<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>BodyBuilder™ Extruded Aluminum Octagonal Booms</td>
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</tr>
<tr>
<td>BodyBuilder™ Structure Mid Mount Assemblies</td>
<td>11</td>
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<tr>
<td>BodyBuilder™ Structure End Mount Assemblies</td>
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<td>BodyBuilder™ Transition Brackets and Blocks</td>
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<td>75</td>
</tr>
<tr>
<td>BodyBuilder™ Swivel Arm Accessories</td>
<td>79</td>
</tr>
</tbody>
</table>
Mid Mount with GR1 Series Gripper

Mid Mount with GR84 Series Mini-Clamps

End Mount with Venturi Cup Mounts and Vacuum Cups

End Mount with GR84 Series Mini Clamp

Mid Mount with 82M50 Enclosed Power Clamps

Mid Mounted Part Nest with CPI-HTW Hold Table Weldment and Nest Pad guides

Dimensions and technical information are subject to change without notice
**BODYBUILDER™ END EFFECTOR SYSTEM**

**Product Overview**

BodyBuilder™ is designed to maximize productivity, both before and after installation. The flexibility of the system allows modifications to the end effector in minutes, greatly reducing start up time to launch.

The octagonal structure is available in four sizes: 30mm, 45mm, 60mm, and 90mm.

The patented BodyBuilder™ Alignment System allows the modular components to be replaced individually and easily returned to their original positions.

Alignment nut(s) are included with every Bodybuilder™ modular component, utilizing the patented alignment system.

**U.S. PATENT 6,349,912**
Ready-to-assemble mounts and accessories eliminate drilling and welding at assembly.

Most commonly used in:

<table>
<thead>
<tr>
<th>Applications</th>
<th>Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robot Welding</td>
<td>Industrial</td>
</tr>
<tr>
<td>Pick and Place</td>
<td>Automotive</td>
</tr>
<tr>
<td>Material Handling</td>
<td>Transportation</td>
</tr>
<tr>
<td>Lower Nest</td>
<td>Appliance</td>
</tr>
</tbody>
</table>

Dimensions and technical information are subject to change without notice.
# BODYBUILDER™ BOOM STRUCTURE

**BodyBuilder™ Octagonal Tooling | Dimensions**

## 30, 45, 60, and 90mm Boom Lengths and Ordering Numbers

<table>
<thead>
<tr>
<th>(L) Length</th>
<th>B - 30 - (L) - 0</th>
<th>B - 45 - (L) - 0</th>
<th>B - 60 - (L) - 0</th>
<th>B - 90 - (L) - 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>150 mm</td>
<td>B - 30 - 150 - 0</td>
<td>B - 45 - 150 - 0</td>
<td>B - 60 - 150 - 0</td>
<td>N/A</td>
</tr>
<tr>
<td>200 mm</td>
<td>B - 30 - 200 - 0</td>
<td>B - 45 - 200 - 0</td>
<td>B - 60 - 200 - 0</td>
<td>N/A</td>
</tr>
<tr>
<td>250 mm</td>
<td>B - 30 - 250 - 0</td>
<td>B - 45 - 250 - 0</td>
<td>B - 60 - 250 - 0</td>
<td>N/A</td>
</tr>
<tr>
<td>300 mm</td>
<td>B - 30 - 300 - 0</td>
<td>B - 45 - 300 - 0</td>
<td>B - 60 - 300 - 0</td>
<td>B - 90 - 300 - 0</td>
</tr>
<tr>
<td>400 mm</td>
<td>B - 30 - 400 - 0</td>
<td>B - 45 - 400 - 0</td>
<td>B - 60 - 400 - 0</td>
<td>B - 90 - 400 - 0</td>
</tr>
<tr>
<td>500 mm</td>
<td>B - 30 - 500 - 0</td>
<td>B - 45 - 500 - 0</td>
<td>B - 60 - 500 - 0</td>
<td>B - 90 - 500 - 0</td>
</tr>
<tr>
<td>600 mm</td>
<td>B - 30 - 600 - 0</td>
<td>B - 45 - 600 - 0</td>
<td>B - 60 - 600 - 0</td>
<td>B - 90 - 600 - 0</td>
</tr>
<tr>
<td>700 mm</td>
<td>B - 30 - 700 - 0</td>
<td>B - 45 - 700 - 0</td>
<td>B - 60 - 700 - 0</td>
<td>B - 90 - 700 - 0</td>
</tr>
<tr>
<td>750 mm</td>
<td>B - 30 - 750 - 0</td>
<td>B - 45 - 750 - 0</td>
<td>B - 60 - 750 - 0</td>
<td>B - 90 - 750 - 0</td>
</tr>
<tr>
<td>800 mm</td>
<td>B - 30 - 800 - 0</td>
<td>B - 45 - 800 - 0</td>
<td>B - 60 - 800 - 0</td>
<td>B - 90 - 800 - 0</td>
</tr>
<tr>
<td>900 mm</td>
<td>B - 30 - 900 - 0</td>
<td>B - 45 - 900 - 0</td>
<td>B - 60 - 900 - 0</td>
<td>B - 90 - 900 - 0</td>
</tr>
<tr>
<td>1200 mm</td>
<td>B - 30 - 1200 - 0</td>
<td>B - 45 - 1200 - 0</td>
<td>B - 60 - 1200 - 0</td>
<td>B - 90 - 1200 - 0</td>
</tr>
<tr>
<td>1500 mm</td>
<td>B - 30 - 1500 - 0</td>
<td>B - 45 - 1500 - 0</td>
<td>B - 60 - 1500 - 0</td>
<td>B - 90 - 1500 - 0</td>
</tr>
<tr>
<td>1800 mm</td>
<td>B - 30 - 1800 - 0</td>
<td>B - 45 - 1800 - 0</td>
<td>B - 60 - 1800 - 0</td>
<td>B - 90 - 1800 - 0</td>
</tr>
<tr>
<td>2100 mm</td>
<td>B - 30 - 2100 - 0</td>
<td>B - 45 - 2100 - 0</td>
<td>B - 60 - 2100 - 0</td>
<td>B - 90 - 2100 - 0</td>
</tr>
<tr>
<td>2400 mm</td>
<td>B - 30 - 2400 - 0</td>
<td>B - 45 - 2400 - 0</td>
<td>B - 60 - 2400 - 0</td>
<td>B - 90 - 2400 - 0</td>
</tr>
<tr>
<td>2700 mm</td>
<td>B - 30 - 2700 - 0</td>
<td>B - 45 - 2700 - 0</td>
<td>B - 60 - 2700 - 0</td>
<td>B - 90 - 2700 - 0</td>
</tr>
<tr>
<td>3000 mm</td>
<td>B - 30 - 3000 - 0</td>
<td>B - 45 - 3000 - 0</td>
<td>B - 60 - 3000 - 0</td>
<td>B - 90 - 3000 - 0</td>
</tr>
</tbody>
</table>

## 30mm Boom Profile Dimensions and Specifications

### BodyBuilder™ 30mm Boom

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Length</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>B - 30 - (L) - 0</td>
<td>1.4 kg/m [0.9 lb/ft]</td>
<td></td>
</tr>
</tbody>
</table>


BodyBuilder™ 45mm Boom

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>B - 45 - (L) - 0</td>
<td>2.0 kg/m [1.4 lb/ft]</td>
</tr>
</tbody>
</table>

BodyBuilder™ 60mm Boom

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>B - 60 - (L) - 0</td>
<td>3.3 kg/m [2.2 lb/ft]</td>
</tr>
</tbody>
</table>

BodyBuilder™ 90mm Boom

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>B - 90 - (L) - 0</td>
<td>6.5 kg/m [4.4 lb/ft]</td>
</tr>
</tbody>
</table>
**BODYBUILDER™ BOOM STRUCTURE**

BodyBuilder™ Octagonal Tooling | Technical Specifications

### 30mm Boom Deflection and Torsion Charts

**Deflection of 30mm BB**

<table>
<thead>
<tr>
<th>Load (Kgf)</th>
<th>Deflection (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>11.0 lbf</td>
</tr>
<tr>
<td>10</td>
<td>22.0 lbf</td>
</tr>
<tr>
<td>15</td>
<td>33.0 lbf</td>
</tr>
</tbody>
</table>

