

# AZR Series

## Mini Vacuum Generator

**AIRBEST**



ELECTRONICS



PLASTIC

### Features

- ◇ Small size, light weight
- ◇ High vacuum level type and large vacuum flow type are optional
- ◇ The generator has vacuum breaking function itself
- ◇ Separate vacuum filter and mounting bracket are optional

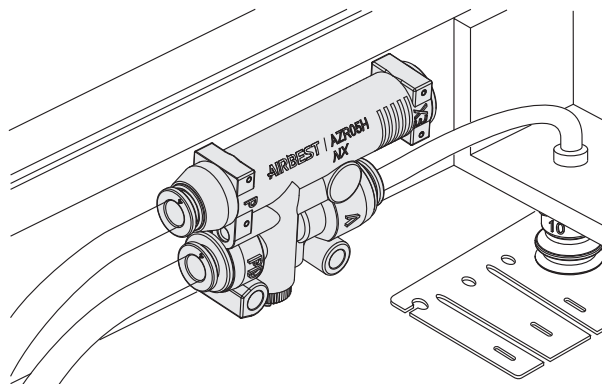
### Advantages

- ◇ For the occasions with limited installation space and weight
- ◇ It can meet different requirements of vacuum flow in different working conditions
- ◇ There is no need for external control device, can quickly release the product
- ◇ Customers can choose freely according to the actual working conditions



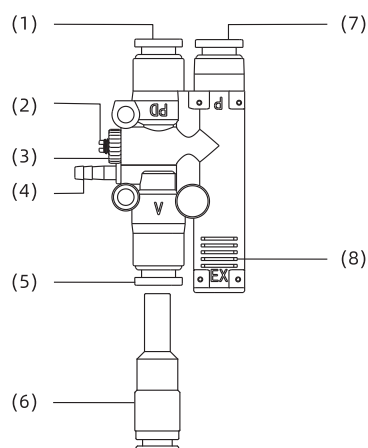
### Applications

- ◇ Suitable for handling electronic components and other small workpieces
- ◇ Suitable for working occasions where quick picking and quick release are required



### Structure

- ◇ (1) Release port
- ◇ (2) Vacuum release regulating valve
- ◇ (3) Lock nut
- ◇ (4) Vacuum detecting port
- ◇ (5) Vacuum port
- ◇ (6) Vacuum filter
- ◇ (7) Air supply port
- ◇ (8) Exhaust port



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### How to order

**AZR 07 H - J - V - F**  
 ①      ②      ③      ④      ⑤      ⑥

| ① Series | ② Nozzle Diameter                      | ③ Specification                                          | ④ Exhaust way                                   | ⑤ Special specification                          | ⑥ Vacuum filter                               |
|----------|----------------------------------------|----------------------------------------------------------|-------------------------------------------------|--------------------------------------------------|-----------------------------------------------|
| AZR      | 05 - $\phi$ 0.5mm<br>07 - $\phi$ 0.7mm | H - High vacuum level type<br>L - Large vacuum flow type | Nil - Direct exhaust<br>J - Centralized exhaust | Nil - Standard type<br>V - Vacuum detecting port | Nil - Standard type<br>F - With vacuum filter |

### Selection

| Model/<br>Nozzle Diameter | 05           |              | 07           |              |
|---------------------------|--------------|--------------|--------------|--------------|
| AZR□□                     | AZR05H       | AZR05L       | AZR07H       | AZR07L       |
| AZR□□-J                   | AZR05H-J     | AZR05L-J     | AZR07H-J     | AZR07L-J     |
| AZR□□-J-F                 | AZR05H-J-F   | AZR05L-J-F   | AZR07H-J-F   | AZR07L-J-F   |
| AZR□□-J-V                 | AZR05H-J-V   | AZR05L-J-V   | AZR07H-J-V   | AZR07L-J-V   |
| AZR□□-J-V-F               | AZR05H-J-V-F | AZR05L-J-V-F | AZR07H-J-V-F | AZR07L-J-V-F |
| AZR□□-V                   | AZR05H-V     | AZR05L-V     | AZR07H-V     | AZR07L-V     |
| AZR□□-V-F                 | AZR05H-V-F   | AZR05L-V-F   | AZR07H-V-F   | AZR07L-V-F   |
| AZR□□-F                   | AZR05H-F     | AZR05L-F     | AZR07H-F     | AZR07L-F     |

