

# Quick Exhaust Valve Series AQ

Excellent exhaust characteristics

Large flow capacity

Compact and lightweight

A wide selection of models



## Model

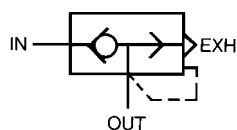
| Model     | Port size | Effective area (mm <sup>2</sup> ) |           | Mass (g) |
|-----------|-----------|-----------------------------------|-----------|----------|
|           |           | IN → OUT                          | OUT → EXH |          |
| AQ1500-M5 | M5 x 0.8  | 2                                 | 2.8       | 25       |
| AQ1510-01 | 1/8       | 4                                 | 5.8       | 45       |
| AQ2000-01 | 1/8       | 25                                | 25        | 110      |
| AQ2000-02 | 1/4       | 35                                | 40        | 105      |
| AQ3000-02 | 1/4       | 40                                | 42        | 215      |
| AQ3000-03 | 3/8       | 60                                | 70        | 205      |
| AQ5000-04 | 1/2       | 105                               | 115       | 690      |
| AQ5000-06 | 3/4       | 135                               | 180       | 650      |

## Specifications

|                               |                          |          |
|-------------------------------|--------------------------|----------|
| Fluid                         | Air                      |          |
| Proof pressure                | 1.5 MPa                  |          |
| Max. operating pressure       | AQ15□0                   | 0.7 MPa  |
|                               | AQ2000 to 5000           | 1 MPa    |
| Min. operating pressure       | AQ15□0                   | 0.1 MPa  |
|                               | AQ2000 to 5000           | 0.05 MPa |
| Ambient and fluid temperature | -5 to 60°C (No freezing) |          |

## How to Order

### JIS Symbol



AQ 2 0 0 0 - 02 -

### Standard size

|   |     |
|---|-----|
| 1 | 1/8 |
| 2 | 1/4 |
| 3 | 3/8 |
| 5 | 3/4 |

### Type

| Symbol | Type      | Applicable model |
|--------|-----------|------------------|
| 0      | Diaphragm | AQ2 to AQ5       |
| 5      | Lip       | AQ1 Only         |

### Standard

|   |          |
|---|----------|
| 0 | M5 x 0.8 |
| 1 | 1/8      |

Note) "AQ15□0" only

### Thread type

|     |                    |
|-----|--------------------|
| Nil | Metric thread (M5) |
| N   | NPT                |
| F   | G                  |

### Option

|   |                               |
|---|-------------------------------|
| H | High temperature (-5 to 80°C) |
| L | Low temperature (-30 to 60°C) |

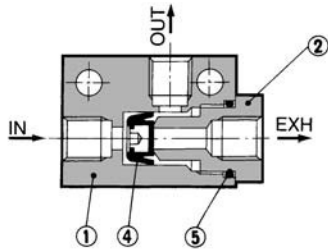
Note) AQ1500 and AQ1510 are not available.

### Port size

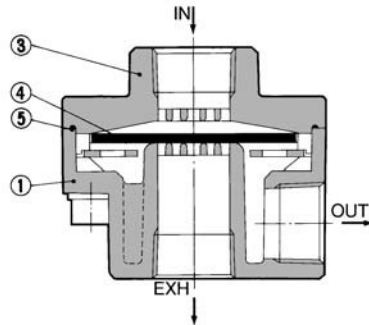
| Port size | Applicable series |
|-----------|-------------------|
| M5        | M5 x 0.8 AQ1500   |
| 01        | 1/8 AQ1510/2000   |
| 02        | 1/4 AQ2000/3000   |
| 03        | 3/8 AQ3000        |
| 04        | 1/2 AQ5000        |
| 06        | 3/4 AQ5000        |

## Construction

### AQ1500/1510



### AQ2000/3000/5000



## ⚠ Specific Product Precautions

Be sure to read before handling.  
Refer to front matters 58 and 59 for  
Safety Instructions and pages 412 to 414  
for Flow Control Equipment Precautions.

## Design/Selection

## ⚠ Caution

1. In the following cases, insufficient exhaust or vibration may cause noise.

- With residual pressure or back pressure on the IN side.
- When the differential pressure between the IN and OUT sides is smaller than the minimum operating pressure.
- When the effective area of the IN side piping of AQ, or the solenoid valve, is smaller than AQ.