**Torsional Twist of 30mm BB**

<table>
<thead>
<tr>
<th>Load (Kgf-cm)</th>
<th>Twist (rad)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 Kgf-cm</td>
<td>86.8 lbf-in</td>
</tr>
<tr>
<td>200 Kgf-cm</td>
<td>173.6 lbf-in</td>
</tr>
<tr>
<td>300 Kgf-cm</td>
<td>260.4 lbf-in</td>
</tr>
<tr>
<td>400 Kgf-cm</td>
<td>347.2 lbf-in</td>
</tr>
<tr>
<td>800 Kgf-cm</td>
<td>694.4 lbf-in</td>
</tr>
<tr>
<td>1300 Kgf-cm</td>
<td>1128.4 lbf-in</td>
</tr>
</tbody>
</table>

**Note:** Performance may vary if used with non-DESTACO components

### 45mm Boom Deflection and Torsion Charts

**Deflection of 45mm BB**

<table>
<thead>
<tr>
<th>Load (Kgf)</th>
<th>Deflection (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>11.0 lbf</td>
</tr>
<tr>
<td>10</td>
<td>22.0 lbf</td>
</tr>
<tr>
<td>20</td>
<td>44.1 lbf</td>
</tr>
<tr>
<td>30</td>
<td>66.1 lbf</td>
</tr>
<tr>
<td>40</td>
<td>88.2 lbf</td>
</tr>
</tbody>
</table>

**Torsional Twist of 45mm BB**

<table>
<thead>
<tr>
<th>Load (Kgf-cm)</th>
<th>Twist (rad)</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Kgf-cm</td>
<td>347.2 lbf-in</td>
</tr>
<tr>
<td>700 Kgf-cm</td>
<td>607.6 lbf-in</td>
</tr>
<tr>
<td>1000 Kgf-cm</td>
<td>867.0 lbf-in</td>
</tr>
<tr>
<td>1300 Kgf-cm</td>
<td>1128.4 lbf-in</td>
</tr>
<tr>
<td>1600 Kgf-cm</td>
<td>1388.7 lbf-in</td>
</tr>
<tr>
<td>2000 Kgf-cm</td>
<td>1735.9 lbf-in</td>
</tr>
<tr>
<td>3000 Kgf-cm</td>
<td>2603.9 lbf-in</td>
</tr>
</tbody>
</table>

**Note:** Performance may vary if used with non-DESTACO components

Dimensions and technical information are subject to change without notice
BODYBUILDER™ BOOM STRUCTURE

BodyBuilder™ Octagonal Tooling | Technical Specifications

60mm Boom Deflection and Torsion Charts

<table>
<thead>
<tr>
<th>Load (Kgf)</th>
<th>5 Kgf</th>
<th>10 Kgf</th>
<th>20 Kgf</th>
<th>30 Kgf</th>
<th>40 Kgf</th>
<th>50 Kgf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deflection (mm)</td>
<td>11.0 lbf</td>
<td>22.0 lbf</td>
<td>44.1 lbf</td>
<td>66.1 lbf</td>
<td>88.2 lbf</td>
<td>110.2 lbf</td>
</tr>
</tbody>
</table>

Torsional Twist of 60mm BB

<table>
<thead>
<tr>
<th>Load (Kgf-cm)</th>
<th>400 Kgf-cm</th>
<th>800 Kgf-cm</th>
<th>1200 Kgf-cm</th>
<th>1600 Kgf-cm</th>
<th>2000 Kgf-cm</th>
<th>2400 Kgf-cm</th>
<th>2800 Kgf-cm</th>
<th>3000 Kgf-cm</th>
<th>3400 Kgf-cm</th>
<th>4000 Kgf-cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torsional Twist (rad)</td>
<td>347.2 lbf-in</td>
<td>694.4 lbf-in</td>
<td>1041.6 lbf-in</td>
<td>1388.7 lbf-in</td>
<td>1735.9 lbf-in</td>
<td>2083.1 lbf-in</td>
<td>2430.3 lbf-in</td>
<td>2951.1 lbf-in</td>
<td>3471.8 lbf-in</td>
<td></td>
</tr>
</tbody>
</table>

90mm Boom Deflection and Torsion Charts

<table>
<thead>
<tr>
<th>Load (Kgf)</th>
<th>10 Kgf</th>
<th>20 Kgf</th>
<th>30 Kgf</th>
<th>40 Kgf</th>
<th>50 Kgf</th>
<th>60 Kgf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deflection (mm)</td>
<td>22.0 lbf</td>
<td>44.1 lbf</td>
<td>66.1 lbf</td>
<td>88.2 lbf</td>
<td>110.2 lbf</td>
<td>132.3 lbf</td>
</tr>
</tbody>
</table>

Torsional Twist of 90mm BB

<table>
<thead>
<tr>
<th>Load (Kgf-cm)</th>
<th>1000 Kgf-cm</th>
<th>2000 Kgf-cm</th>
<th>3000 Kgf-cm</th>
<th>4000 Kgf-cm</th>
<th>5000 Kgf-cm</th>
<th>6000 Kgf-cm</th>
<th>8000 Kgf-cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torsional Twist (rad)</td>
<td>867.0 lbf-in</td>
<td>1735.9 lbf-in</td>
<td>3000 Kgf-cm</td>
<td>441.8 lbf-in</td>
<td>4339.8 lbf-in</td>
<td>5207.8 lbf-in</td>
<td>6943.7 lbf-in</td>
</tr>
</tbody>
</table>

Note: Performance may vary if used with non-DESTACO components
**ETP-35 Extrusion Accessory Mount**

**Specifications:**
- Material: Aluminum

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Technical Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>115.5</td>
<td>4.55</td>
</tr>
<tr>
<td>139.7</td>
<td>5.00</td>
</tr>
<tr>
<td>76.2</td>
<td>3.00</td>
</tr>
<tr>
<td>66</td>
<td>2.60</td>
</tr>
<tr>
<td>6.4</td>
<td>.25</td>
</tr>
<tr>
<td>18.4</td>
<td>.73 .09</td>
</tr>
<tr>
<td>Ø2.2</td>
<td>4.8</td>
</tr>
</tbody>
</table>

PLEASE USE “ETP-M6” TO ORDER NUT ONLY

**Model Number | Weight**
---|---
CPI-ETP-35 | .31 kg [.68 lb]

**EC-60 60mm Bodybuilder Octagonal Boom End Cap**

**Dimensions:**
- 60mm End Cap: 89.0
- 45mm End Cap: 59.0

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.50</td>
<td>89.0</td>
</tr>
<tr>
<td>2.32</td>
<td>.16 TYP</td>
</tr>
<tr>
<td>.75</td>
<td>19.0 TYP</td>
</tr>
<tr>
<td>1.73</td>
<td>44.0 TYP</td>
</tr>
<tr>
<td>.16</td>
<td>.15 TYP</td>
</tr>
<tr>
<td>.43</td>
<td>.10 TYP</td>
</tr>
</tbody>
</table>

**Model Number | Weight**
---|---
CPI-EC-45B | .02 kg [.05 lb]
CPI-EC-60B | .04 kg [.09 lb]
CPI-EC-90B | .09 kg [.20 lb]

Dimensions and technical information are subject to change without notice.
RMM-30B-40BC-08-90 Single Extrusion 30mm Mid Mount with 40mm Bolt Circle

Specifications:
Max. Static Product Load: 102 Nm [75 ft-lb]
Material: Aluminum

Model Number Weight
CPI-RMM-30B-40BC-08-90 .28 kg [.62 lb]
**RMM-30B-SE** Single Extrusion 60mm Robot Adaptor Mid Mount

**Specifications:**
- Max. Static Product Load: 102 Nm [75 ft-lb]
- Material: Aluminum

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-RMM-30B-SE</td>
<td>1.05 kg [2.31 lb]</td>
</tr>
</tbody>
</table>

**RMM-30B-DE** Double Extrusion 30mm Robot Adaptor Mid Mount

**Specifications:**
- Max. Static Product Load: 102 Nm [75 ft-lb]
- Material: Aluminum

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-RMM-30B-DE</td>
<td>1.05 kg [2.31 lb]</td>
</tr>
</tbody>
</table>
BODYBUILDER™ MID MOUNT ASSEMBLIES

BM1-45-SE Single Extrusion 45mm Mid Mount

Can be supplied with robot interface hole patterns. (See pages 19-21).

Specifications:
- Max. Static Product Load: 350 Nm [258 ft-lb]
- Material: Aluminum

Weight
5.05 kg [11.1 lb]

BM1-45-DE Double Extrusion 45mm Mid Mount

Can be supplied with robot interface hole patterns. (See pages 19-21).

