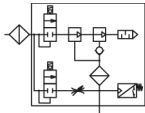


## ZK2\*A, Vacuum Unit, Ejector System, Single Unit ZK2A12K5CLA-08

Datasheet

### General series information

- Dual 2 port valve (Release valve/Supply valve).
- Efficient 2-stage ejector.
- Pressure sensor / switch variations with energy-saving function available.



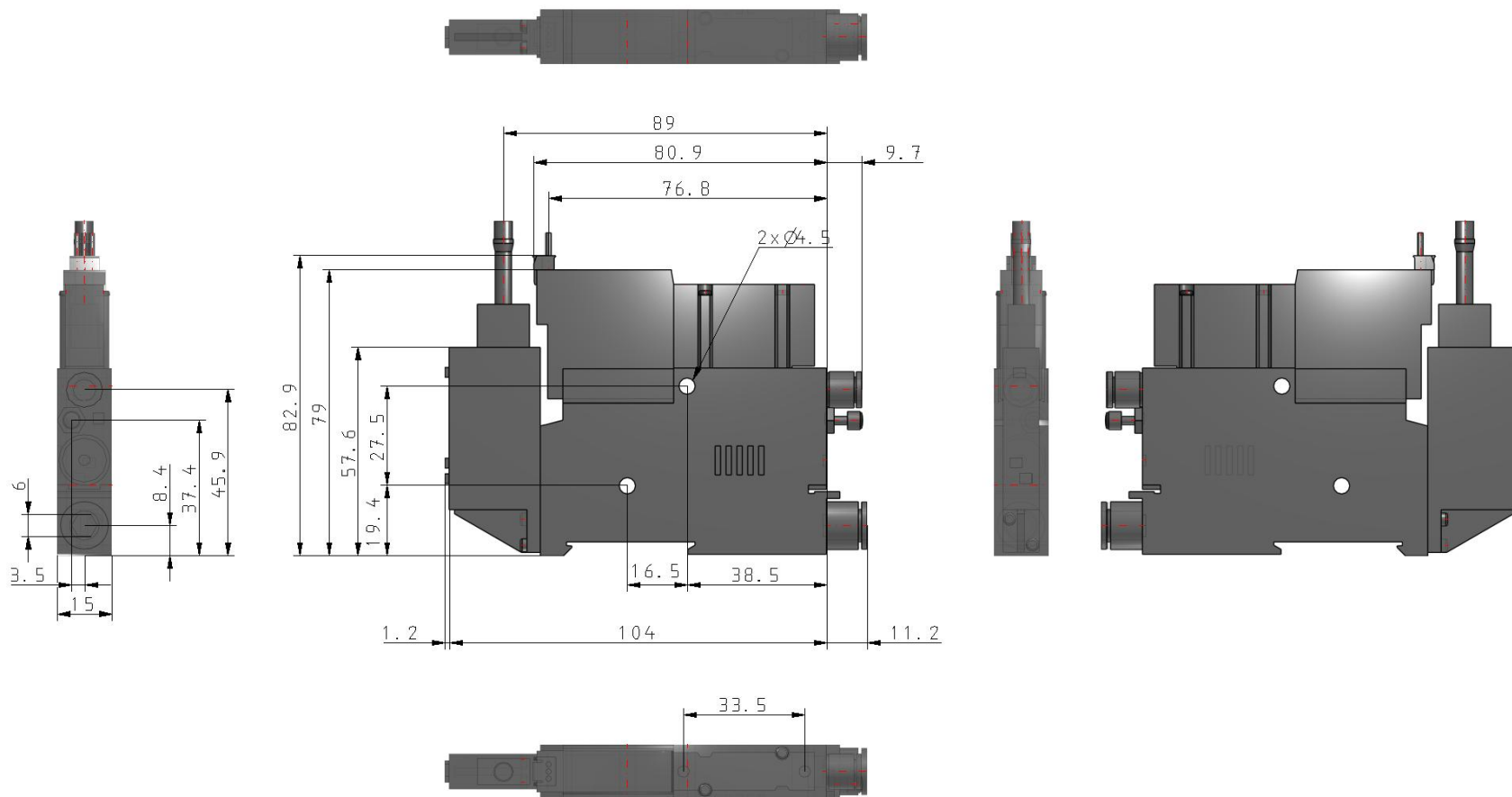
Dual stage modular ejector - with valves and switch