## Component Parts

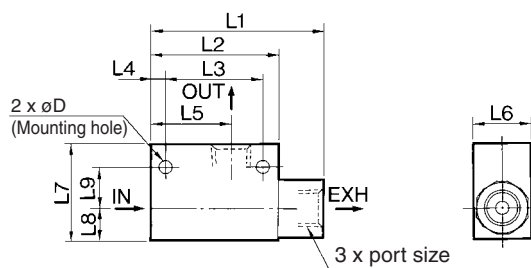
| No. | Description | Material/Model  |                 |                     |
|-----|-------------|-----------------|-----------------|---------------------|
|     |             | AQ1500          | AQ1510          | AQ2000, 3000, 5000  |
| 1   | Body        | Zinc die-casted | Zinc die-casted | Aluminum die-casted |
| 2   | Guide       | Brass           | Brass           | —                   |
| 3   | Cover       | —               | —               | Aluminum die-casted |

## Replacement Parts

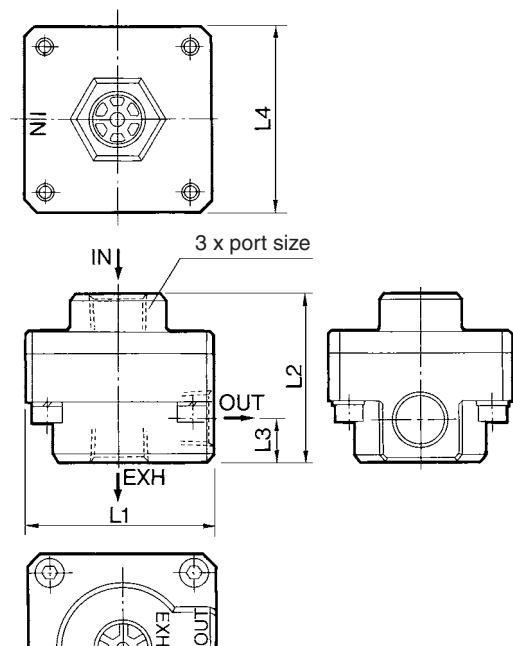
| No. | Description | Material | Part no.  |             |           |           |        |
|-----|-------------|----------|-----------|-------------|-----------|-----------|--------|
|     |             |          | AQ1500    | AQ1510      | AQ2000    | AQ3000    | AQ5000 |
| 4   | Valve       | NBR      | 30083     | 30093       | 30073     | 30053     | 30063  |
| 5   | O-ring      | NBR      | 9 x 7 x 1 | JISB2401P-7 | CA40-1601 | CA50-1602 | 30066  |

## Dimensions

### AQ1500/1510



### AQ2000/3000/5000



| Model  | Port size | L1 | L2 | L3 | L4 | L5   | L6 | L7 | L8  | L9  | D   |
|--------|-----------|----|----|----|----|------|----|----|-----|-----|-----|
| AQ1500 | M5 x 0.8  | 23 | 20 | 14 | 3  | 12.5 | 12 | 15 | 5.5 | 6.5 | 3.1 |
| AQ1510 | 1/8       | 45 | 33 | 25 | 4  | 21   | 15 | 25 | 8   | 11  | 4.3 |

| Model  | Port size | L1 | L2 | L3   | L4 |
|--------|-----------|----|----|------|----|
| AQ2000 | 1/8, 1/4  | 45 | 40 | 10   | 45 |
| AQ3000 | 1/4, 3/8  | 56 | 50 | 12.5 | 56 |
| AQ5000 | 1/2, 3/4  | 85 | 75 | 18   | 85 |

AS

ASP

ASN

AQ

ASV

AK

VCHC

ASS

ASR  
ASQ

KE

TMH

# Quick Exhaust Valve with One-touch Fittings Series **AQ240F/340F**

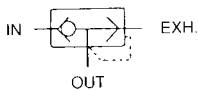


With exhaust port fitting

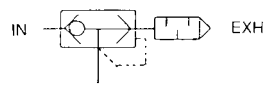


With silencer

## JIS Symbol



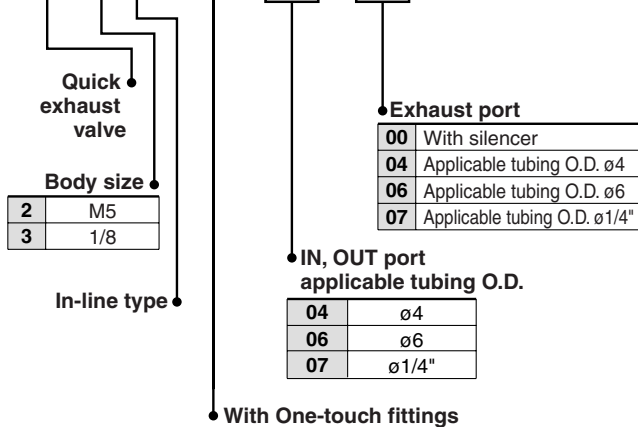
With exhaust port fitting



With silencer

## How to Order

**AQ 2 4 0 F - 06 - 06**



Note) Brass parts are all electroless nickel plated.

