Add. Spec. Printed in Red

# MC Nylon® Plates

## Standard Type

MC Nylon® is the most versatile material among Engineered Plastics and used for various industrial purposes.
New finish variations are now available in addition to the conventional Saw Cut.

*Details of color samples and features, see **P.3070**

Standard Type

RoHS10 Properties **P.3067**

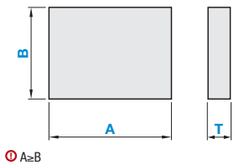
| Type | Grade / Material | Color | Operating Ambient Temperature |
|---|---|---|---|
| MCA | Standard / MC901 | Blue | -40–120°C |
| MCA–G | Standard Thick Type / MC901 | | |
| MCAW | Standard / MC900NC | Ivory | |
| MCAS | Sliding / MC703HL | Purple | |
| MCAY | High Strength / MC602ST | Dark Brown | Ambient Temp. ~150°C |
| MCAPS | Weather Resistance / MC801 | Dark Gray | Ambient Temp. ~120°C |
| MCCA | Conductivity CDR2 / MC501CDR2 | Black | Ambient Temp. ~120°C |
| MCDA | Antistatic CDR6 / MC501CDR6 | Black | |
| MCEA | Antistatic / Heat Resistant CDR9 / MC501CDR9 | Black | Ambient Temp. ~150°C |

**Dimension Tolerance of A and B**

| T | A, B Unit: mm | A, B Dimension Tolerance |
|---|---|---|
| 5–30 | ~99 | ±0.5 |
| | 100–250 | ±0.75 |
| | 251~ | ±1.0 |
| 40–100 | ~300 | 0–+5 |

**T Dimension Tolerance, Rate of Camber & Torsion**

| T | T Dimension Tolerance | Rates of Camber and Torsion per 1,000 mm |
|---|---|---|
| 5, 7, 10 | 0–+1.5 | 1.2% or Less |
| 12, 15, 20 | | 1.0% or Less |
| 25, 30 | 0–+2.0 | 0.4% or Less |
| 40, 50, 60 | 0–+3.0 | |
| 70, 80, 90, 100 | 0–+5.0 | |




A≥B

| Finish | 4 Sides | | Upper-Lower Surface | |
|---|---|---|---|---|
| | Drilling Method | Finish Symbol | Drilling Method | Finish Symbol |
| Circular Sawing | Circular Sawing | ✓ | Material | — |
| Guaranteed Perpendicularity of Circular Sawing (NT) | Circular Sawing | ✓ | Material | — |
| 4-Side Milling (4F) | Milling | 6.3 | Material | — |
| 6-Surface Milling (6F) | Milling | 6.3 | Milling | 6.3 |
| Upper-Lower Surface Milling (2F) | Circular Sawing | ✓ | Milling | 6.3 |

**Precision Guarantee**

| Finish | Width Parallelism | Perpendicularity of Reference Plane |
|---|---|---|
| | Per 100 mm | |
| Guaranteed Perpendicularity of Circular Sawing (NT) | 0.1 | 0.1 |
| 4-Side Milling (4F) | | |
| 6-Surface Milling (6F) | | |

Reference plane stickers are attached to 4-side milled plates.