### Standard specifications

|   |  |
|---|--|
| Body type   | A (Single Unit - Silencer Exhaust)   |
| Nominal Nozzle Size   | 12 (ø1.2)  |
| Supply Valve / Release Valve  | K (N.C. / N.C.)  |
| Rated Voltage   | 5 (24 VDC)   |
| Pressure Sensor/Digital Pressure Switch for Vacuum Spec.                      | C (Digital Pressure Switch for Vacuum / 0 to -101 kPa / PNP 2 Outputs / Unit Selection Function)                 |
| Supply Valve/Release Valve/Digital Pressure Switch for Vacuum Connector Spec. | L [L-type Plug Connector - w/ Lead Wire with Connector - w/ Lead Wire with Connector for Pressure Switch/sensor] |
| Vacuum (V) Port   | 08 [ø8 One-touch Fitting (Metric)]   |
| Bracket   | None   |
| Individual Release Pressure Supply  | None   |
| Screwdriver Operation Type Long Lock Nut                                      | None   |
| Vacuum Break Flow Adjustment  | None   |
| Exhaust Interference Prevention Valve   | None   |
| Pressure medium   | Air  |
| Proof pressure  | 500 kPa  |
| Conform to the European RoHS Directive  | Conform  |
| Enclosure   | IP40   |
| Element nominal filtration rating   | 30 µm  |
| Repeatability   | ±0.2 % F.S. ±1 digit   |
| Set pressure range  | -105 - 10 kPa  |