Specifications:
- Max. Static Product Load: 350 Nm [258 ft-lb]
- Material: Aluminum

Weight
5.05 kg [11.1 lb]
BODYBUILDER™ MID MOUNT ASSEMBLIES

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

BM1-60-SE 60mm Single Extrusion Mid Mount Assembly

Can be supplied with robot interface hole patterns. (See pages 19-21).

BM1-60-DE 60mm Double Extrusion Mid Mount Assembly

Can be supplied with robot interface hole patterns. (See pages 19-21).

Specifications:
Max. Static Product Load: 675 Nm [500 ft-lb]
Material: Aluminum

Weight
5.2 kg [11.5 lb]
**BodyBuilder™ MID MOUNT ASSEMBLIES**

**BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications**

**BM1-45/BM1-60 Mid Mount Assembly - Mount Plate**

**Features:**
- Can be machined or left blank.
- Can be supplied with robot interface hole patterns. (See pages 19-21).

**Specifications:**
- **Material:** Aluminum
- All mounting patterns on pages 19-21 can be used for BM1-60 and BM1-45 Mid Mount Assemblies.
- All Ø200mm mounting patterns, when used on the BM1-45 and BM1-60, includes an Adapter Plate as shown.

**MID MOUNT ASSEMBLY ADAPTER PLATE**

<table>
<thead>
<tr>
<th>PATTERN</th>
<th>“A”</th>
<th>“B”</th>
<th>“C”</th>
<th>“D”</th>
</tr>
</thead>
<tbody>
<tr>
<td>R01, R10, R11, R16</td>
<td>89.6</td>
<td>27.8</td>
<td>83.8</td>
<td>27.8</td>
</tr>
<tr>
<td></td>
<td>[3.53]</td>
<td>[1.09]</td>
<td>[3.30]</td>
<td>[1.09]</td>
</tr>
<tr>
<td>R07, R09</td>
<td>96.0</td>
<td>34.1</td>
<td>99.6</td>
<td>34.1</td>
</tr>
<tr>
<td></td>
<td>[3.78]</td>
<td>[1.34]</td>
<td>[3.92]</td>
<td>[1.34]</td>
</tr>
</tbody>
</table>

Dimensions and technical information are subject to change without notice.
Features:
• Can be used as a direct robot interface.
• Provide robust clamping of each extrusion for maximum stability.
• Standard robot interface patterns provided. Plate can also be left blank.

Specifications:
Max. Static Product Load: 453.6 kg [1000 lb]
Material:
Mid Mount: Cast Aluminum
Clamps: Steel

HEAVY-DUTY MID MOUNT ASSEMBLY DIMENSIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>“A”</th>
<th>“As”</th>
<th>“B”</th>
<th>“C”</th>
<th>“D”</th>
<th>“E”</th>
<th>“F”</th>
<th>“G”</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM4-45</td>
<td>85.6</td>
<td>111</td>
<td>117.6</td>
<td>400</td>
<td>490</td>
<td>560</td>
<td>500.0</td>
<td>45</td>
<td>13.6 kg [30.0 lb]</td>
</tr>
<tr>
<td>RM4-60</td>
<td>91.9</td>
<td>117.3</td>
<td>131.7</td>
<td>400</td>
<td>508</td>
<td>560.8</td>
<td>500.0</td>
<td>60</td>
<td>15.5 kg [34.2 lb]</td>
</tr>
<tr>
<td>RM4-XX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MODEL
- RM4-XX

ROBOT INTERFACE PATTERN
- RXX

SPACER
- S (Skip if NONE)

ACCESSORY
- XX (Leave Blank if NONE)
**BM2-EPM Accessory Mount Plate**

**Features:**
- Mount directly to the RM4-45 or RM4-60 Heavy Duty Mid-Mount Assembly.
- Used to mount pneumatic manifolds and electric proximity blocks.

**Specifications:**
- Material: Aluminum

**Features:**
- Mount directly to the RM4-45 or RM4-60 Heavy Duty Mid-Mount Assembly.
- Used to mount pneumatic manifolds and electric proximity blocks.

When ordering with Heavy Duty Mid Mount Please add designation “EPM-01” as shown RM4-XX-RXX-EPM-01 or add designation “EPM-BLK” to order blank RM4-XX-RXX-EPM-BLK

To order separately use Model Number

<table>
<thead>
<tr>
<th>(A)</th>
<th>Pattern</th>
<th>Model RM4-45/60</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPM-01</td>
<td>Standard</td>
<td>CPI-BM2-EPM-01</td>
<td>.63 kg [1.39 lb]</td>
</tr>
<tr>
<td>EPM-BLK</td>
<td>Blank</td>
<td>CPI-BM2-EPM-BLK</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions and technical information are subject to change without notice

Dimensions and technical information are subject to change without notice
BM3-90 90mm Heavy Duty Mid Mount Assembly - Dimensions

Features:
- Can be used as a direct robot interface.
- Provide robust clamping of each extrusion for maximum stability.
- Standard robot interface patterns provided. Plate can also be left blank.

Specifications:
- Max. Static Product Load: 589.7 kg [1300 lb]
- Material: Mid Mount: Cast Aluminum
  Clamps: Steel

ALIGNMENT NUTS INCLUDED

ROBOT INTERFACE PLATE SHOWN BLANK.
PLEASE REFER TO PAGES 19-21 FOR STANDARD
ROBOT INTERFACE BOLT PATTERNS & DIMENSIONS

NOTES:
SCREWS AND FASTENERS FOR MOUNTING ARE NOT INCLUDED
ADD 1.5MM TO "A"/"AS" DIM FOR INSULATION PACKAGES IF REQUIRED.
INSULATION PACKAGE INCLUDES:
(1) INSULATION PLATE, BUSHINGS AND WASHERS

HEAVY-DUTY MID MOUNT ASSEMBLY DIMENSIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>“A”</th>
<th>“As”</th>
<th>“B”</th>
<th>“C”</th>
<th>“D”</th>
<th>“E”</th>
<th>“F”</th>
<th>“G”</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>BM3-90</td>
<td>107.8</td>
<td>133.2</td>
<td>165.3</td>
<td>600.0</td>
<td>738.0</td>
<td>750.0</td>
<td>700.0</td>
<td>90</td>
<td>24.1 kg [53.1 lb]</td>
</tr>
</tbody>
</table>

MODEL ROBOT INTERFACE PATTERN

SPACER (Skip if NONE)

ACCESSORY (e.g. EPM-01) (Leave Blank if NONE)
**BM3-EPM Accessory Mount Plate**

**Features:**
- Mount directly to the BM3-90 Heavy Duty Mid-Mount Assembly.
- Used to mount pneumatic manifolds and electric proximity blocks.

**Specifications:**
- Material: Aluminum

**Model Number and Weight:**
- **Model Number**: CPI-BM3-EPM-xx
- **Weight**: 1.54 kg [3.39 lb]

When ordering with Heavy Duty Mid Mount Please add designation “EPM-01” as shown BM3-90-RXX-EPM-01 or add designation “EPM-BLK” to order blank BM3-90-RXX-EPM-BLK

To order separately use Model Number CPI-BM3-EPM-xx

Dimensions and technical information are subject to change without notice
BODYBUILDER™ MID MOUNT BOLT PATTERNS

BodyBuilder™ Octagonal Tooling | Robot Interface Bolt Patterns

R07 (Ø200mm Bolt Circle)

R08 (Ø125/160mm Bolt Circle)

Includes Insulation
Add 1.5mm to Height Dim “A”/“AS”

R09 (Ø200mm Bolt Circle)

Includes Insulation
Add 1.5mm to Height Dim “A”/“AS”

R07 (Ø200mm Bolt Circle)

Includes Insulation
Add 1.5mm to Height Dim “A”/“AS”

R09 (Ø200mm Bolt Circle)

Includes Insulation
Add 1.5mm to Height Dim “A”/“AS”

R07 (Ø200mm Bolt Circle)

Includes Insulation
Add 1.5mm to Height Dim “A”/“AS”

R09 (Ø200mm Bolt Circle)

Includes Insulation
Add 1.5mm to Height Dim “A”/“AS”

Model R7 (Ø200mm Bolt Circle)

Model R8 (Ø125/160mm Bolt Circle)

Includes Insulation
Add 1.5mm to Height Dim “A”/“AS”

Model R9 (Ø200mm Bolt Circle)

Includes Insulation
Add 1.5mm to Height Dim “A”/“AS”

BodyBuilder ™ Mid Mount Bolt Patterns

Dimensions and technical information are subject to change without notice

EE-BBR | 20
**BODYBUILDER™ MID MOUNT BOLT PATTERNS**

**BodyBuilder™ Octagonal Tooling | Robot Interface Bolt Patterns**

**R13 (Ø125/160mm Bolt Circle) (Ø110mm Pilot, 5.5mm Deep)**

**R14 (Ø200mm Bolt Circle) (Ø125mm Pilot, 11mm Deep)**

**R16 (Ø200mm Bolt Circle)**

Includes Insulation
Add 1.5mm to Height Dim “A”/“AS”

**R17 (Ø160mm Bolt Circle)**

**Dimensions and technical information are subject to change without notice**

**BM3-90 Adapter**
**RM4-60 Heavy Duty Mid Mount Assembly - 1.00” Riser/Spacer**

When ordering with Heavy Duty Mid Mount add designation (S) as shown:
RM4-60-RXX-S

To order Riser separately use Model Number.