## Standard Type

| Part Number: Type | Finish Symbol | T Dimension Tolerance | A, B Dimension Tolerance | By Material Dimension Range | A | B | T |
|---|---|---|---|---|---|---|---|
| | Circular Sawing | | | | 1 mm Increment | | Selection |
| MCA Standard Blue<br>MCA–G Standard Thick Type<br>MCAW Standard Ivory<br>MCAS Sliding<br>MCAY High Strength<br>MCAPS Weather Resistance<br>MCCA Conductivity CDR2<br>MCDA Antistatic CDR6<br>MCEA Antistatic / Heat Resistant CDR9 | — | Not Available | Not Available | MCA | 20–600 | 20–500 | 5 7 10 12 15 20 25 30 |
| | | | | | 40–300 | 40–300 | 40 50 60 |
| | | | | MCA–G | 301–500 | 301–500 | 40 50 60 |
| | | | | | 70–300 | 70–300 | 70 80 90 100 |
| | | | | MCEA | 20–600 | 20–500 | 10 12 15 20 25 |
| | | | | Others | 20–600 | 20–500 | 5 7 10 12 15 20 25 30 |
| | Guaranteed Perpendicularity of Circular Sawing (NT) | | | | 0.5 mm Increment | | Selection |
| | NT | Not Available | T5, 7, 10: Q 0–+0.3, N ±0.2, M -0.3 – 0<br>T12, 15, 20: Q 0–+0.4, N ±0.3, M -0.4 – 0<br>T25, 30: Q 0–+0.5, N ±0.4, M -0.5 – 0 | MCEA | 20–500 | 20–400 | 10 12 15 20 25 |
| | | | | Others | | | 5 7 10 12 15 20 25 30 |
| | 4-side Milling (4F) | | | | 0.1 mm Increment | | Selection |
| | 4F | Not Available | Q 0–+0.2<br>N ±0.1<br>M -0.2 – 0 | MCEA | 10–400 | 10–200 | 10 12 15 20 25 |
| | | | | Others | | | 5 7 10 12 15 20 25 30 |
| | 6-surface Milling (6F) | | | | 0.1 mm Increment | | 0.1 mm Increment |
| | 6F | Q 0–+0.2<br>N ±0.1<br>M -0.2 - 0 | Q 0–+0.2<br>N ±0.1<br>M -0.2 – 0 | MCEA | 10–400 | 10–200 | 10–24 |
| | | | | Others | | | 5–29 |
| | Upper-lower Surface Milling (2F) | | | | 1 mm Increment | | 0.1 mm Increment |
| | 2F | Q 0–+0.2<br>N ±0.1<br>M -0.2 – 0 | Not Available | MCEA | 20–400 | 20–250 | 10–24 |
| | | | | Others | | | 5–29 |

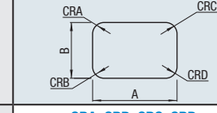
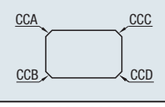
T40, 50 and 60 may have steps on cut surfaces.
If MCA-G, A≥B≥T

**Part Number Example**

| | Part Number | - A - | B - | T |
|---|---|---|---|---|
| Circular Sawing | MCA | - 300 - | 200 - | 40 |
| Guaranteed Perpendicularity of Circular Sawing | MCANTQ | - 200.5 - | 100.5 - | 10 |
| 4-Side Milling | MCA4FN | - 150.5 - | 100.3 - | 15 |
| 6-Surface Milling | MCA6FMM | - 100.3 - | 90.5 - | 10.5 |
| Upper-Lower Surface Milling | MCA2FQ | - 80 - | 50 - | 5 |

**Part Number Alterations**

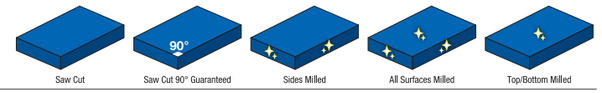
Part Number - A - B - T - (CRA...)
MCA - 300 - 200 - 5 - CRA10

| Alterations | Corner Radius | Corner Cut |
|---|---|---|
| |   |   |
| Code | CRA, CRB, CRC, CRD | CCA, CCB, CCC, CCD |
| Spec. | Adds radius to any corner.<br>R=5 mm Increment 10≤A(B)-R(2R)<br>5≤CRA, CRB, CRC, CRD≤100<br>**Ordering Code:** (Ex.) Adds R10 at the corner of A and C. CRA10-CRC10<br>Not applicable to Sides Milled or All Surfaces Milled.<br>Not applicable to T40, 50 and 60. | Cuts any corners.<br>5≤Corner Cut≤50<br>5 mm Increment<br>**Ordering Code:** (Ex.) When the corners of A and D are cut by C5→CCA5-CCD5<br>Not applicable to Sides Milled or All Surfaces Milled.<br>Not applicable to T40, 50 and 60.<br>10≤A-C(2C) or B-C(2C) |



