

Double-Seated Two-Way Valve with Flanged-End Connection Model V5064A

General

Model V5064A is a double-seated two-way valve, which is cast-iron with flanged-end connection. Valve size ranges from DN40 to DN150.

Since the trim is pressure-balanced, this model is applicable to high differential pressure comparing to a single-seated valve.

Model V5064A is operated with the control motor, high-torque actuator or pneumatic valve actuator for controlling non-corrosive chilled/hot water.



Specifications

| Item | Specification | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|--|---------------------|------------------------------------|---------------------|------------------|--------------|------------|----------------------|----|----|----|------------|----------------------|----|------------|--------------------|----|------|------------|----------------------|----|------|------------|--------------------|-----|----|------|------------|----------------------|-----|----|------------|----------------------|-----|----|------------|----------------------|-----|--|------|
| Models | Double-seated two-way valve with flanged-end connection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>Model number</th><th>Valve size × Port size mm (in.)</th><th>Flow capacity Cv</th><th>Rated lift mm</th><th>Weight kg</th></tr> </thead> <tbody> <tr> <td>V5064A6002</td><td>40 × 32 (1½ × 1¼)</td><td>20</td><td rowspan="4">19</td><td rowspan="4">11</td></tr> <tr> <td>V5064A6010</td><td>40 × 40 (1½ × 1½)</td><td>28</td></tr> <tr> <td>V5064A6028</td><td>50 × 50 (2 × 2)</td><td>50</td><td>15.8</td></tr> <tr> <td>V5064A6036</td><td>65 × 65 (2½ × 2½)</td><td>78</td><td>21.2</td></tr> <tr> <td>V5064A6044</td><td>80 × 80 (3 × 3)</td><td>112</td><td rowspan="3">38</td><td>29.8</td></tr> <tr> <td>V5064A6051</td><td>100 × 100 (4 × 4)</td><td>200</td><td>44</td></tr> <tr> <td>V5064A6069</td><td>125 × 125 (5 × 5)</td><td>260</td><td>61</td></tr> <tr> <td>V5064A6077</td><td>150 × 150 (6 × 6)</td><td>380</td><td></td><td>89.4</td></tr> </tbody> </table> | Model number | Valve size × Port size mm (in.) | Flow capacity Cv | Rated lift mm | Weight kg | V5064A6002 | 40 × 32 (1½ × 1¼) | 20 | 19 | 11 | V5064A6010 | 40 × 40 (1½ × 1½) | 28 | V5064A6028 | 50 × 50 (2 × 2) | 50 | 15.8 | V5064A6036 | 65 × 65 (2½ × 2½) | 78 | 21.2 | V5064A6044 | 80 × 80 (3 × 3) | 112 | 38 | 29.8 | V5064A6051 | 100 × 100 (4 × 4) | 200 | 44 | V5064A6069 | 125 × 125 (5 × 5) | 260 | 61 | V5064A6077 | 150 × 150 (6 × 6) | 380 | | 89.4 |
| Model number | Valve size × Port size mm (in.) | Flow capacity Cv | Rated lift mm | Weight kg | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V5064A6002 | 40 × 32 (1½ × 1¼) | 20 | 19 | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V5064A6010 | 40 × 40 (1½ × 1½) | 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V5064A6028 | 50 × 50 (2 × 2) | 50 | | | 15.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V5064A6036 | 65 × 65 (2½ × 2½) | 78 | | | 21.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V5064A6044 | 80 × 80 (3 × 3) | 112 | 38 | 29.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V5064A6051 | 100 × 100 (4 × 4) | 200 | | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V5064A6069 | 125 × 125 (5 × 5) | 260 | | 61 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V5064A6077 | 150 × 150 (6 × 6) | 380 | | 89.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Close-off ratings | Refer to Table 1. