

ASAHI **AV** VALVE AND PIPING SYSTEMS

ASAHI **AV** VALVES

DIAPHRAGM VALVE TYPE 14 15mm - 100mm(¹/₂inch - 4inch)



DIAPHRAGM VALVE TYPE 14 15mm - 100mm(1/2inch - 4inch)

● 15mm(1/2inch) – 50mm(2inch)

● 65mm(2 1/2inch) – 100mm(4inch)



FEATURES

Excellent Sealing Property

The DIAPHRAGM VALVE TYPE 14 uses a high quality rubber material, exhibiting lower compressive strain, for its diaphragm and cushion, resulting in optimum sealing performance.

Tight Seal at Low Torque

Using dynamic analysis by CAE, DIAPHRAGM VALVE TYPE 14 is designed so that pressure is distributed evenly. This design allows the hand wheel torque be reduced and maintain shut off at low torque.

Easier Maintenance

A bayonet mechanism, provided between the diaphragm and compressor, allows the diaphragm to be replaced easily.

Bottom Stand for Easy Support

Having a new bottom stand with an insert hole, DIAPHRAGM VALVE TYPE 14 helps support the piping. The valve is also provided with a flange stand to increase installation safety.

Built-in Travel Stop

DIAPHRAGM VALVE TYPE 14 contains a revolutionary travel stop mechanism protecting the diaphragm.

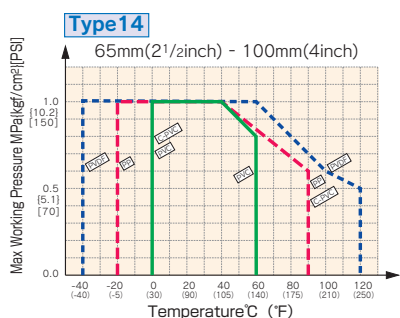
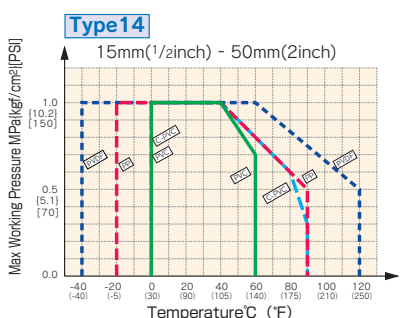
Visual Indicator

A color indicator clearly shows whether the valve is fully-opened, half-opened, or fully-closed. Because the indicator enters the handle, going out of view when the valve is fully-closed, the operator would know at glance of valve position valve is fully-opened, half-opened.

MATERIAL AND WORKING TEMPERATURE

| Body Material | Nominal Size mm(inch) | Working Temperature °C (°F) | Max. Working Pressure at 20°C(70°F) | End Connectors |
|---------------|-----------------------|-----------------------------|-------------------------------------|----------------|
| | | | MPa{kgf/cm²} [PSI] | |
| PVC | 15 - 100(1/2 - 4) | 0 - 60 (30 - 140) | 1.0 {10.2} [150] | Flanged End |
| C-PVC | 15 - 100(1/2 - 4) | 0 - 90 (30 - 195) | 1.0 {10.2} [150] | Flanged End |
| PP | 15 - 100(1/2 - 4) | -20 - 90 (-5 - 195) | 1.0 {10.2} [150] | Flanged End |
| PVDF | 15 - 100(1/2 - 4) | -40 - 120 (-40 - 250) | 1.0 {10.2} [150] | Flanged End |

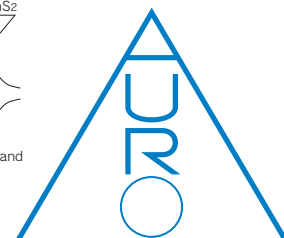
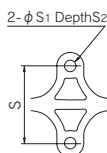
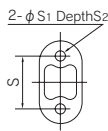
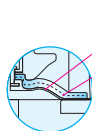
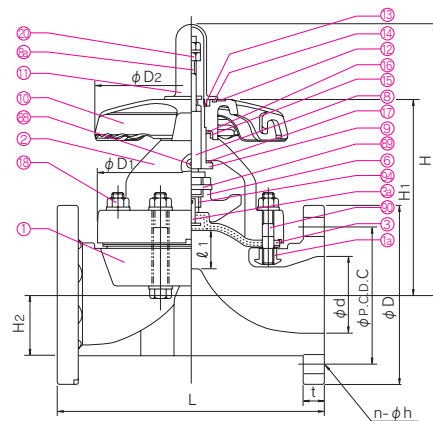
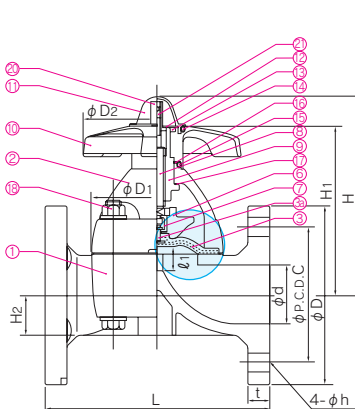
WORKING PRESSURE VS. TEMPERATURE



