel | W.no. 1.4310/AISI 301 |
| | O-rings: | EPDM, FKM or NBR | |
| | Valve plate: | EPDM, FKM or NBR | |
| Diaphragm: | EPDM, FKM or NBR | | |

Solenoid valves, type EV220B 15–50

Dezincification resistant brass (DZR) valve body, NC



| Connection ISO228/1 | Seal material | Orifice size | k_v -value [m ³ /h] | Differential pressure Min. – max. [bar] | Media temperature min. to max. [°C] | Code number |
|---------------------|--------------------|--------------|----------------------------------|---|-------------------------------------|-----------------|
| G ½ | EPDM ¹⁾ | 15 | 4 | 0.3 – 16 | -30 – 120 ²⁾ | 032U5815 |
| G ¾ | | 20 | 8 | | | 032U5820 |
| G 1 | | 25 | 11 | | | 032U5825 |
| G 1 ¼ | | 32 | 18 | | | 032U5832 |
| G 1 ½ | | 40 | 24 | | | 032U5840 |
| G 2 | | 50 | 40 | | | 032U5850 |

¹⁾ EPDM is recommended for water.

²⁾ Low pressure steam, 4 bar: Max. +140 °C
 BA a.c./d.c. and BB/BE d.c. coils: Max. +100 °C
 BO and BP coils: Max. +90 °C

Technical data, dezincification resistant brass (DZR) valve body, NC

| Main type | EV220B 15BD | EV220B 20BD | EV220B 25BD | EV220B 32BD | EV220B 40BD | EV220B 50BD |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Time to open [ms] ¹⁾ | 40 | 40 | 300 | 1000 | 1500 | 5000 |
| Time to close ms] ¹⁾ | 350 | 1000 | 1000 | 2500 | 4000 | 10000 |

¹⁾The times are indicative and apply to water. The exact times will depend on the pressure conditions.
 Closing times can be changed by replacement of the equalising orifice.

| | | | |
|---------------------------|--|---------------------------------------|--------------------------|
| Installation | Optional, but vertical solenoid system is recommended. | | |
| Max. test pressure | 25 bar | | |
| Viscosity | Max. 50 cSt | | |
| Materials | Valve body: | Dezincification resistant brass (DZR) | CuZn36Pb2As/CZ132 |
| | Armature: | Stainless steel | W.no. 1.4105/AISI 430 FR |
| | Armature tube: | Stainless steel | W.no. 1.4306/AISI 304 L |
| | Armature stop: | Stainless steel | W.no. 1.4105/AISI 430 FR |
| | Springs | Stainless steel | W.no. 1.4310/AISI 301 |
| | Orifices | Stainless steel | W.no. 1.4404/AISI 316L |
| | Valve seat | Stainless steel | W.no. 1.4404/AISI 316L |
| | O-rings | EPDM | |
| | Valve plate | EPDM | |
| Diaphragm | EPDM | | |

Solenoid valves, type EV220B 15–50

Stainless steel valve body, NC



| Connection ISO228/1 | Seal material | Orifice size | k_v - value [m ³ /h] | Differential pressure min. – max. [bar] | Media temperature min. to max. [°C] | Code number |
|---------------------|--------------------|--------------|-----------------------------------|---|-------------------------------------|-----------------|
| G ½ | EPDM ¹⁾ | 15 | 4 | 0.3 – 16 | -30 – 120 ³⁾ | 032U8500 |
| | FKM ²⁾ | | | 0.3 – 10 | 0 – 100 ⁴⁾ | 032U8506 |
| G ¾ | EPDM ¹⁾ | 20 | 8 | 0.3 – 16 | -30 – 120 ³⁾ | 032U8501 |
| | FKM ²⁾ | | | 0.3 – 10 | 0 – 100 ⁴⁾ | 032U8507 |
| G 1 | EPDM ¹⁾ | 25 | 11 | 0.3 – 16 | -30 – 120 ³⁾ | 032U8502 |
| | FKM ²⁾ | | | 0.3 – 10 | 0 – 100 ⁴⁾ | 032U8508 |
| G 1 ¼ | EPDM ¹⁾ | 32 | 18 | 0.3 – 16 | -30 – 120 ³⁾ | 032U8503 |
| | FKM ²⁾ | | | 0.3 – 10 | 0 – 100 ⁴⁾ | 032U8509 |
| G 1 ½ | EPDM ¹⁾ | 40 | 24 | 0.3 – 16 | -30 – 120 ³⁾ | 032U8504 |
| | FKM ²⁾ | | | 0.3 – 10 | 0 – 100 ⁴⁾ | 032U8510 |
| G 2 | EPDM ¹⁾ | 50 | 40 | 0.3 – 16 | -30 – 120 ³⁾ | 032U8505 |
| | FKM ²⁾ | | | 0.3 – 10 | 0 – 100 ⁴⁾ | 032U8511 |

