# T-Slotted Extrusions and Quick Frame

### How to Order

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<td>45</td>
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<td>3075  (3.0&quot; x .75&quot; T-Slot)</td>
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</tr>
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<td>3030  (3&quot; x 3&quot; T-Slot)</td>
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<td>3060  (3&quot; x 6&quot; T-Slot)</td>
<td>55</td>
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<tr>
<td>9000 Quick Frame Extrusions</td>
<td>56</td>
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<td>57</td>
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<td>9010 Quick Frame Extrusions</td>
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<td>9025 Quick Frame Extrusions</td>
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<td>61</td>
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</tbody>
</table>
80/20 Inc.  The Industrial Erector Set®

ORDERING EXAMPLE FOR:
T-SLOTTED EXTRUSIONS & QUICK FRAME

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Quantity</th>
<th>Length (inches)</th>
<th>Machining/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1010</td>
<td>2</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>1010</td>
<td>3</td>
<td>19</td>
<td>7042 in A both ends</td>
</tr>
<tr>
<td>1020</td>
<td>2</td>
<td>15</td>
<td>7042 in F, G both ends</td>
</tr>
<tr>
<td>1515-Lite</td>
<td>3</td>
<td>64</td>
<td>7060 one end</td>
</tr>
<tr>
<td>1517</td>
<td>1</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>3030</td>
<td>2</td>
<td>16.625</td>
<td>7050 style A in W, X both ends</td>
</tr>
<tr>
<td>9000</td>
<td>2</td>
<td>34.5</td>
<td></td>
</tr>
<tr>
<td>9005</td>
<td>1</td>
<td>20.25</td>
<td>7300 on A</td>
</tr>
</tbody>
</table>

*See page 18 for a complete order example.

Listed above are T-slotted extrusions and Quick Frame with various machining services. To begin your selection of the various profiles, you'll need to know a little bit about what we have to offer:

1. Determine if you have a preference between our 10 and 15 SERIES profiles or Quick Frame.
2. Select your profile by strength and/or appearance. You can refer to pages 34-39 for Technical Data.
3. Order your extrusion lengths in 97", 145" or 242" stock length bars or at a specified cut length. When ordering Quick Frame, you can order a stock length bar of 145" or a specified cut length.
4. When ordering your T-slotted extrusion or Quick Frame, look carefully at your design when specifying your lengths. Remember, the type of profile selected and the design configuration will effect the length you specify because of the different outside dimensions of each profile. Also, if you are ordering stock length material and are cutting the material in-house, make sure you consider the material loss from the saw cut.

As you will notice in the order above, some of the extrusions and Quick Frame have machining services. The type and location of the machining service are listed with the extrusion or quick frame, but the actual charge is listed separately in the machining services section of your order. For cut to length services, which are required for anything less than a stock length, the charge is listed only in the machining services section, not the extrusion section. See Section 13 for more information on cut to length and machining services. For more information on Quick Frame, see Section 11, Quick Frame.

As an added bonus, when we cut extrusions or Quick Frame to a specified length or provide machining services, they are deburred and washed! When you receive your extrusions or Quick Frame, they are paper-wrapped and packaged with parts separated into bags.

When ordering extrusions or Quick Frame, consider the following:
- Specify the length of extrusion and Quick Frame in inches and decimals.
- Reduce your freight costs significantly by purchasing pre-cut lengths of extrusion and Quick Frame up to 100".
- Assemble your "Industrial Erector Set®" as you unpack it with pre-washed, pre-cut, and pre-packaged extrusion and Quick Frame lengths.
- 95% of all orders ship the same day!
Introduction to Section 1: T-slotted Extrusions and Quick Frame

Section 1 contains information you will need to know about the structural components from 80/20. These structural components are the basic building blocks of the Industrial Erector Set® and consist of T-slotted Aluminum Extrusions in 10 SERIES, 15 SERIES, and Quick Frame.

Technical details, material strength, and weight for these components can be found on pages 34-37, with details on the many extrusion profiles found on pages 40-61.

10 SERIES T-slotted Extrusions are shown on pages 40-45. These six (6) sizes range from 1” square to 2” x 4”. All 10 SERIES sizes have .255” slot widths and are modular to each other. Accessories throughout this catalog allow you to build a complete project from our 10 SERIES family or transition to and from our 15 SERIES. Watch for the 10 SERIES icon (,) for 10 SERIES compatible parts.