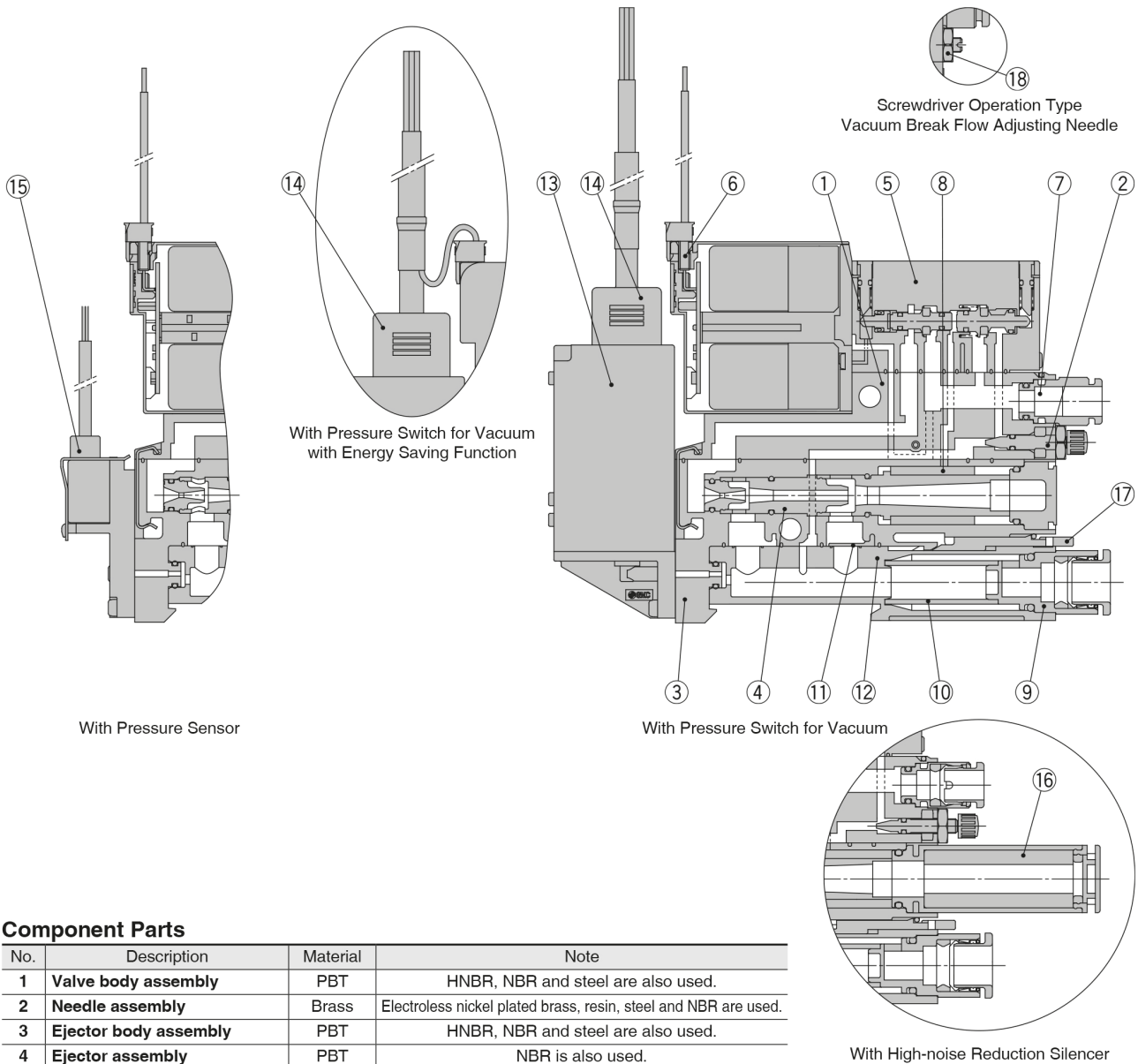
|   |   |
|---|---|
| Current consumption                                 | 40 mA or less   |
| Applicable fluid                                    | Air   |
| Rated pressure range                                | -101 - 0 kPa  |
| Power supply voltage                                | 12 to 24 VDC $\pm 10\%$ , Ripple (p-p) 10 % or less (Protected against reverse connection)  |
| Switch output                                       | PNP Open Collector 2 Outputs  |
| Supply pressure range (MPa)                         | 0.3 - 0.6 MPa   |
| Noise level   | 75 dB   |
| Standard supply pressure                            | 0.35 MPa  |
| Maximum vacuum pressure                             | -91 kPa   |
| Air consumption                                     | 58 l/min  |
| Operating temperature range                         | -5 - 50 °C  |
| Vibration resistance                                | 20 m/s <sup>2</sup>   |
| Impact resistance                                   | 100 m/s <sup>2</sup>  |
| Smallest settable increment                         | 0.1 kPa   |
| Display   | 3 1/2 digit, 7-segment LED, 1-colour display (Red)  |
| Display accuracy                                    | $\pm 2\%$ F.S. $\pm 1$ digit (Ambient temperature at 25 $\pm 3$ °C)   |
| Indicator light                                     | Lights up when output is turned ON. OUT1: Green, OUT2: Red  |
| Insulation resistance                               | 50 M $\Omega$ or more (500 VDC measured via megohmmeter) between terminals and housing  |
| Valve type of actuation                             | Supply valve: N.C. Release valve: N.C.  |
| Valve configuration                                 | Pilot operated dual 2-port  |
| Valve operating pressure range                      | 0.3 - 0.6 MPa   |
| Valve construction                                  | Popper seal   |
| Valve rated voltage                                 | 24 VDC  |
| Valve power consumption                             | 0.4 W   |
| Valve lead wire (ZK2-LV**-A)                        | Cross section: 0.2 mm <sup>2</sup> (AWG24) Insulator O.D.: 1.4 mm   |
| Suction filter, Filtration area                     | 510 mm <sup>2</sup>   |
| Switch output max. load current                     | 80 mA   |
| Switch output residual voltage                      | 2 V or less (at load current of 80 mA)  |
| Switch output response time                         | 2.5 ms or less (with anti-chattering function: 20, 100, 500, 1000, 2000 ms)   |
| Switch output short circuit protection              | Yes   |
| Hysteresis  | Variable from 0   |
| Switch temperature range                            | Stored: -10 to 60 °C (No condensation or freezing)  |
| Switch humidity range                               | Operating/Stored: 35 to 85 % RH (No condensation)   |
| Switch withstand voltage                            | 1000 VAC for 1 minute between terminals and housing   |
| Switch temperature characteristics                  | $\pm 2\%$ F.S. (Ambient temperature: based on 25 °C)  |
| Switch lead wire                                    | Oilproof heavy-duty vinyl cable 5 cores $\varnothing$ 3.5, 2 m Cross section: 0.15 mm <sup>2</sup> (AWG26) Insulator O.D.: 1.0 mm |
| Max. suction flow, Silencer exhaust/Complex exhaust | 61 l/min  |
| Weight  | 0.190 Kg  |

