OUTLINE

The C Series constant flow valve keeps the flow rate of gases or liquids constant even when the supply or load pressure changes. A diaphragm control valve automatically maintains the flow rate.

The C Series constant flow valve is usually used as a purge set with glass tube or metal tube flowmeters.

Smaller purge sets (CP and CM-900) are also available. See respective Technical Guidance for details.

LINEUP

<table>
<thead>
<tr>
<th>Inlet pressure control type (for liquids and gases) and outlet pressure control type (for liquids)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
</tr>
<tr>
<td><strong>Liquids</strong></td>
</tr>
<tr>
<td>Water (density: 1.0 kg/m³, viscosity: 1.0 mPas)</td>
</tr>
<tr>
<td>C-21</td>
</tr>
<tr>
<td><strong>Gases</strong></td>
</tr>
<tr>
<td>Air (0 °C, 1 atm)</td>
</tr>
<tr>
<td><strong>Model</strong></td>
</tr>
<tr>
<td><strong>Outlet pressure control type (for gases)</strong></td>
</tr>
<tr>
<td><strong>Model</strong></td>
</tr>
<tr>
<td>C-22</td>
</tr>
<tr>
<td>C-32</td>
</tr>
<tr>
<td>C-42</td>
</tr>
<tr>
<td>C-52</td>
</tr>
<tr>
<td>C-62</td>
</tr>
<tr>
<td>C-72</td>
</tr>
<tr>
<td>C-82</td>
</tr>
</tbody>
</table>
C Series CONSTANT FLOW VALVE in CR and CAM Series PURGE SETS

EXTERNAL DIMENSIONS AND MATERIALS

C-20

STANDARD SPECIFICATION

- **Flow range**
  - Liquid (water): Min. 0.9 to 9 L/h
  - Max. 12 to 120 L/h
  - Gas (air: 0°C, 1 atm): Min. 0.015 to 0.15 m³/h (nor)
  - Max. 0.36 to 3.6 m³/h (nor)
  - Max. op. pressure: 1 MPa
  - Acceptable difference in pressure between inlet and outlet: 0.06 to 0.4 MPa
  - Control accuracy: ±5% F.S.
  - Max. op. temperature: 120°C (When FPM is used)

- **Painting**
  - Munsell 7.5BG 4/1.5
  - (Only for carbon steel)

- **Process connection**
  - Standard Rc 1/4 (NPT 1/4)
  - Flange connection is available.

- **Mass**
  - C-21 (inlet pressure control type): approx. 2.5 kg
  - C-22 (outlet pressure control type): approx. 4.5 kg

CONSTRUCTION AND MATERIALS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part name</th>
<th>Available material</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Valve body</td>
<td>SCS14</td>
</tr>
<tr>
<td>②</td>
<td>Spring</td>
<td>SUS304, SUS316</td>
</tr>
<tr>
<td>③</td>
<td>Diaphragm</td>
<td>CR (FPM, PTFE)</td>
</tr>
<tr>
<td>④</td>
<td>Tube, union</td>
<td>SUS304, SUS316</td>
</tr>
<tr>
<td>⑤</td>
<td>Valve</td>
<td>SUS316</td>
</tr>
</tbody>
</table>

DIMENSIONS OF CONSTANT FLOW VALVE UNIT

C-21 (inlet pressure control type)

C-22 (outlet pressure control type)
EXAMPLE OF COMBINATION WITH FLOWMETERS

Inlet pressure control type (Also applicable to outlet pressure control of liquids)

Combination with glass tube flowmeters

Combination with metal tube flowmeters

※Dimensions are for standard types. Confirm the dimensions in the approval drawing.

CR-21-101
- Flow range
  - Liquid (water)
    - Min. 0.9 to 9 L/h
    - Max. 12 to 120 L/h
    - Min. 0.015 to 0.15 m³/h (nor)
    - Max. 0.36 to 3.6 m³/h (nor)
- Standard connection
  - 10 mm or 15 mm JIS10K flange

CAM-21-71
- Flow range
  - Liquid (water)
    - Min. 10 to 100 L/h
    - Max. 12 to 120 L/h
- Standard connection
  - 15 mm or 20 mm JIS10K flange

CAM-21-73
- Flow range
  - Gas
    - Min. 0.31 to 3.1 m³/h (nor)
    - Max. 0.36 to 3.6 m³/h (nor)
- Standard connection
  - 15 mm or 20 mm JIS10K flange

Outlet pressure control type

Combination with glass tube flowmeters

Combination with metal tube flowmeters

※Dimensions are for standard types. Confirm the dimensions in the approval drawing.