¹⁾ EPDM is recommended for water.
(steam max. +140° C / 4 bar).

²⁾ FKM is suitable for oil and air. For water at max. +60 °C

³⁾ Low pressure steam, 4 bar: Max. +140 °C
BA a.c./d.c. and BB/BE d.c. coils: Max. +100 °C
BO and BP coils: Max. +90 °C

⁴⁾ For water: Max. +60 °C
BO and BP coils: Max. +90 °C

Technical data, stainless steel valve body, NC

| Main type | EV220B 15SS | EV220B 20SS | EV220B 25SS | EV220B 32SS | EV220B 40SS | EV220B50SS |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|------------|
| Time to open [ms] ¹⁾ | 40 | 40 | 300 | 1000 | 1500 | 5000 |
| Time to close [ms] ¹⁾ | 350 | 1000 | 1000 | 2500 | 4000 | 10000 |

¹⁾The times are indicative and apply to water. The exact times will depend on the pressure conditions.
Closing times can be changed by replacement of the equalising orifice.

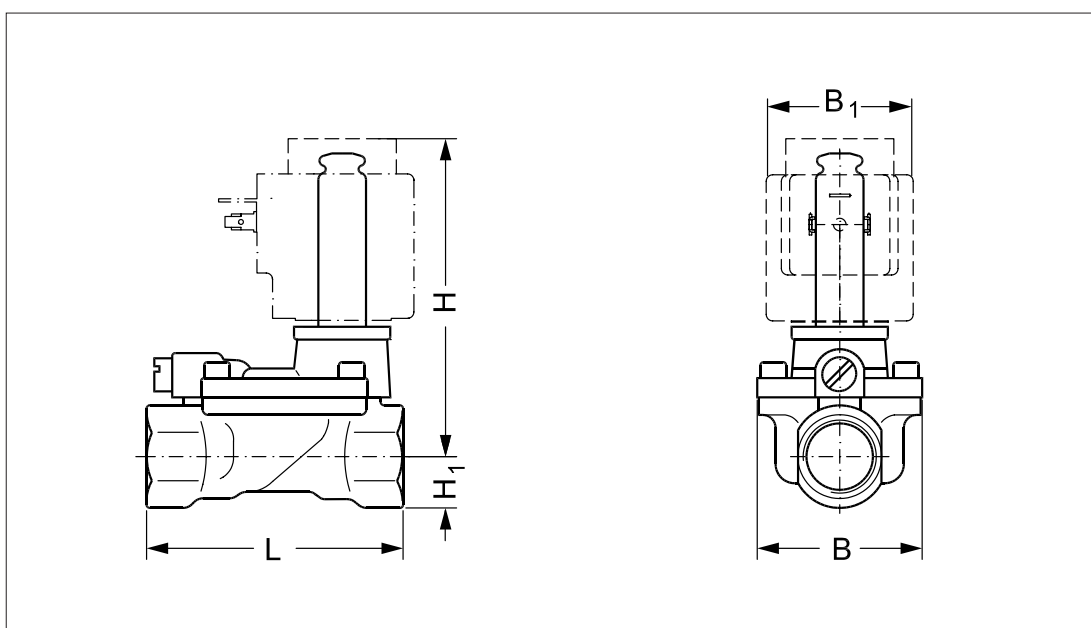
| | | | |
|--------------------|--|-----------------|--------------------------|
| Installation | Optional, but vertical solenoid system is recommended. | | |
| Max. test pressure | 25 bar | | |
| Viscosity | Max. 50 cSt | | |
| Materials | Valve body: | Stainless steel | W.no. 1.4581/AISI 318 |
| | Armature: | Stainless steel | W.no. 1.4105/AISI 430 FR |
| | Armature tube: | Stainless steel | W.no. 1.4306/AISI 304 L |
| | Armature stop: | Stainless steel | W.no. 1.4105/AISI 430 FR |
| | Springs: | Stainless steel | W.no. 1.4310/AISI 301 |
| | Orifices: | Stainless steel | W.no. 1.4404/AISI316L |
| | O-rings: | EPDM or FKM | |
| | Valve plate: | EPDM or FKM | |
| Diaphragm: | EPDM or FKM | | |