15 SERIES T-slotted Extrusions are shown on pages 46-55. These ten (10) sizes range from 3/4” x 1-1/2” to 3” x 6”. All 15 SERIES sizes have .320” slot widths and are modular to each other. Accessories throughout this catalog allow you to build a complete project from our 15 SERIES family or transition to and from our 10 SERIES.

Quick Frame is an aluminum tubing system that’s used by pressing nylon corners into the framework. Both strong and lightweight, Quick Frame is easy to assemble, aesthetically pleasing, and can be used in many applications where space and weight limitations exist. Profile dimensions and other Quick Frame data can be found on pages 56-61 and in Section 11.

80/20 T-Slotted Extrusion Advantages

- Linear adjustment in X, Y, & Z axis
- All T-slots are on 1/2", 3/4", 1", or 11/2" centerlines
- Uses standard fractional or metric sized fasteners
- Lightweight and easy to machine
- Deburred and washed before we ship
- No welding - no fighting heat stress and warpage
- Easy to fabricate - requires only simple hand tools

80/20 Quick Frame Advantages

- Internal ribs hold nylon corner connectors securely
- Clear anodized for corrosion protection
- Aesthetically pleasing
- Reconfigure design changes easily
- Cut to length services available
- Another dimension in framing choices
80/20 Inc.

80/20 "Product" Advantages

- Attractive appearance
- Design freedom
- Easy to fabricate
- Lightweight
- Joinable in many ways
- Strong
- Easy to assemble designs
- High strength/weight ratio
- Precise, close tolerances
- Resilient
- Assured, uniform quality
- Corrosion-resistant
- Cost-effective
- Align-A-Grooves
- Non-magnetic
- Recyclable

Area of 80/20 Extrusions

15 Series Profiles

10 Series Profiles

Compare the steel tubes cross sectional area to 80/20's to help you select the proper aluminum extrusion.

Area of Steel Tube
Material Specifications

**A36 CARBON STEEL**

**MINIMUM YIELD STRENGTH IN POUNDS**

- 80/20’s 6105-T5 alloy yield strength of 35,000 p.s.i. compares to A36 carbon steel’s yield strength of 36,000 p.s.i.

- Volume for volume, aluminum weighs about one-third as much as iron, steel, copper, or brass.

**Simple Beam Deflection Calculations**

In the example below, find the worst case deflection for a beam that is supported at both ends with the load centered over the span. Example: using 1515 extrusion, a length of 30 inches, and a weight load of 50 pounds, you should find the approximate deflection to be .011 inches.

\[
\frac{L^3W}{48EI} = D
\]

- \(L\) = length in inches (30)
- \(W\) = weight in pounds (50)
- \(E\) = modulus of elasticity = 10,200,000 (see page 37)
- \(I\) = moment of inertia = .249207 in^4 (see page 37)

**Example Calculation**

\[
\frac{L^3W}{48EI} = \frac{30^3 \times 50}{48 \times 10,200,000 \times .249207} = 0.011
\]

This formula will yield worst case deflection for a beam supported at both ends with the load centered over the span.

**Example Calculation**

\[
\frac{5WL^3}{384EI} = \frac{5 \times 50 \times 30^3}{384 \times 10,200,000 \times .249207} = 0.011
\]

This formula will yield worst case deflection for a beam supported at both ends with the load evenly distributed over the span.
Material Specifications

