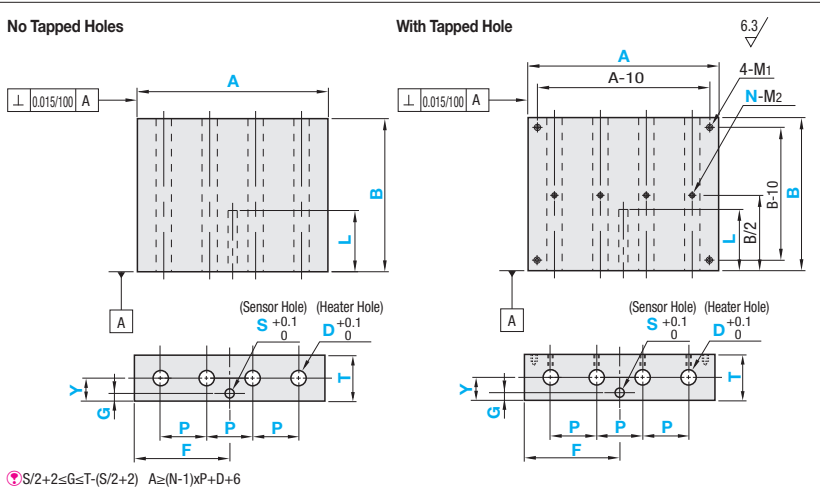


## Hot Plates



A white, square hot plate with four circular ports on the front edge. The device is shown from a three-quarter perspective against a white background.

**RoHS 10**



💡  $S/2+2 \leq G \leq T-(S/2+2)$     $A \geq (N-1) \times P + D + 6$

| Part Number   |               | Plate         |        |       | Heater Hole (Selection) |                 | Sensor Hole (Selection) |               | Heater Position                                                 |      | Sensor Position |      |
|---------------|---------------|---------------|--------|-------|-------------------------|-----------------|-------------------------|---------------|-----------------------------------------------------------------|------|-----------------|------|
| Type          | Material Code | A             | B      | T     | D                       | N               | S                       | L             | P                                                               | Y    | F               | G    |
|               |               | 1mm Increment |        |       | Selection               | Number of Holes | Selection               | 1mm Increment | 1mm Increment                                                   |      | 1mm Increment   |      |
| HTPL<br>HTPLT | A<br>S        | 50~200        | 50~200 | 12~30 | 5                       | 1~10            | 1.6                     | 10~30         | 8~191<br>When N=1,<br>P is the<br>distance<br>from left<br>end. | 6~25 | 4~197           | 4~27 |
|               |               |               |        |       | 6                       |                 | 10~100                  |               |                                                                 |      |                 |      |
|               |               |               |        |       | 8                       |                 |                         |               |                                                                 |      |                 |      |
|               |               |               |        |       | 10                      |                 |                         |               |                                                                 |      |                 |      |
|               |               |               |        |       | 12                      |                 |                         |               |                                                                 |      |                 |      |
|               |               |               |        |       | 14                      |                 | 2.3                     |               |                                                                 |      |                 |      |
|               |               |               |        |       | 16                      |                 | 3.2                     |               |                                                                 |      |                 |      |
|               |               |               |        |       | 18                      |                 | 4.8                     |               |                                                                 |      |                 |      |

① The distance from plate end face to the hole and tap should be 3mm or more.  
 ② The distance between holes (between heater holes, or between heater hole and sensor hole) should be 3mm or more. ③ M1 tapped holes may go through when T dimension is 15mm or less.  
 ④ It is important to establish the distance between heaters (P) to 3 to 4 times larger than the heater diameter (D). (if the distance between heaters is too small, the heating may accumulate in the plate and heating unevenness may occur.)

 **Ordering Example**   **Part Number**   **Plate**   **Heater Hole**   **Sensor Hole**   **Heater Position**   **Sensor Position**

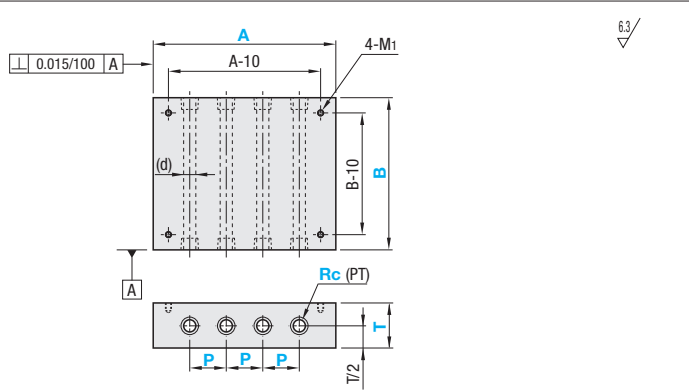
**HTPLA**   **200**   **200**   **30**   **D5**   **N6**   **S1.6**   **L30**   **P20**   **Y15**   **F100**   **G5**

## Cooling Plates



A white, rectangular cooling plate with four circular ports on the front face. The plate is shown from a three-quarter perspective, highlighting its flat top and slightly raised edges.

**RoHS 10**



| Part Number |               | 1mm Increment |        | T             | Rc (PT) | N                        | P             |
|-------------|---------------|---------------|--------|---------------|---------|--------------------------|---------------|
| Type        | Material Code | A             | B      | 5mm Increment |         | (Number of Cooler Holes) | 1mm Increment |
| HTPC        | S             | 50~200        | 50~200 | 15~30         | 1 (1/8) | 1~7                      | 25~(A-25)     |
|             |               |               |        | 20~30         | 2 (1/4) |                          |               |

- ❗ The distance from plate end face to the hole and tap should be 2mm or more.
- ❗ 3mm or more is required for the distance between holes.

