

# Heat Insulating Plates

High Temperature Insulating Grade High Temperature Super Insulating Grade

■ High Temperature Insulating ■ High Temperature Super Insulating



RoHS10

Type	Tolerance Selection	Dim. Tolerance of A and B	Grade	Color	Operating Ambient Temperature
HIPIA	Not Specified	+1.0 0	High Temperature Insulating	Natural Color	Room Temp. ~ 180°C
	P	±0.3			
HIPAL	Not Specified	+1.0 0	High Temperature Super Insulating	White	Room Temp. ~ 400°C
	P	±0.3			

Properties and Machining Conditions P.1675

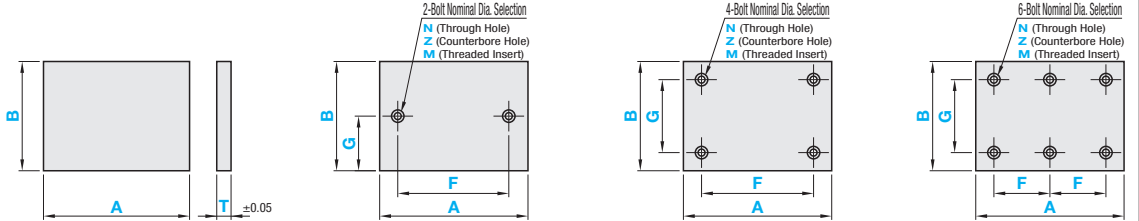
Standard

With Holes

-2 Holes-2H

-4 Holes-4H

-6 Holes-6H



A≥B

Standard

Part Number	1mm Increment	T Selection			
		HIPIA	HIPAL		
Type	Tolerance Selection	A	B	HIPIA	HIPAL
		Not Specified	20~800	20~600	3 5 10 15
HIPIA HIPAL	P	20~200	20~200	5 10	5 10

Hole Machining Detail

N (Through Hole)		Z (Counterbore Hole)	M (Threaded Insert)																																																															
<table border="1"> <caption>Table 1</caption> <thead> <tr> <th>Bolt Nominal Dia.</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>8</th> <th>10</th> </tr> </thead> <tbody> <tr> <td>d</td> <td>3.5</td> <td>4.5</td> <td>5.5</td> <td>6.5</td> <td>9</td> <td>11</td> </tr> <tr> <td>d<sub>1</sub></td> <td>-</td> <td>8</td> <td>9.5</td> <td>11</td> <td>14</td> <td>-</td> </tr> <tr> <td>h</td> <td>-</td> <td>5</td> <td>6</td> <td>7</td> <td>9</td> <td>-</td> </tr> </tbody> </table>		Bolt Nominal Dia.	3	4	5	6	8	10	d	3.5	4.5	5.5	6.5	9	11	d <sub>1</sub>	-	8	9.5	11	14	-	h	-	5	6	7	9	-	<table border="1"> <thead> <tr> <th>Bolt Nominal Dia.</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>8</th> <th>10</th> </tr> </thead> <tbody> <tr> <td>d</td> <td>3.5</td> <td>4.5</td> <td>5.5</td> <td>6.5</td> <td>9</td> <td>11</td> </tr> <tr> <td>L</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>8</td> <td>10</td> </tr> <tr> <td></td> <td>4.5</td> <td>6</td> <td>7.5</td> <td>9</td> <td>12</td> <td>15</td> </tr> <tr> <td></td> <td>6</td> <td>8</td> <td>10</td> <td>12</td> <td>-</td> <td>-</td> </tr> </tbody> </table>		Bolt Nominal Dia.	3	4	5	6	8	10	d	3.5	4.5	5.5	6.5	9	11	L	3	4	5	6	8	10		4.5	6	7.5	9	12	15		6	8	10	12	-	-
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Ordering Code (Ex.) M4-L6																																																																		
L≤T-1																																																																		
For details of Threaded Insert HLTS, See P.271																																																																		

With Holes

When L+5<T, machined holes will be blind ones.

Type	Tolerance Selection	Number of Holes	Part Number		1mm Increment		T Selection		0.5mm Increment		Bolt Hole Nominal Dia. Selection						
			A	B	HIPIA	HIPAL	F	G	Through Hole	Counterbore Hole	Threaded Insert		Select from Table 1				
											N	Z		M	L		
HIPIA HIPAL	Not Specified	2H 4H 6H	20~800	20~600	3	3	9~791 (2H, 4H Type)	5~595 (2H)	3 4 5 6 8 10								
					5	5											
	P		20~200	20~200	10	10	9~395 (6H Type)	9~591 (Other than 2H)								4 5 6	3 4 5 6 8
					15	15										4 5 6 8	3 4 5 6 8 10

F Dimension Range: For 2H and 4H,  $d(d_1)+5 \leq F \leq A-d(d_1)-5$ ; for 6H,  $d(d_1)+5 \leq F \leq A/2-d(d_1)/2-2.5$ .

G Dimension Range: For 2H,  $d(d_1)/2+2.5 \leq G \leq B-d(d_1)/2-2.5$ ; for 4H and 6H,  $d(d_1)+5 \leq G \leq B-d(d_1)-5$ .  
(d for through hole and threaded insert, d<sub>1</sub> for counterbore)

For Hole Type, select N (through hole), Z (counterbore hole), or M (threaded insert) and L (insert length).



Ordering Example

Standard

Part Number - A - B - T

HIPIA - 300 - 222 - 10

HIPALP - 200 - 100 - 5

With Holes

Part Number - A - B - T - F - G - Bolt Nominal Dia. - L

HIPIAP2H - 200 - 170 - 10 - F100 - G70 - N8

HIPIA4H - 300 - 200 - 10 - F150 - G120 - M5 - L7.5



Alterations

Part Number - A - B - T - F - G - Bolt Nominal Dia. - (XC, YC)

HIPIA4H - 100 - 100 - 5 - F40 - G50 - N6 - XC30-YC20

Alterations Code	Hole Position from Left		Hole Position from Bottom	
	XC	YC	XC	YC
Spec.	<p>XC=1mm Increment</p> <p>5≤XC≤786</p> <p>(2H, 4H Type)</p> <p><math>d(d_1)/2+2.5 \leq XC \leq A-F-d(d_1)/2-2.5</math></p> <p>(6H Type)</p> <p><math>d(d_1)/2+2.5 \leq XC \leq A-2F-d(d_1)/2-2.5</math></p>	<p>YC=1mm Increment</p> <p>5≤YC≤586</p> <p><math>d(d_1)/2+2.5 \leq YC \leq B-G-d(d_1)/2-2.5</math></p> <p>Not applicable to 2H Type.</p>		