# Dimensions



Specifications are subject to change without prior notice and any obligation on the part of the manufacturer.

## Constructions



### Component Parts

| No. | Description           | Material | Note  |
|-----|-----------------------|----------|---|
| 1   | Valve body assembly   | PBT      | HNBR, NBR and steel are also used.                              |
| 2   | Needle assembly       | Brass    | Electroless nickel plated brass, resin, steel and NBR are used. |
| 3   | Ejector body assembly | PBT      | HNBR, NBR and steel are also used.                              |
| 4   | Ejector assembly      | PBT      | NBR is also used.   |

### Replacement Parts

| No. | Description                                 | Note   |
|-----|---|--|
| 5   | Valve assembly                              | —  |
| 6   | Connector assembly                          | Connector for solenoid valve 3 wire (For valve type K/R), 2 wire (For valve type J)  |
| 7   | One-touch fitting assembly                  | Metric size: $\varnothing 6$ , Inch size: $\varnothing 1/4$ "  |
| 8   | Sound absorbing material                    | 10 pcs. per set  |
| 9   | Vacuum port adapter assembly                | With One-touch fitting and filter element  |
| 10  | Filter element                              | Nominal filtration rating: 30 $\mu\text{m}$ , 10 pcs. per set  |
| 11  | Body gasket                                 | Gasket integrated with the exhaust interference prevention valve, 10 pcs. per set  |
| 12  | Filter case                                 | Case body: Polycarbonate (Refer to the Specific Product Precautions on page 47.)<br>Clear filter case: without a port for the pressure switch or sensor, Opaque filter case: with a port for the pressure switch or sensor |
| 13  | Vacuum pressure switch assembly             | With 2 screws and 1 gasket   |
| 14  | Lead wire with connector                    | —  |
| 15  | Pressure sensor assembly                    | With 2 screws and 1 gasket   |
| 16  | High-noise reduction silencer case assembly | With sound absorbing material (Part number: ZK2-SE4-6-A)   |
| 17  | Release lever                               | 10 pcs. per set  |
| 18  | Lock nut                                    | 10 pcs. per set  |

## Additional information

|                           |  |
|---------------------------|--|
| Catalogue                 | <a href="#">ZK2A-B_EU.pdf</a>  |
| Declaration of conformity | <a href="#">newDoC_ZK2-A_TF1Z208EN.pdf</a>   |
| Installation manuals      | <a href="#">IM_ZK2-A_TF2Z368EN-A.pdf</a>   |
| Operation manuals         | <a href="#">OM_ZK2-ZSV-A_OM00501EN-B.pdf</a><br><a href="#">OM_ZK2xA_OM01301EN.pdf</a> |