

Ultra High-Molecular-Weight Polyethylene Plates

Standard / Conductive Grade

Ultra High-Molecular-Weight Polyethylene is light in specific gravity and weight. Excels in abrasion resistance and sliding property. In addition to Standard Type, Conductive Grade for antistatic is also available.

* For Details of color samples and features, see P951.

Type	Grade	Color	Operating Ambient Temperature	Finish	4 Sides		Upper-lower Surface	
					Drilling Method	Finish Symbol	Drilling Method	Finish Symbol
UPA	Standard	Milky White	-100~80°C	Circular Sawing	✓	Material	~	
UPACA	Electrical Conductivity	Black						

Standard Type

Pre-drilled Type

2H

2-Screw Nominal Dia. Selection

N (Through Hole)
Z (Counterbore)
M (Threaded Insert)

2HL

2-Screw Nominal Dia. Selection

N (Through Hole)
Z (Counterbore)
M (Threaded Insert)

4H

4-Screw Nominal Dia. Selection

N (Through Hole)
Z (Counterbore)
M (Threaded Insert)

6H

6-Screw Nominal Dia. Selection

N (Through Hole)
Z (Counterbore)
M (Threaded Insert)

Hole Machining Details

N (Through Hole)	Z (Counterbore Hole)	M (Threaded Insert)																																																															
<table border="1"> <tr><th>Screw Nominal Dia.</th><th>3</th><th>4</th><th>5</th><th>6</th><th>8</th><th>10</th></tr> <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>d1</td><td>6.5</td><td>8</td><td>9.5</td><td>11</td><td>14</td><td>-</td></tr> <tr><td>h</td><td>4</td><td>5</td><td>6</td><td>7</td><td>9</td><td>-</td></tr> </table>	Screw Nominal Dia.	3	4	5	6	8	10	d	3.5	4.5	5.5	6.5	9	11	d1	6.5	8	9.5	11	14	-	h	4	5	6	7	9	-		<table border="1"> <tr><th>Screw Nominal Dia.</th><th>3</th><th>4</th><th>5</th><th>6</th><th>8</th><th>10</th></tr> <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>d1</td><td>3</td><td>4</td><td>5</td><td>6</td><td>8</td><td>10</td></tr> <tr><td>L</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>16</td><td>20</td></tr> </table>	Screw Nominal Dia.	3	4	5	6	8	10	d	3.5	4.5	5.5	6.5	9	11	d1	3	4	5	6	8	10	L	4.5	6	7.5	9	12	15		6	8	10	12	16	20
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Ordering Code (Ex.) M4-L6
 * L<T-1
 * When L+S<T, drilled holes will be blind ones.

Standard Type			T Dimension Tolerance, Rate of Camber and Torsion			Dimension Tolerances of A and B			
Part Number	A	B	T	T	Rate of Camber and Torsion per 1,000mm	A, B Unit: mm	A, B Dimension Tolerance		
Type	1mm Increment	Selectable		UPA	UPACA				
UPA (Standard)	20-500	20-400	3, 5, 8, 10, 15, 20	3	-0.2~+0.5	-	10% or Less	~99	±0.5
UPACA (Conductive)	20-500	20-400	10, 15, 20	5	0~+0.8	-	2.0% or Less	100-250	±0.75
				8	0~+1.0	-		251~	±1.0
				10	0~+1.5	-			
				15	0~+2.0	+0.4~+1.0	1.5% or Less		
				20	0~+2.5				

Pre-drilled Type		A		B		T Selection		F		G		Pre-drilled Hole Nominal Dia.			
Part Number	Hole Dia.	1mm Increment	1mm Increment	UPA	UPACA	0.5mm Increment	0.5mm Increment	N	Z	M	L	Through Hole	Counterbore Hole	Threaded Insert	
UPA (Standard)	2H	20~500	20~400	3	-	6~491.5 (2H, 4H)	4.5~395.5 (2H)	3	-	-	-				
UPACA (Conductive)	2HL			5	-	4.5~495.5 (2HL)	6~391.5 (2HL, 4H, 6H)	4	5	3 4 5 6				(Threaded Insert Length) Select from Table 1	
	4H			8	-	6~245.5 (6H)		5	6	3 4 5 6 8					
	6H			10	10			6	8	3 4 5 6 8 10					
				15	15			8	10	3 4 5 6 8 10					
				20	20			10		3 4 5 6 8 10					

