02 METRIC EXTRUSIONS
**Metric Extrusions**

**TS20-20M**

**SPECIFICATIONS**
- Length Clear: 240" (6 m)
- Length Black: 240" (6 m)
- Length Yellow: 144" (3.6 m)
- Weight: 0.335 lbs/ft (0.498 kg/m)
- Estimated Area: 0.279 in² (1.799 cm²)
- Moment of Inertia: lx 0.017 in⁴ (0.707 cm⁴), ly 0.017 in⁴ (0.707 cm⁴)

**MACHINING SERVICES**
- CTL: 660002
- Single Access Hole: 660123
- Tap M5: 660124

**BEAM SELECTION BY LOAD AND LENGTH**

*Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 10
**SPECSIFICATIONS**

<table>
<thead>
<tr>
<th>Dimension</th>
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<tbody>
<tr>
<td>Length Clear</td>
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<tr>
<td>Weight</td>
<td>0.362 lbs/ft (0.538 kg/m)</td>
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<tr>
<td>Estimated Area</td>
<td>0.302 in² (1.948 cm²)</td>
</tr>
<tr>
<td>Moment of Inertia x</td>
<td>0.020 in⁴ (0.832 cm⁴)</td>
</tr>
<tr>
<td>Moment of Inertia y</td>
<td>0.020 in⁴ (0.832 cm⁴)</td>
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**MACHINING SERVICES**

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<tr>
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<th>Code</th>
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<tr>
<td>CTL</td>
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<td>Single Access Hole</td>
<td>660123</td>
</tr>
<tr>
<td>Tap M5</td>
<td>660124</td>
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</table>

**BEAM SELECTION BY LOAD AND LENGTH**

*Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 10
**Metric Extrusions**

**TS20-20M BISLOT OPP**

Clear Anodized - 650050

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tbody>
<tr>
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<tr>
<td>Weight</td>
<td>0.362 lbs/ft (0.538 kg/m)</td>
</tr>
<tr>
<td>Estimated Area</td>
<td>0.302 in² (1.948 cm²)</td>
</tr>
<tr>
<td>Moment of Inertia</td>
<td>lx .020 = in² (0.832 cm²)</td>
</tr>
<tr>
<td></td>
<td>ly .020 = in² (0.832 cm²)</td>
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**MACHINING SERVICES**

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<tr>
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<tbody>
<tr>
<td>CTL</td>
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<td>Single Access Hole</td>
<td>660123</td>
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<tr>
<td>Tap M5</td>
<td>660124</td>
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</table>

**BEAM SELECTION BY LOAD AND LENGTH**

*Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 10
TS20-40M
Clear Anodized - 650046

SPECIFICATIONS
- Length Clear: 240" (6 m)
- Weight: 0.606 lbs/ft (0.901 kg/m)
- Estimated Area: 0.505 in² (3.258 cm²)
- Moment of Inertia: lx = 0.031 in⁴ (1.290 cm⁴)
  ly = 0.121 in⁴ (5.036 cm⁴)

MACHINING SERVICES
- CTL: 660000
- Single Access Hole: 660123
- Tap M5: 660189

BEAM SELECTION BY LOAD AND LENGTH

* Charts based on allowable loads related to yield strength with a margin of safety equal to five.

» For deflection equations see page 10
Metric Extrusions

TS40-40M

SPECIFICATIONS
Length Clear ........................................ 240" (6 m)
Length Black ........................................ 240" (6 m)
Length Yellow ...................................... 144" (3.6 m)
Weight .............................................. 1.533 lbs/ft (2.281 kg/m)
Estimated Area .................................... 1.309 in² (8.447 cm²)
Moment of Inertia
Ix= .314 in² (13.063 cm²)
Iy= .314 in² (13.063 cm²)

MACHINING SERVICES
CTL .................................................. 660003
Single Access Hole ................................ 660028
Single Anchor Fastener ......................... 660020
Tap 5/16 - 18 ...................................... 660034
Tap M8 .............................................. 660033

BEAM SELECTION BY LOAD AND LENGTH

* Charts based on allowable loads related to yield strength with a margin of safety equal to five.