CR-22-102
- Flow range
  - Gas
    - Min. 0.015 to 0.15 m³/h (nor)
    - Max. 0.36 to 3.6 m³/h (nor)
- Standard connection
  - 10 mm or 15 mm JIS10K flange

CAM-22-71/72/73
- Flow range
  - Gas
    - Min. 0.3 to 3 m³/h (nor)
    - Max. 0.36 to 3.6 m³/h (nor)
- Standard connection
  - 15 mm or 20 mm JIS10K flange

TOKYO KEISO CO., LTD.
C Series CONSTANT FLOW VALVE in CR and CAM Series PURGE SETS

C-30

■ STANDARD SPECIFICATION

Flow range
Liquid (water) Min. 12 to 120 L/h
Gas (air: 0°C, 1 atm) Min. 0.36 to 3.6 m³/h (nor)
Max. 0.9 to 9 m³/h (nor)
Max. op. pressure 1 MPa
Acceptable difference in pressure between inlet and outlet 0.1 to 0.5 MPa
Control accuracy ±5% F.S.
Max. op. temperature 120°C (When FPM is used)
The maximum operation temperature depends on usage and conditions.
Painting Munsell 7.5BG4/1.5
(Only for carbon steel)
Process connection Standard 15 mm JIS10K flange
(1/2 ANSI/JPI Class 150)
Screw connection is available.
Mass C-31
(inlet pressure control type): approx. 4 kg
C-32
(outlet pressure control type): approx. 4 kg

■ CONSTRUCTION AND MATERIALS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part name</th>
<th>Available material</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Flange</td>
<td>CS, SUS304, SUS316</td>
</tr>
<tr>
<td>②</td>
<td>Valve body</td>
<td>SCS14 (C-31) SUS304, SUS316 (C-32)</td>
</tr>
<tr>
<td>③</td>
<td>Spring</td>
<td>SUS304, SUS316</td>
</tr>
<tr>
<td>④</td>
<td>Diaphragm</td>
<td>CR (FPM, PTFE)</td>
</tr>
<tr>
<td>⑤</td>
<td>Tube, union</td>
<td>SUS304, SUS316</td>
</tr>
<tr>
<td>⑥</td>
<td>Valve</td>
<td>SUS316</td>
</tr>
<tr>
<td>⑦</td>
<td>Bolt</td>
<td>CS, SUS304</td>
</tr>
</tbody>
</table>

■ DIMENSIONS OF CONSTANT FLOW VALVE UNIT

![C-31 (inlet pressure control type)](image1)

![C-32 (outlet pressure control type)](image2)
EXAMPLE OF COMBINATION WITH FLOWMETERS

Inlet pressure control type (Also applicable to outlet pressure control of liquids)

Combination with glass tube flowmeters

Combination with metal tube flowmeters

※Dimensions are for standard types. Confirm the dimensions in the approval drawing.

CR-31-101
- Flow range
  - Liquid (water)
  - Gas (air: 0°C, 1 atm)
- Standard connection
  - 15 mm or 20 mm JIS10K flange

CAM-31-71□□ for liquids
- Flow range
  - Liquid (water)
  - Gas (air: 0°C, 1 atm)
- Standard connection
  - 15 mm or 20 mm JIS10K flange

CAM-31-73□□/DL for gases
- Flow range
  - Gas (air: 0°C, 1 atm)
- Standard connection
  - 15 mm or 20 mm JIS10K flange

Outlet pressure control type

Combination with glass tube flowmeters

Combination with metal tube flowmeters

※Dimensions are for standard types. Confirm the dimensions in the approval drawing.

