

# DIAPHRAGM VALVE TYPE 14

- NEAR-LINEAR FLOW CHARACTERISTICS
- A NEW TYPE OF RUBBER HAVING A HIGH RELIABILITY IN LEAKAGE PREVENTION IS USED FOR THE DIAPHRAGM AND CUSHION.
- THE ORIGINAL DESIGN ACHIEVES HIGH SEALING PERFORMANCE WITH LOW TORQUE.
- BAYONET STRUCTURE ALLOWING QUICK DIAPHRAGM REPLACEMENT
- EQUIPPED WITH A BOTTOM STAND ALLOWING EASY AND SECURE REPLACEMENT (See P. 69 for details.)

MANUAL



AUTOMATIC



## BASIC SPECIFICATIONS

|                           |                                 |       |     |      |
|---------------------------|---------------------------------|-------|-----|------|
| VALVE TYPE                | DIAPHRAGM VALVE TYPE 14         |       |     |      |
| SIZE                      | 15 mm—100 mm (1/2 inch—4 inch)  |       |     |      |
| BODY MATERIAL             | U-PVC                           | C-PVC | PP  | PVDF |
| SEAL MATERIAL / DIAPHRAGM | EPDM                            | PTFE  | FKM | etc. |
| CONNECTION / FLANGED      | JIS10K, DIN PN10, ANSI CLASS150 |       |     |      |

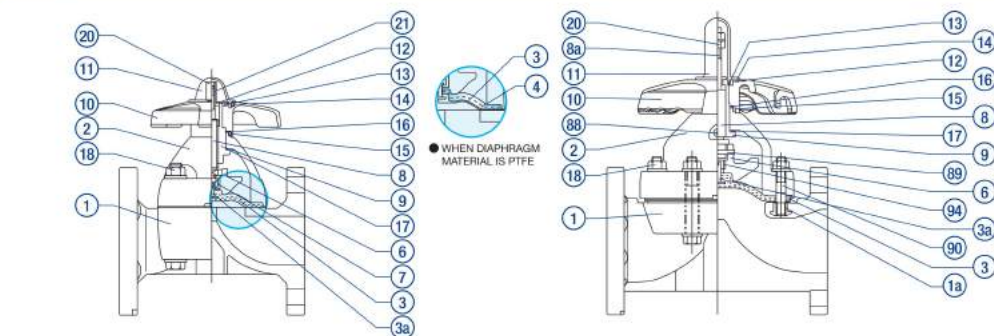
|       | FLUID TEMPERATURE | MAXIMUM WORKING PRESSURE<br>(NORMAL TEMPERATURE)<br>MPa(kgf/cm <sup>2</sup> ) | CONNECTION METHOD |
|-------|-------------------|-------------------------------------------------------------------------------|-------------------|
|       |                   |                                                                               | FLANGED           |
| U-PVC | 0°C ~ 60°C        | 1.0 {10.2}                                                                    | ○                 |
| C-PVC | 0°C ~ 90°C        | 1.0 {10.2}                                                                    | ○                 |
| PP    | -20°C ~ 90°C      | 1.0 {10.2}                                                                    | ○                 |
| PVDF  | -40°C ~ 120°C     | 1.0 {10.2}                                                                    | ○                 |

**NOTE** The maximum working pressure is the value including the water hammer pressure. Be careful that the maximum working pressure is not exceeded during use.

\* Concerning the allowable pressure for each temperature and material, see the technical documents at the end of this catalog.

\* The diaphragm may become loose due to temperature changes during long storage, operation stop or while in use. Check the conditions and then retighten the bolts and nuts between the bonnet and the body to the "bonnet tightening torque". (Failure to do so may cause fluid leakage.)

## PARTS LIST



| PART NO. / NAME                | QTY | MATERIAL                                                               | PART NO. / NAME               | QTY | MATERIAL | PART NO. / NAME                 | QTY | MATERIAL                                     |
|--------------------------------|-----|------------------------------------------------------------------------|-------------------------------|-----|----------|---------------------------------|-----|----------------------------------------------|
| ① BODY                         | 1   | BODY — BONNET<br>U-PVC — U-PVC<br>C-PVC — PP<br>PP — PP<br>PVDF — PVDF | ⑧ STEM                        | 1   | C3604    | ⑪ THRUST RING (B)               | 1   | UHMWPE                                       |
| ② BONNET                       | 1   | PVDF — PPG <sup>(1)</sup><br>PVDF — PVDF                               | ⑨a DISPLAY LOT <sup>(4)</sup> | 1   | SUS304   | ⑫ BOLT/NUT (A)                  | 4   | SUS304                                       |
| ③ DIAPHRAGM                    | 1   | EPDM, PTFE, etc.                                                       | ⑩ SLEEVE                      | 1   | C3604    | ⑬ STOPPER                       | 1   | C3604 <sup>(3)</sup> , SUS304 <sup>(4)</sup> |
| ③a EMBEDDED DIAPHRAGM FITTING  | 1   | SUS304                                                                 | ⑪ HANDLE                      | 1   | PP       | ⑭ SCREW <sup>(3)</sup>          | 1   | SUS304                                       |
| ④ CUSHION <sup>(2)</sup>       | 1   | EPDM                                                                   | ⑫ GAUGE COVER                 | 1   | PC       | ⑮ GREASE NIPPLE <sup>(4)</sup>  | 1   | C3604                                        |
| ⑥ COMPRESSOR                   | 1   | PVDF                                                                   | ⑬ NAMEPLATE                   | 1   | U-PVC    | ⑯ COMPRESSOR PIN <sup>(4)</sup> | 1   | SUS304                                       |
| ⑦ JOINT FITTING <sup>(3)</sup> | 1   | SUS304                                                                 | ⑭ C-SHAPED STOP RING          | 1   | SUS304   | ⑰ STUD BOLT/NUT <sup>(4)</sup>  | 4   | SUS304                                       |
|                                |     |                                                                        | ⑮ O-RING (A)                  | 1   | EPDM     | ⑱ COMPRESSOR                    | 1   | SUS304                                       |
|                                |     |                                                                        | ⑯ O-RING (B)                  | 1   | EPDM     | ⑲ STUD NUT <sup>(4)</sup>       | 4   | C3604 <sup>(5)</sup> , SUS304 <sup>(6)</sup> |
|                                |     |                                                                        | ⑰ THRUST RING (A)             | 1   | UHMWPE   |                                 |     |                                              |

**NOTE** (1) Bonnet PPG 15—100 mm: black, 125—250 mm: ivory. (2) is used when the diaphragm material is PTFE. (3) is used for sizes of 50 mm or less. (4) is used for sizes of 65 mm or more. (5) is used when the body material is U-PVC, C-PVC or PP. (6) is used when the body material is PVDF.

