

# AL-140ML

|                     |             |                                    |                    |
|---------------------|-------------|------------------------------------|--------------------|
| Full bore type      | Lift type   | Safety valve                       | Relief valve       |
| Safety relief valve | Lever type  | Closed type                        | Dash-pot structure |
| Handle type         | Stainless   | High pressure gas testing products |                    |
| Diaphragm           | Non-leakage |                                    |                    |

## ■Features

1. Lever type safety relief valve. A discharge inspection can be manually performed when the difference between the set pressure and the inlet pressure is as shown in Table 1 below.
2. Safety relief valve of all stainless steel made. Used for trim parts is SCS14A (equivalent to SUS316) with outstanding corrosion resistance.
3. Closed structure prevents fluid leakage.

[Table 1] Required differential pressure at a discharge inspection

| Nominal size | Difference between set pressure and inlet pressure |
|--------------|----------------------------------------------------|
| 15A-25A      | 1.0 MPa or less                                    |
| 32A, 40A     | 0.6 MPa or less                                    |
| 50A          | 0.4 MPa or less                                    |

## ■Specifications

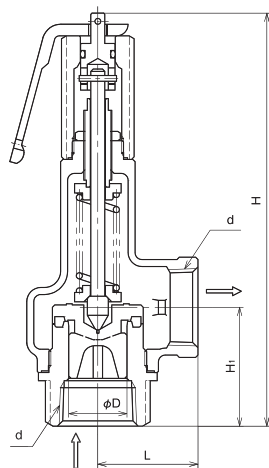
|                     |                                                            |                          |
|---------------------|------------------------------------------------------------|--------------------------|
| Structure           | Closed type with a lever                                   |                          |
| Application         | Air, Cold and hot water, Oil, Other non-dangerous fluids * |                          |
| Working pressure    | 0.05-1.0 MPa                                               |                          |
| Working temperature | 5-120°C                                                    |                          |
| Material            | Spring case                                                | Stainless steel          |
|                     | Valve, valve seat                                          | Stainless steel (SCS14A) |
|                     | Adjusting spring                                           | Stainless steel          |
| Connection          | JIS Rc screwed                                             |                          |

\* Please contact us when using for oil.

· Please refer to the chart in P. 3-80 for set pressure range.

## ■Dimensions and Weights

| Nominal size | Dimension (mm) |    |    |                |     |  | Flow area<br>$\pi D_L^2$ (mm <sup>2</sup> ) | Weight<br>(kg) |
|--------------|----------------|----|----|----------------|-----|--|---------------------------------------------|----------------|
|              | d              | D  | L  | H <sub>1</sub> | H   |  |                                             |                |
| 15A          | Rc 1/2         | 16 | 34 | 40             | 158 |  | 20.1                                        | 0.8            |
| 20A          | Rc 3/4         | 21 | 38 | 42             | 158 |  | 34.6                                        | 0.9            |
| 25A          | Rc 1           | 26 | 43 | 51             | 177 |  | 53.0                                        | 1.3            |
| 32A          | Rc 1-1/4       | 33 | 50 | 61.5           | 211 |  | 93.3                                        | 1.9            |
| 40A          | Rc 1-1/2       | 41 | 60 | 64             | 246 |  | 135.2                                       | 3.0            |
| 50A          | Rc 2           | 51 | 75 | 76             | 286 |  | 208.2                                       | 4.9            |



# ■ Certified Capacity Table

· AL-140T, AL-140ML, AL-140TML for air (20°C) <Pressure vessel structure standard>

(kg/h)

| Pressure Mpa<br>Nominal size | 0.05 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5  | 0.6  | 0.7  | 0.8  | 0.9  | 1.0  |
|------------------------------|------|-----|-----|-----|-----|------|------|------|------|------|------|
| 15A                          | 25   | 33  | 48  | 65  | 81  | 98   | 114  | 131  | 147  | 164  | 181  |
| 20A                          | 44   | 57  | 83  | 111 | 140 | 169  | 197  | 226  | 254  | 283  | 311  |
| 25A                          | 67   | 87  | 127 | 171 | 215 | 258  | 302  | 346  | 390  | 433  | 477  |
| 32A                          | 113  | 147 | 214 | 288 | 362 | 435  | 509  | 582  | 656  | 730  | 803  |
| 40A                          | 169  | 221 | 321 | 431 | 542 | 652  | 762  | 872  | 982  | 1093 | 1203 |
| 50A                          | 262  | 341 | 496 | 666 | 836 | 1006 | 1176 | 1346 | 1516 | 1687 | 1857 |

· AL-140T, 140T-N, 140ML, 140TML, 140TML-N for water (accumulation 25%) <Yoshitake standard>

(m<sup>3</sup>/h)

| Pressure Mpa<br>Nominal size | 0.05 | 0.1 | 0.2  | 0.3  | 0.4  | 0.5  | 0.6  | 0.7  | 0.8  | 0.9  | 1.0  |
|------------------------------|------|-----|------|------|------|------|------|------|------|------|------|
| 15A                          | 0.4  | 0.5 | 0.9  | 1.1  | 1.3  | 1.5  | 1.6  | 1.8  | 1.9  | 2.0  | 2.1  |
| 20A                          | 0.6  | 0.9 | 1.6  | 2.0  | 2.3  | 2.6  | 2.8  | 3.1  | 3.3  | 3.5  | 3.7  |
| 25A                          | 1.0  | 1.5 | 2.5  | 3.1  | 3.6  | 4.0  | 4.4  | 4.7  | 5.1  | 5.4  | 5.7  |
| 32A                          | 1.8  | 2.6 | 4.5  | 5.5  | 6.3  | 7.1  | 7.8  | 8.4  | 9.0  | 9.5  | 10.0 |
| 40A                          | 2.7  | 3.8 | 6.5  | 7.9  | 9.2  | 10.3 | 11.3 | 12.2 | 13.0 | 13.8 | 14.6 |
| 50A                          | 4.1  | 5.9 | 10.0 | 12.3 | 14.2 | 15.9 | 17.4 | 18.8 | 20.1 | 21.3 | 22.4 |

\* Please refer to P.3 -12 for the calculation procedure for nominal size selection.

## Soft seat is used for the trim parts!

Soft seat (O-ring) is used for the trim parts, ensuring the reliable airtightness of the valve seat.

