

# KS

## KOREAN INDUSTRIAL STANDARD

### Thermostat

#### KS R 3036 : 1987

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## Thermostat

**1. Applicable Scope :** This standard defines a wax thermostat used for controlling water temperature within a water-cooled engine of an automobile (hereafter referred to as "Thermostat").

**Remarks :** Any units or numerical values within parentheses { } are of the International Unit System (SI Unit) for reference only.

**2. Types :** Types of thermostats are as indicated in **table 1**.

Shapes are as illustrated in **fig. 1, 2 and 3**.

**Table 1**

| Type          | Code | Remarks     |
|---------------|------|-------------|
| Inline        | I    | See Fig. 1. |
| Side-bypass   | S    | See Fig. 2. |
| Bottom-bypass | B    | See Fig. 3. |

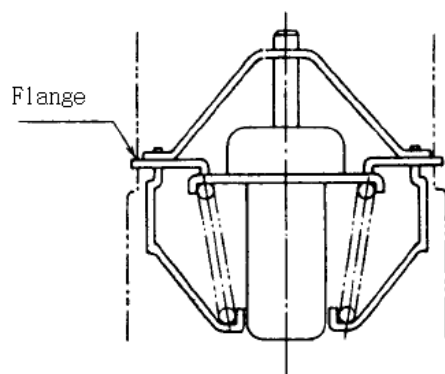


**Fig. 1 Inline (I type)**

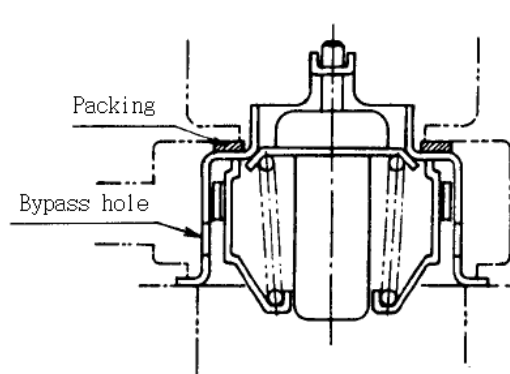


**Fig. 2 Side-bypass (S type)**

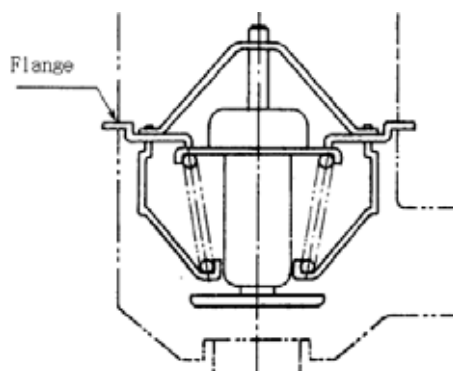
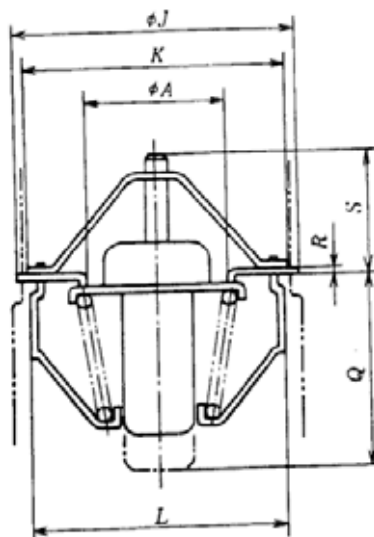


**Fig. 3 Bottom-bypass (B type)**

**3. Dimensions:** The dimensions of each type are as follows:

**3.1 Inline type:** Dimensions of the inline type are as indicated in **table 2**:

**Table 2**



Unit : mm

| Type dimension designation | A       | J         | K (max) | L (max) | Q (max) <sup>(1)</sup> | R        | S (max) <sup>(2)</sup> |
|----------------------------|---------|-----------|---------|---------|------------------------|----------|------------------------|
| I - 38a                    | 20± 0.2 | 38± 0.2   | 33      | 33      | 38                     | 0.8± 0.1 | 28                     |
| I - 38b                    | 20± 0.2 | 38± 0.2   | 33      | 33      | 42                     | 0.8± 0.1 | 28                     |
| I - 42a                    | 25± 0.2 | 42± 0.2   | 37      | 37      | 38                     | 0.8± 0.1 | 28                     |
| I - 42b                    | 25± 0.2 | 42± 0.2   | 37      | 37      | 42                     | 0.8± 0.1 | 28                     |
| I - 44a                    | 28± 0.2 | 44± 0.2   | 38      | 37      | 38                     | 0.8± 0.1 | 28                     |
| I - 44b                    | 28± 0.2 | 44± 0.2   | 38      | 37      | 42                     | 0.8± 0.1 | 28                     |
| I - 52a                    | 33± 0.2 | 52± 0.2   | 47      | 47.5    | 38                     | 1± 0.1   | 28                     |
| I - 52b                    | 33± 0.2 | 52± 0.2   | 47      | 47.5    | 42                     | 1± 0.1   | 28                     |
| I - 54a                    | 33± 0.2 | 54± 0.2   | 47.5    | 47.5    | 38                     | 1± 0.1   | 28                     |
| I - 54b                    | 33± 0.2 | 54± 0.2   | 47.5    | 47.5    | 42                     | 1± 0.1   | 28                     |
| I - 54c                    | 33± 0.2 | 54.5± 0.2 | 48      | 47.5    | 38                     | 1± 0.1   | 28                     |
| I - 54d                    | 33± 0.2 | 54.5± 0.2 | 48      | 47.5    | 42                     | 1± 0.1   | 28                     |