Solenoid valves, type EV220B 15–50

Dimensions and weight: Brass, DZR brass and stainless steel, NC and NO

| Type | Weight gross, valve body without coil [kg] | L [mm] | B [mm] | B ₁ [mm] / coil type | | | | H [mm] | H ₁ [mm] |
|-----------|--|-----------|-----------|---------------------------------|-------|-------|----|-----------|------------------------|
| | | | | BA | BB/BE | BG/BO | BP | | |
| EV220B 15 | 0,7 | 80,0 | 52,0 | 32 | 46 | 68 | 45 | 99 | 15,0 |
| EV220B 20 | 0,9 | 90,0 | 58,0 | 32 | 46 | 68 | 45 | 103 | 18,0 |
| EV220B 25 | 1,3 | 109,0 | 70,0 | 32 | 46 | 68 | 45 | 113 | 22,0 |
| EV220B 32 | 2,0 | 120,0 | 82,0 | 32 | 46 | 68 | 45 | 120 | 27,0 |
| EV220B 40 | 3,0 | 130,0 | 95,0 | 32 | 46 | 68 | 45 | 129 | 32,0 |
| EV220B 50 | 4,8 | 162,0 | 113,0 | 32 | 46 | 68 | 45 | 135 | 37,0 |

Dimensions



Solenoid valves, type EV220B 15–50

Below coils can be used with EV220B 15–50

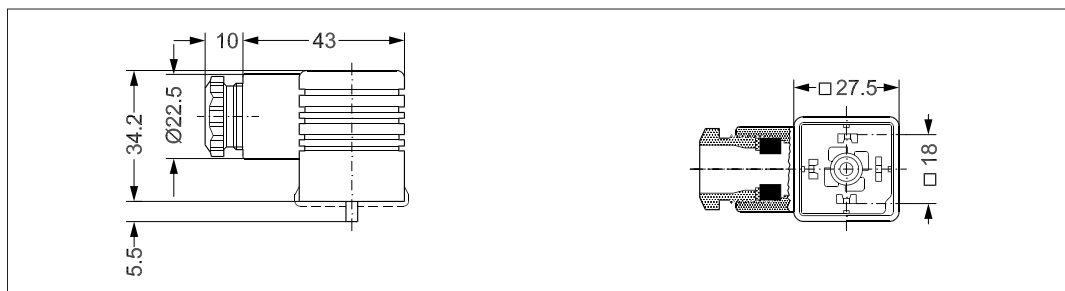
| Coil | Type | Power consumption | Enclosure | Features |
|---|-------------------|------------------------|---|--|
|  | BA / BD, screw on | 9 W a.c. 15 W d.c. | IP00 with spade connector | IP20 with protective cap, IP65 with cable plug |
|  | BB, clip on | 10 W a.c. 18 W d.c. | IP00 with spade connector | IP20 with protective cap, IP65 with cable plug |
|  | BE, clip on | 10 W a.c. 18 W d.c. | IP67 | With terminal box |
|  | BF, clip on | 10 W a.c. 18 W d.c. | IP67 | With 1 m cable |
|  | BG, clip on | 12 W a.c. 20 W d.c. | IP67 | With terminal box |
|  | BN, clip on | 20 W 26 VA | IP67 | Hum free With terminal box and 1 m cable |
|  | BO, screw on | 10 W 21 VA | IP67 only including seal kit 018Z0090 | For explosion-risk environment zone 1. With terminal box and 5 m cable |
|  | BP, screw on | 12 W 10.5 W | IP67 only including seal kit 018Z0090 | For explosion-risk environment zone 1. With 3 m cable |

For further information and for ordering, see separate data sheet for coils.