10 SERIES Extrusions

<table>
<thead>
<tr>
<th>Part Number</th>
<th>1010</th>
<th>1012</th>
<th>1020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>6105-T5 Aluminum</td>
<td>6105-T5 Aluminum</td>
<td>6105-T5 Aluminum</td>
</tr>
<tr>
<td>Finish</td>
<td>Clear Anodize #204-R1</td>
<td>Clear Anodize #204-R1</td>
<td>Clear Anodize #204-R1</td>
</tr>
<tr>
<td>Weight Per Foot</td>
<td>.495 Lbs.</td>
<td>.487 Lbs.</td>
<td>.937 Lbs.</td>
</tr>
<tr>
<td>Stock Length</td>
<td>145&quot; +/- .125&quot; and 242&quot; +/- .125&quot;</td>
<td>145&quot; +/- .125&quot; and 242&quot; +/- .125&quot;</td>
<td>145&quot; +/- .125&quot; and 242&quot; +/- .125&quot;</td>
</tr>
<tr>
<td>Moment of Inertia</td>
<td>IX=.0441316&quot;^4</td>
<td>IX=.039267&quot;^4</td>
<td>IX=.0826334&quot;^4</td>
</tr>
<tr>
<td></td>
<td>IY=.0441316&quot;^4</td>
<td>IY=.0392724&quot;^4</td>
<td>IY=.303706&quot;^4</td>
</tr>
<tr>
<td>Modulus of Elasticity</td>
<td></td>
<td></td>
<td>10,200,000 Lbs./Sq. In.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part Number</th>
<th>1030</th>
<th>2020</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>6105-T5 Aluminum</td>
<td>6105-T5 Aluminum</td>
<td>6105-T5 Aluminum</td>
</tr>
<tr>
<td>Finish</td>
<td>Clear Anodize #204-R1</td>
<td>Clear Anodize #204-R1</td>
<td>Clear Anodize #204-R1</td>
</tr>
<tr>
<td>Weight Per Foot</td>
<td>1.277 Lbs.</td>
<td>1.468 Lbs.</td>
<td>2.736 Lbs.</td>
</tr>
<tr>
<td>Stock Length</td>
<td>145&quot; +/- .125&quot; and 242&quot; +/- .125&quot;</td>
<td>145&quot; +/- .125&quot; and 242&quot; +/- .125&quot;</td>
<td>145&quot; +/- .125&quot; and 242&quot; +/- .125&quot;</td>
</tr>
<tr>
<td>Moment of Inertia</td>
<td>IX=.122385&quot;^4</td>
<td>IX=.551334&quot;^4</td>
<td>IX=1.05363&quot;^4</td>
</tr>
<tr>
<td></td>
<td>IY=.961164&quot;^4</td>
<td>IY=.551334&quot;^4</td>
<td>IY=3.54565&quot;^4</td>
</tr>
<tr>
<td>Estimated Area</td>
<td>1.141 Sq. In.</td>
<td>1.223 Sq. In.</td>
<td>2.281 Sq. In.</td>
</tr>
<tr>
<td>Modulus of Elasticity</td>
<td></td>
<td></td>
<td>10,200,000 Lbs./Sq. In.</td>
</tr>
</tbody>
</table>

* Other lengths available upon request. See Cut to Length Services on page 378.

- Yield strength 35,000 lbs. /sq. in. minimum
- Tensile strength 38,000 lbs. /sq. in. minimum
- Elongation A5 minimum 10%
- Elongation A10 minimum 8%
- Elasticity E approximately 10,200 k lbs. /sq.in.
- Rockwell hardness approximately E-88
- Extrusion conforming to DIN 17 615 specifications
- Twist per foot of length not to exceed .25 degree and total twist over 20 feet of length not to exceed 1.5 degrees
- Flatness .004" per inch of width
- Straightness 0.0125" per foot of length, not to exceed .120 inches over 20 feet of length
- Unless otherwise specified, all extrusions will have etch and clear (204R1) anodizing with depth of .0004" and surface hardness of approximately 250 HV
## Material Specifications

### 15 SERIES Extrusions

<table>
<thead>
<tr>
<th>Part Number</th>
<th>1515-Lite</th>
<th>1515</th>
<th>1517</th>
<th>1530-Lite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>6105-T5 Aluminum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finish</td>
<td>Clear Anodize #204-R1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Stock Length * | 97", 145" or 242" | 97", 145" or 242" | 145" or 242" | 97", 145" or 242" |
| Moment of Inertia | IX=.185300"^4 | IX=.249407"^4 | IX=.162973"^4 | IX=.389690"^4 |
|                | IY=.185300"^4 | IY=.249207"^4 | IY=.162889"^4 | IY=.1372640"^4 |

| Modulus of Elasticity | 10,200,000 Lbs./Sq. In. |      |      |           |

### 15 SERIES Extrusions

<table>
<thead>
<tr>
<th>Part Number</th>
<th>1530</th>
<th>1545</th>
<th>3030</th>
<th>3060</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>6105-T5 Aluminum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finish</td>
<td>Clear Anodize #204-R1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Stock Length * | 97", 145" or 242" | 145" or 242" | 145" or 242" | 145" or 242" |
| Moment of Inertia | IX=.483255"^4 | IX=.711463"^4 | IX=3.36251"^4 | IX=6.47326"^4 |
|                | IY=1.81366"^4 | IY=5.72648"^4 | IY=3.36251"^4 | IY=21.6846"^4 |

| Modulus of Elasticity | 10,200,000 Lbs./Sq. In. |      |      |           |

### 15 SERIES Extrusions

<table>
<thead>
<tr>
<th>Part Number</th>
<th>1575</th>
<th>3075</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>6105-T5 Aluminum</td>
<td></td>
</tr>
<tr>
<td>Finish</td>
<td>Clear Anodize #204-R1</td>
<td></td>
</tr>
</tbody>
</table>

| Stock Length | 145" | 145" |
| Moment of Inertia | IX=.0364293 | IX=.0770384 |
|                | IY=.141346 | IY=.105042 |

| Estimated Area | .693 Sq. In. | 1.320 Sq. In. |
| Modulus of Elasticity | 10,200,000 Lbs./Sq. In. |      |