## Specific Product Precautions

Be sure to read before handling.  
Refer to front matters 58 and 59 for Safety Instructions and pages 412 to 414 for Flow Control Equipment Precautions.

## Design/Selection

## Caution

- In the following cases, insufficient exhaust or vibration may cause noise.
  - With residual pressure or back pressure on the IN side.
  - When the differential pressure between the IN and OUT sides is smaller than the minimum operating pressure.
  - When the effective area of the IN side piping of AQ, or the solenoid valve, is smaller than AQ.

## Space-saving

Rectilinear IN-OUT tubing connections

- With One-touch fittings and silencer
- With silencer
- Lightweight (Resin body)

## Specifications

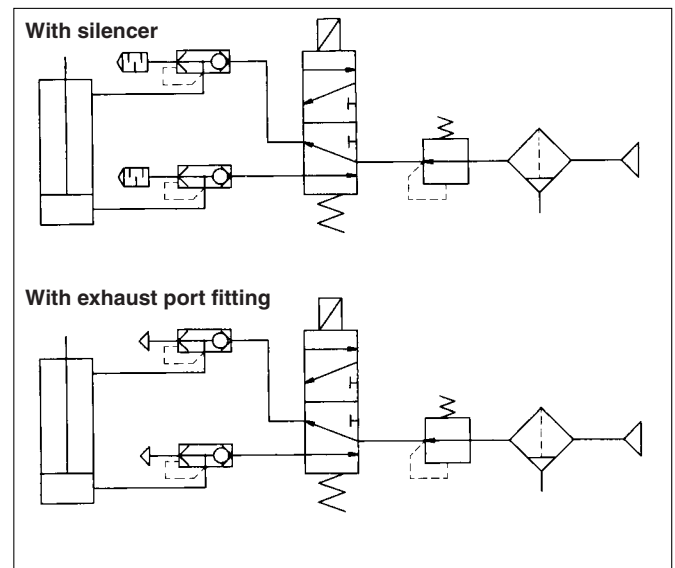
|                                           |                                 |
|-------------------------------------------|---------------------------------|
| Fluid                                     | Air                             |
| Proof pressure                            | 1.5 MPa                         |
| Max. operating pressure                   | 1 MPa                           |
| Min. operating pressure                   | 0.1 MPa                         |
| Ambient and fluid temperature             | -5 to 60°C (No freezing)        |
| Applicable tubing material <sup>(1)</sup> | Nylon, Soft nylon, Polyurethane |

Note 1) Use caution regarding the max. operating pressure when soft nylon or polyurethane tubing is used. (Refer to pages 371 and 372 for details.)

## Model

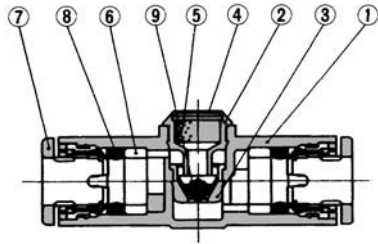
| Model       | Applicable tubing O.D. |   |      | Effective area (mm <sup>2</sup> ) |          |
|-------------|------------------------|---|------|-----------------------------------|----------|
|             | 4                      | 6 | 1/4" | IN→OUT                            | OUT→EXH. |
| AQ240F-04-□ | ●                      |   |      | 1.7                               | 2.5      |
| AQ240F-06-□ |                        | ● |      | 2.4                               | 2.7      |
| AQ340F-06-□ |                        | ● |      | 4                                 | 4        |
| AQ240F-07-□ |                        |   | ●    | 2.4                               | 2.7      |
| AQ340F-07-□ |                        |   | ●    | 4                                 | 4        |