**Note** <sup>(1)</sup> Q indicates dimension at 120°C.

<sup>(2)</sup> S includes  $S_1$  or  $S_2$  indicated in the **figure** below.



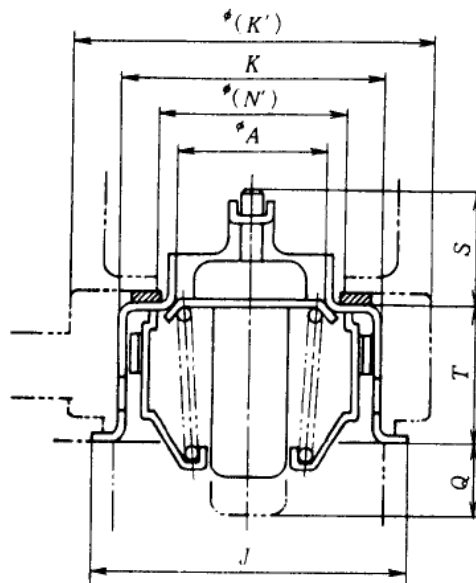
**Remarks 1.** A indicates valve diameter.

2. It is possible to install a jiggle valve to reduce leakage rate.

3. Designation of types is determined upon agreement with a buyer. Allowable deviation of A or J is  $\pm 0.2$ , and  $\pm 0.1$  for R. Dimensions of K, L, Q or S other than those specified in **Table 2** may vary dependent upon specifications of a buyer.

**3.2 Side-bypass type :** Dimensions of the side-bypass type are as indicated in **table 3**:

**table 3**

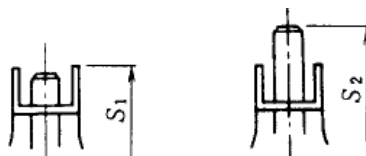


Unit : mm

| Type dimension designation | A       | J       | K  | Q (max) <sup>(3)</sup> | S(max) <sup>(4)</sup> | T       | (K') <sup>(5)</sup> | (N') (max) <sup>(5)</sup> |
|----------------------------|---------|---------|----|------------------------|-----------------------|---------|---------------------|---------------------------|
| S - 73                     | 35± 0.2 | 73± 0.3 | 60 | 35                     | 45                    | 26± 0.3 | (67)                | (40)                      |
| S - 78                     | 40± 0.2 | 78± 0.3 | 68 | 35                     | 45                    | 30± 0.3 | (76)                | (45)                      |
| S - 83                     | 45± 0.2 | 83± 0.3 | 73 | 35                     | 45                    | 30± 0.3 | (87)                | (50)                      |
| (S - 84a)                  | 48± 0.2 | 84± 0.3 | 72 | 35                     | 45                    | 25± 0.3 | -                   | -                         |
| (S - 84b)                  | 48± 0.2 | 84± 0.3 | 75 | 35                     | 45                    | 25± 0.3 | -                   | -                         |
| S - 88                     | 50± 0.2 | 88± 0.3 | 78 | 35                     | 45                    | 30± 0.3 | (96)                | (55)                      |

**Note** <sup>(3)</sup> Q indicates dimension at 120°C.

<sup>(4)</sup> S includes  $S_1$  or  $S_2$  indicated in the **figure** below.



<sup>(5)</sup> K' and N' denote dimensions of assembly side for reference.

**Remarks 1.** It is not suggested to use the types in parentheses.

2. A indicates valve diameter.

3. It is possible to install a jiggle valve to reduce leakage rate.

4. Designation of types is determined upon agreement with a buyer. Allowable deviation of A is ± 0.2, and ± 0.3 for J, T. Also, the values of Q, S, and N specified in Table 3 may vary dependent upon specifications of a buyer.