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Materials | Body : Cast iron (JIS* FC200) Plug, seat : Stainless steel (JIS SCS13) Stem : Stainless steel (JIS SUS304) Packing, gasket : Non asbestos | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Body pressure rating | 1 MPa | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Allowable fluid temperature | 0 °C to 200 °C Note: Due to heat transmission, etc., an actuator operating the valve may not accept this range. Refer to Specifications/Instructions of the actuator. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Item | Specification | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|-----------------------------------|------------------------------|-----------------------------------|-------------|-------------|--------|-----------------------|--------------------------|--------|------------------------|------------------------------|-------------|--------------|---------|----------------|--------------|-----------------------|-----------------|--------------|--------------------|-----------------|
| End connection | Flanged-end Flat face flange (JIS 10K) | | | | | | | | | | | | | | | | | | | | | |
| Flow characteristic | Equal percentage | | | | | | | | | | | | | | | | | | | | | |
| Plug shape | Pressure-balanced contoured plug (standard) V-port plug (optional, for noise prevention) | | | | | | | | | | | | | | | | | | | | | |
| Applicable actuators | Control motor: Model MY3000 with valve linkage Model Q455 High-torque actuators: Models MY9400 and MY9401 with yoke assembly Model QMY9400 Pneumatic valve actuators: Models MP912 and MP953 | | | | | | | | | | | | | | | | | | | | | |
| Standard replacement parts | (Additional order is required for the part replacement.) | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>Name</th><th>Part number</th><th>Applicable valve size mm (in.)</th><th>Description</th></tr> </thead> <tbody> <tr> <td rowspan="2">Stem button</td><td>228895</td><td>40 to 80 (1½ to 3)</td><td>M8 threaded (1 mm pitch)</td></tr> <tr> <td>221867</td><td>100 to 150 (4 to 6)</td><td>M10 threaded (1.25 mm pitch)</td></tr> <tr> <td rowspan="3">Packing set</td><td>83164120-001</td><td>40 (1½)</td><td>For φ8 mm stem</td></tr> <tr> <td>83164120-002</td><td>50 to 100 (2 to 4)</td><td>For φ10 mm stem</td></tr> <tr> <td>83164120-003</td><td>125, 150 (5, 6)</td><td>For φ13 mm stem</td></tr> </tbody> </table> | Name | Part number | Applicable valve size mm (in.) | Description | Stem button | 228895 | 40 to 80 (1½ to 3) | M8 threaded (1 mm pitch) | 221867 | 100 to 150 (4 to 6) | M10 threaded (1.25 mm pitch) | Packing set | 83164120-001 | 40 (1½) | For φ8 mm stem | 83164120-002 | 50 to 100 (2 to 4) | For φ10 mm stem | 83164120-003 | 125, 150 (5, 6) | For φ13 mm stem |
| Name | Part number | Applicable valve size mm (in.) | Description | | | | | | | | | | | | | | | | | | | |
| Stem button | 228895 | 40 to 80 (1½ to 3) | M8 threaded (1 mm pitch) | | | | | | | | | | | | | | | | | | | |
| | 221867 | 100 to 150 (4 to 6) | M10 threaded (1.25 mm pitch) | | | | | | | | | | | | | | | | | | | |
| Packing set | 83164120-001 | 40 (1½) | For φ8 mm stem | | | | | | | | | | | | | | | | | | | |
| | 83164120-002 | 50 to 100 (2 to 4) | For φ10 mm stem | | | | | | | | | | | | | | | | | | | |
| | 83164120-003 | 125, 150 (5, 6) | For φ13 mm stem | | | | | | | | | | | | | | | | | | | |
| Requirements for ordering | 1. Valve model number 2. Actuator and valve linkage model numbers (if necessary) | | | | | | | | | | | | | | | | | | | | | |

* JIS: Japanese Industrial Standards.