CR-32-102
- Flow range
  - Gas (air: 0°C, 1 atm)
  - Standard connection
    - 15 mm or 20 mm JIS10K flange

CAM-32-72□□/DU
- Flow range
  - Gas (air: 0°C, 1 atm)
  - Standard connection
    - 15 mm or 20 mm JIS10K flange

CAM-32-73□□/DL
- Flow range
  - Gas (air: 0°C, 1 atm)
  - Standard connection
    - 15 mm or 20 mm JIS10K flange
C Series CONSTANT FLOW VALVE in CR and CAM Series PURGE SETS

C-40

- **STANDARD SPECIFICATION**

  **Flow range**
  - Liquid (water): Min. 30 to 300 L/h
  - Gas (air: 0°C, 1 atm): Min. 0.9 to 9 m³/h (nor)
  - Gas (air: 0°C, 1 atm): Max. 2.1 to 21 m³/h (nor)
  - Max. op. pressure: 1 MPa
  - Acceptable difference in pressure between inlet and outlet: 0.1 to 0.6 MPa
  - Control accuracy: ±5% F.S.
  - Max. op. temperature: 120°C (When FPM is used)
  - The maximum operation temperature depends on usage and conditions.
  - Painting: Munsell 7.5BG4/1.5 (Only for carbon steel)
  - Process connection: Standard 15 mm JS10K flange (1/2 ANSI/JPI Class 150)
  - Screw connection is available.
  - Mass: C-41 (inlet pressure control type): approx. 12 kg
  - Mass: C-42 (outlet pressure control type): approx. 10 kg

- **CONSTRUCTION AND MATERIALS**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part name</th>
<th>Available material</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Flange</td>
<td>CS, SUS304, SUS316</td>
</tr>
<tr>
<td>②</td>
<td>Valve body</td>
<td>CS, SUS304, SUS316</td>
</tr>
<tr>
<td>③</td>
<td>Spring</td>
<td>SUS304, SUS316</td>
</tr>
<tr>
<td>④</td>
<td>Diaphragm</td>
<td>CR (FPM, PTFE)</td>
</tr>
<tr>
<td>⑤</td>
<td>Tube, union</td>
<td>SUS304, SUS316</td>
</tr>
<tr>
<td>⑥</td>
<td>Valve</td>
<td>SUS316</td>
</tr>
<tr>
<td>⑦</td>
<td>Bolt, nut</td>
<td>CS, SUS304</td>
</tr>
</tbody>
</table>

- **DIMENSIONS OF CONSTANT FLOW VALVE UNIT**

![Diagram of C-41 (inlet pressure control type) and C-42 (outlet pressure control type) dimensions]
### EXAMPLE OF COMBINATION WITH FLOWMETERS

**Inlet pressure control type (Also applicable to outlet pressure control of liquids)**

<table>
<thead>
<tr>
<th>Combination with glass tube flowmeters</th>
<th>Combination with metal tube flowmeters</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Diagram" /></td>
<td><img src="image2.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

※Dimensions are for standard types. Confirm the dimensions in the approval drawing.

**CR-41-101**
- **Flow range**
  - Liquid (water)
    - Min. 30 to 300 L/h
    - Max. 70 to 700 L/h
  - Gas (air: 0°C, 1 atm)
    - Min. 0.9 to 9 m³/h (nor)
    - Max. 2.1 to 21 m³/h (nor)
- **Standard connection**
  - 15 mm, 20 mm or 25 mm JIS10K flange

**CAM-41-71□□ (for liquids)**
- **Flow range**
  - Liquid (water)
    - Min. 30 to 300 L/h
    - Max. 70 to 700 L/h
- **Standard connection**
  - 15 mm or 20 mm JIS10K flange

**CAM-41-72□□/DU, CAM-41-71□□/DU (for gases)**
- **Flow range**
  - Gas (air)
    - Min. 0.9 to 9 m³/h (nor)
    - for CAM-41-72□□/DU
      - Max. 1.6 to 16 m³/h (nor)
    - for CAM-41-71□□/DU
      - Max. 2.1 to 21 m³/h (nor)
- **Standard connection**
  - 15 mm or 20 mm JIS10K flange

---

### Outlet pressure control type

<table>
<thead>
<tr>
<th>Combination with glass tube flowmeters</th>
<th>Combination with metal tube flowmeters</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3.png" alt="Diagram" /></td>
<td><img src="image4.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

※Dimensions are for standard types. Confirm the dimensions in the approval drawing.