## HANDLE ROTATION [FULL OPEN (ROTATION/LIFT) FULL CLOSE]

| SIZE             | ROTATION | SIZE             | ROTATION |
|------------------|----------|------------------|----------|
| 15mm ( 1/2inch)  | 3.3      | 50mm ( 2inch)    | 6.0      |
| 20mm ( 3/4inch)  | 3.3      | 65mm (2 1/2inch) | 9.0      |
| 25mm ( 1inch)    | 4.0      | 80mm ( 3inch)    | 10.0     |
| 32mm (1 1/4inch) | 4.0      | 100mm ( 4inch)   | 10.0     |
| 40mm (1 1/2inch) | 5.0      |                  |          |

## COMPATIBLE ACTUATOR

PNEUMATIC

TYPE AN

For detailed specifications, see  
P.117

ELECTRIC

TYPE H

For detailed specifications, see  
P.125

PNEUMATIC

TYPE AV

For detailed specifications, see  
P.118

ELECTRIC

TYPE M

For detailed specifications, see  
P.127

PRODUCT MODEL  
CODE LIST

MANUAL

| ACTUATION | TYPE | OPERATING SYSTEM | BODY MATERIAL                                      | SEAL MATERIAL    | CONNECTION | STANDARD                    | SIZE                  |
|-----------|------|------------------|----------------------------------------------------|------------------|------------|-----------------------------|-----------------------|
| V         | 14   | MH               | *                                                  | *                | F          | *                           | ***                   |
| V         | 14   | MH               | U U-PVC<br>C C-PVC<br>P PP<br>F PVDF<br>G PVDF+PPG | E EPDM<br>T PTFE | F FLANGED  | 1 JIS10K<br>D DIN<br>A ANSI | 015 15mm<br>100 100mm |

PRODUCT MODEL  
CODE LIST

AUTOMATIC

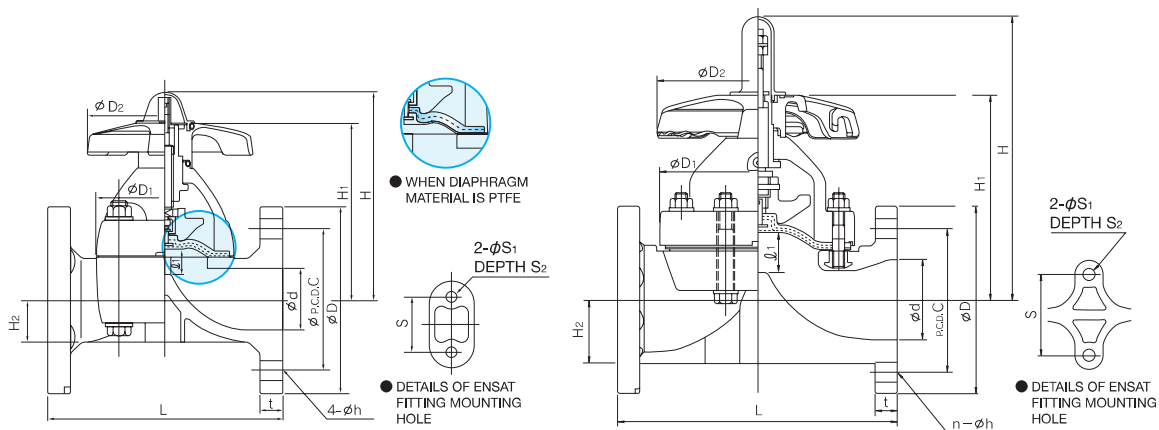
| ACTUATION | TYPE | ACTUATOR TYPE                                              | ACTION / POWER SOURCE                                                                                                  | BODY MATERIAL                        | SEAL MATERIAL    | CONNECTION | STANDARD                    | SIZE                  |
|-----------|------|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------|------------|-----------------------------|-----------------------|
| A         | 14   | *                                                          | *                                                                                                                      | *                                    | *                | F          | *                           | ***                   |
| A         | 14   | N TYPE AN<br>V TYPE AV<br>ELECTRIC<br>H TYPE H<br>M TYPE M | F DOUBLEACTING<br>G AIR TO OPEN<br>S AIR TO CLOSE<br>ELECTRIC<br>1 Single-Phase 100V<br>2 Single-Phase 200V<br>D DC24V | U U-PVC<br>C C-PVC<br>P PP<br>F PVDF | E EPDM<br>T PTFE | F FLANGED  | 1 JIS10K<br>D DIN<br>A ANSI | 015 15mm<br>100 100mm |

MANUAL

## DIAPHRAGM VALVE TYPE 14

TYPE—V14MH

CONNECTION / FLANGED—JIS, DIN, ANSI



■ JIS, DIN (Unit: mm)

| mm  | d   | D <sub>1</sub> | D <sub>2</sub> | ℓ <sub>1</sub> | H   | H <sub>1</sub> | H <sub>2</sub> | S   | S <sub>1</sub> | S <sub>2</sub> | JIS10K |     |   |    |     |    | DIN PN10 |     |   |    |     |    |
|-----|-----|----------------|----------------|----------------|-----|----------------|----------------|-----|----------------|----------------|--------|-----|---|----|-----|----|----------|-----|---|----|-----|----|
|     |     |                |                |                |     |                |                |     |                |                | D      | C   | n | h  | L   | t  | D        | C   | n | h  | L   | t  |
| 15  | 16  | 54×66          | 100            | 10             | 104 | 86             | 19.5           | 25  | 7              | 13             | 95     | 70  | 4 | 15 | 110 | 12 | 95       | 65  | 4 | 14 | 130 | 12 |
| 20  | 20  | 54×66          | 100            | 10             | 106 | 88             | 17.5           | 25  | 7              | 13             | 100    | 75  | 4 | 15 | 120 | 13 | 105      | 75  | 4 | 14 | 150 | 13 |
| 25  | 25  | 67×80          | 100            | 12             | 111 | 93             | 18.5           | 25  | 7              | 13             | 125    | 90  | 4 | 19 | 130 | 13 | 115      | 85  | 4 | 14 | 160 | 13 |
| 32  | 32  | 67×80          | 100            | 12             | 116 | 97             | 22.5           | 25  | 7              | 13             | 135    | 100 | 4 | 19 | 142 | 16 | 140      | 100 | 4 | 18 | 180 | 16 |
| 40  | 40  | 108×108        | 156            | 21             | 177 | 144            | 27.5           | 45  | 9              | 15             | 140    | 105 | 4 | 19 | 180 | 16 | 150      | 110 | 4 | 18 | 200 | 20 |
| 50  | 52  | 123×123        | 156            | 25             | 191 | 158            | 36.0           | 45  | 9              | 15             | 155    | 120 | 4 | 19 | 210 | 20 | 165      | 125 | 4 | 18 | 230 | 22 |
| 65  | 67  | 175            | 220            | 34             | 266 | 188            | 61             | 85  | 11             | 20             | 175    | 140 | 4 | 19 | 250 | 22 | 185      | 145 | 4 | 18 | 290 | 22 |
| 80  | 78  | 201            | 220            | 42             | 280 | 202            | 63             | 100 | 15             | 28             | 185    | 150 | 8 | 19 | 280 | 22 | 200      | 160 | 8 | 18 | 310 | 24 |
| 100 | 100 | 241            | 257            | 50             | 329 | 241            | 78             | 120 | 15             | 28             | 210    | 175 | 8 | 19 | 340 | 22 | 220      | 180 | 8 | 18 | 350 | 24 |