* Other lengths available upon request. See Cut to Length Services on page 378.
# Fastener Application Tests

**A**  
*Direct Force*

**B**  
*Cantilevered Force*

**C**  
*Tortional Force*

1) **Single Anchor**

2) **Double Anchor**  

3) **End Fastener**  

4) **Joining Plate**

5) **90° Joining Plate**

6) **Corner Bracket**

7) **Corner Gusset**

---

### Horizontal Extrusion Dimension

- **10 SERIES** = 5.00”
- **15 SERIES** = 6.00”

---

**NOTE:** Plates, brackets and gussets were attached with recommended bolt kits and all fasteners were torqued according to page 39.

---

**1010**  
**1515-Lite**  
**1515**

<table>
<thead>
<tr>
<th>Fastener</th>
<th>A (lbs)</th>
<th>B (lbs)</th>
<th>C (inch-lbs)</th>
<th>Fastener</th>
<th>A (lbs)</th>
<th>B (lbs)</th>
<th>C (inch-lbs)</th>
<th>Fastener</th>
<th>A (lbs)</th>
<th>B (lbs)</th>
<th>C (inch-lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>500</td>
<td>250</td>
<td>180</td>
<td>1</td>
<td>950</td>
<td>625</td>
<td>540</td>
<td>1</td>
<td>950</td>
<td>1,000</td>
<td>700</td>
</tr>
<tr>
<td>2</td>
<td>900</td>
<td>250</td>
<td>260</td>
<td>2</td>
<td>1,200</td>
<td>700</td>
<td>1,150</td>
<td>2</td>
<td>1,200</td>
<td>1,200</td>
<td>2,000</td>
</tr>
<tr>
<td>3</td>
<td>450</td>
<td>200</td>
<td>325</td>
<td>3</td>
<td>1,000</td>
<td>500</td>
<td>680</td>
<td>3</td>
<td>1,000</td>
<td>820</td>
<td>1,150</td>
</tr>
<tr>
<td>4</td>
<td>175</td>
<td>50</td>
<td>400</td>
<td>4</td>
<td>225</td>
<td>200</td>
<td>1,000</td>
<td>4</td>
<td>225</td>
<td>200</td>
<td>1,100</td>
</tr>
<tr>
<td>5</td>
<td>175</td>
<td>50</td>
<td>500</td>
<td>5</td>
<td>250</td>
<td>200</td>
<td>1,120</td>
<td>5</td>
<td>250</td>
<td>200</td>
<td>1,260</td>
</tr>
<tr>
<td>6</td>
<td>325</td>
<td>75</td>
<td>180</td>
<td>6</td>
<td>375</td>
<td>225</td>
<td>500</td>
<td>6</td>
<td>575</td>
<td>225</td>
<td>500</td>
</tr>
<tr>
<td>7</td>
<td>325</td>
<td>220</td>
<td>260</td>
<td>7</td>
<td>375</td>
<td>750</td>
<td>500</td>
<td>7</td>
<td>575</td>
<td>750</td>
<td>500</td>
</tr>
</tbody>
</table>

**Test results reflect the connection failure point. Loads at or above these points are not recommended.**
Drop Lock Feature

- All T-slotted structural extrusions have a drop lock feature — a 2° decline on the T-slot flange
- Acts as a lockwasher in that it spring loads the fastener as it’s tightened

Torque Specifications

- Table below indicates amount of torque in foot-lbs. needed to activate the 2° drop lock feature of the extrusion
- Nut and bolt combination is pre-loaded when tightened to the minimum torque rating
- Pre-loaded state makes vibration proof connection