**CR-42-102**
- **Flow range**
  - Gas (air: 0°C, 1 atm)
    - Min. 0.9 to 9 m³/h (nor)
    - Max. 2.1 to 21 m³/h (nor)
- **Standard connection**
  - 20 mm or 25 mm JIS10K flange

**CAM-42-72□□/DU**
- **Flow range**
  - Gas (air: 0°C, 1 atm)
    - Min. 0.9 to 9 m³/h (nor)
    - Max. 2.1 to 21 m³/h (nor)
- **Standard connection**
  - 15 mm or 20 mm JIS10K flange
C-50

■ STANDARD SPECIFICATION

Flow range

Liquid (water)  Min. 70 to 700 L/h
               Max. 120 to 1200 L/h

Gas (air: 0°C, 1 atm) Min. 2.1 to 21 m³/h (nor)
            Max. 3.6 to 36 m³/h (nor)

Max. op. pressure 1 MPa

Acceptable difference in pressure between inlet and outlet 0.1 to 0.6 MPa

Control accuracy ±5% F.S.

Max. op. temperature 120°C (When FPM is used)
The maximum operation temperature depends on usage and conditions.

Painting

Munsell 7.5BG4/1.5
(Only for carbon steel)

Process connection

Standard 20 mm JIS10K flange (3/4 ANSI/JPI Class 150)

Mass

C-51
(inlet pressure control type): approx. 14 kg
C-52
(outlet pressure control type): approx. 10 kg

■ CONSTRUCTION AND MATERIALS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part name</th>
<th>Available material</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Flange</td>
<td>CS, SUS304, SUS316</td>
</tr>
<tr>
<td>②</td>
<td>Valve body</td>
<td>CS, SUS304, SUS316</td>
</tr>
<tr>
<td>③</td>
<td>Spring</td>
<td>SUS304, SUS316</td>
</tr>
<tr>
<td>④</td>
<td>Diaphragm</td>
<td>CR (FPM, PTFE)</td>
</tr>
<tr>
<td>⑤</td>
<td>Tube, union</td>
<td>SUS304, SUS316</td>
</tr>
<tr>
<td>⑥</td>
<td>Valve</td>
<td>SUS316</td>
</tr>
<tr>
<td>⑦</td>
<td>Bolt, nut</td>
<td>CS, SUS304</td>
</tr>
</tbody>
</table>

■ DIMENSIONS OF CONSTANT FLOW VALVE UNIT

C-51 (inlet pressure control type)

C-52 (outlet pressure control type)
EXAMPLE OF COMBINATION WITH FLOWMETERS

Inlet pressure control type (Also applicable to outlet pressure control of liquids)

Combination with glass tube flowmeters  Combination with metal tube flowmeters

※Dimensions are for standard types. Confirm the dimensions in the approval drawing.

CR-51-101
- Flow range
  Liquid (water) Min. 70 to 700 L/h
  Max. 120 to 1200 L/h
  Gas (air: 0°C, 1 atm)
  Min. 2.1 to 21 m³/h (nor)
  Max. 3.6 to 36 m³/h (nor)
- Standard connection
  20 mm, 25 mm or 40 mm JIS10K flange

CAM-51-71 (for liquids)
- Flow range
  Liquid (water) Min. 70 to 700 L/h
  Max. 120 to 1200 L/h
- Standard connection
  15 mm or 20 mm JIS10K flange

CAM-51-71/DU (for gases)
- Flow range
  Gas (air: 0°C, 1 atm)
  Min. 2.1 to 21 m³/h (nor)
  Max. 3.6 to 36 m³/h (nor)
- Standard connection
  20 mm JIS10K flange

Outlet pressure control type

Combination with glass tube flowmeters  Combination with metal tube flowmeters

※Dimensions are for standard types. Confirm the dimensions in the approval drawing.

CR-52-102
- Flow range
  Gas (air: 0°C, 1 atm)
  Min. 2.1 to 21 m³/h (nor)
  Max. 3.6 to 36 m³/h (nor)
- Standard connection
  25 mm or 40 mm JIS10K flange

CAM-52-72/DU
- Flow range
  Gas (air: 0°C, 1 atm)
  Min. 2.1 to 21 m³/h (nor)
  Max. 3.6 to 36 m³/h (nor)
- Standard connection
  20 mm JIS10K flange
C-60

■ STANDARD SPECIFICATION

Flow range
Liquid (water) Min. 120 to 1200 L/h
Max. 180 to 1800 L/h
Gas (air: 0°C, 1 atm) Min. 3.6 to 36 m³/h (nor)
Max. 5.4 to 54 m³/h (nor)
Max. op. pressure 1 MPa
Acceptable difference in pressure 0.1 to 0.6 MPa
between inlet and outlet
Control accuracy ±5% F.S.
Max. op. temperature 120°C (When FPM is used)
The maximum operation temperature depends on usage and conditions.