Close-Off Ratings (kPa)

Table 1. Close-off ratings (kPa)

| Valve size × Port size mm (in.) | Control motor Model MY3000 | | | High-torque actuator Model MY9400 with Model QMY9400A | High-torque actuator Model MY9401 with Model QMY9400B | Model MP953C/MP953E | | Model MP912A | Model MP912B | Model MP912C | | Model MP912D | |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---|---|---------------------|-----------------|--------------|--------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | with valve linkage Model Q455C* | with valve linkage Model Q455D* | with valve linkage model Q455F* | | | φ127 (5" type) | φ330 (13" type) | | | Spring range 30 kPa to 80 kPa | Spring range 15 kPa to 50 kPa | Spring range 30 kPa to 80 kPa | Spring range 50 kPa to 90 kPa |
| | 40 × 30 (1½ × 1¼) | 980 | / | | | 860 | 980 | | | / | 290 | / | 980 |
| 40 × 40 (1½ × 1½) | 980 | / | 860 | 980 | / | 290 | / | 980 | 690 | 980 | 690 | 980 | 690 |
| 50 × 50 (2 × 2) | 980 | / | 640 | 980 | / | 290 | / | 980 | 690 | 980 | 690 | 980 | 690 |
| 65 × 65 (2½ × 2½) | 880 | / | 440 | 980 | / | / | / | 540 | 340 | 540 | 340 | 540 | 340 |
| 80 × 80 (3 × 3) | 690 | / | 340 | 980 | / | / | / | 440 | 290 | 440 | 290 | 440 | 290 |
| 100 × 100 (4 × 4) | / | 490 | / | / | 686 | / | 690 | / | / | / | / | / | / |
| 125 × 125 (5 × 5) | / | 290 | / | / | 590 | / | 590 | / | / | / | / | / | / |
| 150 × 150 (6 × 6) | / | 250 | / | / | 490 | / | 490 | / | / | / | / | / | / |

Note: Refer to AB-4051 Specifications/Instructions for appropriate combinations of the control motor and valve linkage.

Safety Instructions

Please read instructions carefully and use the product as specified in this manual. Be sure to keep this manual nearby for ready reference.

Usage Restrictions

This product is targeted for general air conditioning. Do not use this product in a situation where human life may be affected. If this product is used in a clean room or a place where reliability or control accuracy is particularly required, please contact Yamatake's sales representatives. Yamatake Corporation will not bear any responsibility for the results produced by the operators.

⚠ CAUTION

- ❗ • Installation must be performed by qualified personnel in accordance with all applicable safety standards.
- ❗ • This product must be operated within its operating ranges specified in this manual. Failure to comply will cause equipment damages.
- ❗ • Installation must be carried out according to the operating conditions specified in this manual to prevent equipment damages.
- ❗ • For storage, do not stack too many container boxes in which products are packed.
- ❗ • Do not leave the controlled fluid frozen. Valve damages and fluid leakage may result.
- ❗ • Make sure the flow direction and install the product in the direction and position specified in this manual. Excessively tight connection of piping and improper installation position may cause equipment damages.
- ❗ • Flush the piping so that no foreign substance remains. Attach a strainer at upstream side of the piping to prevent equipment damages.
- ❗ • After the piping installation, make sure no fluid leaks from the connecting parts.
- ❗ • Use full gaskets for a flat face flange to prevent equipment damages and fluid leakage.
- ❗ • Avoid any application that keeps product operating cycle excessively frequent so as not to shorten the product operating life.
- ❗ • Do not disassemble the product at any time except when replacing a part. Failure may result.