■ ANSI (Unit: inch)

| inch  | mm  | d    | D <sub>1</sub> | D <sub>2</sub> | ℓ <sub>1</sub> | H     | H <sub>1</sub> | H <sub>2</sub> | S    | S <sub>1</sub> | S <sub>2</sub> | ANSI CLASS150 |      |   |      |       |       |                      |                |                |            |
|-------|-----|------|----------------|----------------|----------------|-------|----------------|----------------|------|----------------|----------------|---------------|------|---|------|-------|-------|----------------------|----------------|----------------|------------|
|       |     |      |                |                |                |       |                |                |      |                |                | D             | C    | n | h    | L     | t     | GRINNELL<br>STANDARD | AV<br>STANDARD | U-PVC<br>C-PVC | PP<br>PVDF |
| 1/2   | 15  | 0.63 | 2.13×2.60      | 3.94           | 0.39           | 4.09  | 3.39           | 0.77           | 0.98 | 0.28           | 0.51           | 3.50          | 2.38 | 4 | 0.62 | 4.25  | 4.33  | 0.43                 | 0.43           |                |            |
| 3/4   | 20  | 0.79 | 2.13×2.60      | 3.94           | 0.39           | 4.17  | 3.46           | 0.69           | 0.98 | 0.28           | 0.51           | 3.88          | 2.75 | 4 | 0.62 | 5.88  | 4.72  | 0.51                 | 0.51           |                |            |
| 1     | 25  | 0.98 | 2.64×3.15      | 3.94           | 0.47           | 4.37  | 3.66           | 0.73           | 0.98 | 0.28           | 0.51           | 4.25          | 3.12 | 4 | 0.62 | 5.88  | 5.12  | 0.59                 | 0.59           |                |            |
| 1 1/4 | 32  | 1.26 | 2.64×3.15      | 3.94           | 0.47           | 4.57  | 3.82           | 0.89           | 0.98 | 0.28           | 0.51           | 4.62          | 3.50 | 4 | 0.62 | 6.38  | -     | 0.63                 | 0.63           |                |            |
| 1 1/2 | 40  | 1.57 | 4.25×4.25      | 6.14           | 0.83           | 6.97  | 5.67           | 1.08           | 1.77 | 0.35           | 0.59           | 5.00          | 3.88 | 4 | 0.62 | 6.94  | 7.09  | 0.63                 | 0.63           |                |            |
| 2     | 50  | 2.05 | 4.84×4.84      | 6.14           | 0.98           | 7.52  | 6.22           | 1.42           | 1.77 | 0.35           | 0.59           | 6.00          | 4.75 | 4 | 0.75 | 7.94  | 8.27  | 0.79                 | 0.79           |                |            |
| 2 1/2 | 65  | 2.64 | 6.89           | 8.66           | 1.34           | 10.47 | 7.40           | 2.40           | 3.35 | 0.43           | 0.79           | 7.00          | 5.50 | 4 | 0.75 | -     | 9.84  | 0.87                 | 0.91           |                |            |
| 3     | 80  | 3.07 | 7.91           | 8.66           | 1.65           | 11.02 | 7.95           | 2.48           | 3.94 | 0.59           | 1.10           | 7.50          | 6.00 | 4 | 0.75 | 10.37 | 11.02 | 0.87                 | 0.91           |                |            |
| 4     | 100 | 3.94 | 9.49           | 10.12          | 1.97           | 12.95 | 9.49           | 3.07           | 4.72 | 0.59           | 1.10           | 9.00          | 7.50 | 8 | 0.75 | 12.93 | 13.39 | 0.87                 | 0.94           |                |            |

AUTOMATIC

PNEUMATIC

TYPE AN

DOUBLE ACTING

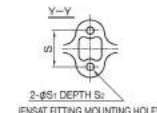
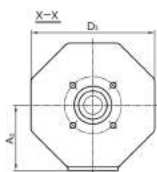
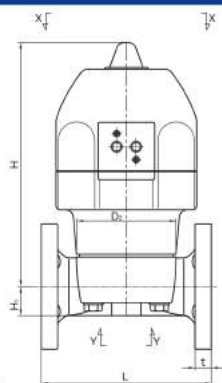
AIR TO OPEN

AIR TO CLOSE

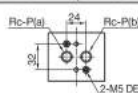
## DIAPHRAGM VALVE TYPE 14

TYPE—A14N

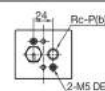
CONNECTION / FLANGED—JIS, DIN, ANSI



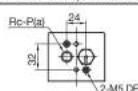
AIR PIPE OPENING (FOR DOUBLE ACTING)



AIR PIPE OPENING (FOR AIR TO OPEN)



AIR PIPE OPENING (FOR AIR TO CLOSE)



## ACTUATOR SELECTION CHART

| SIZE             | ACTUATOR TYPE |             |              |
|------------------|---------------|-------------|--------------|
|                  | DOUBLE ACTING | AIR TO OPEN | AIR TO CLOSE |
| 15mm ( 1/2inch)  | AN-1DA        | AN-1AO      | AN-1AS       |
| 20mm ( 3/4inch)  |               |             |              |
| 25mm ( 1inch)    | AN-2DA        | AN-2AO      | AN-2AS       |
| 32mm (1 1/4inch) |               |             |              |
| 40mm (1 1/2inch) | AN-3DA        | AN-3AO      | AN-3AS       |
| 50mm ( 2inch)    | AN-4DA        | AN-4AO      | AN-4AS       |