Solenoid valves, type EV220B 15–50

Accessories: Cable plug

| Application | Code number |
|--|-----------------|
| GDM 2011 (grey) cable plug according to DIN 43650-A PG11 | 042N0156 |



Universal electronic multi-timer, type ETM



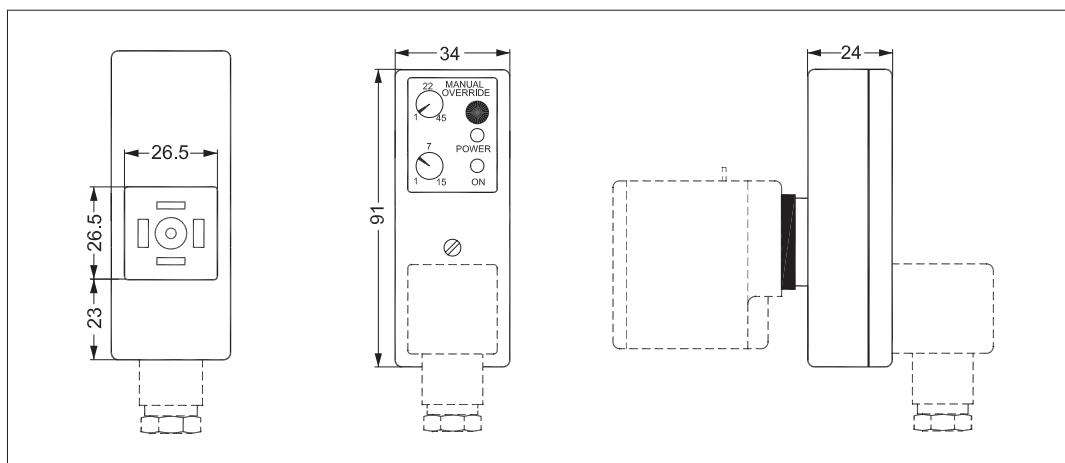
| Application | Voltage | To use with coil: | Ambient temperature [°C] | Code number |
|---|-----------------|-------------------|--------------------------|-----------------|
| External adjustable timing from 1 to 45 minutes with 1 to 15 seconds drain open. With manual override (test button). Electrical connection DIN 43650 A / EN 175 301-803-A | 24 – 240 V a.c. | BA, BD, BB | -10 – 50 | 042N0185 |

- Outside adjustments
- Light weight and small size
- External adjustable timing from 1 minute to 45 minutes with 1 to 15 seconds drain open
- One solid state timer fits all coil voltages from 24 to 240 V a.c.
- Light diodes for indication
- All in one unit
- Manual override (test button)

Technical data

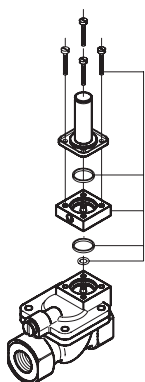
| | |
|-------------------------------------|--|
| Type | ET 20 M |
| Voltage | 24 – 240 V a.c./ 50-60 Hz. |
| Power rating | Max. 20 Watt |
| Enclosure | IP00, IP65 with power connector (cable plug) |
| Electrical connection | DIN connector (DIN 43650-A) |
| Ambient operating temperature range | -10 – 50 °C |
| Function | Start with pulse |
| Interval timer | 1 – 45 min. |
| “On” timer | 1 – 15 sec. |
| Weight | 0.084 kg |

Dimensions



Solenoid valves, type EV220B 15–50

Manuel override unit, tool operated



| Material | Code number |
|--------------------------------|-----------------|
| Brass, size DN 15–32, seal NBR | 032U0150 |
| Stainless steel, seal NBR | 032U0149 |

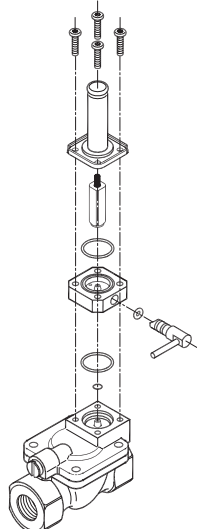
Media temperature: -10 – 90 °C



Used for manual override in event of power failure.
Note: Valve height is increased by 16 mm.