### Technical parameters

| Model  | Rated air<br>supply pressure<br>bar | Max.<br>vacuum level<br>-kPa | Max.<br>vacuum flow<br>NL/min | Air<br>consumption<br>NL/min | Noise<br>level<br>dB(A) | Weight<br>g | Air supply port P | Recommended<br>hose dia. mm<br>Vacuum port V |
|--------|-------------------------------------|------------------------------|-------------------------------|------------------------------|-------------------------|-------------|-------------------|----------------------------------------------|
| AZR05H | 5.0                                 | 88                           | 7.0                           | 11                           | 80                      | 19          | $\phi$ 4          | $\phi$ 4                                     |
| AZR07H | 5.0                                 | 88                           | 12.5                          | 22                           | 80                      | 20          | $\phi$ 6          | $\phi$ 6                                     |
| AZR05L | 5.0                                 | 58                           | 12.0                          | 11                           | 70                      | 19          | $\phi$ 4          | $\phi$ 4                                     |
| AZR07L | 5.0                                 | 58                           | 20.0                          | 22                           | 70                      | 20          | $\phi$ 6          | $\phi$ 6                                     |

◇ Note: Max. air supply pressure is 6.0 bar.

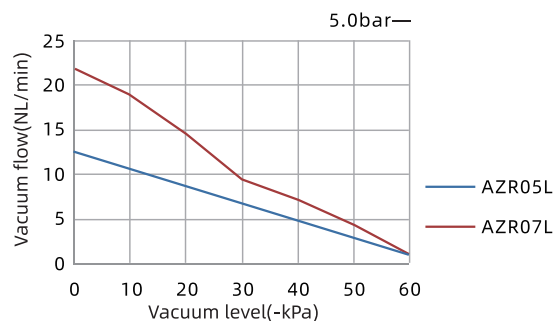
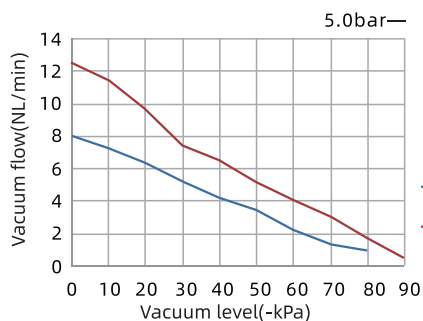
### Vacuum flow(NL/min) at different vacuum levels(-kPa)

| Model  | Air supply<br>pressure<br>bar | Air<br>consumption<br>NL/min | 0    | 10   | 20   | 30  | 40  | 50  | 60  | 70  | 80  | Max.<br>vacuum level<br>-kPa |
|--------|-------------------------------|------------------------------|------|------|------|-----|-----|-----|-----|-----|-----|------------------------------|
| AZR05H | 5.0                           | 11                           | 8.0  | 7.3  | 6.3  | 5.2 | 4.2 | 3.4 | 2.2 | 1.4 | 1.0 | 88                           |
| AZR07H | 5.0                           | 22                           | 12.5 | 11.5 | 9.7  | 7.4 | 6.5 | 5.2 | 4.1 | 3.0 | 1.7 | 88                           |
| AZR05L | 5.0                           | 11                           | 12.5 | 10.5 | 8.7  | 6.9 | 5.0 | 2.9 | 1.0 | -   | -   | 58                           |
| AZR07L | 5.0                           | 22                           | 22.0 | 19.1 | 14.5 | 9.4 | 7.2 | 4.3 | 1.0 | -   | -   | 58                           |