DIMENSION

● 15mm(1/2inch) - 50mm(2inch)

● 65mm(2 1/2inch) - 100mm(4inch)



PARTS & MATERIALS

| No. | DESCRIPTION | Pcs. | MATERIAL | No. | DESCRIPTION | Pcs. | MATERIAL |
|-----|-----------------------------|------|--|-----|------------------------------|------|--|
| ① | BODY | 1 | BODY/BONNET, | ⑬ | RETAINING RING-C TYPE | 1 | STAINLESS STEEL304 |
| ② | BONNET | 1 | PVC/PVC,C-PVC/PP,PP/PP,PVDF/PPG,PVDF/PVDF | ⑭ | O-RING(A) | 1 | EPDM |
| ③ | DIAPHRAGM | 1 | EPDM,IIR,NBR,CSM,CPE,FKM VIFLON C (FKM-C), VIFLON F (FKM-F), PTFE | ⑮ | O-RING(B) | 1 | EPDM |
| ③a | INSERTED METAL OF DIAPHRAGM | 1 | STAINLESS STEEL304 | ⑯ | THRUST RING(A) | 1 | UHMWPE |
| ④ | CUSHION | 1 | EPDM ¹⁾ | ⑰ | THRUST RING(B) | 1 | UHMWPE |
| ⑤ | PVDF GAS BARRIER(OPTION) | 1 | PVDF | ⑱ | BOLT·NUT | 4 | STAINLESS STEEL304 |
| ⑥ | COMPRESSOR | 1 | PVDF | ⑳ | STOPPER | 1 | COPPER ALLOY ²⁾ , STAINLESS STEEL ³⁾ 304 |
| ⑦ | JOINT ²⁾ | 1 | STAINLESS STEEL304 | ㉑ | SCREW ²⁾ | 1 | STAINLESS STEEL304 |
| ⑧ | STEM | 1 | COPPER ALLOY | ㉒ | GREASE NIPPLE ³⁾ | 1 | COPPER ALLOY (C3604) |
| ⑧a | INDICATOR ROD ²⁾ | 1 | STAINLESS STEEL304 | ㉓ | COMPRESSOR PIN ³⁾ | 1 | STAINLESS STEEL304 |
| ⑨ | SLEEVE | 1 | COPPER ALLOY (C3604) | ㉔ | STUD BOLT·NUT ³⁾ | 4 | STAINLESS STEEL304 |
| ⑩ | HAND WHEEL | 1 | PP | ㉕ | METAL OF COMPRESSOR | 1 | STAINLESS STEEL304 |
| ⑪ | GAUGE COVER | 1 | POLYCARBONATE | ㉖ | INSERTED NUT ³⁾ | 4 | COPPER ALLOY (C3604) STAINLESS STEEL304 |
| ⑫ | NAME PLATE | 1 | PVC | | | | |

Note. 1) Used for PTFE diaphragm
 2) Used for 15mm(1/2inch)-50mm(2inch)
 3) Used for size 65mm(2 1/2inch)-100mm(4inch)