Parts Identification and Dimensions

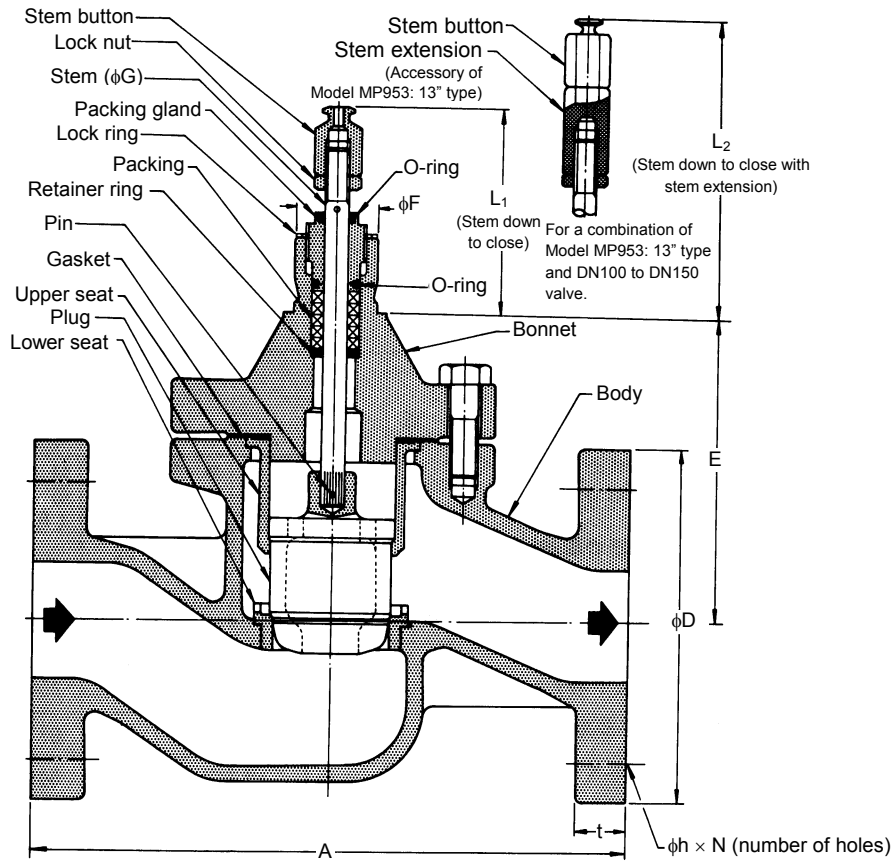


Figure 1. Parts identification

IMPORTANT:
 Flow direction shown in the figure above is for DN40 to DN80 valves. For DN100 to DN150 valves, the direction is opposite to the direction in the figure.

Table 2. Dimensions (mm)

| Valve size × port size | L ₁ | L ₂ | A | E | φD | t | φh | N | φF | φG |
|------------------------|----------------|----------------|-----|-----|-----|----|----|---|------|----|
| 40 × 30, 40 × 40 | 89.4 | | 222 | 103 | 140 | 20 | 19 | 4 | 34.8 | 8 |
| 50 × 50 | 89.4 | | 254 | 126 | 155 | 20 | 19 | 4 | 34.8 | 10 |
| 65 × 65 | 89.4 | | 276 | 176 | 175 | 22 | 19 | 4 | 34.8 | 10 |
| 80 × 80 | 89.4 | | 298 | 180 | 185 | 22 | 19 | 8 | 34.8 | 10 |
| 100 × 100 | 133.9 | 191 | 352 | 183 | 210 | 24 | 19 | 8 | 47.6 | 10 |
| 125 × 125 | 133.9 | 191 | 403 | 195 | 250 | 24 | 23 | 8 | 47.6 | 13 |
| 150 × 150 | 133.9 | 191 | 451 | 220 | 280 | 26 | 23 | 8 | 47.6 | 13 |