# AZR Series

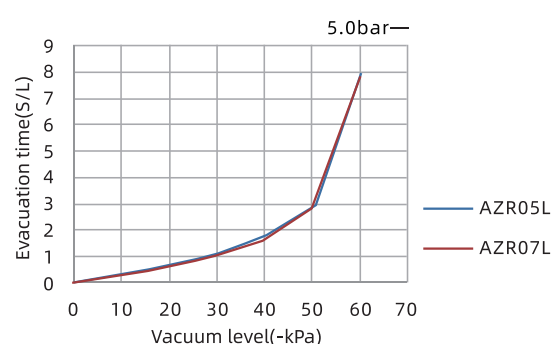
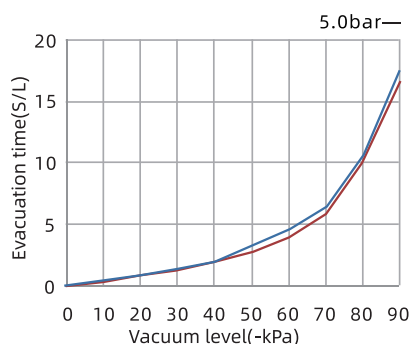
## Mini Vacuum Generator

### Vacuum flow(NL/min) at different vacuum levels(-kPa)

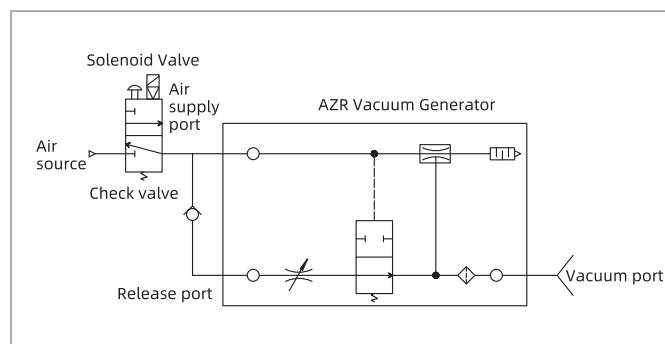


### Evacuation time(s/L) to reach different vacuum levels(-kPa)

| Model  | Air supply pressure bar | Air consumption NL/min | 10   | 20   | 30   | 40   | 50  | 60  | 70  | 80   | Max. vacuum level -kPa |
|--------|-------------------------|------------------------|------|------|------|------|-----|-----|-----|------|------------------------|
| AZR05H | 5.0                     | 11                     | 0.42 | 0.83 | 1.30 | 1.92 | 3.2 | 4.5 | 6.3 | 10.5 | 88                     |
| AZR07H | 5.0                     | 22                     | 0.34 | 0.75 | 1.22 | 1.87 | 2.7 | 3.8 | 5.7 | 9.9  | 88                     |
| AZR05L | 5.0                     | 11                     | 0.32 | 0.64 | 1.06 | 1.73 | 2.9 | 8.2 | -   | -    | 58                     |
| AZR07L | 5.0                     | 22                     | 0.23 | 0.53 | 0.93 | 1.53 | 2.8 | 7.8 | -   | -    | 58                     |



### Air circuit schematic diagram



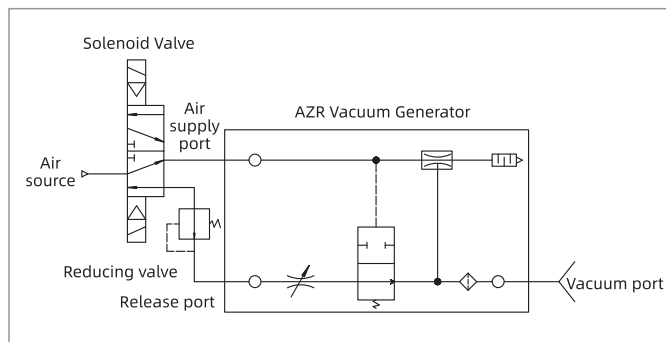
#### Vacuum release principle and attentions:

- ◇ 1. Close solenoid valve and stop air supply, open the release valve. The residual positive pressure air in the air circuit between check valve and release port flows into the vacuum circuit to release vacuum
- ◇ 2. Change the tube length between the check valve and release port to adjust the residual positive pressure air volume. In this way, the vacuum releasing time can be adjusted
- ◇ 3. The vacuum releasing flow of this way is small