<table>
<thead>
<tr>
<th>Fastener Description</th>
<th>Tested Extrusion</th>
<th>Minimum Ft-lbs. Torque</th>
<th>Maximum Ft-lbs. Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/16-18 Flanged or Standard Button Head Socket Cap Screw</td>
<td>1515</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Economy T-slot Stud, Washer, &amp; Hex Nut</td>
<td>1515</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Part #3360 Anchor Fastener &amp; Standard T-Nut</td>
<td>1515</td>
<td>17</td>
<td>22</td>
</tr>
<tr>
<td>Part #3380 End Fastener</td>
<td>1515</td>
<td>17</td>
<td>22</td>
</tr>
<tr>
<td>1/4-20 Flanged or Standard Button Head Socket Cap Screw</td>
<td>1515</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>Part #3066 1/4-20 Flanged Button Head Socket Cap Screw used as an End Fastener for the 1010 (1&quot; x 1&quot;) Extrusion</td>
<td>1010</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td>10-32 Socket Head or Button Head Cap Screw &amp; Economy T-Nut</td>
<td>1515</td>
<td>9</td>
<td>13</td>
</tr>
</tbody>
</table>
1010 is ideal for machine guards, sound enclosures, work benches, displays, and panel mount racks. Mount accessories such as valves, sensors, switches, DIN rails, etc. directly to T-slotted extrusions.

Our 10 SERIES structural extrusion line also includes additional profiles — 1012, 1020, 1030, 2020, and 2040.

For 10 SERIES compatible parts & accessories, look for this extrusion profile icon (็ก) throughout this catalog.

Storage Cabinet

Computer Cart
1012 Quarter Round

Material 6105-T5
Finish Clear Anodized
Weight Per Foot .487 Lbs.
Stock Length * 145" +/- .125"
               242" +/- .125"
Moment Of Inertia IX=.039267"^4
               IY=.0392724"^4
Estimated Area .422 Sq. In.

* Request other lengths to match your specs with our Cut to Length Service (P/N 7005) on page 378.

1012 Quarter Round extrusion was developed to create an aesthetic looking edge. Use 1012 to round off the corners of light-duty workstations, displays, exhibits, inspection devices, office furniture, and other applications where an ergonomic edge may be required.

For 10 SERIES compatible parts & accessories, look for this extrusion profile icon throughout this catalog.

10 SERIES PROFILE

Retail System

Framing

(219) 248-8030 Fax 248-8029 www.8020.net
1020

Material: 6105-T5
Finish: Clear Anodized
Weight Per Foot: .937 Lbs.
Stock Length: 145" +/- .125"
Stock Length: 242" +/- .125"
Moment Of Inertia: IX = .0826334"^4
Moment Of Inertia: IY = .303706"^4
Estimated Area: .785 Sq. In.

1020 is ideal for machine guards, sound enclosures, work benches, displays, and panel mount racks. It can also be used to mount accessories such as valves, sensors, switches, DIN rails, etc.

Like the 1030, 2020, 2040, 1530, 1545, 3030, & 3060, the center can be used to run air lines or serve as a pressure or vacuum manifold up to 150 p.s.i.

See Section 7 (pages 249-264) — Accessories, for pressure manifold accessories.

The 1020 profile accepts 10 SERIES mounting accessories and stanchions.

For 10 SERIES compatible parts & accessories, look for this extrusion profile icon (خار) throughout this catalog.
1030 is ideal for applications where long lengths without supporting structures are needed. It can be used for conveyor systems, linear motion, machine frames, robotics, and whatever else your mind can imagine.

The two hollow centers are perfect for dual manifolds up to 150 p.s.i. See Section 7 (pages 249-264), for 80/20’s stock pressure manifold plates and accessories. Call 80/20 or your local distributor for custom manifold plates. We’re in the business of making what you need.

The 1030 profile accepts 10 SERIES fasteners, mounting accessories, and stanchions.

For 10 SERIES compatible parts & accessories, look for this extrusion profile icon throughout this catalog.
### 2020

<table>
<thead>
<tr>
<th>Material</th>
<th>6105-T5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finish</td>
<td>Clear Anodized</td>
</tr>
<tr>
<td>Weight Per Foot</td>
<td>1.468 Lbs.</td>
</tr>
<tr>
<td>Stock Length *</td>
<td>145&quot; +/- .125&quot;</td>
</tr>
<tr>
<td></td>
<td>242&quot; +/- .125&quot;</td>
</tr>
<tr>
<td>Moment Of Inertia</td>
<td>IX = .551334&quot;^4</td>
</tr>
<tr>
<td></td>
<td>IY = .551334&quot;^4</td>
</tr>
<tr>
<td>Estimated Area</td>
<td>1.223 Sq. In.</td>
</tr>
</tbody>
</table>

* Request other lengths to match your specs with our Cut to Length Service (P/N 7012) on page 378.

2020 is ideal for structures where more strength is needed for 10 SERIES frame assemblies. Like the 1020, 1030, 2020, 2040, 1530, 1545, 3030, & 3060, the center can be used to run air lines or serve as a pressure or vacuum manifold up to 150 p.s.i.

See Section 7 (pages 249-264) — Accessories, for pressure manifold accessories.