The unit consists of:
Manual override body
4 screws
3 o-rings

Manual override unit, hand operated



| Material | Code number |
|----------------------------|-----------------|
| Stainless steel, seal EPDM | 032U7390 |

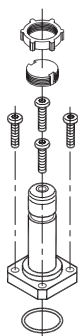
Media temperature: -30 – 120 °C



Used for manual override in event of power failure.

The unit consists of:
Armature incl. closing spring
Armature tube
Stainless steel valve body
O-ring 3.68 x 1.78
O-ring 19 x 1.5
O-ring 5 x 2.5
4 screws
4 nuts for transportation purpose only

Isolating diaphragm kit



| Seal material | Code number |
|---------------|-----------------|
| EPDM | 042U1009 |
| FKM | 042U1010 |

EPDM is recommended for water.
FKM is suitable for oil and air. For water at max.+60 °C



The isolating diaphragm design ensures that no fluid enters the armature area, which gives the following advantages:
The valve is resistant to aggressive fluids, impurities in the fluid and to calcareous and scale deposits.

The kit contains:
Assembled isolating unit
O-ring
4 screws
Locking button
Nut for the coil

Equalizing orifice

The kit comprises:

An equalizing orifice including O-ring and gasket. The valve's closing time can be changed by installing an equalizing orifice of a size which deviates from the standard valve:

- A shorter closing time is obtained with a larger orifice (the shorter closing time, the greater risk of water hammering)
- A longer closing time is obtained with a smaller orifice.

| Equalizing orifice size mm | Seal material | Applicable in | Code number | |
|----------------------------|--------------------|-------------------------------------|-----------------|---|
| | | | Brass | DZR brass ³⁾ / Stainless steel |
| 0.5 | EPDM ¹⁾ | EV220B 15 EV220B 20 | 032U0082 | 032U6310 |
| 0.8 | EPDM ¹⁾ | EV220B 25 EV220B 32 EV220B 40 | 032U0084 | 032U6311 |
| 1.2 | FKM ²⁾ | EV220B 25 EV220B 32 | 032U0085 | 032U6314 |
| 1.2 | EPDM ¹⁾ | EV220B 50 | 032U0086 | 032U6312 |
| 1.4 | FKM ²⁾ | EV220B 40 EV220B 50 | 032U0087 | 032U6315 |

Adjustable orifice

The kit comprises:

An adjustable orifice including O-ring and gasket.

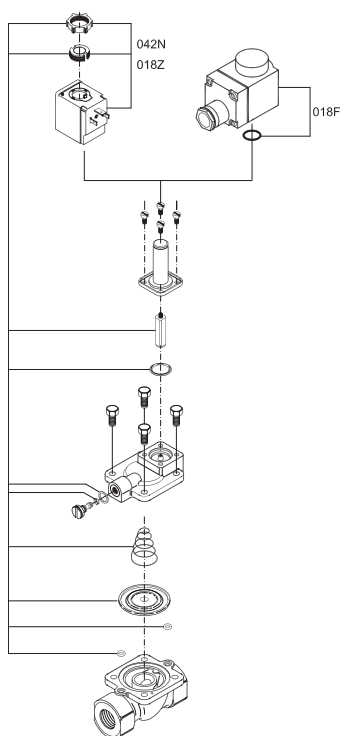
The valves closing time can be adjusted by turning the setting screw.

| Orifice | Seal material | Applicable in | Material | Code number |
|------------|--------------------|-------------------------|----------|-----------------|
| Adjustable | EPDM ¹⁾ | All EV220B 15–50 valves | Brass | 032U0682 |
| Adjustable | FKM ²⁾ | | Brass | 032U0683 |

- ¹⁾ Approved by WRAS.
Approved by Attestation de Conformite Sanitaire (ACS)
EPDM is recommended for water. (Steam max. 40 °C / 4 bar)
- ²⁾ FKM is suitable for oil and air. For water at max. 60 °C.
- ³⁾ Dezincification resistant brass.