# MC Nylon® Plates

## Pre-Drilled Type




Pre-Drilled Type

RoHS10 Properties **P.3067**

| Type | Grade / Material | Color | Operating Ambient Temperature |
|---|---|---|---|
| MCA | Standard / MC901 | Blue | -40–120°C |
| MCAW | Standard / MC900NC | Ivory | |
| MCAS | Sliding / MC703HL | Purple | |
| MCAY | High Strength / MC602ST | Dark Brown | Ambient Temp. ~150°C |
| MCAPS | Weather Resistance / MC801 | Dark Gray | Ambient Temp. ~120°C |
| MCCA | Conductivity CDR2 / MC501CDR2 | Black | Ambient Temp. ~120°C |
| MCDA | Antistatic CDR6 / MC501CDR6 | Black | |
| MCEA | Antistatic / Heat Resistant CDR9 / MC501CDR9 | Black | Ambient Temp. ~150°C |

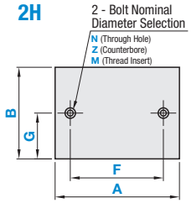
**Dimensional Tolerances of A & B**

| T | A, B Unit: mm | A, B Dimension Tolerance |
|---|---|---|
| 5–30 | ~99 | ±0.5 |
| | 100–250 | ±0.75 |
| | 251~ | ±1.0 |

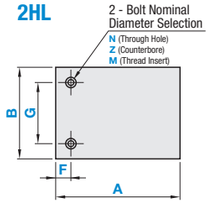
**T Dimension Tolerance, Rate of Camber & Torsion**

| T | T Dimension Tolerance | Rates of Camber & Torsion per 1,000 mm |
|---|---|---|
| 5, 7, 10 | 0–+1.5 | 1.2% or Less |
| 12, 15, 20 | | 1.0% or Less |
| 25, 30 | 0–+2.0 | 0.4% or Less |

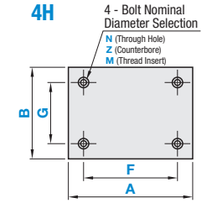
**2H** 2 - Bolt Nominal Diameter Selection
N (Through Hole) Z (Counterbore) M (Thread Insert)



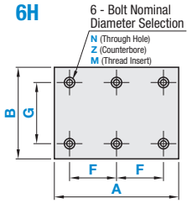

**2HL** 2 - Bolt Nominal Diameter Selection
N (Through Hole) Z (Counterbore) M (Thread Insert)



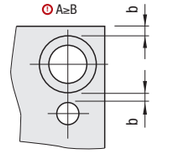

**4H** 4 - Bolt Nominal Diameter Selection
N (Through Hole) Z (Counterbore) M (Thread Insert)




**6H** 6 - Bolt Nominal Diameter Selection
N (Through Hole) Z (Counterbore) M (Thread Insert)




A≥B




| Hole Diameter | b (Min. value) |
|---|---|
| 3–10 | 2.5 |

**Drilling Details**

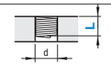
**N (Through hole)**


**Z (Counterbore Hole)**


**N (Through Hole) Z (Counterbored Hole) Details**

| Boit Nominal Dia. | 3 | 4 | 5 | 6 | 8 | 10 |
|---|---|---|---|---|---|---|
| d | 3.5 | 4.5 | 5.5 | 6.5 | 9 | 11 |
| $d_1$ | 6.5 | 8 | 9.5 | 11 | 14 | — |
| h | 4 | 5 | 6 | 7 | 9 | — |

**M (Thread Insert)**




**Ordering Code:** Ex.) M4–L6
L≤T-1
When L+5<T, drilled holes will be blind ones.

**Table 1 M (Thread Insert) Details**

| 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 | 16 | 20 |

| Finish | 4 Sides | | Upper-Lower Surface | |
|---|---|---|---|---|
| | Drilling Method | Finish Symbol | Drilling Method | Finish Symbol |
| Circular Sawing (-) | Circular Sawing | ✓ | Material | — |
| Upper-Lower Surface Milling (2F) | Circular Sawing | ✓ | Milling | 6.3 |