The 2020 profile accepts 10 SERIES fasteners, mounting accessories, and stanchions.

**For 10 SERIES compatible parts & accessories, look for this extrusion profile icon (X) throughout this catalog.**
2040 was created for structures with very high load requirements. 2040 works great for mezzanines, heavy duty machine bases, support structures, and anywhere else where structural stability is necessary. Pressure up to 150 p.s.i.

See Section 7 (pages 249-264) — for 80/20's stock line of pressure manifold plates and accessories. Contact 80/20 or your local distributor for any special manifold applications.

The 2040 profile accepts 10 SERIES fasteners, mounting accessories, and stanchions.

Material
6105-T5

Finish
Clear Anodized

Weight Per Foot
2.736 Lbs.

Stock Length *
145° +/- .125°

242° +/- .125°

Moment Of Inertia
IX = 1.05363"^4

IY = 3.54565"^4

Estimated Area
2.281 Sq. In.

* Request other lengths to match your specs with our Cut to Length Service (P/N 7013) on page 378.
We specialize in same day shipments!

80/20 Inc.

The Industrial Erector Set®

NEW!

1575

Material: 6105-T5
Finish: Clear Anodized
Weight Per Foot: .832 Lbs.
Stock Length*: 145" +/- .125"

Moment Of Inertia
IX=.0364293"
IY=.141346"

Estimated Area: .693 Sq. In.

* Request other lengths to match your specs with our Cut to Length Service (P/N 7010) on page 378.

Some of the applications for the 1575 profile include handles, door track, rails and supports for other components such as valves, sensors, etc.

A great way to start guarding and workstation applications from existing equipment.

New Machining Services for 1575 & 3075

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7256</td>
<td>Drill .257 dia thru with .406 dia spot face</td>
</tr>
<tr>
<td>7257</td>
<td>Drill .328 dia thru with .515 dia spot face</td>
</tr>
</tbody>
</table>
1515-Lite was developed for applications with lighter weight and strength requirements than our heavier wall extrusions.

The 1515-Lite version is ideal for lighter load bearing structures, guarding, and lightweight frames.
1517 Quarter Round

**VIBRATION PROOF**

<table>
<thead>
<tr>
<th>Material</th>
<th>6105-T5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finish</td>
<td>Clear Anodized</td>
</tr>
<tr>
<td>Weight Per Foot</td>
<td>1.004 Lbs.</td>
</tr>
<tr>
<td>Stock Length *</td>
<td>145&quot; +/- .125&quot;</td>
</tr>
<tr>
<td></td>
<td>242&quot; +/- .125&quot;</td>
</tr>
<tr>
<td>Moment Of Inertia IX</td>
<td>.162973&quot;^4</td>
</tr>
<tr>
<td></td>
<td>IY = .162889&quot;^4</td>
</tr>
<tr>
<td>Estimated Area</td>
<td>.837 Sq. In.</td>
</tr>
</tbody>
</table>

* Request other lengths to match your specs with our Cut to Length Service (P/N 7010) on page 378.

1517 Quarter Round extrusion was developed to create an aesthetic looking edge. Use 1517 to round off the corners of workstations, displays, exhibits, material handling systems, inspection devices, office furniture, and other applications where an ergonomic edge may be required.

**15 SERIES PROFILE**

**Special Applications**

**Corners**

**Doors**

We specialize in same day shipments!
1515 heavy wall is ideal for applications requiring greater strength. 1515 is ideal for machine frames, work stations, shop carts, and machine retrofits.

The 1515 shape offers the best combinations of compact size and structural strength.
**Material**
6105-T5

**Finish**
Clear Anodized

**Weight Per Foot**
1.584 Lbs.

**Stock Length** *
145" +/- .125"

**Moment Of Inertia**
IX = 0.0770384"

**Y = 1.05042"**

**Estimated Area**
1.320 Sq. In.

* Request other lengths to match your specs with our Cut to Length Service (P/N 7020) on page 378.

---

**New Machining Services for 1575 & 3075**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7256</td>
<td>Drill .257 dia thru with .406 dia spot face</td>
</tr>
<tr>
<td>7257</td>
<td>Drill .328 dia thru with .515 dia spot face</td>
</tr>
</tbody>
</table>
1530-Lite

Material: 6105-T5
Finish: Clear Anodized
Weight Per Foot: 1.960 Lbs.
Stock Length *: 97" +/- .125"
145" +/- .125"
242" +/- .125"

Moment Of Inertia: IX=.38969"^4
IY=1.37264"^4
Estimated Area: 1.718 Sq. In.