For detailed specifications, see P.117

JIS, DIN (Unit: mm)

| mm | D <sub>2</sub> | D <sub>3</sub> | H   | H <sub>1</sub> | A <sub>3</sub> | S  | S <sub>1</sub> | S <sub>2</sub> | P   | JIS10K |    | DIN PN10 |    |
|----|----------------|----------------|-----|----------------|----------------|----|----------------|----------------|-----|--------|----|----------|----|
|    |                |                |     |                |                |    |                |                |     | L      | t  | L        | t  |
| 15 | 54×66          | 130            | 186 | 19.5           | 68             | 25 | 7              | 13             | 1/4 | 110    | 12 | 130      | 12 |
| 20 | 54×66          | 130            | 188 | 17.5           | 68             | 25 | 7              | 13             | 1/4 | 120    | 13 | 150      | 13 |
| 25 | 67×80          | 130            | 193 | 18.5           | 68             | 25 | 7              | 13             | 1/4 | 130    | 13 | 160      | 13 |
| 32 | 67×80          | 130            | 197 | 22.5           | 68             | 25 | 7              | 13             | 1/4 | 142    | 16 | 180      | 16 |
| 40 | 108×108        | 174            | 293 | 27.5           | 92             | 45 | 9              | 15             | 1/4 | 180    | 16 | 200      | 20 |
| 50 | 123×123        | 174            | 302 | 36             | 92             | 45 | 9              | 15             | 1/4 | 210    | 20 | 230      | 22 |

ANSI (Unit: inch)

| inch  | mm | D <sub>2</sub> | D <sub>3</sub> | H     | H <sub>1</sub> | A <sub>3</sub> | S    | S <sub>1</sub> | S <sub>2</sub> | P   | ANSI CLASS150     |             |      |
|-------|----|----------------|----------------|-------|----------------|----------------|------|----------------|----------------|-----|-------------------|-------------|------|
|       |    |                |                |       |                |                |      |                |                |     | L                 | AV STANDARD | t    |
| 1/2   | 15 | 2.13×2.60      | 5.12           | 7.32  | 0.77           | 2.68           | 0.98 | 0.28           | 0.51           | 1/4 | GRINNELL STANDARD | 4.25        | 0.43 |
| 3/4   | 20 | 2.13×2.60      | 5.12           | 7.40  | 0.69           | 2.68           | 0.98 | 0.28           | 0.51           | 1/4 |                   | 4.33        | 0.51 |
| 1     | 25 | 2.64×3.15      | 5.12           | 7.60  | 0.73           | 2.68           | 0.98 | 0.28           | 0.51           | 1/4 |                   | 4.72        | 0.59 |
| 1 1/4 | 32 | 2.64×3.15      | 5.12           | 7.76  | 0.89           | 2.68           | 0.98 | 0.28           | 0.51           | 1/4 |                   | 5.12        | 0.63 |
| 1 1/2 | 40 | 4.25×4.25      | 6.85           | 11.54 | 1.08           | 3.62           | 1.77 | 0.35           | 0.59           | 1/4 |                   | 6.38        | 0.63 |
| 2     | 50 | 4.84×4.84      | 6.85           | 11.89 | 1.42           | 3.62           | 1.77 | 0.35           | 0.59           | 1/4 |                   | 7.09        | 0.79 |

AUTOMATIC

PNEUMATIC

TYPE AV

DOUBLE ACTING

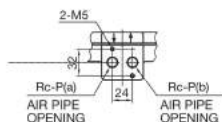
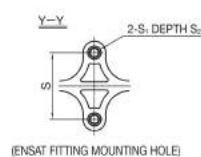
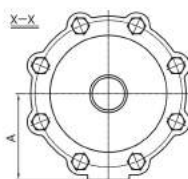
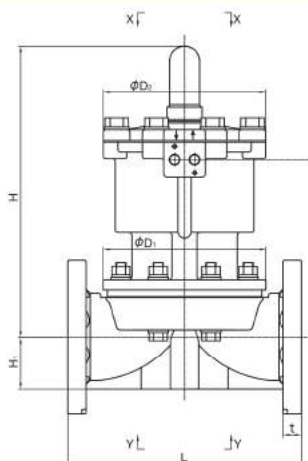
AIR TO OPEN

AIR TO CLOSE

## DIAPHRAGM VALVE TYPE 14

TYPE—A14V

CONNECTION / FLANGED—JIS, DIN, ANSI



## ACTUATOR SELECTION CHART

| SIZE             | ACTUATOR TYPE |
|------------------|---------------|
| 65mm (2 1/2inch) | AV-1DA        |
| 80mm ( 3inch)    | AV-2DA        |
| 100mm ( 4inch)   | AV-3DA        |

For detailed specifications, see P.118

JIS, DIN (Unit: mm)

| mm  | D <sub>1</sub> | D <sub>2</sub> | A   | H   | H <sub>1</sub> | S   | S <sub>1</sub> | S <sub>2</sub> | P   | JIS10K |       |         | DIN PN10 |       |         |
|-----|----------------|----------------|-----|-----|----------------|-----|----------------|----------------|-----|--------|-------|---------|----------|-------|---------|
|     |                |                |     |     |                |     |                |                |     | L      | U-PVC | PP PVDF | L        | U-PVC | PP PVDF |
| 65  | 171            | 208            | 103 | 323 | 61             | 85  | MB             | 15             | 1/4 | 250    | 22    | 23      | 290      | 22    | 22      |
| 80  | 195            | 208            | 103 | 354 | 63             | 100 | M12            | 22             | 1/4 | 280    | 22    | 23      | 310      | 24    | 24      |
| 100 | 235            | 250            | 120 | 417 | 78             | 120 | M12            | 22             | 1/4 | 340    | 22    | 24      | 350      | 24    | 26      |

ANSI (Unit: inch)

| inch  | mm  | D <sub>1</sub> | D <sub>2</sub> | A    | H     | H <sub>1</sub> | S    | S <sub>1</sub> | S <sub>2</sub> | P   | ANSI CLASS150     |             |       |         |
|-------|-----|----------------|----------------|------|-------|----------------|------|----------------|----------------|-----|-------------------|-------------|-------|---------|
|       |     |                |                |      |       |                |      |                |                |     | L                 | AV STANDARD | U-PVC | PP PVDF |
| 2 1/2 | 65  | 6.73           | 8.19           | 4.06 | 12.72 | 2.40           | 3.35 | MB             | 0.59           | 1/4 | GRINNELL STANDARD | 9.84        | 0.87  | 0.91    |
| 3     | 80  | 7.68           | 8.19           | 4.06 | 13.94 | 2.48           | 3.94 | M12            | 0.87           | 1/4 |                   | 11.02       | 0.87  | 0.91    |
| 4     | 100 | 9.25           | 9.84           | 4.72 | 16.42 | 3.07           | 4.72 | M12            | 0.87           | 1/4 |                   | 13.39       | 0.87  | 0.94    |