DIMENSIONS TABLE

| DIN | | | | | | | | | | | | | Unit:mm | | | | | |
|--------------|-------|-----|---------------|-----|---|----|----------------|----------------|--------------------------|-----|--------------|------------|---------|----------------|----------------|-----|----------------|----------------|
| Nominal Size | | d | DIN 2501 PN10 | | | | D ₁ | D ₂ | ℓ ₁ (LIFT) | L | t | | H | H ₁ | H ₂ | S | S ₁ | S ₂ |
| mm | inch | | D | C | n | h | | | | | PVC C-PVC | PP PVDF | | | | | | |
| 15 | 1/2 | 16 | 95 | 65 | 4 | 14 | 54×66 | 100 | 10 | 130 | 12 | 12 | 104 | 86 | 19.5 | 25 | 7 | 13 |
| 20 | 3/4 | 20 | 105 | 75 | 4 | 14 | 54×66 | 100 | 10 | 150 | 13 | 13 | 106 | 88 | 17.5 | 25 | 7 | 13 |
| 25 | 1 | 25 | 115 | 85 | 4 | 14 | 67×80 | 100 | 12 | 160 | 13 | 13 | 111 | 93 | 18.5 | 25 | 7 | 13 |
| 32 | 1 1/4 | 32 | 140 | 100 | 4 | 18 | 67×80 | 100 | 12 | 180 | 16 | 16 | 116 | 97 | 22.5 | 25 | 7 | 13 |
| 40 | 1 1/2 | 40 | 150 | 110 | 4 | 18 | 108×108 | 156 | 21 | 200 | 20 | 20 | 177 | 144 | 27.5 | 45 | 9 | 15 |
| 50 | 2 | 52 | 165 | 125 | 4 | 18 | 123×123 | 156 | 25 | 230 | 22 | 22 | 191 | 158 | 36 | 45 | 9 | 15 |
| 65 | 2 1/2 | 67 | 185 | 145 | 4 | 18 | 175 | 220 | 34 | 290 | 22 | 22 | 266 | 188 | 61 | 85 | 11 | 20 |
| 80 | 3 | 78 | 200 | 160 | 8 | 18 | 201 | 220 | 42 | 310 | 24 | 24 | 280 | 202 | 63 | 100 | 15 | 28 |
| 100 | 4 | 100 | 220 | 180 | 8 | 18 | 241 | 257 | 50 | 350 | 24 | 26 | 329 | 241 | 78 | 120 | 15 | 28 |

| ANSI | | | | | | | | | | | | | Unit:inch | | | | | | |
|--------------|-----|------|----------------|------|---|------|----------------|----------------|--------------------------|------------|------------|--------------|------------|-------|----------------|----------------|------|----------------|----------------|
| Nominal Size | | d | ANSI CLASS 150 | | | | D ₁ | D ₂ | ℓ ₁ (LIFT) | L | | t | | H | H ₁ | H ₂ | S | S ₁ | S ₂ |
| inch | mm | | D | C | n | h | | | | G-STANDARD | A-STANDARD | PVC C-PVC | PP PVDF | | | | | | |
| 1/2 | 15 | 0.63 | 3.50 | 2.38 | 4 | 0.62 | 2.13×2.60 | 3.94 | 0.39 | 4.25 | 4.33 | 0.43 | 0.43 | 4.09 | 3.39 | 0.77 | 0.98 | 0.28 | 0.51 |
| 3/4 | 20 | 0.79 | 3.88 | 2.75 | 4 | 0.62 | 2.13×2.60 | 3.94 | 0.39 | 5.88 | 4.72 | 0.51 | 0.51 | 4.17 | 3.46 | 0.69 | 0.98 | 0.28 | 0.51 |
| 1 | 25 | 0.98 | 4.25 | 3.12 | 4 | 0.62 | 2.64×3.15 | 3.94 | 0.47 | 5.88 | 5.12 | 0.59 | 0.59 | 4.37 | 3.66 | 0.73 | 0.98 | 0.28 | 0.51 |
| 1 1/4 | 32 | 1.26 | 4.62 | 3.50 | 4 | 0.62 | 2.64×3.15 | 3.94 | 0.47 | 6.38 | — | 0.63 | 0.63 | 4.57 | 3.82 | 0.89 | 0.98 | 0.28 | 0.51 |
| 1 1/2 | 40 | 1.57 | 5.00 | 3.88 | 4 | 0.62 | 4.25×4.25 | 6.14 | 0.83 | 6.94 | 7.09 | 0.63 | 0.63 | 6.97 | 5.67 | 1.08 | 1.77 | 0.35 | 0.59 |
| 2 | 50 | 2.05 | 6.00 | 4.75 | 4 | 0.75 | 4.84×4.84 | 6.14 | 0.98 | 7.94 | 8.27 | 0.79 | 0.79 | 7.52 | 6.22 | 1.42 | 1.77 | 0.35 | 0.59 |
| 2 1/2 | 65 | 2.64 | 7.00 | 5.50 | 4 | 0.75 | 6.89 | 8.66 | 1.34 | — | 9.84 | 0.87 | 0.91 | 10.47 | 7.40 | 2.40 | 3.35 | 0.43 | 0.79 |
| 3 | 80 | 3.07 | 7.50 | 6.00 | 4 | 0.75 | 7.91 | 8.66 | 1.65 | 10.37 | 11.02 | 0.87 | 0.91 | 11.02 | 7.95 | 2.48 | 3.94 | 0.59 | 1.10 |
| 4 | 100 | 3.94 | 9.00 | 7.50 | 8 | 0.75 | 9.49 | 10.12 | 1.97 | 12.93 | 13.39 | 0.87 | 0.94 | 12.95 | 9.49 | 3.07 | 4.72 | 0.59 | 1.10 |



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