## Pre-Drilled Type

| Part Number: Type | T Dim. Tolerance | Number of Holes | A | B | T Dimension Range by Material | T | F | G |
|---|---|---|---|---|---|---|---|---|
| | Circular Sawing | | 1 mm Increment | | | Selection | 0.5 mm Increment | |
| MCA Standard Blue<br>MCAW Standard Ivory<br>MCAS Sliding<br>MCAY High Strength<br>MCAPS Weather Resistance<br>MCCA Conductivity CDR2<br>MCDA Antistatic CDR6<br>MCEA Antistatic / Heat Resistant CDR9 | Not Available | 2H (Horizontal)<br>2HL (Vertical)<br>4H<br>6H | 20–500 | 20–400 | MCEA | 10 12 15 20 25 | 6–491.5 (2H, 4H)<br>4.5–395.5 (2HL)<br>6–245.5 (6H) | 4.5–395.5 (2H)<br>6–391.5 (2HL, 4H, 6H) |
| | | | | | Others | 5 7 10 12 15 20 25 30 | | |
| | Upper-Llower Surface Milling (2F) | | 1 mm Increment | | | 0.1 mm Increment | 0.5 mm Increment | |
| | 2FQ 0–+0.2<br>2FN ±0.1<br>2FM -0.2–0 | 2H (Horizontal)<br>2HL (Vertical)<br>4H<br>6H | 20–400 | 20–250 | MCEA | 10–24 | 6–391.5 (2H, 4H)<br>4.5–395.5 (2HL)<br>6–195.5 (6H) | 4.5–245.5 (2H)<br>6–241.5 (2HL, 4H, 6H) |
| | | | | | Others | 5–29 | | |

Dimension F Specification Range: For 2H and 4H, $d(d_1)+2.5 \le F \le A-d(d_1)-5$; for 2HL, $d(d_1)/2+2.5 \le F \le A-d(d_1)/2-2.5$; for 6H, $d(d_1)+2.5 \le F \le (A-d(d_1)-5)/2$.
Dimension G Specification Range: For 2H, $d(d_1)/2+2.5 \le G \le B-d(d_1)/2-2.5$. For 2HL, 4H and 6H, $(d1)+2.5 \le G \le B-d(d_1)-5$.
For Pre-drilled Type, select N (through hole) or Z (counterbore hole), for Thread Insert Type, select M (thread insert) and L (insertion length).

| T | Pre-Drilled Hole Nominal Diameter | | | |
|---|---|---|---|---|
| | Through Hole | Counterbore Hole | Thread Insert | |
| | N | Z | M | L |
| 5–6 | 3 | — | 3 4 | (Thread Insert Length) Select from Table 1 |
| 7–9 | 4<br>5 | 3 4 | 3 4 5 6 | |
| 10–14 | 6<br>8 | 4 5 6 | 3 4 5 6 8 10 | |
| 15–30 | 10 | 4 5 6 8 | 3 4 5 6 8 10 | |

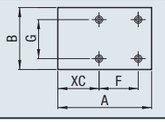
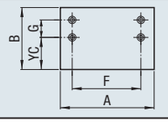
**Part Number Example**

Pre-Drilled Type

| Part Number | - A - | B - | T - | F - | G - | Bolt Nominal Diameter - | L |
|---|---|---|---|---|---|---|---|
| MCDA4H | - 200 - | 155 - | 5 - | F160 - | G120 - | N4 | |
| MCDA4H | - 500 - | 300 - | 10 - | F300 - | G200 - | M5 | - L7.5 |

**Part Number Alterations**

Part Number - A - B - T - F - G - Bolt Nominal Diameter - (XC / YC)
MCA2H - 50 - 40 - 5 - F10 - G20 - N3 - XC10

| Alterations | Hole Position from Left | Hole Position from Bottom |
|---|---|---|
| |   |   |
| Code | XC | YC |
| Spec. | XC = 0.5 mm Increment<br>(2H, 4H Type) $d(d_1)/2+2.5 \le XC \le A-F-d(d_1)/2-2.5$<br>(6H Type) $d(d_1)/2+2.5 \le XC \le A-2F-d(d_1)/2-2.5$ | YC = 0.5 mm Increment<br>$d(d_1)/2+2.5 \le YC \le B-G-d(d_1)/2-2.5$<br>Not available for 2H |