 **Ordering Example**

| Part Number | Plate |     |    | Rc (PT) | N<br>(Number of Cooler Holes) | P<br>(Pitch) |
|-------------|-------|-----|----|---------|-------------------------------|--------------|
|             | A     | B   | T  |         |                               |              |
| HTPCS       | 200   | 200 | 15 | R1      | N4                            | P30          |

(Ex.) Hot Plates  
HTPLA100-50-22-D5-N2-S3.2-L25-P70-Y11-F50-G10  
( Body Price ) + ( Heater Hole Unit Price x Qty. ) = (Product Price)

Part Number - A - B - T - Rc - N - P  
HTPCS - 100 - 100 - 20 - R1 - N4 - P25

$$(\text{Body Price}) + (\text{Cooling Hole Unit Price} \times \text{Qty.}) = \text{Plate Price}$$

■ **Body Price** \* HTPL and HTPLT include sensor hole drilling.

| Part Number                                                                | Material Code | A       | B       | Unit Price |        |             |        |
|----------------------------------------------------------------------------|---------------|---------|---------|------------|--------|-------------|--------|
|                                                                            |               |         |         | HTPL       |        | HTPLT, HTPC |        |
|                                                                            |               |         |         | T10~20     | T21~30 | T10~20      | T21~30 |
| Hot Plates<br><b>HTPL</b><br><b>HTPLT</b><br>Cooling Plates<br><b>HTPC</b> | A             | 50~100  | 50~100  |            |        |             |        |
|                                                                            |               |         | 101~150 |            |        |             |        |
|                                                                            |               |         | 151~200 |            |        |             |        |
|                                                                            |               | 101~150 | 50~100  |            |        |             |        |
|                                                                            |               |         | 101~150 |            |        |             |        |
|                                                                            |               |         | 151~200 |            |        |             |        |
|                                                                            |               | 151~200 | 50~100  |            |        |             |        |
|                                                                            |               |         | 101~150 |            |        |             |        |
|                                                                            |               |         | 151~200 |            |        |             |        |
|                                                                            | S             | 50~100  | 50~100  |            |        |             |        |
|                                                                            |               |         | 101~150 |            |        |             |        |
|                                                                            |               |         | 151~200 |            |        |             |        |
|                                                                            |               | 101~150 | 50~100  |            |        |             |        |
|                                                                            |               |         | 101~150 |            |        |             |        |
|                                                                            |               |         | 151~200 |            |        |             |        |
|                                                                            |               | 151~200 | 50~100  |            |        |             |        |
|                                                                            |               |         | 101~150 |            |        |             |        |
|                                                                            |               |         | 151~200 |            |        |             |        |

■ Unit Price of Heater Hole ( D: 5~18 ) / Unit Price of Cooling Hole ( Rc: 1~2 )

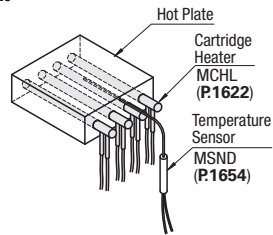
| Type  | Material Code |   |
|-------|---------------|---|
|       | A             | S |
| HTPL  |               |   |
| HTPLT |               |   |
| HTPC  | -             |   |



|                                  |                                                                |       |       |            |
|----------------------------------|----------------------------------------------------------------|-------|-------|------------|
| • Thickness Parallelism          | 0.015 or less per 100mm                                        |       |       |            |
| • Flatness                       | $\frac{T}{\text{Per 100 mm}}$                                  | 10-15 | 16-25 | 26 or More |
|                                  |                                                                | 0.03  | 0.015 | 0.012      |
| • Dimension Tolerance of A and B | $\frac{99 \text{ mm or Less } 100-200}{\pm 0.2 \quad \pm 0.3}$ |       |       |            |
| • T Dimension Tolerance          | $\pm 0.1$                                                      |       |       |            |
| • Circumference Chamfering       | C0.2-C1.0                                                      |       |       |            |



### Example



**RoHS10**

**M** Material: SUS303

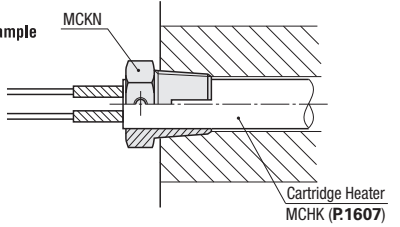
| Part Number |      | d    | B  | L   | R (PT) | Unit Price |
|-------------|------|------|----|-----|--------|------------|
| Type        | No.  |      |    |     |        |            |
| MCKN        | 5    | 5.1  | 14 | 18  | 1/8    |            |
|             | 6    | 6.1  |    |     |        |            |
|             | 6.25 | 6.4  | 17 | 20  | 1/4    |            |
|             | 8    | 8.1  |    |     |        |            |
|             | 9.42 | 9.5  | 21 | 25  | 3/8    |            |
|             | 10   | 10.1 |    |     |        |            |
|             | 12   | 12.1 | 24 | 27  | 1/2    |            |
|             | 12.6 | 12.7 |    |     |        |            |
|             | 14   | 14.1 | 29 | 3/4 |        |            |
|             | 16   | 16.1 |    |     |        |            |
| 18          | 18.1 |      |    |     |        |            |



### Ordering Example

Part Number  
**MCKN8**

### Example



❗ Use M3 set screw to fix the heater mounting bolt and the heater from the side face when tightening is inadequate or when mounting the heater.

⚠️ Avoid using Mounting Bolt with heater when power density exceeds 15W/cm<sup>2</sup>.