* Request other lengths to match your specs with our Cut to Length Service (P/N 7020) on page 378.

1530-Lite is perfect for structures where the size, not the strength, of the 1530 is required.

1530-Lite is the ideal choice for large door tracks. The center of the extrusion can be used for running air lines, or it also works well as a pressure or vacuum manifold up to 150 p.s.i.

See Section 7, Accessories (pages 249-264), for pressure manifold accessories.
1530 heavy wall is for larger and stronger structures where higher strength is required. It is an excellent framing system for roller conveyors, fixturing, special machines, supports, linear slides, and automated assembly systems.

The extrusion center is perfect for running air lines. It also works well as a pressure or vacuum manifold up to 150 p.s.i.

See Section 7 — Accessories (pages 249-264), for pressure manifold accessories.
**1545 VIBRATION PROOF**

<table>
<thead>
<tr>
<th>Material</th>
<th>6105-T5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finish</td>
<td>Clear Anodized</td>
</tr>
<tr>
<td>Weight Per Foot</td>
<td>3.629 Lbs.</td>
</tr>
<tr>
<td>Stock Length</td>
<td>145&quot; +/- .125&quot;</td>
</tr>
<tr>
<td></td>
<td>242&quot; +/- .125&quot;</td>
</tr>
<tr>
<td>Moment Of Inertia</td>
<td>IX=.711463&quot;^4</td>
</tr>
<tr>
<td></td>
<td>IY=5.72648&quot;^4</td>
</tr>
<tr>
<td>Estimated Area</td>
<td>3.024 Sq. In.</td>
</tr>
</tbody>
</table>

* Request other lengths to match your specs with our Cut to Length Service (P/N 7021) on page 378.

1545 is ideal for applications where long lengths without supporting structures are needed. Use it in conveyor systems, linear motion, material handling, and whatever else you can imagine.

The two hollow centers are perfect for dual air manifolds up to 150 p.s.i. See Section 7 (pages 249-264), for 80/20's stock pressure manifold plates and accessories. Call 80/20 or your local distributor for custom manifold plates. We're in the business of making what you need.

- **Conveyor Systems**
- **T-slot Tables**
- **Machine Frames**
- **Robotics**
- **Vision Equipment**

**15 SERIES PROFILE**

**DUAL MANIFOLD**

(219) 248-8030  Fax 248-8029  www.8020.net
3030 heavy wall is for larger and stronger structures where greater strength is required. Like the 1530, the center of the extrusion can be used to run air lines or serve as a pressure or vacuum manifold up to 150 p.s.i.

See Section 7 — Accessories (pages 249-264), for pressure manifold plates and accessories.
3060 was created for structures with very high load requirements. 3060 works great for mezzanines, heavy-duty machine bases, support structures, and anywhere else where maximum structural stability is necessary. Pressure up to 150 p.s.i.

See Section 7 (pages 249-264) for 80/20’s stock line of pressure manifold plates and accessories. Contact 80/20 or your local distributor for any special manifold applications, or refer to Section 2, Structural Shapes.

- **Heavy Machine Bases**
- **Mezzanines**
- **Towers**
- **Pallet Racks**

**QUAD AIR MANIFOLD**

(219) 248-8030   Fax 248-8029  www.8020.net
Quick Frame is a simple, economical solution for light-duty framing applications. It is a boltless construction system extruded from 6105 aluminum alloy. Internal ribs furnish maximum bite for securing the nylon connectors. A mallet is the only assembly tool you’ll need. Quick Frame does the rest.

Versatile nylon corner connectors give you unlimited enclosure configurations.

You get quick, easy enclosures, tables, display cases, mailing stations, portable racks, or cabinets custom-made to your specs.

Three different Quick Frame shapes are available with integral flanges to accept 1/4" panels for flush mounting.

Three NEW! Quick Frame shapes are now available with twin flanges. You can mount panels without using fasteners.

For connector selections, see Section 11 — Quick Frame, beginning on page 347.
Quick Frame is a simple, economical solution for light-duty framing applications. It is a boltless construction system. The only assembly tool you’ll need is a mallet. Quick Frame does the rest.

Versatile nylon corner connectors give you unlimited enclosure configurations.

You get quick, easy custom cabinets, enclosures, tables, display cases, mailing stations, or portable racks custom-made to your specs.

Three different Quick Frame shapes are available with integral flanges to accept 1/4" panels for flush mounting.

Three NEW! Quick Frame shapes are now available with twin flanges. You can mount panels without using fasteners.