AUTOMATIC

PNEUMATIC

TYPE AV

DOUBLE ACTING

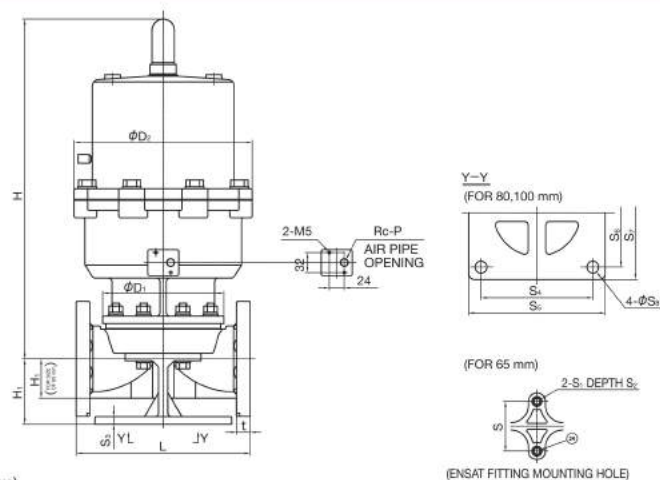
AIR TO OPEN

AIR TO CLOSE

## DIAPHRAGM VALVE TYPE 14

TYPE—A14V

CONNECTION / FLANGED—JIS, DIN, ANSI



## ACTUATOR SELECTION CHART

| SIZE             | ACTUATOR TYPE |
|------------------|---------------|
| 65mm (2 1/2inch) | AV-1AO        |
| 80mm ( 3inch)    | AV-2AO        |
| 100mm ( 4inch)   | AV-3AO        |

For detailed specifications, see P.118

■ JIS, DIN (Unit: mm)

| mm  | D1  | D2  | H   | H1  | S  | S1 | S2 | S3 | S4  | S5  | S6  | S7  | S8 | P   | JIS10K |                |            | DIN PN10 |                |            |
|-----|-----|-----|-----|-----|----|----|----|----|-----|-----|-----|-----|----|-----|--------|----------------|------------|----------|----------------|------------|
|     |     |     |     |     |    |    |    |    |     |     |     |     |    |     | L      | U-PVC<br>C-PVC | PP<br>PVDF | L        | U-PVC<br>C-PVC | PP<br>PVDF |
| 65  | 171 | 280 | 473 | 61  | 85 | M8 | 15 | -  | -   | -   | -   | -   | -  | 1/4 | 250    | 22             | 23         | 290      | 22             | 22         |
| 80  | 195 | 305 | 550 | 109 | -  | -  | -  | 12 | 180 | 220 | 175 | 215 | 19 | 1/4 | 280    | 22             | 23         | 310      | 24             | 24         |
| 100 | 235 | 385 | 601 | 119 | -  | -  | -  | 15 | 230 | 270 | 220 | 260 | 19 | 1/4 | 340    | 22             | 24         | 350      | 24             | 26         |

■ ANSI (Unit: inch)

| inch  | mm  | D1   | D2    | H     | H1   | S    | S1 | S2   | S3   | S4   | S5    | S6   | S7    | S8   | P   | ANSI CLASS150 |                |                |            |
|-------|-----|------|-------|-------|------|------|----|------|------|------|-------|------|-------|------|-----|---------------|----------------|----------------|------------|
|       |     |      |       |       |      |      |    |      |      |      |       |      |       |      |     | L             | AV<br>STANDARD | U-PVC<br>C-PVC | PP<br>PVDF |
| 2 1/2 | 65  | 6.73 | 11.02 | 18.62 | 2.40 | 3.35 | M8 | 0.59 | -    | -    | -     | -    | -     | -    | 1/4 | -             | 9.84           | 0.87           | 0.91       |
| 3     | 80  | 7.68 | 12.01 | 21.65 | 4.29 | -    | -  | -    | 0.47 | 7.09 | 8.66  | 6.89 | 8.46  | 0.75 | 1/4 | 10.37         | 11.02          | 0.87           | 0.91       |
| 4     | 100 | 9.25 | 15.16 | 23.66 | 4.69 | -    | -  | -    | 0.59 | 9.06 | 10.63 | 8.66 | 10.24 | 0.75 | 1/4 | 12.93         | 13.39          | 0.87           | 0.94       |

AUTOMATIC

PNEUMATIC

TYPE AV

DOUBLE ACTING

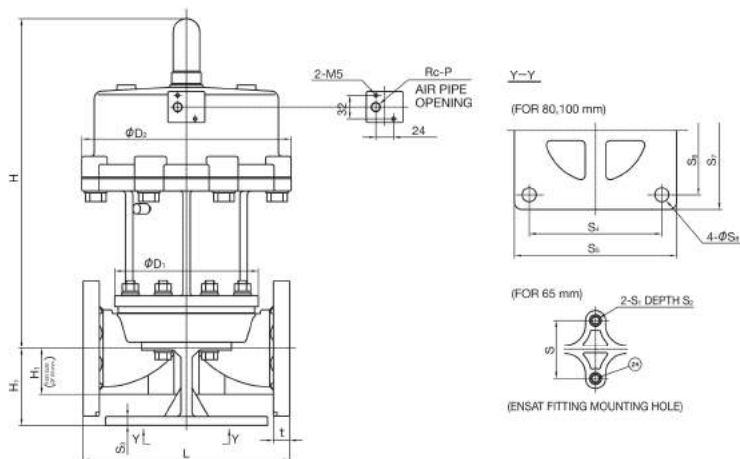
AIR TO OPEN

AIR TO CLOSE

## DIAPHRAGM VALVE TYPE 14

TYPE—A14V

CONNECTION / FLANGED—JIS, DIN, ANSI



## ACTUATOR SELECTION CHART

| SIZE             | ACTUATOR TYPE |
|------------------|---------------|
| 65mm (2 1/2inch) | AV-1AS        |
| 80mm ( 3inch)    | AV-2AS        |
| 100mm ( 4inch)   | AV-3AS        |