» For deflection equations see page 10
**TS40-40LM**

**Clear Anodized - 650033**
**Black Anodized - 650133**

**SPECIFICATIONS**
- Length: 240" (6 m)
- Weight: 1.242 lbs/ft (1.848 kg/m)
- Estimated Area: 1.050 in² (6.774 cm²)
- Moment of Inertia: lx = 0.236 in⁴ (9.823 cm⁴)
- ly = 0.236 in⁴ (9.823 cm⁴)

**MACHINING SERVICES**
- CTL: 660003
- Single Access Hole: 660028
- Single Anchor Fastener: 660020
- Tap 5/16 - 18: 660034
- Tap M8: 660033

**BEAM SELECTION BY LOAD AND LENGTH**

- **CONCENTRATED LOAD @ CENTER SIMPLY SUPPORTED**
- **UNIFORMLY DISTRIBUTED LOAD SIMPLY SUPPORTED**
- **CONCENTRATED LOAD @ FREE END CANTILEVERED**
- **UNIFORMLY DISTRIBUTED LOAD CANTILEVERED**

*Charts based on allowable loads related to yield strength with a margin of safety equal to five.

» For deflection equations see page 10
Metric Extrusions

TS40-40VLM

Clear Anodized - 650034

SPECIFICATIONS

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<th>Characteristics</th>
<th>Value</th>
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<tbody>
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<tr>
<td>Weight</td>
<td>1.020 lbs/ft (1.518 kg/m)</td>
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<tr>
<td>Estimated Area</td>
<td>0.836 in² (5.394 cm²)</td>
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<tr>
<td>Moment of Inertia</td>
<td>lx= 1972 in⁴ (8.21 cm⁴)</td>
</tr>
<tr>
<td></td>
<td>ly= 1972 in⁴ (8.21 cm⁴)</td>
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</table>

MACHINING SERVICES

<table>
<thead>
<tr>
<th>Service</th>
<th>Code</th>
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<tbody>
<tr>
<td>CTL</td>
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<tr>
<td>Single Access Hole</td>
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<tr>
<td>Tap 5/16 - 18</td>
<td>660034</td>
</tr>
<tr>
<td>Tap M8</td>
<td>660033</td>
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</table>

BEAM SELECTION BY LOAD AND LENGTH

CONCENTRATED LOAD @ CENTER SIMPLY SUPPORTED

UNIFORMLY DISTRIBUTED LOAD SIMPLY SUPPORTED

CONCENTRATED LOAD @ FREE END CANTILEVERED

UNIFORMLY DISTRIBUTED LOAD CANTILEVERED

* Charts based on allowable loads related to yield strength with a margin of safety equal to five.

» For deflection equations see page 10
**TS40-40M BIAD**

Clear Anodized - 650055

**SPECIFICATIONS**
- Length: 240" (6 m)
- Weight: 1.471 lbs/ft (2.190 kg/m)
- Estimated Area: 1.257 in² (8.109 cm²)
- Moment of Inertia:
  - lx: 0.307 in⁴ (12.773 cm⁴)
  - ly: 0.307 in⁴ (12.773 cm⁴)

**MACHINING SERVICES**
- CTL: 660003
- Single Access Hole: 660028
- Single Anchor Fastener: 660020
- Tap 5/16 - 18: 660034
- Tap M8: 660033

**BEAM SELECTION BY LOAD AND LENGTH**

- **CONCENTRATED LOAD @ CENTER SIMPLY SUPPORTED**
  - Load vs. Length cm

- **UNIFORMLY DISTRIBUTED LOAD SIMPLY SUPPORTED**
  - Load vs. Length cm

- **CONCENTRATED LOAD @ FREE END CANTILEVERED**
  - Load vs. Length cm

- **UNIFORMLY DISTRIBUTED LOAD CANTILEVERED**
  - Load vs. Length cm

*Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 10
Metric Extrusions

TS40-40M BIOP

SPECIFICATIONS
Length Clear ................................. 240" (6 m)
Weight ....................................... 1.472 lbs/ft (2.191 kg/m)
Estimated Area ............................. 1.257 in² (8.112 cm²)
Moment of Inertia .......................... Ix = .296 in⁴ (12.407 cm⁴)
............................................. Iy = .317 in⁴ (13.193 cm⁴)

