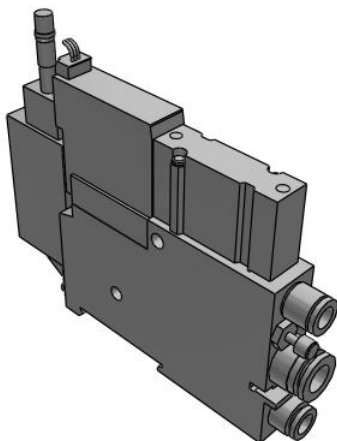


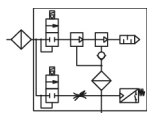


## ZK2\*A, Vacuum Unit, Ejector System, Single Unit ZK2B12K5RWA-06

### 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.

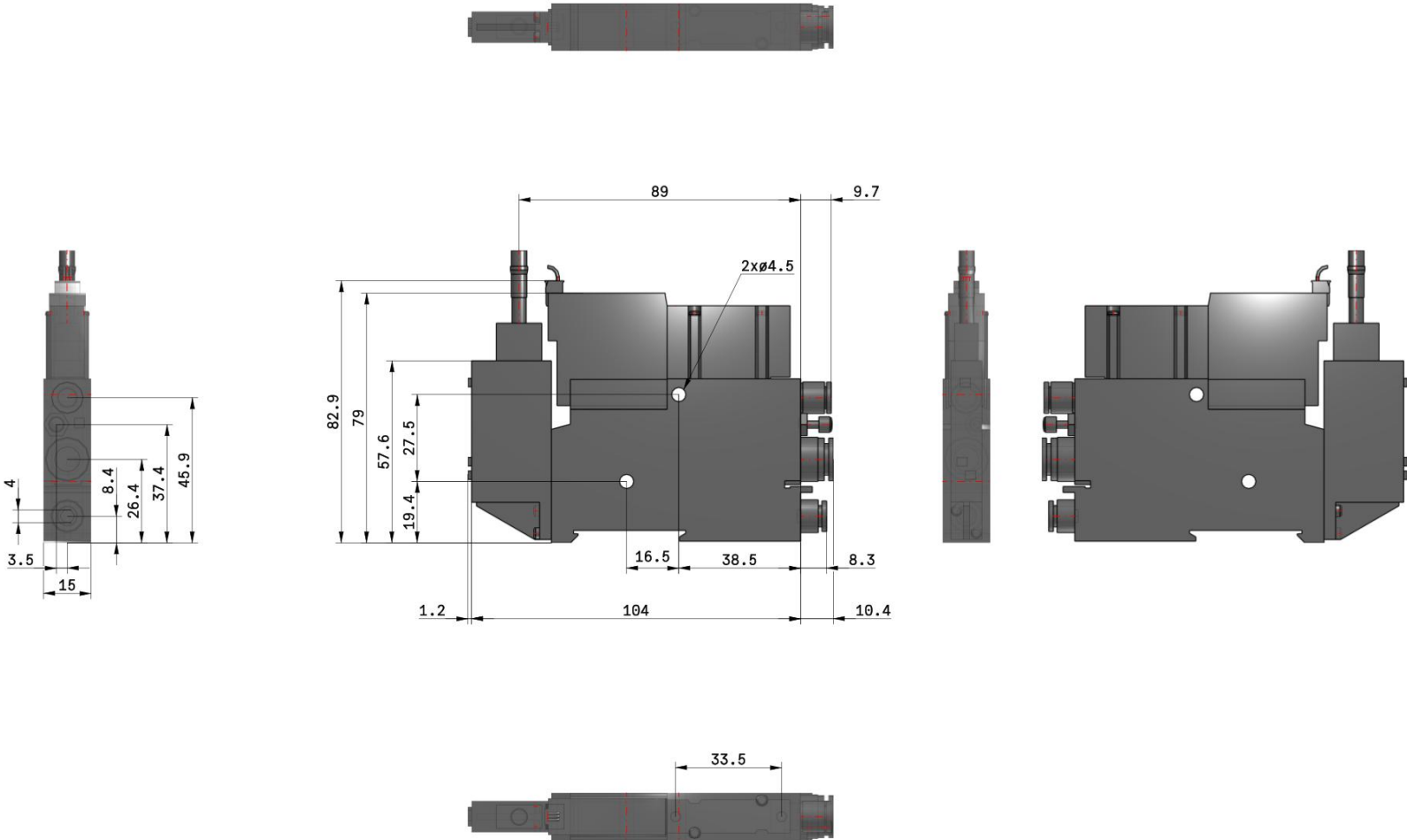


Dual stage modular ejector - with valves and switch

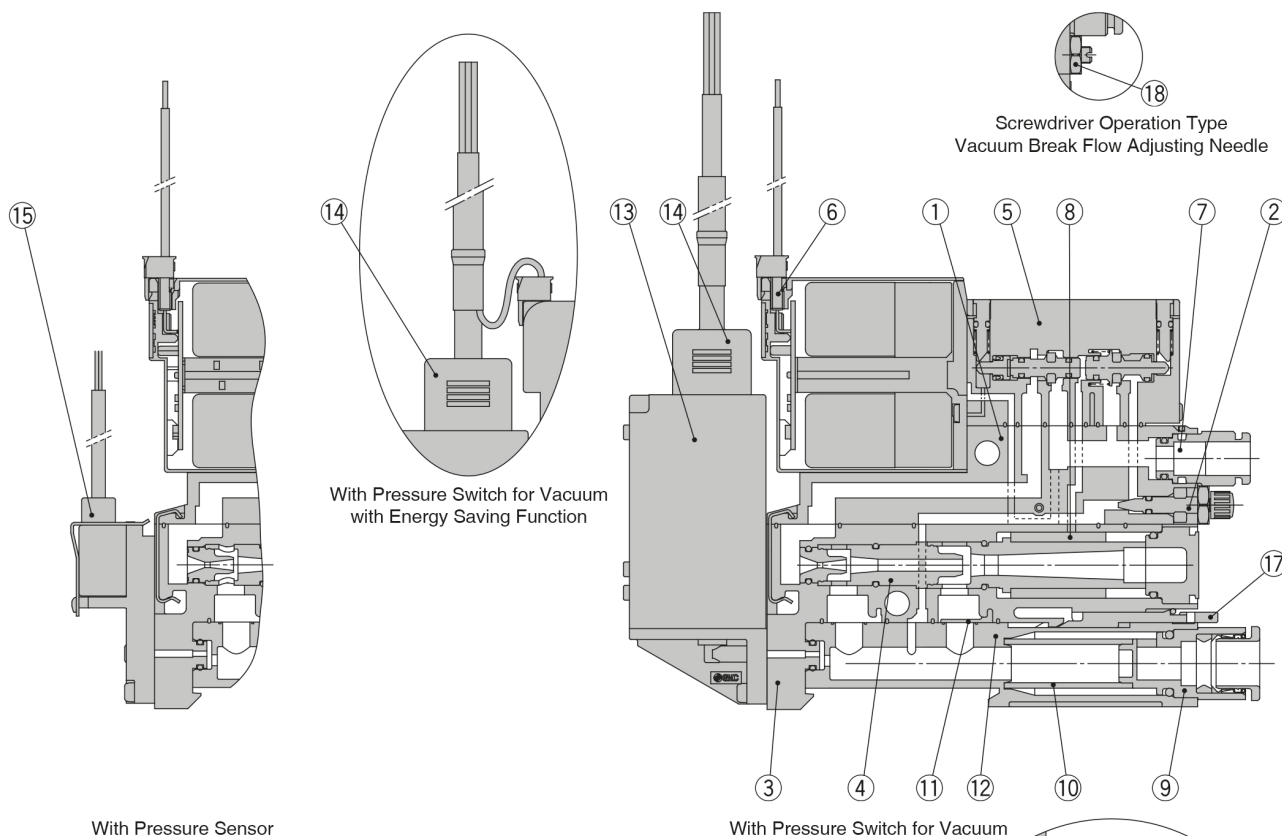
### Standard specifications

|                                                                               |                                                                                                                               |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Body type                                                                     | B (Single Unit - Port 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.                      | R (Digital Pressure Switch for Vacuum with Energy Saving Function / 100 to -100 kPa / PNP 1 Output / Unit Selection Function) |
| Supply Valve/Release Valve/Digital Pressure Switch for Vacuum Connector Spec. | W (With Lead Wire for Switch with Energy Saving Function)                                                                     |
| Vacuum (V) Port                                                               | 06 [ø6 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                                                                                                                       |
| Element nominal filtration rating                                             | 30 µm                                                                                                                         |
| Repeatability                                                                 | ±0.2 % F.S. ±1 digit                                                                                                          |
| Set pressure range                                                            | -105 - 105 kPa                                                                                                                |

|                                        |                                                                                                           |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Current consumption                    | 40 mA or less                                                                                             |