Dimension F Specification Range: For 2H and 4H, $d(d1)+2.5 \leq F \leq A-d(d1)-5$; for 2HL, $d(d1)/2+2.5 \leq F \leq A-d(d1)/2-2.5$; for 6H, $d(d1)+2.5 \leq F \leq (A-d(d1)-5)/2$.
 Dimension G Specification Range: For 2H, $d(d1)/2+2.5 \leq G \leq B-d(d1)/2-2.5$; for 2HL, 4H and 6H, $d(d1)+2.5 \leq G \leq B-d(d1)-5$.
 (d for through hole and threaded insert, d1 for counterbore)
 For Pre-drilled Type, select N (through hole) or Z (counterbore hole); for Threaded Insert Type, select M (threaded insert) or L (insertion length).

Ordering Example

Standard Type
 Part Number - A - B - T
 UPA - 150 - 118 - 5

Pre-drilled, Threaded Insert Type
 Part Number - A - B - T - F - G - Screw Nominal Dia. - L
 UPA2H - 50 - 25 - 8 - F34 - G10 - N4 - L7.5
 UPA2H - 200 - 100 - 10 - F70 - G20 - M5 - L7.5

Plate Price

Material multiplier should be noted. UPACA x1.2

Part Number	T	A	Unit Price															
			20	51	101	151	201	251	301	351								
			50	100	150	200	250	300	350	400								
Type (Material Multiplier)	3	20~50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		51~100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		101~150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		151~200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		201~250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		251~300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		301~350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		351~400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		401~450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		451~500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UPA (x1.0)	5	20~50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		51~100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		101~150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		151~200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		201~250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		251~300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		301~350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		351~400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		401~450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		451~500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
UPACA (x1.2)	8	20~50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		51~100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		101~150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		151~200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		201~250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		251~300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		301~350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		351~400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		401~450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		451~500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Hole Machining Charge

Pre-drilled Type	Hole Machining Charge		
2H, 2HL	N (Through Hole)	Z (Counterbore Hole)	M (Threaded Insert)
4H			
6H			

The prices of Pre-drilled Type and Threaded Insert Type are Standard Type Unit Price plus Hole Machining Charge or Threaded Insert Machining Charge, respectively.

Price Calculation Method for Pre-drilled Type

Part Number - A - B - T - F - G - Screw Nominal Dia. - L >> (Standard Type Unit Price) + (Threaded Insert Machining Details) = Threaded Insert Type Unit Price

UPACA2H - 300 - 200 - 10 - F240 - G160 - M5 - L5 >>

Alterations

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

UPA4H - 200 - 180 - 8 - F100 - G140 - Z4 - XC10
 UPACA - 200 - 130 - 15 - CRA10 - CRB10

Alterations	Corner Radius	Corner Cut	Hole Position from Left	Hole Position from Bottom
Code	CRA, CRB, CRC, CRD	CCA, CCB, CCC, CCD	XC	YC
Spec.	Adds radius to any corner. R = 5mm Increment * 10 ≤ A(B)-R(2R) * 5 ≤ CRA, CRB, CRC, CRD ≤ 100 Ordering Code (Ex.) Adds R10 at the corner of A and C. CRA10-CRC10 * Available for Standard Type only.	Cuts any corners. 5 ≤ Corner Cut ≤ 50 5mm Increment Ordering Code (Ex.) When the corners of A and D are cut by C5 → CCA5-CCD5 * Available for Standard Type only.	XC = 0.5mm Increment (2H, 4H Type) d(d1)/2+2.5 ≤ XC ≤ A-F-d(d1)/2-2.5 (6H Type) d(d1)/2+2.5 ≤ XC ≤ A-2F-d(d1)/2-2.5	YC = 0.5mm Increment d(d1)/2+2.5 ≤ YC ≤ B-G-d(d1)/2-2.5 * Not available for 2H.