<table>
<thead>
<tr>
<th>Riser for</th>
<th>Model</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM4-45/60</td>
<td>TPMS-60-BM2-10R</td>
<td>.26 kg [.56 lb]</td>
</tr>
</tbody>
</table>

**Specifications:**
- Material: Aluminum

---

**BM3-90 Heavy Duty Mid Mount Assembly - 1.00” Riser/Spacer**

When ordering with Heavy Duty Mid Mount add designation (S) as shown:
BM3-90-RXX-S

To order Riser separately use Model Number.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPMS-90-BM3-10R</td>
<td>.34 kg [.76 lb]</td>
</tr>
</tbody>
</table>

**Specifications:**
- Material: Aluminum

Dimensions and technical information are subject to change without notice.
BODYBUILDER™ HOLD TABLE

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

HTW 6” SQ. Pedestal Hold Table Weldment

Features:
• Pedestal Hold Table Weldment when used in conjunction with Mid Mount assemblies serves as a pedestal base for a robust parts nest.

Specifications:
Material: Steel

CPI-HTW-“H” HOLD TABLE WELDMENT

<table>
<thead>
<tr>
<th>“H”</th>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>CPI-HTW-250</td>
<td>32.43 kg [71.30lb]</td>
</tr>
<tr>
<td>300</td>
<td>CPI-HTW-300</td>
<td>33.75 kg [74.40lb]</td>
</tr>
<tr>
<td>350</td>
<td>CPI-HTW-350</td>
<td>35.16 kg [77.50lb]</td>
</tr>
<tr>
<td>400</td>
<td>CPI-HTW-400</td>
<td>36.56 kg [80.60lb]</td>
</tr>
<tr>
<td>450</td>
<td>CPI-HTW-450</td>
<td>37.97 kg [83.70lb]</td>
</tr>
<tr>
<td>500</td>
<td>CPI-HTW-500</td>
<td>39.37 kg [86.81lb]</td>
</tr>
<tr>
<td>550</td>
<td>CPI-HTW-550</td>
<td>40.78 kg [89.91lb]</td>
</tr>
<tr>
<td>600</td>
<td>CPI-HTW-600</td>
<td>42.19 kg [93.01lb]</td>
</tr>
<tr>
<td>650</td>
<td>CPI-HTW-650</td>
<td>43.59 kg [96.11lb]</td>
</tr>
<tr>
<td>700</td>
<td>CPI-HTW-700</td>
<td>45.00 kg [99.21lb]</td>
</tr>
<tr>
<td>750</td>
<td>CPI-HTW-750</td>
<td>46.41 kg [102.31lb]</td>
</tr>
<tr>
<td>800</td>
<td>CPI-HTW-800</td>
<td>47.81 kg [105.41lb]</td>
</tr>
<tr>
<td>850</td>
<td>CPI-HTW-850</td>
<td>49.22 kg [108.51lb]</td>
</tr>
<tr>
<td>900</td>
<td>CPI-HTW-900</td>
<td>50.62 kg [111.61lb]</td>
</tr>
</tbody>
</table>
BODYBUILDER™ HOLD TABLE

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

**HTW-4 4” SQ. Pedestal Hold Table Weldment**

**Specifications:**
- Material: Steel

**Features:**
- Pedestal Hold Table Weldment when used in conjunction with 45mm or 60mm flange and end mount assemblies serves as a pedestal base for a robust parts nest.

### CPI-HTW-"H"-4 HOLD TABLE WELDMENT

<table>
<thead>
<tr>
<th>&quot;H&quot;</th>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>CPI-HTW-250-4</td>
<td>24.02 kg [52.97 lb]</td>
</tr>
<tr>
<td>300</td>
<td>CPI-HTW-300-4</td>
<td>24.93 kg [54.96 lb]</td>
</tr>
<tr>
<td>350</td>
<td>CPI-HTW-350-4</td>
<td>25.83 kg [56.95 lb]</td>
</tr>
<tr>
<td>400</td>
<td>CPI-HTW-400-4</td>
<td>26.73 kg [58.94 lb]</td>
</tr>
<tr>
<td>450</td>
<td>CPI-HTW-450-4</td>
<td>27.63 kg [60.93 lb]</td>
</tr>
<tr>
<td>500</td>
<td>CPI-HTW-500-4</td>
<td>28.54 kg [62.92 lb]</td>
</tr>
<tr>
<td>550</td>
<td>CPI-HTW-550-4</td>
<td>29.44 kg [63.82 lb]</td>
</tr>
<tr>
<td>600</td>
<td>CPI-HTW-600-4</td>
<td>30.35 kg [66.90 lb]</td>
</tr>
<tr>
<td>650</td>
<td>CPI-HTW-650-4</td>
<td>31.25 kg [68.89 lb]</td>
</tr>
<tr>
<td>700</td>
<td>CPI-HTW-700-4</td>
<td>32.15 kg [70.88 lb]</td>
</tr>
<tr>
<td>750</td>
<td>CPI-HTW-750-4</td>
<td>33.05 kg [72.87 lb]</td>
</tr>
<tr>
<td>800</td>
<td>CPI-HTW-800-4</td>
<td>33.96 kg [74.87 lb]</td>
</tr>
<tr>
<td>850</td>
<td>CPI-HTW-850-4</td>
<td>34.86 kg [76.86 lb]</td>
</tr>
<tr>
<td>900</td>
<td>CPI-HTW-900-4</td>
<td>35.76 kg [78.85 lb]</td>
</tr>
</tbody>
</table>
**BODYBUILDER™ HOLD TABLE**

*BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications*

**HTW-1200/1400** Pass-Thru Hold Table Weldment

**Dimensions and technical information are subject to change without notice**

**M10 x 1.50 Thru (6) Hole Pattern for TBC-60-00 and TBC-45-00**

**SEE PAGE 23 FOR FOOT HOLE PATTERN**

**CPI-"MODEL"-"H" PASS THROUGH TABLE WELDMENT**

<table>
<thead>
<tr>
<th>&quot;H&quot;</th>
<th>&quot;Model&quot;</th>
<th>Weight</th>
<th>&quot;Model&quot;</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>350</td>
<td>HTW-1200</td>
<td>84.62 kg</td>
<td>[186.55lb]</td>
<td>HTW-1400</td>
</tr>
<tr>
<td>400</td>
<td>HTW-1200</td>
<td>86.42 kg</td>
<td>[190.53lb]</td>
<td>HTW-1400</td>
</tr>
<tr>
<td>500</td>
<td>HTW-1200</td>
<td>90.04 kg</td>
<td>[198.50lb]</td>
<td>HTW-1400</td>
</tr>
<tr>
<td>600</td>
<td>HTW-1200</td>
<td>93.65 kg</td>
<td>[206.46lb]</td>
<td>HTW-1400</td>
</tr>
<tr>
<td>700</td>
<td>HTW-1200</td>
<td>97.26 kg</td>
<td>[214.42lb]</td>
<td>HTW-1400</td>
</tr>
<tr>
<td>800</td>
<td>HTW-1200</td>
<td>100.87 kg</td>
<td>[222.39lb]</td>
<td>HTW-1400</td>
</tr>
<tr>
<td>900</td>
<td>HTW-1200</td>
<td>104.49 kg</td>
<td>[230.35lb]</td>
<td>HTW-1400</td>
</tr>
</tbody>
</table>

**BodyBuilder™ Octagonal Tooling**

*Dimensions and technical information are subject to change without notice*
**Features:**
- Can be used as direct robot interface.