For detailed specifications, see P.118

■ JIS, DIN (Unit: mm)

| mm  | D1  | D2  | H   | H1  | S  | S1 | S2 | S3 | S4  | S5  | S6  | S7  | S8 | P   | JIS10K |                |            | DIN PN10 |                |            |
|-----|-----|-----|-----|-----|----|----|----|----|-----|-----|-----|-----|----|-----|--------|----------------|------------|----------|----------------|------------|
|     |     |     |     |     |    |    |    |    |     |     |     |     |    |     | L      | U-PVC<br>C-PVC | PP<br>PVDF | L        | U-PVC<br>C-PVC | PP<br>PVDF |
| 65  | 171 | 280 | 423 | 61  | 85 | M8 | 15 | -  | -   | -   | -   | -   | -  | 1/4 | 250    | 22             | 23         | 290      | 22             | 22         |
| 80  | 195 | 305 | 455 | 109 | -  | -  | -  | 12 | 180 | 220 | 175 | 215 | 19 | 1/4 | 280    | 22             | 23         | 310      | 24             | 24         |
| 100 | 235 | 385 | 582 | 119 | -  | -  | -  | 15 | 230 | 270 | 220 | 260 | 19 | 1/4 | 340    | 22             | 24         | 350      | 24             | 26         |

■ ANSI (Unit: inch)

| inch  | mm  | D1   | D2    | H     | H1   | S    | S1 | S2   | S3   | S4   | S5    | S6   | S7    | S8   | P   | ANSI CLASS150 |                |                |            |
|-------|-----|------|-------|-------|------|------|----|------|------|------|-------|------|-------|------|-----|---------------|----------------|----------------|------------|
|       |     |      |       |       |      |      |    |      |      |      |       |      |       |      |     | L             | AV<br>STANDARD | U-PVC<br>C-PVC | PP<br>PVDF |
| 2 1/2 | 65  | 6.73 | 11.02 | 16.65 | 2.40 | 3.35 | M8 | 0.59 | -    | -    | -     | -    | -     | -    | 1/4 | -             | 9.84           | 0.87           | 0.91       |
| 3     | 80  | 7.68 | 12.01 | 17.91 | 4.29 | -    | -  | -    | 0.47 | 7.09 | 8.66  | 6.89 | 8.46  | 0.75 | 1/4 | 10.37         | 11.02          | 0.87           | 0.91       |
| 4     | 100 | 9.25 | 15.16 | 22.91 | 4.69 | -    | -  | -    | 0.59 | 9.06 | 10.63 | 8.66 | 10.24 | 0.75 | 1/4 | 12.93         | 13.39          | 0.87           | 0.94       |

AUTOMATIC

ELECTRIC

TYPE H

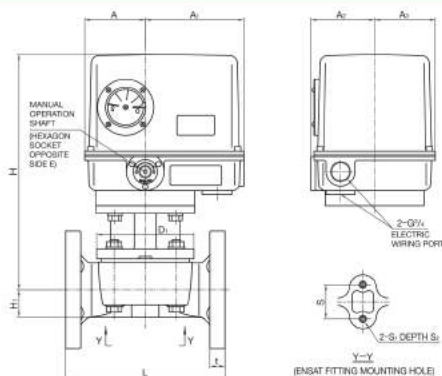
Single-Phase 100V

Single-Phase 200V

## DIAPHRAGM VALVE TYPE 14

TYPE—A14H

CONNECTION / FLANGED—JIS, DIN, ANSI



## ACTUATOR SELECTION CHART

| SIZE             | ACTUATOR TYPE |
|------------------|---------------|
| 15mm ( 1/2inch)  | ED-11H        |
| 20mm ( 3/4inch)  |               |
| 25mm ( 1inch)    |               |
| 32mm (1 1/4inch) |               |
| 40mm (1 1/2inch) |               |
| 50mm ( 2inch)    |               |

For detailed specifications, see P.125

■ JIS, DIN (Unit: mm)

| mm | D1      | H     | H1   | A  | A1  | A2 | A3 | S  | S1 | S2 | E | JIS10K |    | DIN PN10 |    |
|----|---------|-------|------|----|-----|----|----|----|----|----|---|--------|----|----------|----|
|    |         |       |      |    |     |    |    |    |    |    |   | L      | t  | L        | t  |
| 15 | 54×66   | 284   | 19.5 | 80 | 130 | 84 | 80 | 25 | M5 | 10 | 5 | 110    | 12 | 130      | 12 |
| 20 | 54×66   | 286   | 17.5 | 80 | 130 | 84 | 80 | 25 | M5 | 10 | 5 | 120    | 13 | 150      | 13 |
| 25 | 67×80   | 291   | 18.5 | 80 | 130 | 84 | 80 | 25 | M5 | 10 | 5 | 130    | 13 | 160      | 13 |
| 32 | 67×80   | 294.5 | 22.5 | 80 | 130 | 84 | 80 | 25 | M5 | 10 | 5 | 142    | 16 | 180      | 16 |
| 40 | 110×110 | 302.2 | 27.5 | 80 | 130 | 84 | 80 | 45 | M6 | 14 | 5 | 180    | 16 | 200      | 20 |
| 50 | 128×128 | 311.2 | 36   | 80 | 130 | 84 | 80 | 45 | M6 | 14 | 5 | 210    | 20 | 230      | 22 |

■ ANSI (Unit: inch)

| inch  | mm | D1        | H     | H1   | A    | A1   | A2   | A3   | S    | S1 | S2   | E    | ANSI CLASS150     |             |      |
|-------|----|-----------|-------|------|------|------|------|------|------|----|------|------|-------------------|-------------|------|
|       |    |           |       |      |      |      |      |      |      |    |      |      | GRINNELL STANDARD | AV STANDARD | t    |
| 1/2   | 15 | 2.13×2.60 | 11.18 | 0.77 | 3.15 | 5.12 | 3.31 | 3.15 | 0.98 | M5 | 0.39 | 0.20 | 4.25              | 4.33        | 0.43 |
| 3/4   | 20 | 2.13×2.60 | 11.26 | 0.69 | 3.15 | 5.12 | 3.31 | 3.15 | 0.98 | M5 | 0.39 | 0.20 | 5.88              | 4.72        | 0.51 |
| 1     | 25 | 2.64×3.15 | 11.46 | 0.73 | 3.15 | 5.12 | 3.31 | 3.15 | 0.98 | M5 | 0.39 | 0.20 | 5.88              | 5.12        | 0.59 |
| 1 1/4 | 32 | 2.64×3.15 | 11.59 | 0.89 | 3.15 | 5.12 | 3.31 | 3.15 | 0.98 | M5 | 0.39 | 0.20 | 6.38              | -           | 0.63 |
| 1 1/2 | 40 | 4.25×4.25 | 11.90 | 1.08 | 3.15 | 5.12 | 3.31 | 3.15 | 1.77 | M5 | 0.55 | 0.20 | 6.94              | 7.09        | 0.63 |
| 2     | 50 | 4.84×4.84 | 12.25 | 1.42 | 3.15 | 5.12 | 3.31 | 3.15 | 1.77 | M5 | 0.55 | 0.20 | 7.94              | 8.27        | 0.79 |

