

Quick Exhaust Valve Series AQ

Excellent exhaust characteristics
Large flow capacity
Compact and lightweight
A wide selection of models



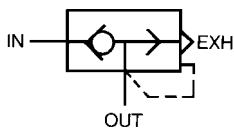
Model

| Model | Port size | Effective area (mm ²) | | 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) | |

JIS Symbol



How to Order

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

Option

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

Note) AQ1500 and AQ1510 are not available.

Port size

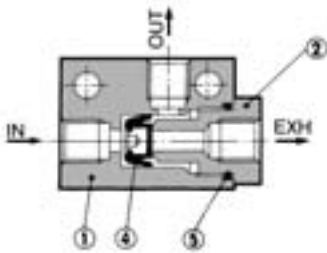
| Port size | Applicable series |
|-----------|-------------------|
| M5 | M5 x 0.8 AQ1500 |
| 01 | 1/8 AQ1510/2000 |
| 02 | 1/4 AQ2000/3000 |
| 03 | 3/8 AQ3000 |
| 04 | 1/2 AQ5000 |
| 06 | 3/4 AQ5000 |

Thread type

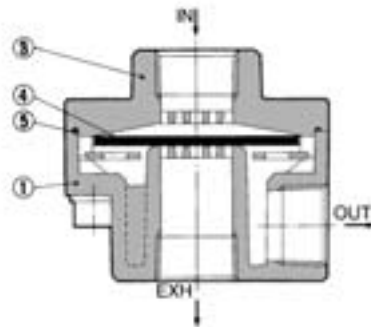
| | |
|-----|--------------------|
| Nil | Metric thread (M5) |
| N | NPT |
| F | G |

Construction

AQ1500/1510



AQ2000/3000/5000



Component Parts

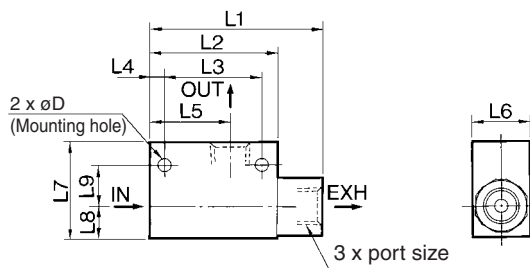
| No. | Description | Material/Model | | |
|-----|-------------|-----------------|-----------------|---------------------|
| | | AQ1500 | AQ1510 | AQ2000, 3000, 5000 |
| 1 | Body | Zinc die-casted | Zinc die-casted | Aluminum die-casted |
| 2 | Guide | Brass | Brass | — |
| 3 | Cover | — | — | Aluminum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

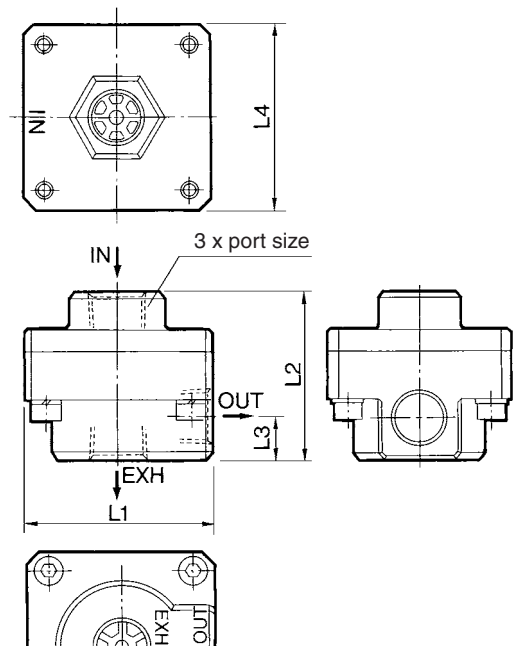
Dimensions

AQ1500/1510



| 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 |

AQ2000/3000/5000



| 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 |

⚠ 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.