Precautions for Installation

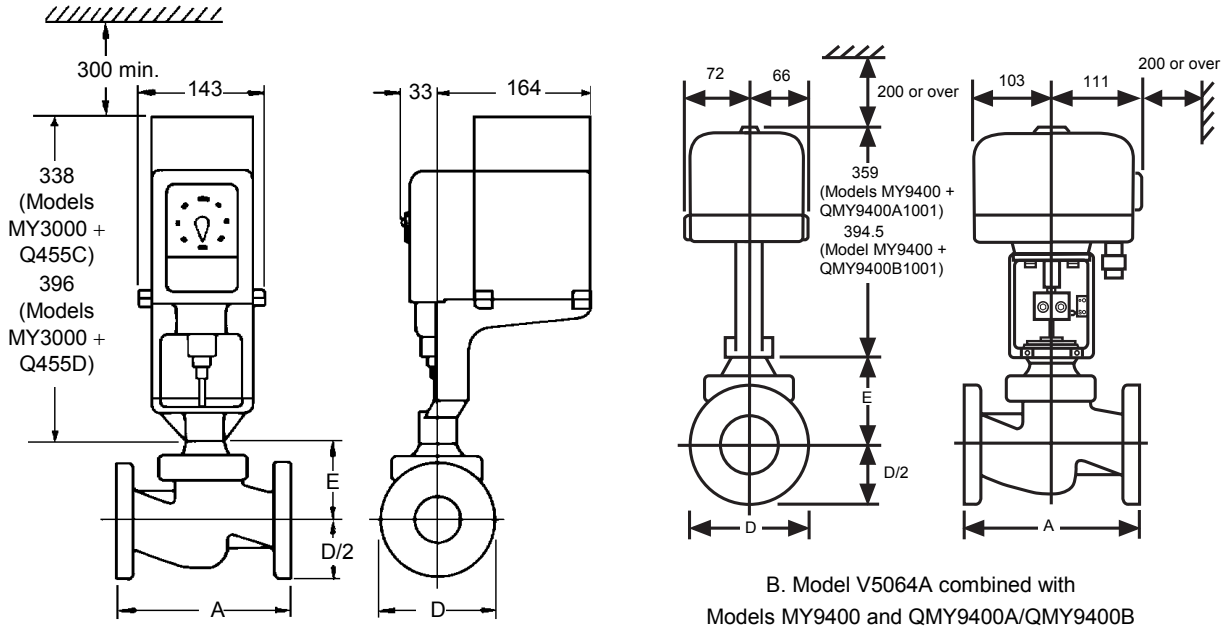
- 1) Do not install the valve to the pipe where water hammer occurs, or slag and other solid objects may accumulate.
- 2) Install the valve in a position allowing easy access for maintenance and inspection. Be sure to secure enough clearance around the valve for maintenance and inspection (e.g., attaching/detaching the actuator, replacing a packing, etc.) See figures A to E of Fig. 2 for the minimum clearance for detaching the actuator. When installing the valve in a ceiling space, provide an access hole for inspection within 50 cm radius from the valve. Additionally, place a drain pan under the valve.
- 3) Confirm that the valve ambient temperature is within the allowable ambient temperature range of the actuator.
- 4) Install a bypass pipe and gate valves on the inflow, outflow and bypass sides. Also, install a strainer on the inflow side.
- 5) To prevent the valve stem from being damaged and distorted, be sure to cover the stem with a protective tube for shipment. Remove the tube right before the actuator is mounted.
- 6) Install the valve so that the fluid flowing direction agrees with the arrow indicated on the valve body.
- 7) The valve should be installed with its actuator vertically positioned above the valve.
- 8) When the valve is combined with Model MY3000 or MY940X, install the valve with the motor shaft being horizontal.

Mounting of the Actuator

For mounting the control motor Model MY3000 or the pneumatic valve actuator Model MP912, be sure to install a baffle in the joint between the valve stem and the actuator.