## Circuit



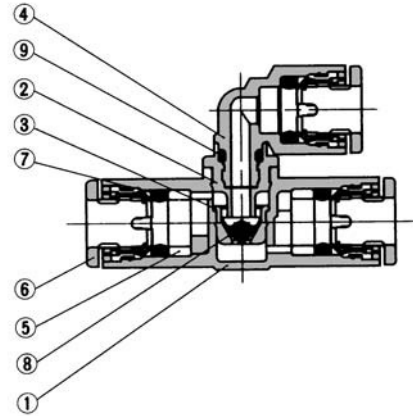
## Construction

### With silencer



| No. | Description    | Material            | Note                      |
|-----|----------------|---------------------|---------------------------|
| 1   | Body A         | PBT                 |                           |
| 2   | Seat ring      | Brass               | Electroless nickel plated |
| 3   | Valve seat     | Brass               | Electroless nickel plated |
| 4   | Silencer cover | Stainless steel 304 |                           |
| 5   | Silencer       | PVA sponge          |                           |
| 6   | Spacer         | POM                 |                           |
| 7   | Cassette       | —                   |                           |
| 8   | Seal           | NBR                 |                           |
| 9   | Valve          | HNBR                |                           |

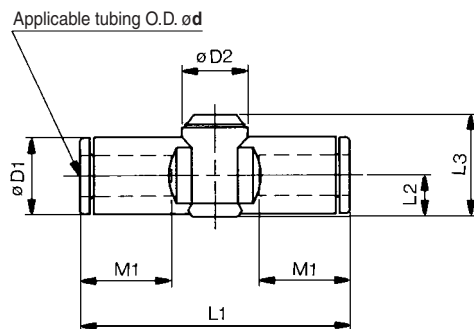
### With exhaust port fitting



| No. | Description      | Material | Note                      |
|-----|------------------|----------|---------------------------|
| 1   | Body A           | PBT      |                           |
| 2   | Seat ring        | Brass    | Electroless nickel plated |
| 3   | Valve seat       | Brass    | Electroless nickel plated |
| 4   | Elbow union body | POM      |                           |
| 5   | Spacer           | POM      |                           |
| 6   | Cassette         | —        |                           |
| 7   | Seal             | NBR      |                           |
| 8   | Valve            | HNBR     |                           |
| 9   | O-ring           | NBR      |                           |

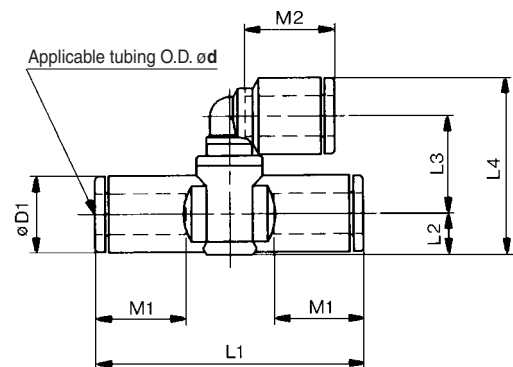
## Dimensions

### With silencer



| Model        | Tubing O.D. ød | D1   | D2   | L1   | L2  | L3   | M1   | Weight (g) |
|--------------|----------------|------|------|------|-----|------|------|------------|
| AQ240F-04-00 | 4              | 9.3  | 10.0 | 39.2 | 5.2 | 14.3 | 12.9 | 5          |
| AQ240F-06-00 | 6              | 11.6 | 10.0 | 40.7 | 6.2 | 15.4 | 13.7 | 6          |
| AQ340F-06-00 | 6              | 11.6 | 11.8 | 44.8 | 6.3 | 19.5 | 13.7 | 11         |
| AQ240F-07-00 | 1/4"           | 12   | 10.0 | 40.7 | 6.2 | 15.4 | 13.7 | 6          |
| AQ340F-07-00 | 1/4"           | 13.2 | 11.8 | 52.2 | 7.1 | 20.3 | 16.8 | 11         |

### With exhaust port fitting



| Model        | Tubing O.D. ød | D1   | L1   | L2  | L3   | L4   | M1   | M2   | Weight (g) |
|--------------|----------------|------|------|-----|------|------|------|------|------------|
| AQ240F-04-04 | 4              | 9.3  | 39.2 | 5.2 | 13.7 | 23.5 | 12.9 | 12.9 | 6          |
| AQ240F-06-06 | 6              | 11.6 | 40.7 | 6.2 | 14.7 | 26.7 | 13.7 | 13.7 | 8          |
| AQ340F-06-06 | 6              | 11.6 | 44.8 | 6.3 | 19.6 | 31.7 | 13.7 | 13.7 | 13         |
| AQ240F-07-07 | 1/4"           | 12   | 40.7 | 6.2 | 15.1 | 27.3 | 13.7 | 13.7 | 8          |
| AQ340F-07-07 | 1/4"           | 13.2 | 52.2 | 7.1 | 20.0 | 33.1 | 16.8 | 13.7 | 13         |

AS

ASP

ASN

AQ

ASV

AK

VCHC

ASS

ASR  
ASQ

KE

TMH