MACHINING SERVICES
CTL ........................................... 660003
Single Access Hole ...................... 660028
Single Anchor Fastener............... 660020
Tap 5/16 - 18 ............................ 660034
Tap M8 .................................. 660033

BEAM SELECTION BY LOAD AND LENGTH

CONCENTRATED LOAD @ CENTER SIMPLY SUPPORTED

UNIFORMLY DISTRIBUTED LOAD SIMPLY SUPPORTED

CONCENTRATED LOAD @ FREE END CANTILEVERED

UNIFORMLY DISTRIBUTED LOAD CANTILEVERED

* Charts based on allowable loads related to yield strength with a margin of safety equal to five.

» For deflection equations see page 10
TS40-40LM MONO

Clear Anodized - 650059

SPECIFICATIONS
Length ........................................... 240” (6 m)
Weight ........................................... 1.145 lbs/ft (1.703 kg/m)
Estimated Area .................................. 0.954 in² (6.154 cm²)
Moment of Inertia ................................ 0.216 lx= in² (8.909 cm²)
........................................... 0.212 ly= in² (8.824 cm²)

MACHINING SERVICES
CTL ............................................. 660003
Single Access Hole ................................ 660028
Single Anchor Fastener .......................... 660020
Tap 5/16 - 18 ..................................... 660034
Tap M8 ........................................... 660033

BEAM SELECTION BY LOAD AND LENGTH

* Charts based on allowable loads related to yield strength with a margin of safety equal to five.

» For deflection equations see page 10
**Metric Extrusions**

**TS40-40LM BISLOT AD**

Clear Anodized - 650052

**SPECIFICATIONS**

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<tr>
<td>Weight</td>
<td>1.265 lbs/ft (1.887 kg/m)</td>
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<tr>
<td>Estimated Area</td>
<td>1.057 in² (6.817 cm²)</td>
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<tr>
<td>Moment of Inertia</td>
<td>Ix=0.214 in⁴ (8.900 cm⁴)</td>
</tr>
<tr>
<td></td>
<td>ly=0.231 in⁴ (9.610 cm⁴)</td>
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**MACHINING SERVICES**

<table>
<thead>
<tr>
<th>Service</th>
<th>Code</th>
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<tbody>
<tr>
<td>CTL</td>
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<td>Tap 5/16 - 18</td>
<td>660034</td>
</tr>
<tr>
<td>Tap M8</td>
<td>660033</td>
</tr>
</tbody>
</table>

**BEAM SELECTION BY LOAD AND LENGTH**

**Concentrated Load @ Center Simply Supported**

**Uniformly Distributed Load Simply Supported**

**Concentrated Load @ Free End Cantilevered**

**Uniformly Distributed Load Cantilevered**

*Charts based on allowable loads related to yield strength with a margin of safety equal to five.

» For deflection equations see page 10
TS40-40LM BISLOT OPP

SPECSIFICATIONS
Length: 240" (6 m)
Weight: 1.267 lbs/ft (1.886 kg/m)
Estimated Area: 1.056 in² (6.816 cm²)
Moment of Inertia: lx=0.214 in⁴ (8.900 cm⁴)
ly=0.250 in⁴ (10.427 cm²)

MACHINING SERVICES
CTL: 660003
Single Access Hole: 660028
Single Anchor Fastener: 660020
Tap 5/16 - 18: 660034
Tap M8: 660033

Beam selection by load and length:

* Charts based on allowable loads related to yield strength with a margin of safety equal to five.

» For deflection equations see page 10
**TS40-40ML TRISLOT**

SPECIFICATIONS
- Length: 240" (6 m)
- Weight: 1.228 lbs/ft (1.827 kg/m)
- Estimated Area: 1.023 (6.600 cm²)
- Moment of Inertia: lx=0.217 in⁴ (9.032 cm⁴), ly=0.235 in⁴ (9.781 cm⁴)

MACHINING SERVICES
- CTL: 660003
- Single Access Hole: 660028
- Single Anchor Fastener: 660020
- Tap 5/16 - 18: 660034
- Tap M8: 660033