Painting Munsell 7.5BG4/1.5
(Only for carbon steel)
Process connection Standard 20 mm JIS10K flange
(3/4 ANSI/JPI Class 150)
Mass C-61
(inlet pressure control type): approx. 10 kg
C-62
(outlet pressure control type): approx. 10 kg

■ CONSTRUCTION AND MATERIALS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part name</th>
<th>Available material</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Flange</td>
<td>CS, SUS304, SUS316</td>
</tr>
<tr>
<td>②</td>
<td>Valve body</td>
<td>CS, SUS304, SUS316</td>
</tr>
<tr>
<td>③</td>
<td>Spring</td>
<td>SUS304, SUS316</td>
</tr>
<tr>
<td>④</td>
<td>Diaphragm</td>
<td>CR (FPM, PTFE)</td>
</tr>
<tr>
<td>⑤</td>
<td>Tube, union</td>
<td>SUS304, SUS316</td>
</tr>
<tr>
<td>⑥</td>
<td>Valve</td>
<td>SUS316</td>
</tr>
<tr>
<td>⑦</td>
<td>Bolt, nut</td>
<td>CS, SUS304</td>
</tr>
</tbody>
</table>

■ DIMENSIONS OF CONSTANT FLOW VALVE UNIT
EXAMPLE OF COMBINATION WITH FLOWMETERS

Inlet pressure control type (Also applicable to outlet pressure control of liquids)

<table>
<thead>
<tr>
<th>Combination with glass tube flowmeters</th>
<th>Combination with metal tube flowmeters</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Image of flowmeters]</td>
<td>![Image of flowmeters]</td>
</tr>
</tbody>
</table>

※Dimensions are for standard types. Confirm the dimensions in the approval drawing.

CR-61-101
- Flow range
  - Liquid (water)
  - Min. 120 to 1200 L/h
  - Max. 180 to 1800 L/h
- Gas (air: 0°C, 1 atm)
- Standard connection
  - 25 mm or 40 mm JIS10K flange

CAM-61-71 (for liquids)
- Flow range
  - Liquid (water)
  - Min. 120 to 1200 L/h
  - Max. 180 to 1800 L/h
- Standard connection
  - 20 mm or 25 mm JIS10K flange

CAM-61-71DU (for gases)
- Flow range
  - Gas (air: 0°C, 1 atm)
  - Min. 3.6 to 36 m³/h (nor)
  - Max. 5.4 to 54 m³/h (nor)
- Standard connection
  - 20 mm or 25 mm JIS10K flange

Outlet pressure control type

<table>
<thead>
<tr>
<th>Combination with glass tube flowmeters</th>
<th>Combination with metal tube flowmeters</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Image of flowmeters]</td>
<td>![Image of flowmeters]</td>
</tr>
</tbody>
</table>

※Dimensions are for standard types. Confirm the dimensions in the approval drawing.

CR-62-102
- Flow range
  - Gas (air: 0°C, 1 atm)
  - Min. 3.6 to 36 m³/h (nor)
  - Max. 5.4 to 54 m³/h (nor)
- Standard connection
  - 25 mm or 40 mm JIS10K flange

CAM-62-72DU
- Flow range
  - Gas (air: 0°C, 1 atm)
  - Min. 3.6 to 36 m³/h (nor)
  - Max. 5.4 to 54 m³/h (nor)
- Standard connection
  - 20 mm or 25 mm JIS10K flange
C Series CONSTANT FLOW VALVE in CR and CAM Series PURGE SETS