| Applicable fluid                       | Air                                                                                                       |
| Rated pressure range                   | -100 - 100 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 OUT1: General purpose, OUT2: Valve control                                             |
| Supply pressure range (MPa)            | 0.3 - 0.6 MPa                                                                                             |
| 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, 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                    |
| Switch output Max. applied voltage     | 26.4 VDC                                                                                                  |
| 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               | 5 - 50 °C                                                                                                 |
| Switch withstand voltage               | 1000 VAC for 1 minute between terminals and housing                                                       |
| Switch temperature characteristics     | $\pm 2\%$ F.S. (at 25 °C in an operating temperature range of 5 and 50 °C)                                |
| Switch lead wire                       | 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, port exhaust        | 74 l/min                                                                                                  |
| Enclosure                              | IP40                                                                                                      |
| Weight                                 | 0.152 Kg                                                                                                  |



## 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-C_EU.pdf</a>                                                              |
| Declaration of conformity | <a href="#">newDoC_ZK2-A_TF1Z208EN.pdf</a><br><a href="#">newDoC_ZK2-A_TF124-124EN.pdf</a> |
| Installation manuals      | <a href="#">IM_ZK2-A_TF2Z368EN-B.pdf</a>                                                   |
| Operation manuals         | <a href="#">OM_ZK2-ZSV-A_OM00501EN-C.pdf</a><br><a href="#">OM_ZK2xA_OM01301EN-A.pdf</a>   |