For connector selections, see Section 11—Quick Frame, beginning on page 347.
9010
Quick Frame

Material: 6105-T5
Finish: Clear Anodized
Weight Per Foot: .390 Lbs.
Stock Length: 145" +/- .125"

* Request other lengths to match your specs with our Cut to Length Service (P/N 7310) on Page 378.
For 45° Flange Milling Service for Quick Frame see page 387.

Quick Frame is a simple, economical solution for light-duty framing applications. It is a boltless construction system. The only assembly tool you'll need is a mallet. Quick Frame does the rest.

Versatile nylon corner connectors give you unlimited enclosure configurations.

You get quick, easy carts, enclosures, tables, display cases, mailing stations, portable racks, or cabinets custom-made to your specs.

Three different Quick Frame shapes are available with integral flanges to accept 1/4" panels for flush mounting.

Three NEW! Quick Frame shapes are now available with twin flanges. You can mount panels without using fasteners.

For connector selections, see Section 11 — Quick Frame, beginning on page 347.

Water Cooler Stand

Display Rack
9015
Quick Frame

Material: 6105-T5
Finish: Clear Anodized
Weight Per Foot: .390 Lbs.
Stock Length: 145" +/- .125"

* Request other lengths to match your specs with our Cut to Length Service (P/N 7310) on page 378. For 45° Flange Milling Service for Quick Frame see page 387.

Quick Frame is a simple, economical solution for light-duty framing applications. It is a boltless construction system. The only assembly tool you'll need is a mallet. Quick Frame does the rest.

Versatile nylon corner connectors give you unlimited enclosure configurations.

You get quick, easy to assemble instrument enclosures, tables, display cases, mailing stations, portable racks, or cabinets custom-made to your specs.

Three different Quick Frame shapes are available with integral flanges to accept 1/4" panels for flush mounting.

Three NEW! Quick Frame shapes are now available with twin flanges. You can mount panels without using fasteners.

For connector selections, see Section 11 — Quick Frame, beginning on page 347.
80/20 Inc.

9025  Quick Frame

NEW!

Material: 6105-T5
Finish: Clear Anodized
Weight Per Foot: .354 Lbs.
Stock Length: 145" +/- .125"

* Request other lengths to match your specs with our Cut to Length Service (P/N 7310) on page 378.
For 45° Flange Milling Service for Quick Frame see page 387.

- Extruded from 6105-T5 aluminum alloy
- Internal ribs give maximum bite to secure nylon corner connectors
- Clear anodized for corrosion protection
- Aesthetically pleasing

9030  Quick Frame

NEW!

Material: 6105-T5
Finish: Clear Anodized
Weight Per Foot: .426 Lbs.
Stock Length: 145" +/- .125"

* Request other lengths to match your specs with our Cut to Length Service (P/N 7310) on page 378.
For 45° Flange Milling Service for Quick Frame see page 387.

For connector selections, see Section 11 - Quick Frame, beginning on page 347.

We specialize in same day shipments!
**Quick Frame**

9035

- **Material**: 6105-T5
- **Finish**: Clear Anodized
- **Weight Per Foot**: .426 Lbs.
- **Stock Length ***: 145" +/- .125"

* Request other lengths to match your specs with our Cut to Length Service (P/N 7310) on page 378.

For 45° Flange Milling Service for Quick Frame see page 387.

Quick Frame is a simple, economical solution for light-duty framing applications. It is a boltless construction system. The only assembly tool you'll need is a mallet. Quick Frame does the rest.

**Dual Flange Quick Frame Profiles 9025, 9030, and 9035 allow panel mounting without the use of fasteners.**

**NEW!**

Rubber Panel Gaskets on page 235 can be used to mount 1/8", 3/16", and 1/4" thick panels. No fasteners required.

(219) 248-8030    Fax 248-8029
www.8020.net
Align-a-Groove™

The distinctive Align-a-Groove™ feature appears on most 80/20 Fractional T-Slotted aluminum extrusions. Beyond the aesthetic value, (We acknowledge that beauty is in the eye of the beholder) Align-a-Grooves™ provide practical benefits during assembly.

Extrusions are aligned by the groove.

Extrusion to extrusion assembly is performed quickly and accurately by using the Align-a-Groove™ feature. Square 90 degree connections are easily obtained. Groovy!

Component to extrusion assembly is also aided by using the Align-a-Groove™ feature. Orientation of components, such as brackets, hinges, and joining plates are a snap when you Align with the Groove.

This feature gives you a quick and easy reference point by measuring to one of the Align-a-Grooves, the T-Slot edge, or the extrusion edge!