Solenoid valves, type EV220B 15-50

Spare parts kit, NC



| Brass versions | | |
|----------------|--------------------|-----------------|
| Type | Seal material | Code number |
| EV220B 15 | EPDM ¹⁾ | 032U1071 |
| EV220B 15 | FKM ²⁾ | 032U1072 |
| EV220B 15 | NBR ³⁾ | 032U6013 |
| EV220B 20 | EPDM ¹⁾ | 032U1073 |
| EV220B 20 | FKM ²⁾ | 032U1074 |
| EV220B 20 | NBR ³⁾ | 032U6014 |
| EV220B 25 | EPDM ¹⁾ | 032U1075 |
| EV220B 25 | FKM ²⁾ | 032U1076 |
| EV220B 25 | NBR ³⁾ | 032U6015 |
| EV220B 32 | EPDM ¹⁾ | 032U1077 |
| EV220B 32 | FKM ²⁾ | 032U1078 |
| EV220B 32 | NBR ³⁾ | 032U6016 |
| EV220B 40 | EPDM ¹⁾ | 032U1079 |
| EV220B 40 | FKM ²⁾ | 032U1080 |
| EV220B 40 | NBR ³⁾ | 032U6017 |
| EV220B 50 | EPDM ¹⁾ | 032U1081 |
| EV220B 50 | FKM ²⁾ | 032U1082 |
| EV220B 50 | NBR ³⁾ | 032U6018 |

| DZR brass ⁴⁾ and stainless steel versions | | |
|--|--------------------|-----------------|
| Type | Seal material | Code number |
| EV220B 15 | EPDM ¹⁾ | 032U6320 |
| EV220B 15 | FKM ²⁾ | 032U6326 |
| EV220B 20 | EPDM ¹⁾ | 032U6321 |
| EV220B 20 | FKM ²⁾ | 032U6327 |
| EV220B 25 | EPDM ¹⁾ | 032U6322 |
| EV220B 25 | FKM ²⁾ | 032U6328 |
| EV220B 32 | EPDM ¹⁾ | 032U6323 |
| EV220B 32 | FKM ²⁾ | 032U6329 |
| EV220B 40 | EPDM ¹⁾ | 032U6324 |
| EV220B 40 | FKM ²⁾ | 032U6330 |
| EV220B 50 | EPDM ¹⁾ | 032U6325 |
| EV220B 50 | FKM ²⁾ | 032U6331 |

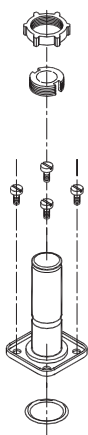
- 1) Approved by WRAS.
Approved by Attestation de Conformite Sanitaire (ACS)
EPDM is recommended for water. (Steam max. 140 °C / 4 bar).
- 2) FKM is suitable for oil and air. For water at max. 60 °C
- 3) NBR is suitable for oil, water and air
- 4) Dezincification resistant brass

The kit contains:

Locking button and nut for the coil
Armature with valve plate and spring
O-ring for the armature tube
Spring and diaphragm
2 O-rings for the pilot system
O-ring and gasket for the equalising orifice



Spare parts kit, NO



| Type | Seal material | Code number |
|--------------|--------------------|-----------------|
| EV220B 15-50 | EPDM ¹⁾ | 032U0296 |
| | FKM ²⁾ | 032U0295 |
| | NBR ³⁾ | 032U0299 |

- 1) EPDM is recommended for water. (Steam max. 140 °C / 4 bar).
- 2) FKM is suitable for oil and air. For water at max. +60 °C
- 3) NBR is suitable for oil, water and air.

The kit contains:

Locking button and nut for the coil
NO actuator unit
O-ring for the armature unit



Function

NC, brass, DZR brass and stainless steel

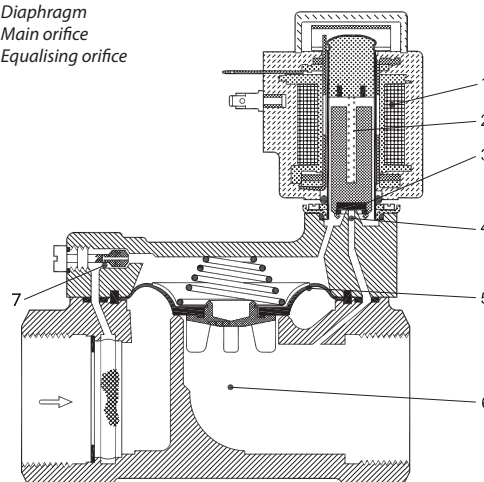
Coil voltage disconnected (closed):

When the voltage is disconnected, the valve plate (3) is pressed down against the pilot orifice (4) by the armature spring (2). The pressure across the diaphragm (5) is built up via the equalising orifice (7). The diaphragm closes the main orifice (6) as soon as the pressure across the diaphragm is equivalent to the inlet pressure. The valve will be closed for as long as the voltage to the coil is disconnected.