**BEAM SELECTION BY LOAD AND LENGTH**

*Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 10
TS40-45LM MONO

Clear Anodized - 650057

SPECIFICATIONS
Length .................................................. 144" (3.6 m)
Weight .................................................. 1.058 lbs/ft (1.574 kg/m)
Estimated Area ........................................... 0.881 in² (5.683 cm²)
Moment of Inertia ................................. 0.166 ix= in² (6.909 cm²)
                      ................................. 0.166 iy= in² (6.909 cm²)

MACHINING SERVICES
CTL ......................................................... 660003
Single Access Hole .................................. 660028
Single Anchor Fastener ......................... 660020
Tap 5/16 - 18 ........................................... 660034
Tap M8 .................................................. 660033

BEAM SELECTION BY LOAD AND LENGTH

Concentrated Load @ Center
Simply Supported

Uniformly Distributed Load
Simply Supported

Concentrated Load @ Free End
Cantilevered

Uniformly Distributed Load
Cantilevered

* Charts based on allowable loads related to yield strength with a margin of safety equal to five.

» For deflection equations see page 10
Metric Extrusions

TS40-45LM BISLOT

Clear Anodized - 650058

SPECIFICATIONS
- Length: 144" (3.66 m)
- Weight: 1.058 lbs/ft (1.574 kg/m)
- Estimated Area: 0.885 in² (5.709 cm²)
- Moment of Inertia: 0.166 Ix = in² (6.909 cm²), 0.166 Iy = in² (6.909 cm²)

MACHINING SERVICES
- CTL: 660003
- Single Access Hole: 660028
- Single Anchor Fastener: 660020
- Tap 3/8-16: 660009
- Tap M10: 660121

BEAM SELECTION BY LOAD AND LENGTH

* Charts based on allowable loads related to yield strength with a margin of safety equal to five.

» For deflection equations see page 10
TS40-80M

SPECIFICATIONS
Length .............................................. 240*(6 m)
Weight .............................................. 2.851 lbs/ft (4.243 kg/m)
Estimated Area .................................. 2.423 in² (15.632 cm²)
Moment of Inertia
lx=6.21 in⁴ (25.848 cm⁴)
ly=2.271 in⁴ (94.526 cm⁴)

MACHINING SERVICES
CTL ................................................. 660006
Single Access Hole ................................ 660028
Single Anchor Fastener ......................... 660020
Tap 5/16 - 18 ..................................... 660024
Tap M8 ............................................. 660027

BEAM SELECTION BY LOAD AND LENGTH

* Charts based on allowable loads related to yield strength with a margin of safety equal to five.

» For deflection equations see page 10
**Metric Extrusions**

**TS40-80LM**

**SPECIFICATIONS**
- Length: 240" (6 m)
- Weight: 2.352 lbs/ft (3.500 kg/m)
- Estimated Area: 2.021 in² (12.981 cm²)
- Moment of Inertia:
  - Ix = 495 in⁴ (20.603 cm⁴)
  - Iy = 1761 in⁴ (73.298 cm⁴)

**MACHINING SERVICES**
- CTL: 660006
- Single Access Hole: 660028
- Single Anchor Fastener: 660020
- Tap 5/16 - 18: 660024
- Tap M8: 660027

**BEAM SELECTION BY LOAD AND LENGTH**

*Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 10
**SPECIFICATIONS**

Length .................................................. 240" (6 m)
Weight .................................................. 2.318 lbs/ft (3.449 kg/m)
Estimated Area ....................................... 1.932 in² (12.464 cm²)
Moment of Inertia ................................. 0.481 Iₓ= in⁴ (20.020 cm⁴)
  1.713 Iᵧ= in⁴ (71.300 cm⁴)

**MACHINING SERVICES**

CTL .................................................. 660006
Single Access Hole .......................... 660028
Single Anchor Fastener ............... 660020
Tap 5/16 - 18 ................................. 660024
Tap M8 .............................................. 660027

**BEAM SELECTION BY LOAD AND LENGTH**

*Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 10
**Metric Extrusions**

**TS40-80LM 2 SLOT BIOPP**

Clear Anodized - 650066

**SPECIFICATIONS**

- **Length** 240" (6 m)
- **Weight** 2.303 lbs/ft (3.427 kg/m)
- **Estimated Area** 1.919 in² (12.380 cm²)
- **Moment of Inertia**
  - IX = in⁴ (19.937 cm⁴)
  - IY = in⁴ (71.258 cm⁴)