C-70

■ STANDARD SPECIFICATION

Flow range
Liquid (water) Min. 180 to 1800 L/h
Max. 300 to 3000 L/h
Gas (air: 0°C, 1 atm) Min. 5.4 to 54 m³/h (nor)
Max. 9 to 90 m³/h (nor)
Max. op. pressure 1 MPa
Acceptable difference in pressure between inlet and outlet 0.1 to 0.6 MPa
Control accuracy ±5% F.S.
Max. op. temperature 120°C (When FPM is used)
The maximum operation temperature depends on usage and conditions.
Painting Munsell 7.5BG/1.5
(Only for carbon steel)
Process connection Standard 25 mm JIS10K flange
(1 ANSI/JPI Class 150)
Mass C-71
(inlet pressure control type): approx. 11 kg
C-72
(outlet pressure control type): approx. 11 kg

■ CONSTRUCTION AND MATERIALS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part name</th>
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</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Flange</td>
<td>CS, SUS304, SUS316</td>
</tr>
<tr>
<td>②</td>
<td>Valve body</td>
<td>CS, SUS304, SUS316</td>
</tr>
<tr>
<td>③</td>
<td>Spring</td>
<td>SUS304, SUS316</td>
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<td>④</td>
<td>Diaphragm</td>
<td>CR (FPM, PTFE)</td>
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<td>Tube, union</td>
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<td>⑥</td>
<td>Valve</td>
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</tr>
<tr>
<td>⑦</td>
<td>Bolt, nut</td>
<td>CS, SUS304</td>
</tr>
</tbody>
</table>

■ DIMENSIONS OF CONSTANT FLOW VALVE UNIT
**EXAMPLE OF COMBINATION WITH FLOWMETERS**

Inlet pressure control type (Also applicable to outlet pressure control of liquids)

<table>
<thead>
<tr>
<th>Glass Tube Flowmeters</th>
<th>Metal Tube Flowmeters</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR-71-101</td>
<td>CAM-71-101/102</td>
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<tr>
<td>Flow range</td>
<td>Flow range</td>
</tr>
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<td>Liquid (water)</td>
<td>Liquid (water)</td>
</tr>
<tr>
<td>Min. 180 to 1800 L/h</td>
<td>Min. 180 to 1800 L/h</td>
</tr>
<tr>
<td>Max. 300 to 3000 L/h</td>
<td>Max. 300 to 3000 L/h</td>
</tr>
<tr>
<td>Liquid (water)</td>
<td>Liquid (water)</td>
</tr>
<tr>
<td>Min. 5.4 to 54 m³/h</td>
<td>Min. 5.4 to 54 m³/h</td>
</tr>
<tr>
<td>Max. 9 to 90 m³/h</td>
<td>Max. 9 to 90 m³/h</td>
</tr>
<tr>
<td>Standard connection</td>
<td>Standard connection</td>
</tr>
<tr>
<td>40 mm or 50 mm JIS10K flange</td>
<td>25 mm JIS10K flange</td>
</tr>
</tbody>
</table>

※Dimensions are for standard types. Confirm the dimensions in the approval drawing.

Outlet pressure control type

<table>
<thead>
<tr>
<th>Glass Tube Flowmeters</th>
<th>Metal Tube Flowmeters</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR-72-102</td>
<td>CAM-72-102/103</td>
</tr>
<tr>
<td>Flow range</td>
<td>Flow range</td>
</tr>
<tr>
<td>Gas</td>
<td>Gas</td>
</tr>
<tr>
<td>(air: 0°C, 1 atm)</td>
<td>(air: 0°C, 1 atm)</td>
</tr>
<tr>
<td>Min. 5.4 to 54 m³/h</td>
<td>Min. 5.4 to 54 m³/h</td>
</tr>
<tr>
<td>Max. 9 to 90 m³/h</td>
<td>Max. 9 to 90 m³/h</td>
</tr>
<tr>
<td>Standard connection</td>
<td>Standard connection</td>
</tr>
<tr>
<td>40 mm or 50 mm JIS10K flange</td>
<td>25 mm or 40 mm JIS10K flange</td>
</tr>
</tbody>
</table>

※Dimensions are for standard types. Confirm the dimensions in the approval drawing.
C Series CONSTANT FLOW VALVE in CR and CAM Series PURGE SETS