**Specifications:**
- Max. Static Product Load: 746 Nm [550 ft-lb]
- Material: Aluminum

**Model Number | Weight**
--- | ---
CPI-ATI-151-90HD-60BB | 3.22 kg [7.10 lb]
ATI-151-90HD-90BB 90mm Mid Mount

Features:
- Can be used as direct robot interface.

Specifications:
- Max. Static Product Load: 1355 Nm [1000 ft-lb]
- Material: Aluminum

Dimensions and technical information are subject to change without notice.
CL-90B-160F 90mm End Mount

Specifications:
- Max. Static Clamp Load: 746 Nm [550 ft-lb]
- Material: Aluminum

Features:
- Can be used as direct robot interface.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-CL-90B-160F</td>
<td>5.91 kg [13.04 lb]</td>
</tr>
</tbody>
</table>
**BODYBUILDER™ BAYONETS**

**BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications**

**RDCF-60B 60mm BodyBuilder™ Bayonet**

**Features:**
- Used in conjunction with Quick Disconnect Housing to provide an efficient method for changing tools manually.
- Two, hardened alignment pins allow quick and accurate installation into the housing.
- Optional 4-port air and electric available.

**Specifications:**
- **Max. Static Product Load:** 746 Nm [550 ft-lb]
- **Material:**
  - Body: Aluminum
  - Pins: Steel

*Used in conjunction with Quick Disconnect Housing to provide an efficient method for changing tools manually.*

*Optional 4-port air and electric connections available.*

---

**Model Number** | **Weight**
--- | ---
**CPI-RDCF-60B-00-00-X** | 3.16 kg [6.96 lb]

Dimensions and technical information are subject to change without notice.
RDN-25-6 Manual Quick Disconnect Housing

Specifications:
- Max. Static Product Load: 746 Nm [550 ft-lb]
- Material:
  - Body: Aluminum
  - Knuckles: Brass
  - Handle and Hooks: Steel
  - Inserts: Urethane

Features:
- Actuation of handle allows quick and accurate installation by pulling the bayonet into a fixed position within the housing.
- The internal rings eliminate vibration and seat the bayonet into a clamped position.
- Hardened steel retainer slots reduce wear and extend product life.

Used in conjunction with 60 mm BodyBuilder™ Bayonets to provide an efficient method for changing tools manually.

Optional 4-port air and electric connections available.

Dimensions and technical information are subject to change without notice.
BodyBuilder™ Alignment System

BodyBuilder™ Robotic Tooling System offers a patented alignment system, ensuring that all BodyBuilder™ components can be adjusted to the original set-up position.

Once the BodyBuilder™ structure bracket mount is secured into place during set-up, insert the alignment nut into the octagonal boom channel groove.

Be sure the alignment nut is inserted so that when it is slid under the bracket mount, the set screws can still be accessed outside the bracket mount as shown.

Slide the alignment nut along the boom groove and underneath the bracket mount until the hole in the block and the appropriate calibration hole in the bracket mount is aligned visually.

Insert the alignment pin into the alignment hole of the bracket mount, through the alignment nut until it stops in the groove of the boom channel.

With the alignment pin in place, the alignment nut should not move. Secure bracket mount in the channel groove by tightening the two set screws. Remove alignment pin as it is used as a probe for alignment purposes only.

The alignment nut remains in place even when the bracket mount is removed.

To order replacement alignment pin or nut, please use the following order numbers:
Alignment Pin #505311, Alignment Nut #505264

To Replace the Bracket mount, place the assembled bracket mount on the BodyBuilder™ boom until the alignment holes are visually aligned. Insert the alignment pin to secure bracket mount in place, and tighten the fasteners.

Remove the alignment pin and continue tightening the fasteners to specified torque values.

U.S. Patent 6,349,912
CLM-30B-30B 30mm to 30mm (Micro) Transition Bracket Assembly

**Specifications:**
- **Max. Static Clamp Load:** 102 Nm [75 ft-lb]
- **Material:** Aluminum

**Features:**
- Connects (2) 30mm extrusions perpendicular to each other.
- Lightweight, high-strength aluminum design.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-CLM-30B-30B</td>
<td>.24 kg [.54 lb]</td>
</tr>
</tbody>
</table>
**BODYBUILDER™ TRANSITION BRACKETS AND BLOCKS**

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

**30B-30B 30mm to 30mm Transition Bracket Assembly**

**Features:**
- Connects (2) 30mm extrusions perpendicular to each other.
- Lightweight, high-strength aluminum design.

**Specifications:**
- **Max. Static Clamp Load:**
  - 30mm: 271 Nm [200 ft-lb]
- **Material:** Aluminum

---

**Model Number**  | **Weight**
---|---
**M-30B-30B-M** | .82 kg [1.80 lb]

Dimensions and technical information are subject to change without notice.
**30B-45B** 30mm to 45mm Transition Bracket Assembly

**Specifications:**
- **Max. Static Clamp Load:**
  - 45mm: 475 Nm [350 ft-lb]
  - 30mm: 271 Nm [200 ft-lb]
- **Material:** Aluminum

**Features:**
- Connects 30mm and 45mm extrusions perpendicular to each other.
- Lightweight, high-strength aluminum design.

---

**Model Number**

<table>
<thead>
<tr>
<th>M-30B-45B-M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
</tr>
<tr>
<td>1.00 kg [2.20 lb]</td>
</tr>
</tbody>
</table>
**BodyBuilder™ Transition Brackets and Blocks**

**45B-45B 45mm to 45mm Transition Bracket Assembly**

**Features:**
- Connects (2) 45mm extrusions perpendicular to each other.
- Lightweight, high-strength aluminum design

**Specifications:**
- **Max. Static Clamp Load:**
  - 45mm: 475 Nm [350 ft-lb]
- **Material:** Aluminum

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-45B-45B-M</td>
<td>1.05 kg [2.31 lb]</td>
</tr>
</tbody>
</table>

Dimensions and technical information are subject to change without notice.
**30B-60B 30mm to 60mm Transition Bracket Assembly**

**Specifications:**
- **Max. Static Clamp Load:**
  - 60mm: 746 Nm [550 ft-lb]
  - 30mm: 271 Nm [200 ft-lb]
- **Material:** Aluminum

**Features:**
- Connects 30mm and 60mm extrusions perpendicular to each other.
- Lightweight, high-strength aluminum design.

**Dimensions and Technical Information:**
- **Model Number:** M-30B-60B-M
- **Weight:** 1.13 kg [2.50 lb]
**BODYBUILDER™ TRANSITION BRACKETS AND BLOCKS**

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

**45B-60B** 45mm to 60mm Transition Bracket Assembly

**Features:**
- Connects 45mm and 60mm extrusions perpendicular to each other.
- Lightweight, high-strength aluminum design.

**Specifications:**
- Max. Static Clamp Load:
  - 60mm: 746 Nm [550 ft-lb]
  - 45mm: 475 Nm [350 ft-lb]
- Material: Aluminum

---

**Model Number** | **Weight**
--- | ---
**M-45B-60B-M** | 1.23 kg [2.70 lb]

Dimensions and technical information are subject to change without notice.
**60B-60B 60mm to 60mm Transition Bracket Assembly**

**Specifications:**
- Max. Static Clamp Load: 60mm: 746 Nm [550 ft-lb]
- Material: Aluminum

**Features:**
- Connects (2) 60mm extrusions perpendicular to each other.
- Lightweight, high-strength aluminum design

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-60B-60B-M</td>
<td>1.36 kg [3.00 lb]</td>
</tr>
</tbody>
</table>
**Features:**
- Connects 30 and 90mm extrusions perpendicular to each other.
- Lightweight, high-strength aluminum design.

**Specifications:**
- **Max. Static Clamp Load:**
  - 30mm: 271 Nm [200 ft-lb]
  - 90mm: 746 Nm [550 ft-lb]
- **Material:** Aluminum

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-30B-90B-M</td>
<td>1.78 kg [3.93 lb]</td>
</tr>
</tbody>
</table>

Dimensions and technical information are subject to change without notice.
45B-90B 45mm to 90mm Transition Bracket Assembly

**Specifications:**
- Max. Static Clamp Load:
  - 45mm: 475 Nm [350 ft-lb]
  - 90mm: 746 Nm [550 ft-lb]
- Material: Aluminum

**Features:**
- Connects 45 and 90mm extrusions perpendicular to each other.
- Lightweight, high-strength aluminum design.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-45B-90B-M</td>
<td>1.91 kg [4.21 lb]</td>
</tr>
</tbody>
</table>
**60B-90B** 60mm to 90mm Transition Bracket Assembly

**Features:**
- Connects 60mm and 90mm extrusions perpendicular to each other.
- Lightweight, high-strength aluminum design.