**MACHINING SERVICES**

- **CTL** 660006
- **Single Access Hole** 660028
- **Single Anchor Fastener** 660020
- **Tap 5/16 - 18** 660024
- **Tap M8** 660027

**BEAM SELECTION BY LOAD AND LENGTH**

*Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 10
TS40-80LM 4 SLOT

Clear Anodized - 650067

SPECIFICATIONS
Length .................................................. 240" (6 m)
Weight .................................................. 2.333 lbs/ft (3.471 kg/m)
Estimated Area ...................................... 1.944 in² (12.541 cm²)
Moment of Inertia .................................
  Ix = in² (20.145 cm²)
  Iy = in² (72.132 cm²)

MACHINING SERVICES
CTL ...................................................... 660006
Single Access Hole ......................... 660028
Single Anchor Fastener ................. 660020
Tap 5/16 - 18 ................................. 660024
Tap M8 ........................................ 660027

BEAM SELECTION BY LOAD AND LENGTH

* Charts based on allowable loads related to yield strength with a margin of safety equal to five.

» For deflection equations see page 10
Metric Extrusions

TS40-80VLM

SPECIFICATIONS
Length ........................................... 240" (6 m)
Weight .......................................... 2.082 lbs/ft (3.098 kg/m)
Estimated Area ................................. 1.661 in² (10.716 cm²)
Moment of Inertia
lx= .396 in⁴ (16.48 cm⁴)
ly= 1.513 in⁴ (62.98 cm⁴)

MACHINING SERVICES
CTL ................................................. 660006
Single Access Hole ......................... 660028
Single Anchor Fastener .................... 660020
Tap 5/16 - 18 .................................... 660024
Tap M8 ............................................. 660027

BEAM SELECTION BY LOAD AND LENGTH

CONCENTRATED LOAD @ CENTER SIMPLY SUPPORTED

UNIFORMLY DISTRIBUTED LOAD SIMPLY SUPPORTED

CONCENTRATED LOAD @ FREE END CANTILEVERED

UNIFORMLY DISTRIBUTED LOAD CANTILEVERED

* Charts based on allowable loads related to yield strength with a margin of safety equal to five.

» For deflection equations see page 10
TS80-80M

SPECIFICATIONS
Length................................. 240" (6 m)
Weight................................. 4.488 lbs/ft (6.679 kg/m)
Estimated Area........................ 4.006 in² (25.845 cm²)
Moment of Inertia ..................... lx = 4.289 in⁴ (178.522 cm⁴)
....................................... ly = 4.289 in⁴ (178.522 cm⁴)

MACHINING SERVICES
CTL ........................................... 660013
Single Access Hole .................... 660028
Single Anchor Fastener ............... 660020
Tap 5/16 - 18 ........................... 660031
Tap M8 ................................... 660032

BEAM SELECTION BY LOAD AND LENGTH

* Charts based on allowable loads related to yield strength with a margin of safety equal to five.

» For deflection equations see page 10
**Metric Extrusions**

**TS80-160M**

![Image of TS80-160M Extrusion]

**SPECIFICATIONS**
- Length: 240" (6 m)
- Weight: 8.384 lbs/ft (12.477 kg/m)
- Estimated Area: 6.987 in² (45.077 cm²)
- Moment of Inertia: $I_x = 7.901$ in⁴ (328.864 cm⁴)
  $I_y = 26.973$ in⁴ (1112.701 cm⁴)

**MACHINING SERVICES**
- CTL: 660008
- Single Access Hole: 660028
- Single Anchor Fastener: 660020
- Tap 5/16 - 18: 660012
- Tap M8: 660014

**BEAM SELECTION BY LOAD AND LENGTH**

**CONCENTRATED LOAD @ CENTER SIMPLY SUPPORTED**

**UNIFORMLY DISTRIBUTED LOAD SIMPLY SUPPORTED**

**CONCENTRATED LOAD @ FREE END CANTILEVERED**

**UNIFORMLY DISTRIBUTED LOAD CANTILEVERED**

*Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

**For deflection equations see page 10**