C-80

■ STANDARD SPECIFICATION

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow range</td>
<td>Min. 300 to 3000 L/h, Max. 1000 to 10000 L/h</td>
</tr>
<tr>
<td>Liquid (water)</td>
<td></td>
</tr>
<tr>
<td>Gas (air: 0°C, 1 atm)</td>
<td>Min. 9 to 90 m³/h (nor), Max. 23 to 230 m³/h (nor)</td>
</tr>
<tr>
<td>Max. op. pressure</td>
<td>1 MPa</td>
</tr>
<tr>
<td>Acceptable difference in pressure between inlet and outlet</td>
<td>±0.1% F.S.</td>
</tr>
<tr>
<td>Max. op. temperature</td>
<td>120°C (When FPM is used)</td>
</tr>
<tr>
<td>Control accuracy</td>
<td></td>
</tr>
<tr>
<td>Painting</td>
<td>Munsell 7.5BG4/1.5 (for carbon steel)</td>
</tr>
<tr>
<td>Process connection</td>
<td>Standard 50 mm JIS10K flange (2 ANSI/JPI Class 150)</td>
</tr>
<tr>
<td>Mass</td>
<td>C-81 (inlet pressure control type): approx. 22 kg, C-82 (outlet pressure control type): approx. 32 kg</td>
</tr>
</tbody>
</table>

■ CONSTRUCTION AND MATERIALS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part name</th>
<th>Available material</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Flange</td>
<td>CS, SUS304, SUS316</td>
</tr>
<tr>
<td>②</td>
<td>Valve body</td>
<td>CS, SUS304, SUS316</td>
</tr>
<tr>
<td>③</td>
<td>Spring</td>
<td>SUS304, SUS316</td>
</tr>
<tr>
<td>④</td>
<td>Diaphragm</td>
<td>CR (FPM, PTFE)</td>
</tr>
<tr>
<td>⑤</td>
<td>Tube, union</td>
<td>SUS304, SUS316</td>
</tr>
<tr>
<td>⑥</td>
<td>Valve</td>
<td>SUS316</td>
</tr>
<tr>
<td>⑦</td>
<td>Bolt, nut</td>
<td>CS, SUS304</td>
</tr>
</tbody>
</table>

■ DIMENSIONS OF CONSTANT FLOW VALVE UNIT

C-81 (inlet pressure control type)

C-82 (outlet pressure control type)
EXAMPLE OF COMBINATION WITH FLOWMETERS

Inlet pressure control type (Also applicable to outlet pressure control of liquids)

Combination with glass tube flowmeters  Combination with metal tube flowmeters

※Dimensions are for standard types. Confirm the dimensions in the approval drawing.

CR-81-101

- Flow range
  - Liquid (water)
  - Min. 300 to 3000 L/h
  - Max. 1 to 10 m³/h
- Gas
  - Min. 9 to 90 m³/h (nor)
  - Max. 21 to 210 m³/h (nor)
- Standard connection
  - 40 mm, 50 mm or 65 mm JIS10K flange

CAM-81-71【（for liquids）

- Flow range
  - Liquid (water)
  - Min. 300 to 3000 L/h
  - Max. 1 to 10 m³/h
- Standard connection
  - 25 mm, 40 mm or 50 mm JIS10K flange

CAM-81-71【/DU (for gases)

- Flow range
  - Gas
    - Min. 9 to 90 m³/h (nor)
    - Max. 23 to 230 m³/h (nor)
- Standard connection
  - 25 mm, 40 mm or 50 mm JIS10K flange

Outlet pressure control type

Combination with glass tube flowmeters  Combination with metal tube flowmeters

※Dimensions are for standard types. Confirm the dimensions in the approval drawing.

CR-82-102

- Flow range
  - Gas
    - Min. 9 to 90 m³/h (nor)
    - Max. 21 to 210 m³/h (nor)
- Standard connection
  - 50 mm or 65 mm JIS10K flange

CAM-82-72【/DU

- Flow range
  - Gas
    - Min. 9 to 90 m³/h (nor)
    - Max. 23 to 230 m³/h (nor)
- Standard connection
  - 40 mm or 50 mm JIS10K flange
C Series CONSTANT FLOW VALVE in CR and CAM Series PURGE SETS

OTHER TYPES PURGE SETS

CP and CM Series Purge sets
These are the combinations of constant flow valve and small size flowmeters for small to medium lines

CP-21-100
CP-31-500
CM-21-900

CX Series In-Line type Flow Set valves
These are direct in-line installation type flow control valves to keep set flow.

CX-1101
For liquids, fixed flow

CX-2000
For liquids, adjustable flow

CX-1500
For gases, fixed flow

* Specification is subject to change without notice.