Coil voltage connected (open):

When voltage is applied to the coil (1), the pilot orifice (4) is opened. As the pilot orifice is larger than the equalising orifice (7), the pressure across the diaphragm (5) drops and therefore it is lifted clear of the main orifice (6). The valve is now open for unimpeded flow and will be open for as long as the minimum differential pressure across the valve is maintained, and for as long as there is voltage to the coil.

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



Function

NO, brass, DZR brass and stainless steel

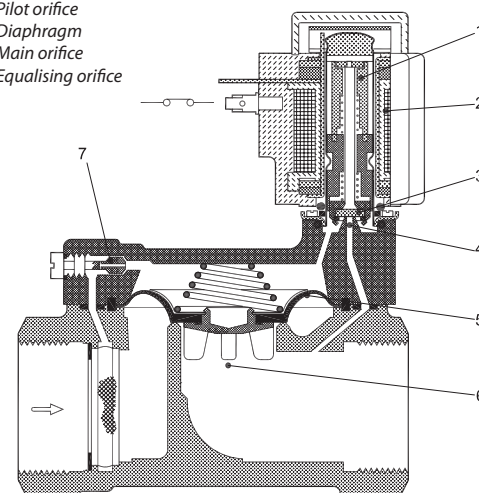
Coil voltage disconnected (open):

When the voltage to the coil (2) is disconnected, the pilot orifice (4) is open. As the pilot orifice is larger than the equalising orifice (7), the pressure across the diaphragm (5) drops and therefore it is lifted clear of the main orifice (6). The valve will be open for as long as the minimum differential pressure across the valve is maintained, and for as long as the voltage to the coil is disconnected.

Coil voltage connected (closed):

When voltage is applied to the coil, the valve plate (3) is pressed down against the pilot orifice (4). The pressure across the diaphragm (5) is built up via the equalising orifice (7). The diaphragm closes the main orifice (6) as soon as the pressure across the diaphragm is equivalent to the inlet pressure. The valve will be closed for as long as there is voltage to the coil.

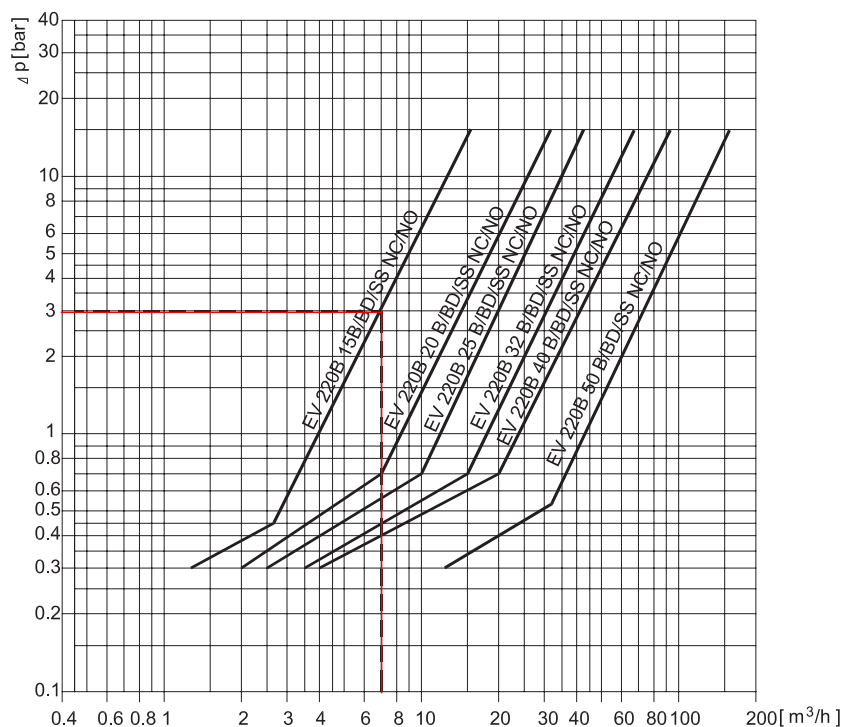
1. Armature
2. Coil
3. Valve plate
4. Pilot orifice
5. Diaphragm
6. Main orifice
7. Equalising orifice