AUTOMATIC

ELECTRIC

TYPE H

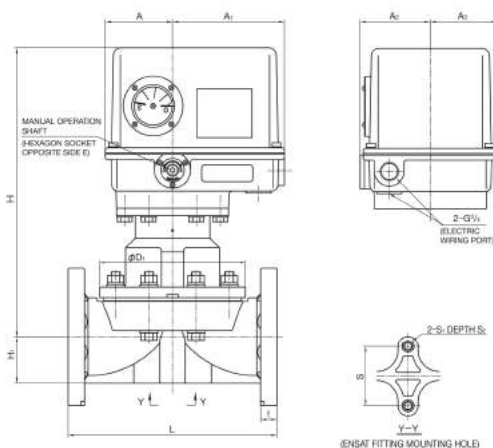
Single-Phase 100V

Single-Phase 200V

## DIAPHRAGM VALVE TYPE 14

TYPE—A14H

CONNECTION / FLANGED—JIS, DIN, ANSI



## ACTUATOR SELECTION CHART

| SIZE             | ACTUATOR TYPE |
|------------------|---------------|
| 65mm (2 1/2inch) | ED-21H        |
| 80mm ( 3inch)    |               |
| 100mm ( 4inch)   |               |

For detailed specifications, see P.125

■ JIS, DIN (Unit: mm)

| mm  | D1  | H   | H1 | A  | A1  | A2 | A3 | S   | S1  | S2 | E | JIS10K |             |         | DIN PN10 |             |         |
|-----|-----|-----|----|----|-----|----|----|-----|-----|----|---|--------|-------------|---------|----------|-------------|---------|
|     |     |     |    |    |     |    |    |     |     |    |   | L      | U-PVC C-PVC | PP PVDF | L        | U-PVC C-PVC | PP PVDF |
| 65  | 175 | 371 | 61 | 90 | 150 | 94 | 90 | 85  | M8  | 15 | 5 | 250    | 22          | 23      | 290      | 22          | 22      |
| 80  | 199 | 388 | 63 | 90 | 150 | 94 | 90 | 100 | M12 | 22 | 5 | 280    | 22          | 23      | 310      | 24          | 24      |
| 100 | 239 | 418 | 78 | 90 | 150 | 94 | 90 | 120 | M12 | 22 | 5 | 340    | 22          | 24      | 350      | 24          | 26      |

■ ANSI (Unit: inch)

| inch  | mm  | D1   | H     | H1   | A    | A1   | A2   | A3   | S    | S1  | S2   | E    | ANSI CLASS150     |             |             |         |
|-------|-----|------|-------|------|------|------|------|------|------|-----|------|------|-------------------|-------------|-------------|---------|
|       |     |      |       |      |      |      |      |      |      |     |      |      | GRINNELL STANDARD | AV STANDARD | U-PVC C-PVC | PP PVDF |
| 2 1/2 | 65  | 6.89 | 14.61 | 2.40 | 3.54 | 5.91 | 3.70 | 3.54 | 3.35 | M8  | 0.59 | 0.20 | -                 | 9.84        | 0.87        | 0.91    |
| 3     | 80  | 7.83 | 15.28 | 2.48 | 3.54 | 5.91 | 3.70 | 3.54 | 3.94 | M12 | 0.87 | 0.20 | 10.37             | 11.02       | 0.87        | 0.91    |
| 4     | 100 | 9.41 | 16.46 | 3.07 | 3.54 | 5.91 | 3.70 | 3.54 | 4.72 | M12 | 0.87 | 0.20 | 12.93             | 13.39       | 0.87        | 0.94    |

AUTOMATIC

ELECTRIC

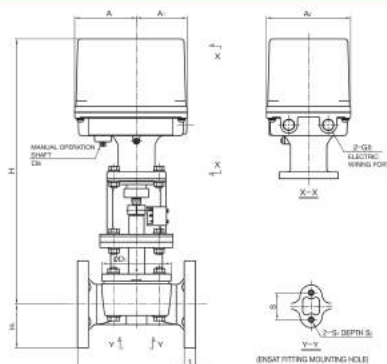
TYPE M

Single-Phase 100V  
Single-Phase 200V

## DIAPHRAGM VALVE TYPE 14

TYPE—A14M

CONNECTION / FLANGED—JIS, DIN, ANSI



## ACTUATOR SELECTION CHART

| SIZE             | ACTUATOR TYPE |
|------------------|---------------|
| 15mm ( 1/2inch)  | PSN1          |
| 20mm ( 3/4inch)  |               |
| 25mm ( 1inch)    |               |
| 32mm (1 1/4inch) |               |
| 40mm (1 1/2inch) | PSN3          |
| 50mm ( 2inch)    |               |

For detailed specifications, see P.127

■ JIS, DIN (Unit: mm)

| mm | D <sub>1</sub> | H   | H <sub>1</sub> | A   | A <sub>1</sub> | A <sub>2</sub> | S  | S <sub>1</sub> | S <sub>2</sub> | JIS10K |    | DIN PN10 |    |
|----|----------------|-----|----------------|-----|----------------|----------------|----|----------------|----------------|--------|----|----------|----|
|    |                |     |                |     |                |                |    |                |                | L      | t  | L        | t  |
| 15 | 54×66          | 406 | 19.5           | 101 | 81             | 140            | 25 | M5             | 10             | 110    | 12 | 130      | 12 |
| 20 | 54×66          | 408 | 17.5           | 101 | 81             | 140            | 25 | M5             | 10             | 120    | 13 | 150      | 13 |
| 25 | 67×80          | 413 | 18.5           | 101 | 81             | 140            | 25 | M5             | 10             | 130    | 13 | 160      | 13 |
| 32 | 67×80          | 416 | 22.5           | 101 | 81             | 140            | 25 | M5             | 10             | 142    | 16 | 180      | 16 |
| 40 | 110×110        | 464 | 27.5           | 110 | 90             | 150            | 45 | M6             | 14             | 180    | 16 | 200      | 20 |
| 50 | 123×123        | 473 | 36             | 110 | 90             | 150            | 45 | M6             | 14             | 210    | 20 | 230      | 22 |