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## Mini Vacuum Generator

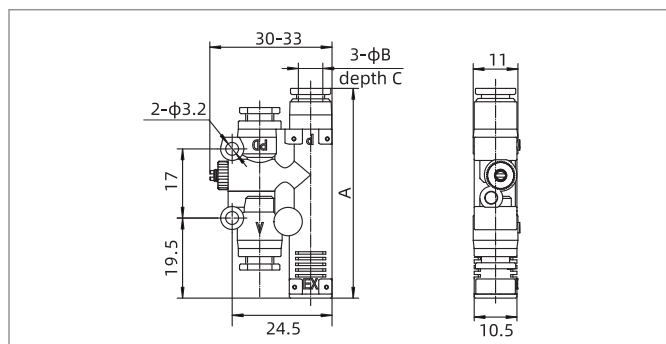
### Air circuit schematic diagram



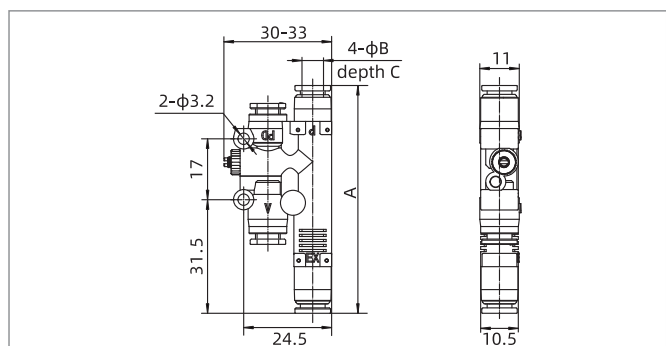
Vacuum release principle and attentions:

- ◇ 1. Close solenoid valve and stop air supply, open the release valve, and the positive pressure air flows directly into the vacuum circuit to release the vacuum
- ◇ 2. Can adjust the vacuum releasing time through controlling the air supply time of solenoid valve
- ◇ 3. Adjust the air releasing pressure through the reducing valve to avoid excessive pressure blowing away the workpiece
- ◇ 4. The air releasing pressure must be lower than air supply pressure of vacuum generator
- ◇ 5. The releasing flow and pressure can be adjusted freely as required

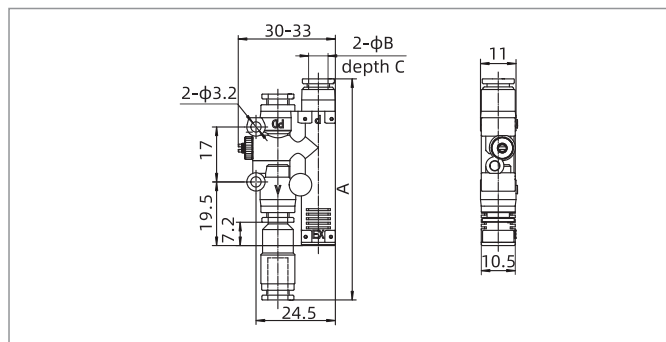
### Dimensions(mm)



AZR□□



AZR□□-J



AZR□□-F

| Model/Size | A    | B | C    |
|------------|------|---|------|
| AZR05H     | 49.5 | 4 | 10   |
| AZR05L     | 49.5 | 4 | 10   |
| AZR07H     | 51.5 | 6 | 12.5 |
| AZR07L     | 51.5 | 6 | 12.5 |

◇ Note:"C" is insert depth

| Model/Size | A    | B | C    |
|------------|------|---|------|
| AZR05H-J   | 61.5 | 4 | 10   |
| AZR05L-J   | 61.5 | 4 | 10   |
| AZR07H-J   | 63.5 | 6 | 12.5 |
| AZR07L-J   | 63.5 | 6 | 12.5 |

◇ Note:"C" is insert depth

| Model/Size | A    | B | C    |
|------------|------|---|------|
| AZR05H-F   | 65.5 | 4 | 10   |
| AZR05L-F   | 65.5 | 4 | 10   |
| AZR07H-F   | 68.8 | 6 | 12.5 |
| AZR07L-F   | 68.8 | 6 | 12.5 |