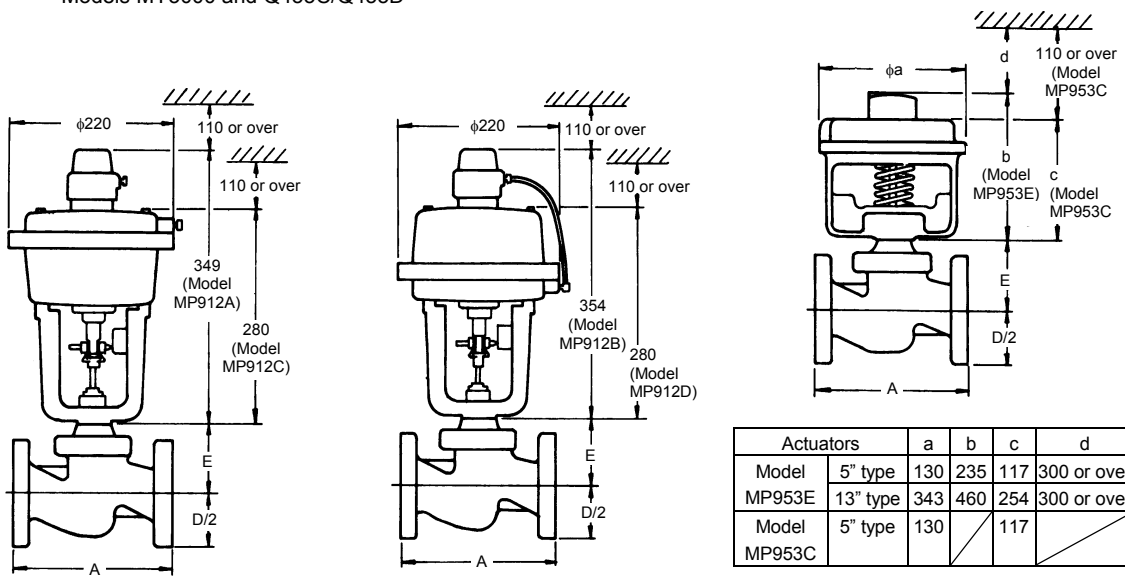
- Mounting of Model MY3000 control motor:
Refer to the instructions of Model Q455 valve linkage.
- Mounting of Model MY940X high-torque actuator:
Remove the stem button screwed on the top of the stem. Mount the actuator with the yoke set Model QMY9400A yoke assembly (for DN40 to DN80 valve) or Model QMY9400B (for DN100 to DN150).
Refer to the instructions of Model MY940X.
- Mounting of Model MP912/ MP953 pneumatic valve actuator:
For the actuator Model MP912 or MP953 (5" type), the actuator can be mounted directly onto the valve. The stem button is screwed and locked at the exact position on the valve stem, before shipment. If the position is shifted, reset it to the position specified with 'L1' in Fig. 1 by adjusting the lock nut.
Refer to the instructions of each actuator for details.
For the actuator Model MP953 (13" type), remove the stem button from the valve, and insert it into the stem extension (supplied with the actuator). Insert the stem extension with the stem button into the valve stem so that the stem button is positioned at 'L2' in Fig. 1. Then, mount the actuator onto the valve.
Refer to the instructions of Model MP953.

Dimensions of Model V5064A Combined with the Actuators



A. Model V5064A combined with Models MY3000 and Q455C/Q455D

B. Model V5064A combined with Models MY9400 and QMY9400A/QMY9400B



C. Model V5064A combined with Model MP912A/MP912C

D. Model V5064A combined with Model MP912B/MP912D

E. Model V5064A combined with Model MP953C/MP953E

| Actuators | | a | b | c | d |
|--------------|----------|-----|-----|-----|-------------|
| Model MP953E | 5" type | 130 | 235 | 117 | 300 or over |
| | 13" type | 343 | 460 | 254 | 300 or over |
| Model MP953C | 5" type | 130 | | 117 | |
| | 13" type | | | | |

| Valve size (in.) | DN40 (1 1/2) | DN50 (2) | DN65 (2 1/2) | DN80 (3) | DN100 (4) | DN125 (5) | DN150 (6) |
|------------------|--------------|----------|--------------|----------|-----------|-----------|-----------|
| A | 222 | 254 | 276 | 298 | 352 | 403 | 451 |
| D | 140 | 155 | 175 | 185 | 210 | 250 | 280 |
| E | 103 | 126 | 176 | 180 | 183 | 195 | 220 |

Figure 2. Dimensions of Model V5064A combined with the actuators (mm)

Inspection and Maintenance

 WARNING



- Avoid touching the installed valve. When being used to control steam, it reaches high temperature and may cause burn injury.

Visually inspect fluid leakage from the inside of the valve every three months. To prevent the fluid leakage from the gland, fasten the packing with the packing gland nut. Replace the packing if it doesn't completely seal the gland.

Refer to the related instruction manuals for the actuator inspection and maintenance.



Specifications are subject to change without notice.

Yamatake Corporation
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