**Specifications:**
- **Maximum Clamp Load:**
  - 60mm and 90mm: 746 Nm [550 ft-lb]
- **Material:** Aluminum

---

**Model Number** | **Weight**
--- | ---
M-60B-90B-M | 2.25 kg [4.97 lb]
BODYBUILDER™ TRANSITION BRACKETS AND BLOCKS

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

90B-90B 90mm to 90mm Transition Bracket Assembly

**Features:**
- Connects (2) 90mm extrusions perpendicular to each other.
- Lightweight, high-strength aluminum design.

**Specifications:**
- **Max. Static Clamp Load:** 746 Nm [550 ft-lb]
- **Material:** Aluminum

**Model Number** | **Weight**
--- | ---
M-90B-90B-M | 3.33 kg [7.34 lb]

Dimensions and technical information are subject to change without notice.
BODYBUILDER™ SQUARE CLAMPS

30B-25M 30mm Octagon to 25mm Round

Specifications:
Max. Static Clamp Load: 407 Nm [300 ft-lb]
Material: High Strength Aluminum

Dimensions and technical information are subject to change without notice.

Model Number | Weight
--- | ---
M-30B-25M-M | 203g [0.45lbs]
**BODYBUILDER™ SQUARE CLAMPS**

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

**45B-25M (-10E)** 45mm Octagon to 25mm or 1 in. Round

**Specifications:**
- Max. Static Clamp Load: 407 Nm [300 ft-lb]
- Material: High Strength Aluminum

---

**Model Number** | **Weight** | **ØD**
--- | --- | ---
M-45B-25M-M | 239g [0.53lbs] | 25mm
M-45B-10E-M | 237g [0.52lbs] | 1 in.

Dimensions and technical information are subject to change without notice.
TRANITION SQUARE CLAMPS

60B-25M 60mm Octagon to 25mm Round

**Specifications:**
- Max. Static Clamp Load: 407 Nm [300 ft-lb]
- Material: High Strength Aluminum

60B-40M (-15E) 60mm Octagon to 40mm or 1.5 in. Round

**Specifications:**
- Max. Static Clamp Load: 813 Nm [600 ft-lb]
- Material: High Strength Aluminum

---

**Model Number** | **Weight** | **ØD**
--- | --- | ---
M-60B-25M-M | 356g [0.78lbs] |
M-60B-40M-M | 520g [1.15lbs] | 40mm
M-60B-15E-M | 535g [1.18lbs] | 1.5 in.

Dimensions and technical information are subject to change without notice.
**BODYBUILDER™ TRANSITION BRACKETS AND BLOCKS**

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

**CLM-30B-50** 30mm Octagon to Ø50”(in) Round Transition Bracket Assembly

**Features:**
- Connects BodyBuilder™ extrusion and round tubing perpendicular to each other.
- Lightweight, high-strength aluminum design.

**Specifications:**
- Max. Static Clamp Load: 102 Nm [75 ft-lb]
- Material: Aluminum

---

**Model Number | Weight**

| CPI-CLM-30B-50-TR | .092 kg {.20 lb} |
**TCAM-30B-30B** 30mm to 30mm Octagon (Micro) T-Clamp Bracket Assembly

**Features:**
- Connects (2) 30mm octagon extrusion perpendicular on the same plane.
- Lightweight, high-strength aluminum design.

**Specifications:**
- Max. Static Clamp Load: 102 Nm [75 ft-lb]
- Material: Aluminum

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-TCAM-30B-30B-M</td>
<td>.45 kg [.99 lb]</td>
</tr>
</tbody>
</table>
**BODYBUILDER™ T-CLAMPS**

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

**TCA-30B-45B 30mm to 45mm Octagon T-Clamp Bracket Assembly**

**Features:**
- Connects 30mm and 45mm octagon extrusion perpendicular on the same plane.
- Lightweight, high-strength aluminum design.

**Specifications:**
- Max. Static Clamp Load:
  - 45mm: 475 Nm [350 ft-lb]
  - 30mm: 271 Nm [200 ft-lb]
- Material: Aluminum

Can be configured as a connector between booms for added stability

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-TCA-30B-45B</td>
<td>.80 kg [1.76 lb]</td>
</tr>
</tbody>
</table>
TCA-30B-60B 30mm to 60mm Octagon T-Clamp Bracket Assembly

**Features:**
- Connects 30mm and 60mm octagon extrusion perpendicular on the same plane.
- Lightweight, high-strength aluminum design.

**Specifications:**
- **Max. Static Clamp Load:**
  - 60mm: 746 Nm [550 ft-lb]
  - 30mm: 271 Nm [200 ft-lb]
- **Material:** Aluminum

**Model Number**
- CPI-TCA-30B-60B

**Weight**
- 1.23 kg [2.71 lb]

Dimensions and technical information are subject to change without notice.
**TCA-45B-30B** 45mm to 30mm Octagon T-Clamp Bracket Assembly

**Features:**
- Connects 45mm and 30mm octagon extrusion perpendicular on the same plane.
- Lightweight, high-strength aluminum design.

**Specifications:**
- **Max. Static Clamp Load:**
  - 45mm: 475 Nm [350 ft-lb]
  - 30mm: 271 Nm [200 ft-lb]
- **Material:** Aluminum
**BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications**

**TCA-45B-45B** 45mm to 45mm Octagon T-Clamp Bracket Assembly

**Specifications:**
- **Max. Static Clamp Load:**
  45mm: 475 Nm [350 ft-lb]
- **Material:** Aluminum

**Features:**
- Connects (2) 45mm octagon extrusion perpendicular on the same plane.
- Lightweight, high-strength aluminum design.

---

**Model Number** | **Weight**
---|---
CPI-TCA-45B-45B | .95 kg [2.09 lb]

Dimensions and technical information are subject to change without notice.
BODYBUILDER™ T-CLAMPS

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

**TCA-45B-60B** 45mm to 60mm Octagon T-Clamp Bracket Assembly

**Features:**
- Connects 45mm and 60mm octagon extrusion perpendicular on the same plane.
- Lightweight, high-strength aluminum design.

**Specifications:**
- **Max. Static Clamp Load:**
  - 60mm: 746 Nm [550 ft-lb]
  - 45mm: 475 Nm [350 ft-lb]
- **Material:** Aluminum

---

**Model Number** | **Weight**
--- | ---
CPI-TCA-45B-60B | 1.21 kg [2.67lb]

Dimensions and technical information are subject to change without notice.
**TCA-45B-25M** 45mm Octagon to 25mm Round T-Clamp Bracket Assembly

**Specifications:**
- **Max. Static Clamp Load:**
  - 45mm: 475 Nm [350 ft-lb]
  - 25mm: 271 Nm [200 ft-lb]
- **Material:** Aluminum

**Features:**
- Connects 45mm octagon and 25mm round perpendicular on the same plane.
- Lightweight, high-strength aluminum design.

**Model Number** CPI-TCA-45B-25M

**Weight** .89 kg [1.97lb]
**TCA-60B-30B** 60mm to 30mm octagon T-Clamp Bracket Assembly

**Features:**
- Connects 60mm and 30mm octagon extrusion perpendicular on the same plane.
- Lightweight, high-strength aluminum design.

**Specifications:**
- Max. Static Clamp Load:
  - 60mm: 746 Nm [550 ft-lb]
  - 30mm: 271 Nm [200 ft-lb]
- Material: Aluminum

**Model Number | Weight**
--- | ---
CPI-TCA-60B-30B | 1.32 kg [2.91 lb]
**TCA-60B-45B** 60mm to 45mm octagon T-Clamp Bracket Assembly

**Specifications:**
- **Max. Static Clamp Load:**
  - 60mm: 746 Nm [550 ft-lb]
  - 45mm: 475 Nm [350 ft-lb]
- **Material:** Aluminum

**Features:**
- Connects 60mm and 45mm octagon extrusion perpendicular on the same plane.
- Lightweight, high-strength aluminum design.