■ ANSI (Unit: inch)

| ANSI (Unit: inch) |    |                |       |                |      |                |                |      |                |                |                      | ANSI CLASS150  |                |            |  |
|-------------------|----|----------------|-------|----------------|------|----------------|----------------|------|----------------|----------------|----------------------|----------------|----------------|------------|--|
| inch              | mm | D <sub>1</sub> | H     | H <sub>1</sub> | A    | A <sub>1</sub> | A <sub>2</sub> | S    | S <sub>1</sub> | S <sub>2</sub> | L                    |                | t              |            |  |
|                   |    |                |       |                |      |                |                |      |                |                | GRINNELL<br>STANDARD | AV<br>STANDARD | U-PVC<br>C-PVC | PP<br>PVDF |  |
| 1/2               | 15 | 2.13×2.60      | 15.98 | 0.77           | 3.98 | 3.19           | 5.51           | 0.98 | M5             | 0.39           | 4.25                 | 4.33           | 0.43           | 0.43       |  |
| 3/4               | 20 | 2.13×2.60      | 16.06 | 0.69           | 3.98 | 3.19           | 5.51           | 0.98 | M5             | 0.39           | 5.88                 | 4.72           | 0.51           | 0.51       |  |
| 1                 | 25 | 2.64×3.15      | 16.26 | 0.73           | 3.98 | 3.19           | 5.51           | 0.98 | M5             | 0.39           | 5.88                 | 5.12           | 0.59           | 0.59       |  |
| 1 1/4             | 32 | 2.64×3.15      | 16.38 | 0.89           | 3.98 | 3.19           | 5.51           | 0.98 | M5             | 0.39           | 6.38                 | -              | 0.63           | 0.63       |  |
| 1 1/2             | 40 | 4.25×4.25      | 18.27 | 1.08           | 4.33 | 3.54           | 5.91           | 1.77 | M6             | 0.55           | 6.94                 | 7.09           | 0.63           | 0.63       |  |
| 2                 | 50 | 4.84×4.84      | 18.62 | 1.42           | 4.33 | 3.54           | 5.91           | 1.77 | M6             | 0.55           | 7.94                 | 8.27           | 0.79           | 0.79       |  |

AUTOMATIC

ELECTRIC

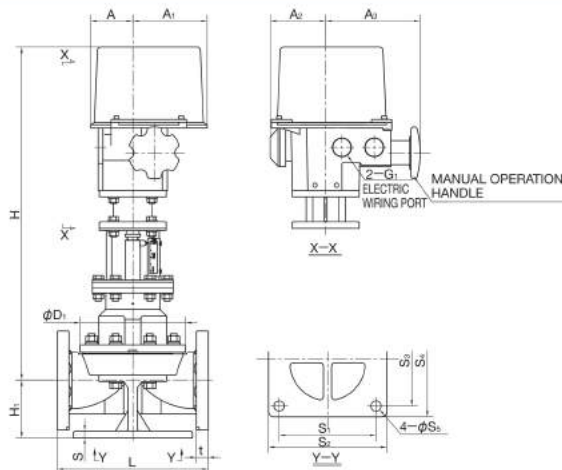
TYPE M

Single-Phase 100V  
Single-Phase 200V

## DIAPHRAGM VALVE TYPE 14

TYPE—A14M

CONNECTION / FLANGED—JIS, DIN, ANSI



## ACTUATOR SELECTION CHART

| SIZE             | ACTUATOR TYPE |
|------------------|---------------|
| 65mm (2 1/2inch) | CSP471        |
| 80mm ( 3inch)    | CSP771        |
| 100mm ( 4inch)   |               |

For detailed specifications, see P.127

■ JIS, DIN (Unit: mm)

| mm  | D <sub>1</sub> | H   | H <sub>1</sub> | A  | A <sub>1</sub> | A <sub>2</sub> | A <sub>3</sub> | S  | S <sub>1</sub> | S <sub>2</sub> | S <sub>3</sub> | S <sub>4</sub> | S <sub>5</sub> | JIS10K |             |         | DIN PN10 |             |         |
|-----|----------------|-----|----------------|----|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|--------|-------------|---------|----------|-------------|---------|
|     |                |     |                |    |                |                |                |    |                |                |                |                |                | L      | U-PVC C-PVC | PP PVDF | L        | U-PVC C-PVC | PP PVDF |
| 65  | 175            | 608 | 98             | 79 | 137            | 103            | 177            | 12 | 155            | 190            | 160            | 190            | 19             | 250    | 22          | 23      | 290      | 22          | 22      |
| 80  | 199            | 625 | 109            | 79 | 137            | 103            | 177            | 12 | 180            | 220            | 175            | 215            | 19             | 280    | 22          | 23      | 310      | 24          | 24      |
| 100 | 239            | 655 | 119            | 79 | 137            | 103            | 177            | 15 | 230            | 270            | 220            | 260            | 19             | 340    | 22          | 24      | 350      | 24          | 26      |

■ ANSI (Unit: inch)

| ANSI (Unit: inch) |     |                |       |                |      |                |                |                |      |                |                |                |                |                | ANSI CLASS150        |                |                |            |
|-------------------|-----|----------------|-------|----------------|------|----------------|----------------|----------------|------|----------------|----------------|----------------|----------------|----------------|----------------------|----------------|----------------|------------|
| inch              | mm  | D <sub>1</sub> | H     | H <sub>1</sub> | A    | A <sub>1</sub> | A <sub>2</sub> | A <sub>3</sub> | S    | S <sub>1</sub> | S <sub>2</sub> | S <sub>3</sub> | S <sub>4</sub> | S <sub>5</sub> | L                    |                | t              |            |
|                   |     |                |       |                |      |                |                |                |      |                |                |                |                |                | GRINNELL<br>STANDARD | AV<br>STANDARD | U-PVC<br>C-PVC | PP<br>PVDF |
| 2 1/2             | 65  | 6.89           | 23.94 | 3.86           | 3.11 | 5.39           | 4.06           | 6.97           | 0.47 | 6.10           | 7.48           | 6.30           | 7.48           | 0.75           | -                    | 9.84           | 0.87           | 0.91       |
| 3                 | 80  | 7.83           | 24.61 | 4.29           | 3.11 | 5.39           | 4.06           | 6.97           | 0.47 | 7.09           | 8.66           | 6.89           | 8.46           | 0.75           | 10.37                | 11.02          | 0.87           | 0.91       |
| 4                 | 100 | 9.41           | 25.79 | 4.69           | 3.11 | 5.39           | 4.06           | 6.97           | 0.59 | 9.06           | 10.63          | 8.66           | 10.24          | 0.75           | 12.93                | 13.39          | 0.87           | 0.94       |