

# PN25

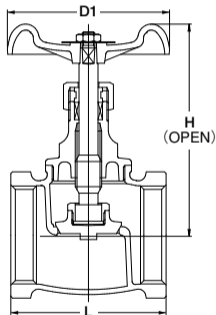
# BRONZE GLOBE VALVE

Union Bonnet, Rising Stem, Soft Seated Disc  
Threaded ends to BS21 (JIS B0203)

25 bar at 100°C, 10.5 bar at 186°C, P-T rating : See page 01



Fig. PN25A



## Materials

| Parts         | Material                        |
|---------------|---------------------------------|
| Body          | Bronze                          |
| Bonnet        | Brass                           |
| Stem          | Dezincification Resistant Brass |
| Disc          | Bronze                          |
| Gland Packing | Aramid Fibers Graphite          |

## Dimensions

| Nominal Size                 | mm        |           |           |         |             |             |         |
|------------------------------|-----------|-----------|-----------|---------|-------------|-------------|---------|
|                              | NPS<br>DN | 1/2<br>15 | 3/4<br>20 | 1<br>25 | 1 1/4<br>32 | 1 1/2<br>40 | 2<br>50 |
| <b>L</b> Threaded end to end |           | 48        | 53        | 63      | 73          | 81          | 94      |
| <b>H</b> Height, valve open  |           | 69        | 80        | 94      | 104         | 127         | 147     |
| <b>D</b> Handwheel diameter  |           | 55        | 60        | 70      | 80          | 90          | 100     |

• Threaded ends to BS21(JIS B0203)

Taper pipe threads for connection shall refer to JIS B0203 standards, while the length of useful threads and the positions of gauge planes are built on KITZ standard.

## KITZ Bronze and Brass Materials to JIS Standards

### JIS H5120 (Copper & Copper Alloy Castings)

| Cast bronze Class 6 | Designation  | Chemical composition (%) |         |         |         |          |          |           |          |           |           | Mechanical property                               |                           |
|---------------------|--------------|--------------------------|---------|---------|---------|----------|----------|-----------|----------|-----------|-----------|---|---------------------------|
|                     |              | Cu                       | Sn      | Zn      | Pb      | Ni       | Fe       | P         | Sb       | Al        | Si        | Tensile strength<br>195 Min. (N/mm <sup>2</sup> ) | Elongation (%)<br>15 Min. |
|                     | CAC406 (BC6) | 83.0-87.0                | 4.0-6.0 | 4.0-6.0 | 4.0-6.0 | 1.0 Max. | 0.3 Max. | 0.05 Max. | 0.2 Max. | 0.01 Max. | 0.01 Max. |   |                           |

### JIS H3250 (Copper & Copper Alloy Rods and Bars)

| Forged brass Alloy No.3771 | Designation |         | Chemical composition (%) |         |          |           | Mechanical property                               |                           |
|----------------------------|-------------|---------|--------------------------|---------|----------|-----------|---|---------------------------|
|                            | Extruded    | Drawn   | Cu                       | Pb      | Fe + Sn  | Zn        | Tensile strength<br>315 Min. (N/mm <sup>2</sup> ) | Elongation (%)<br>15 Min. |
|                            | C3771BE     | C3771BD | 57.0-61.0                | 1.0-2.5 | 1.0 Max. | Remainder |   |                           |

### JIS H3250 (Copper & Copper Alloy Rods and Bars)

| Free-cutting brass Alloy No.3604 | Designation |         | Chemical composition (%) |         |          |          |           | Mechanical property                               |                     |
|----------------------------------|-------------|---------|--------------------------|---------|----------|----------|-----------|---|---------------------|
|                                  | Extruded    | Drawn   | Cu                       | Pb      | Fe       | Fe + Sn  | Zn        | Tensile strength<br>335 Min. (N/mm <sup>2</sup> ) | Elongation (%)<br>— |
|                                  | C3604BE     | C3604BD | 57.0-61.0                | 1.8-3.7 | 0.5 Max. | 1.0 Max. | Remainder |   |                     |

## KITZ Bronze and Brass Materials to ASTM Standards

### ASTM B62

| Chemical composition (%) |         |         |         |                 |           |           |            |           |            |            | Mechanical properties      |                          |                            |
|--------------------------|---------|---------|---------|-----------------|-----------|-----------|------------|-----------|------------|------------|----------------------------|--------------------------|----------------------------|
| Copper                   | Tin     | Lead    | Zinc    | Nickel & Cobalt | Iron      | Sulfur    | Phosphorus | Antimony  | Aluminum   | Silicon    | Minimum                    |                          |                            |
| 84.0-86.0                | 4.0-6.0 | 4.0-6.0 | 4.0-6.0 | 1.0 Max.        | 0.30 Max. | 0.08 Max. | 0.05 Max.  | 0.25 Max. | 0.005 Max. | 0.005 Max. | Tensile strength<br>30 ksi | Yield strength<br>14 ksi | Elongation in 2 in.<br>20% |

### ASTM B584 C84400

| Chemical composition (%) |         |         |          |                 |           |           |            |           |            |            | Mechanical properties      |                          |                            |
|--------------------------|---------|---------|----------|-----------------|-----------|-----------|------------|-----------|------------|------------|----------------------------|--------------------------|----------------------------|
| Copper                   | Tin     | Lead    | Zinc     | Nickel & Cobalt | Iron      | Sulfur    | Phosphorus | Antimony  | Aluminum   | Silicon    | Minimum                    |                          |                            |
| 78.0-82.0                | 2.3-3.5 | 6.0-8.0 | 7.0-10.0 | 1.0 Max.        | 0.40 Max. | 0.08 Max. | 0.02 Max.  | 0.25 Max. | 0.005 Max. | 0.005 Max. | Tensile strength<br>29 ksi | Yield strength<br>13 ksi | Elongation in 2 in.<br>18% |

### ASTM B283 C37700

| Chemical composition (%) |         |           |           | Mechanical properties      |                          |                                   |
|--------------------------|---------|-----------|-----------|----------------------------|--------------------------|-----------------------------------|
| Copper                   | Lead    | Iron      | Zinc      | Minimum                    |                          |                                   |
| 58.0-61.0                | 1.5-2.5 | 0.30 Max. | Remainder | Tensile strength<br>50 ksi | Yield strength<br>18 ksi | Elongation in 4x thickness<br>25% |