- AS
- ASP
- ASN
- AQ
- ASV
- AK
- VCHC
- ASS
- ASR
- ASQ
- KE
- TMH

Quick Exhaust Valve with One-touch Fittings

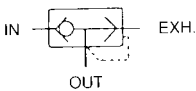
Series AQ240F/340F



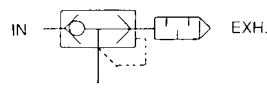
With exhaust port fitting

With silencer

JIS Symbol

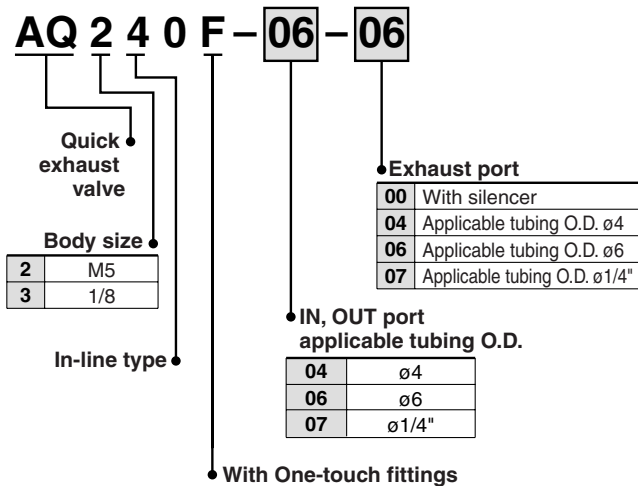


With exhaust port fitting



With silencer

How to Order



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

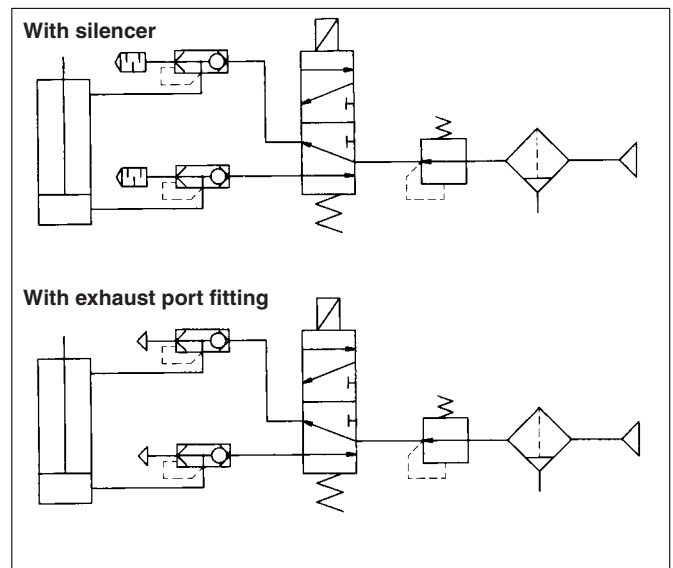
| | |
|---|---------------------------------|
| Fluid | Air |
| Proof pressure | 1.5 MPa |
| Max. operating pressure | 1 MPa |
| Min. operating pressure | 0.1 MPa |
| Ambient and fluid temperature | -5 to 60°C (No freezing) |
| Applicable tubing material ⁽¹⁾ | Nylon, Soft nylon, Polyurethane |

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

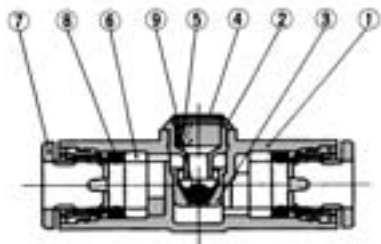
| Model | Applicable tubing O.D. | | | Effective area (mm ²) | |
|-------------|------------------------|---|------|-----------------------------------|----------|
| | 4 | 6 | 1/4" | IN→OUT | OUT→EXH. |
| AQ240F-04-□ | ● | | | 1.7 | 2.5 |
| AQ240F-06-□ | | ● | | 2.4 | 2.7 |
| AQ340F-06-□ | | ● | | 4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

Circuit



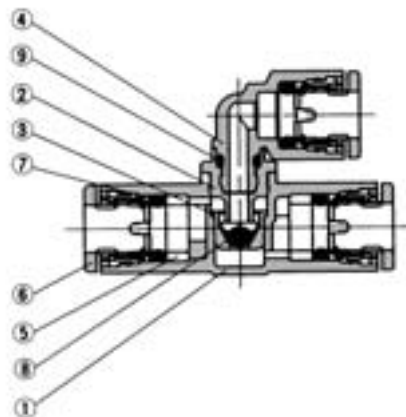
Construction

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 | |

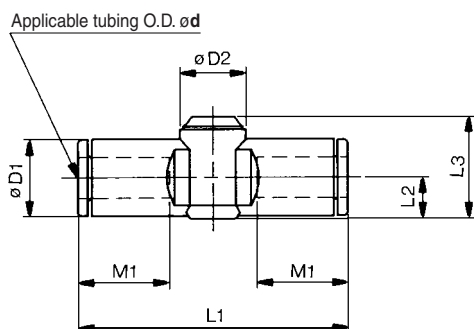
With exhaust port fitting



| 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 | |

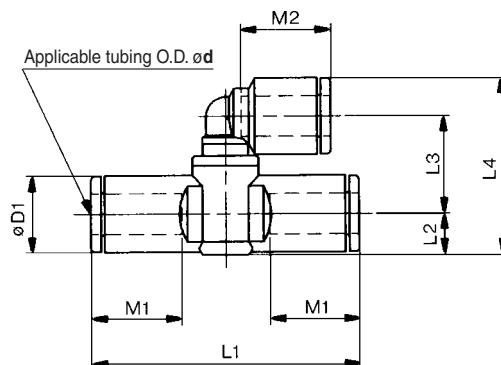
Dimensions

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