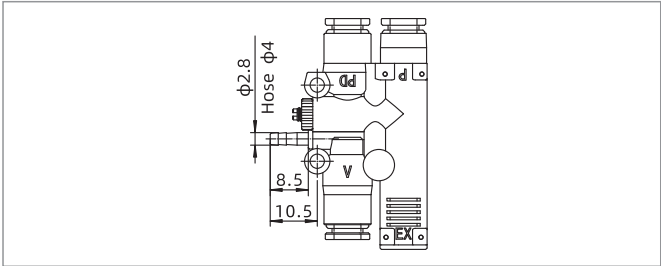
◇ Note:"C" is insert depth

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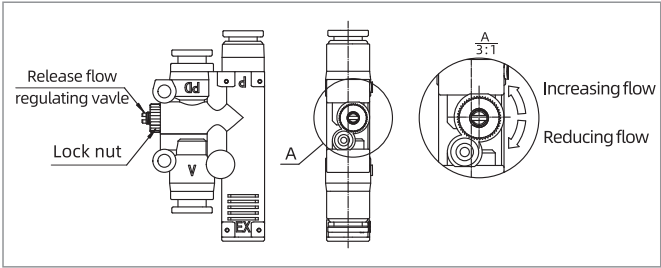


### Dimensions(mm)



AZR□□-V

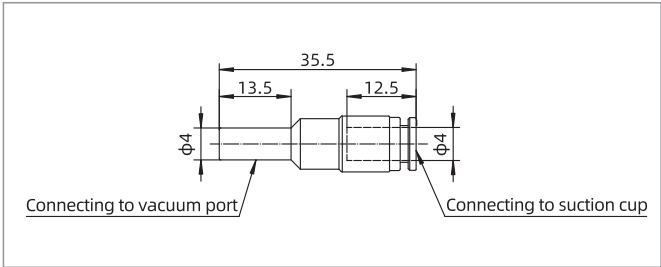
### Vacuum release function



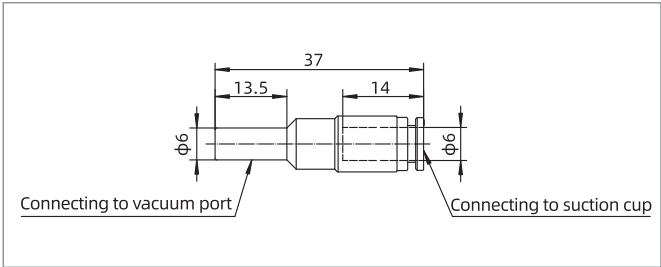
Vacuum releasing flow regulation:

- ◇ 1. Rotating clockwise the releasing flow regulating valve to reduce the releasing flow. Rotating counterclockwise the releasing flow regulating valve to increase the releasing flow
- ◇ 2. When regulation is finished, tighten the lock nut clockwise to fix the position of the regulating valve
- ◇ 3. The regulating valve has limited positions. When it can not be turned clockwise or counterclockwise, it means that the limit position has been reached

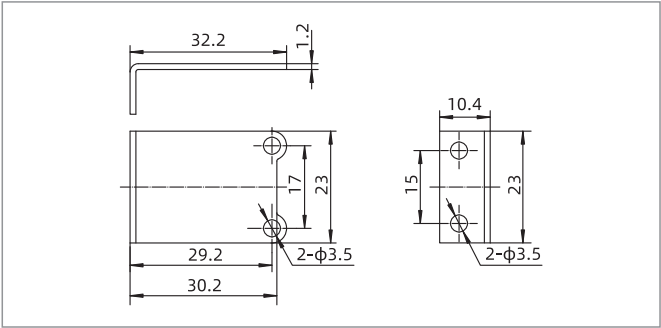
### Repair kits dimensions(mm)



ZFD04 Vacuum filter



ZFD06 Vacuum filter



AZR-B Mounting bracket

| Item             | Model | Applicable vacuum generator |
|------------------|-------|-----------------------------|
| Vacuum filter    | ZFD04 | AZR05H、AZR05L               |
| Vacuum filter    | ZFD06 | AZR07H、AZR07L               |
| Mounting bracket | AZR-B | AZR05H、AZR05L、AZR07H、AZR07L |