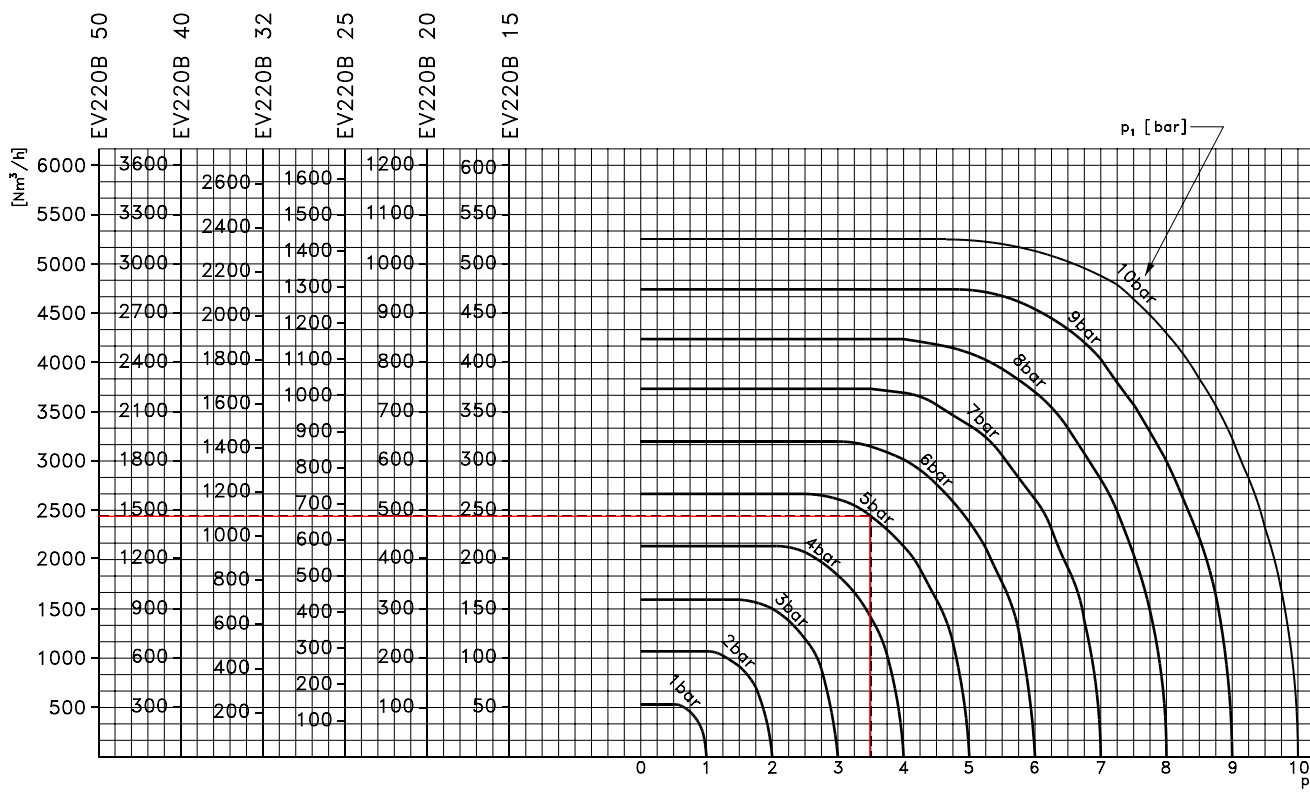
Solenoid valves type EV220B 15-50

Capacity diagrams:

Example, water:
Capacity for EV220B 15B at differential pressure of 3 bar.
Approx. 7 m³/h



Example, air:
Capacity for EV220B 15B at inlet pressure (p_1) of 5 bar and outlet pressure (p_2) of 3.5 bar: Approx. 245 Nm³/h



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