**Model Number** | **Weight**  
---|---  
CPI-TCA-60B-45B | 1.45 kg [3.20 lb]
BODYBUILDER™ T-CLAMPS

TCA-60B-60B 60mm to 60mm octagon T-Clamp Bracket Assembly

Features:
- Connects (2) 60mm octagon extrusions perpendicular on the same plane.
- Lightweight, high-strength aluminum design.

Specifications:
Max. Static Clamp Load:
60mm: 746 Nm [550 ft-lb]
Material: Aluminum

Model Number Weight
CPI-TCA-60B-60B 1.77 kg [3.90 lb]

Dimensions and technical information are subject to change without notice.
BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

**TCA-60B-25M** 60mm Octagon to 25mm Round T-Clamp Bracket Assembly

**Specifications:**
- **Max. Static Clamp Load:**
  - 60mm: 746 Nm [550 ft-lb]
  - 30mm: 271 Nm [200 ft-lb]
- **Material:** Aluminum

**Features:**
- Connects 60mm octagon and 25mm round perpendicular on the same plane.
- Lightweight, high-strength aluminum design.

---

**Model Number** | **Weight**
--- | ---
CPI-TCA-60B-25M | 1.25 kg [2.76 lb]
TCA-25M-45B 25mm Round to 45mm Octagon T-Clamp Brackets Assembly

Features:
- Connects 25mm round and 45mm octagon perpendicular on the same plane.
- Lightweight, high-strength aluminum design.

Specifications:
Max. Static Clamp Load:
45mm: 475 Nm [350 ft-lb]
25mm: 271 Nm [200 ft-lb]
Material: Aluminum
**TCA-25M-60B** 25mm Round to 60mm Octagon T-Clamp Bracket Assembly

**Specifications:**
- Max. Static Clamp Load:
  - 60mm: 746 Nm [550 ft-lb]
  - 25mm: 271 Nm [200 ft-lb]
- Material: Aluminum

**Features:**
- Connects 25mm round and 60mm octagon perpendicular on the same plane.
- Lightweight, high-strength aluminum design.

Can be configured as a connector between booms for added stability.

Dimensions and technical information are subject to change without notice.

---

**Model Number**  |  **Weight**  
---              |  ---       
CPI-TCA-25M-60B |  .85 kg [1.87 lb]
**BODYBUILDER™ ELBOWS**

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

### 45° Angular Boom Clamp Brackets

**Features:**
- Mounts (2) Bodybuilder extrusion booms inline at a 45° angle.

**Specifications:**
- Material: Aluminum

### DC-3030B-45 30mm to 30mm 45° External Boom Clamp Brackets

**Specifications:**
- Max. Static Clamp Load: 271Nm [200 ft-lb]

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-DC-3030B-45</td>
<td>.30 kg [.66 lb]</td>
</tr>
</tbody>
</table>

### DC-4545B-45 45mm to 45mm 45° Angular Boom Clamp Brackets

**Specifications:**
- Max. Static Clamp Load: 475 Nm [350 ft-lb]

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-DC-4545B-45</td>
<td>.64 kg [1.4 lb]</td>
</tr>
</tbody>
</table>
**BODYBUILDER™ ELBOWS**

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

**DC-6060B-45** 60mm to 60mm 45° Angular Boom Clamp Brackets

**Specifications:**
- Max. Static Clamp Load: 746 Nm [550 ft-lb]
- Material: Aluminum

**Features:**
- Mounts (2) Bodybuilder extrusion booms inline at a 45° angle.

---

Dimensions and technical information are subject to change without notice.
**BODYBUILDER™ MID FLANGE CLAMPS**

**BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications**

**CLM-30B-152F-90 30mm Mid Flange Clamp Mount**

**Features:**
- Mounts 30mm extrusion parallel to the mounting surface.
- Can be used as robot interface when quick-change connector is not required.

**Specifications:**
- **Max. Static Clamp Load:** 102 Nm [75 ft-lb]
- **Material:** Cast Aluminum

---

**Dimensions and technical information are subject to change without notice**

---

**Table:**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-CLM-30B-152F-90</td>
<td>0.28 kg [.61 lb]</td>
</tr>
</tbody>
</table>
**TBC-45 45mm Mid Flange Clamp Mount**

**Specifications:**
- Max. Static Clamp Load: 475 Nm [350 ft-lb]
- Material: Aluminum

**Features:**
- Mounts 45mm extrusion parallel to the mounting surface.
- Can be used as robot interface when quick-change connector is not required.

---

**Model Number**
- **TBC-45-00**

**Weight**
- 0.79 kg [1.74 lb]
BODYBUILDER™ MID FLANGE CLAMPS

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

**TBC-60** 60mm Mid Flange Clamp Mount

**Features:**
- Mounts 60mm extrusion parallel to the mounting surface.
- Can be used to mount to robot with an interface plate.
- Cross-key design provides added strength for high-torque applications when used in conjunction with a slot and key mechanism.

**Specifications:**
- Max. Static Clamp Load: 746 Nm [550 ft-lb]
- Material: Cast Aluminum

Cross Key sold separately: (2) x 540-25388

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBC-60-00</td>
<td>0.92 kg [2.02 lb]</td>
</tr>
</tbody>
</table>

Dimensions and technical information are subject to change without notice.
**CLM-30B-20F** 30mm End Flange Clamp Mount

**Specifications:**
- Max. Static Clamp Load: 102 Nm [75 ft-lb]
- Material: Aluminum

**Features:**
- Mounts 30mm extrusion 90° to the mounting surface.
- Can be used as robot interface when quick-change connector is not required.

---

**Model Number**

<table>
<thead>
<tr>
<th>CPI-CLM-30B-20F</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>.29 kg [.64 lb]</td>
<td></td>
</tr>
</tbody>
</table>
**BECC-60 60mm End Flange Clamp Mount**

**Features:**
- Mounts 60mm extrusion 90° to the mounting surface.
- Can be used as robot interface when quick-change connector is not required.
- Cross-key design provides added strength for high-torque applications when used in conjunction with a slot and key mechanism.

**Specifications:**
- Max. Static Clamp Load: 746 Nm [550 ft-lb]
- Material: Cast Aluminum

Cross Key sold separately: (2) x 540-25388

---

**Model Number** | **Weight**
-----------------|-----------
BECC-60-00       | 1.21 kg [2.67 lb]

Dimensions and technical information are subject to change without notice.
**TPM-30 30mm Accessory Mounting Bracket**

**Specifications:**
- Max. Static Clamp Load: 271 Nm [200 ft-lb]
- Material: Aluminum

**Features:**
- Provides a secure attachment point for clamps and pin locators.

---

### Model Number | Weight
--- | ---
TPM-30 | .36 kg [.80 lb]

Dimensions and technical information are subject to change without notice.
TPM(S)-45 45mm Accessory Mounting Bracket

**Features:**
- Provides a secure attachment point for clamps and pin locators.
- Standard NAAMS mounting patterns.

**Specifications:**
- **Max. Static Clamp Load:** 475 Nm [350 ft-lb]
- **Material:**
  - TPMS-45: Steel
  - TPM-45: Aluminum

**Model Number** | **Weight**
--- | ---
TPM-45 (Aluminum) | .48 kg [1.28 lb]
TPMS-45 (Steel) | 1.10 kg [2.90 lb]

Dimensions and technical information are subject to change without notice.
**Features:**
- Provides a secure attachment point for clamps and pin locators.
- Standard NAAMS mounting patterns.

**Specifications:**
- **Max. Static Clamp Load:** 746 Nm [550 ft-lb]
- **Material:** Steel

**Model Number** | **Weight**
---|---
TPMS-60 | 1.3 kg [2.90 lb]

Dimensions and technical information are subject to change without notice.
BODYBUILDER™ ACCESSORY MOUNTS

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

TPMS-90 90mm Accessory Mounting Bracket

Features:
- Provides a secure attachment point for clamps and pin locators.

Specifications:
Max. Static Clamp Load:
746 Nm [550 ft-lb]
Material: Steel

Model Number | Weight
--- | ---
TPMS-90 | 1.93kg [4.25lb]

Dimensions and technical information are subject to change without notice
**GPC-150-30BBS** 30mm Swivel 150 Series Parallel Gripper Mount

**Specifications:**
- Max. Static Clamp Load: 271 Nm [200 ft-lb]
- Material:
  - Body: Aluminum
  - Swivel Ball: Steel

**Features:**
- Removable grip mount lock allows gripper to be adjusted while continuing to holding it in place.
- Swivel ball allows for ±25° adjustment of swivel rotation.

---

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-GPC-150-30BBS-DC</td>
<td>.33 kg [.73 lb]</td>
</tr>
</tbody>
</table>
**Features:**
- Swivel ball allows for ±25° adjustment of swivel rotation.

**Specifications:**
- **Max. Static Clamp Load:** 271 Nm [200 ft-lb]
- **Material:**
  - Housing: Machined Aluminum
  - Swivel: Steel

---

**BodyBuilder™ Gripper Mounts**

**RJM-150-30BBS** 30mm End Gripper Mount for 150 Series Gripper

---

**Dimensions and technical information are subject to change without notice**

---

**Model Number** | **Weight**
--- | ---
CPI-RJM-150-30BBS | .33 kg [.74 lb]
**Features:**

- Swivel ball allows for ±22° adjustment of swivel rotation.

**Specifications:**

- **Max. Static Clamp Load:** 475 Nm [350 ft-lb]
- **Material:**
  - Housing: Machined Aluminum
  - Swivel: Steel

**Model Number** | **Weight**
--- | ---
CPI-RJM-150-45BBS | 1.23 kg [2.71 lb]
**30B50-MSA** 30mm Swivel Arms for .50”(in) Apple Core Accessories

**Features:**
- Mounts to BodyBuilder™ 30mm extrusion boom.
- One bolt design for easy assembly and adjustment, allowing accessories to be repositioned easily.
- Provides 360° of adjustments in (3) axes.
- Used to mount venturi, bumpers, round locators, and proximity switches.

**Specifications:**
- Max. Static Clamp Load: 102 Nm [75 ft-lb]
- Material:
  - Body: Cast Aluminum
  - Insert: Machined Aluminum

---

**CPI-L-30B50-MSA SWIVEL ARM**

<table>
<thead>
<tr>
<th>“L”</th>
<th>“A”</th>
<th>“B”</th>
<th>“C”</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>200</td>
<td>59.8</td>
<td>52.1</td>
<td>84.5</td>
<td>.10 kg</td>
</tr>
<tr>
<td></td>
<td>[2.35]</td>
<td>[2.05]</td>
<td>[3.33]</td>
<td>[.22 lb]</td>
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<tr>
<td>300</td>
<td>82.6</td>
<td>77.2</td>
<td>109.6</td>
<td>.11 kg</td>
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<tr>
<td></td>
<td>[3.25]</td>
<td>[3.04]</td>
<td>[4.32]</td>
<td>[.24 lb]</td>
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<tr>
<td>400</td>
<td>106.2</td>
<td>102.1</td>
<td>134.5</td>
<td>.12 kg</td>
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<tr>
<td></td>
<td>[4.18]</td>
<td>[4.02]</td>
<td>[5.30]</td>
<td>[.26 lb]</td>
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<tr>
<td>500</td>
<td>130.6</td>
<td>127.3</td>
<td>159.7</td>
<td>.13 kg</td>
</tr>
<tr>
<td></td>
<td>[5.14]</td>
<td>[5.01]</td>
<td>[6.29]</td>
<td>[.29 lb]</td>
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<tr>
<td>600</td>
<td>150.0</td>
<td>147.1</td>
<td>179.5</td>
<td>.14 kg</td>
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<tr>
<td></td>
<td>[5.90]</td>
<td>[5.79]</td>
<td>[7.07]</td>
<td>[1.72 lb]</td>
</tr>
</tbody>
</table>

Dimensions and technical information are subject to change without notice.
**Features:**
- Mounts to BodyBuilder™ 45mm extrusion boom.
- One bolt design for easy assembly and adjustment, allowing accessories to be repositioned easily.
- Provides 360° of adjustments in (3) axes.
- Used to mount venturi, bumpers, round locators, and proximity switches.

---

**Specifications:**

**Max. Static Clamp Load:** 271 Nm [200 ft-lb]

**Material:**
- Body: Cast Aluminum
- Insert: Machined Aluminum

---

**CPI-180-45B-CSA SHOWN**

---

**CPI-” L “-45B-CSA SWIVEL ARM**

<table>
<thead>
<tr>
<th>“L”</th>
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<th>“B”</th>
<th>“C”</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>130</td>
<td>119.8[4.72]</td>
<td>118.8[4.68]</td>
<td>140.9[5.56]</td>
<td>.48 kg [1.06 lb]</td>
</tr>
<tr>
<td>280</td>
<td>269.6[10.61]</td>
<td>269.2[10.60]</td>
<td>325.0[12.80]</td>
<td>.67 kg [1.47 lb]</td>
</tr>
</tbody>
</table>

*Dimensions and technical information are subject to change without notice*
**BodyBuilder™ Swivel Arms**

**SA-30 30mm Swivel Arms for Ø19mm [.75 in] Apple Core Accessories**

**Features:**
- Mounts to BodyBuilder™ 30mm extrusion boom.
- One bolt design for easy assembly and adjustment, allowing accessories to be repositioned easily.
- Provides 360° of adjustments in (3) axes.
- Used to mount venturi, bumpers, round locators, and proximity switches.

**Specifications:**
- Max. Static Clamp Load: 271 Nm [200 ft-lb]
- Material:
  - Body: Cast Aluminum
  - Insert: Machined Aluminum

**CPI-700-30-SA**

**CPI-600-30-SA**

**CPI-500-30-SA**

**CPI-800-30-SA**

**CPI-400-30-SA SHOWN**

**CPI-50-30-SA**

**Dimensions and technical information are subject to change without notice.**
**BodyBuilder™ SWIVEL ARMS**

**30-SA-B112** 30mm Swivel Arms for Swivel Ball Mount Accessories

<p>| CPI-“L” “-30-SA-B112 SWIVEL ARM |
|---|---|---|---|---|---|---|---|</p>
<table>
<thead>
<tr>
<th>“L”</th>
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<th>“B”</th>
<th>“C”</th>
<th>Weight</th>
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<tbody>
<tr>
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<td>95.0</td>
<td>146.1</td>
<td>40 kg</td>
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<tr>
<td>500</td>
<td>135.0</td>
<td>126.0</td>
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<tr>
<td>600</td>
<td>153.7</td>
<td>145.8</td>
<td>196.9</td>
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<tr>
<td>700</td>
<td>172.3</td>
<td>165.4</td>
<td>216.5</td>
<td>53 kg</td>
</tr>
<tr>
<td>800</td>
<td>211.1</td>
<td>205.5</td>
<td>256.6</td>
<td>60 kg</td>
</tr>
</tbody>
</table>

Dimensions and technical information are subject to change without notice.
BC19 30mm Bodybuilder to Ø19mm [.75 in] Apple Core Swivel End Mount

Features:
- Mounts to BodyBuilder™ 30mm extrusion boom.
- One bolt design for easy assembly and adjustment, allowing accessories to be repositioned easily.
- Provides 360° of adjustment along (2) axis.

Specifications:
- Material:
  Aluminum

Model Number | Weight
---|---
CPI-BC-19 | .13 kg [.28 lb]
**AB-750-SL** Part Present Proximity Switch Mount

**Specifications:**
- **Max. Static Clamp Load:** 271 Nm [200 ft-lb]
- **Material:** Aluminum

**Features:**
- Mounts a 40mm square proximity sensor to the BodyBuilder™ 30mm Swivel Arm (CPI-"L"-30-SA).
- Mount allows for 360 degrees of radial adjustment along one axis.
- Slots allows 28.6mm [1.13 in] of linear adjustment for fine tuning during final setup.

**Model Number** | **Weight**
--- | ---
CPI-AB-750-SL | .10 KG [.22 lb]
NPG-15RL-400 Rough Locator

Features:
- Mounts to Nest Pad Brackets and indirectly to BodyBuilder™ 30mm Swivel Arm Mount.

Specifications:
- Max. Static Clamp Load: 271 Nm [200 ft-lb]
- Material:
  - Bracket: Steel
  - Wear Surface: UHMW
BODYBUILDER™ SWIVEL ARM ACCESSORIES

BodyBuilder™ Octagonal Tooling | Dimensions | Technical Specifications

**SAP-BM10 Ø19mm [.75 in] Apple Core Nest Bumper Mount**

**Specifications:**

- **Max. Static Clamp Load:** 271 Nm [200 ft-lb]
- **Material:** Steel

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-SAP-BM10</td>
<td>.10 kg [.21 lb]</td>
</tr>
</tbody>
</table>