08  LINEAR MOTION FRACTIONAL
### DELUXE SINGLE FLANGE LINEAR BEARINGS - SHORT

![Image of a linear bearing](image1)

<table>
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### DELUXE SINGLE FLANGE LINEAR BEARINGS - LONG

![Image of a linear bearing](image2)

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» See page 221 for Linear Bearing Assembly and Adjustment Instructions.
» See page 221 for recommended load ratings.
DELUXE DOUBLE FLANGE SINGLE WIDE LINEAR BEARING - SHORT

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DELUXE DOUBLE FLANGE SINGLE WIDE LINEAR BEARING - LONG

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» See page 221 for Linear Bearing Assembly and Adjustment Instructions.
» See page 221 for recommended load ratings.
Linear Motion

DELUXE DOUBLE FLANGE DOUBLE WIDE LINEAR BEARING - SHORT

![Diagram of Deluxe Double Flange Double Wide Linear Bearing - Short]

**RECOMMENDED FASTENERS**

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DELUXE DOUBLE FLANGE DOUBLE WIDE LINEAR BEARING - LONG

![Diagram of Deluxe Double Flange Double Wide Linear Bearing - Long]

**RECOMMENDED FASTENERS**

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» See page 221 for Linear Bearing Assembly and Adjustment Instructions.

» See page 221 for recommended load ratings.
ECONOMY SINGLE FLANGE LINEAR BEARINGS - SHORT

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ECONOMY SINGLE FLANGE LINEAR BEARINGS - LONG

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» See page 221 for recommended load ratings.
ECONOMY DOUBLE FLANGE SINGLE WIDE LINEAR BEARING - SHORT

ITEM#  SERIES  A   B   C   D   E   F   G   H   J   K   L   M   N   O   P   Q   R   S
657152   10  1.218"  .906"  .312"  .656"  1.468"  .812"  1.625"  .312"  1.000"  .094"  2.937"  2.937"  2.250"  .343"  1.875"  .438"  1.000"  .812"
657148   15  1.875"  1.500"  .375"  .750"  1.250"  1.235"  2.500"  .500"  1.500"  .125"  4.000"  4.000"  3.250"  .375"  2.812"  .656"  1.500"  1.245"

RECOMMENDED FASTENERS

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ECONOMY DOUBLE FLANGE SINGLE WIDE LINEAR BEARING - LONG

ITEM#  SERIES  A   B   C   D   E   F   G   H   J   K   L   M   N   O   P   Q   R   S
657153   10  1.218"  .906"  .312"  .656"  1.468"  .812"  1.625"  .312"  1.000"  .094"  .257"  4.000"  .500"  1.000"  2.937"  .343"  2.250"  .812"
657158   15  1.875"  1.500"  .375"  .750"  1.250"  1.235"  2.500"  .500"  1.500"  .125"  .328"  6.000"  .750"  1.500"  4.000"  .375"  3.250"  1.245"

RECOMMENDED FASTENERS

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» See page 221 for recommended load ratings.
# Economy Double Flange Double Wide Linear Bearing - Short

![Economy Double Flange Double Wide Linear Bearing - Short](image)

### Recommended Fasteners

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# Economy Double Flange Double Wide Linear Bearing - Long

![Economy Double Flange Double Wide Linear Bearing - Long](image)

### Recommended Fasteners

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<td>5/16-18 x 7/8&quot; SHCS</td>
<td>Economy</td>
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» See page 221 for recommended load ratings.
LINEAR BEARING MACHINING SERVICES

» We recommend applying Linear Brake on the side without the set screw if possible.
» Refer to linear bearing drawings on pages 214-219 for dimensions.

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To order linear bearing machining services, specify the linear bearing, the machining service and the brake hole location.

When ordering linear bearing machining services, make sure the linear bearing and the machining service are both the same series.

Example - 657095 - 660092 @ C4
**Linear Bearing Information**

**TSLOTS LINEAR BEARINGS**
The shimless linear bearing from Futura Industries provides accurate linear movement on TSLOTS extrusions. The bearing can be adjusted for the first time on an assembly or adjusted for wear while assembled to the application, providing that the adjustment screws are available to the adjustment tools. No shims, no disassembly, only accurate sliding.

1. Linear Bearing adjustable bearing pads are delivered in the open position. Slide the bearing on the extrusion to be used. (Fit will be loose, because of the open position.)

2. Using a 1/16 allen wrench for a 10 Series linear bearing, and a 3/32 allen wrench for 15 Series linear bearing, loosen the Flathead socket cap screws on each side of the linear bearing incrementally as follows. (Fig. #1)
   - 10 Series Bearing. 4-40 THREAD
   - 15 Series Bearing. 8-32 THREAD

   *Each flathead screw should be loosened the same amount, to provide even shimming on the extrusion.*

3. Tighten each set screw, using a .050 allen wrench for a 10 Series linear Bearing, and a 5/64 allen wrench for a 15 Series linear bearing, until each flat head screw is properly seated in each countersink. Hint: The amount of turns per set screw will be the same amount as for the flat head socket cap screw. (Fig. #2)

4. For fine tuning: Repeat steps 2 & 3.

   *Replacement bearing pads are available through Futura Industries or your distributor. Due to patent requirements, Futura Industries requires all users of the aforementioned product to only replace bearing pads as per the drawing below. Only the opposing sides have keyed bearing pads. (Fig. #3)*

---

**LINEAR BEARING LOAD RATINGS**

**LINEAR BEARING LOAD RATINGS FOR BOTH ECONOMY AND STANDARD BEARINGS**

<table>
<thead>
<tr>
<th>SERIES</th>
<th>LOAD A</th>
<th>FORCE B</th>
</tr>
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<tbody>
<tr>
<td>10 S</td>
<td>375 lbs</td>
<td>Force to move = 45 lbs</td>
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<tr>
<td>15 S</td>
<td>500 lbs</td>
<td>Force to move = 60 lbs</td>
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*Values are recommended load ratings not to be used for design purposes.*
**Linear Bearing Replacement Pads**

**Deluxe Bearing Replacement Pads - Keyed**

- Material: UHMW
- Low friction to create better linear motion
- Single keyed
- Premachined holes for easy mounting

### Keyed Pads

<table>
<thead>
<tr>
<th>Item#</th>
<th>Series</th>
<th>Length</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tbody>
<tr>
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<td>Short</td>
<td>1.870&quot;</td>
<td>.806&quot;</td>
<td>.403&quot;</td>
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<td>8-32</td>
<td>.150&quot;</td>
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<td>.250&quot;</td>
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<tr>
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<td>.620&quot;</td>
<td>.650&quot;</td>
<td>1.500&quot;</td>
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**Deluxe Bearing Replacement Pads - Flat**

- Material: UHMW
- Low friction to create better linear motion
- Single keyed
- Premachined holes for easy mounting

### Flat Pads

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<tr>
<th>Item#</th>
<th>Series</th>
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<td>.240&quot;</td>
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ECONOMY BEARING REPLACEMENT PADS

- Material: UHMW
- Low friction to create better linear motion
- Single keyed
- Premachined holes for easy mounting

KEYED PADS

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<thead>
<tr>
<th>ITEM#</th>
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<th>B</th>
<th>C</th>
<th>D</th>
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LINEAR BEARING SHIM STOCK PADS

- Material: Mylar
- Creates precise fit
- Loosen bearing and insert shim between bearing and pad

LINEAR BEARING SHIM STOCK

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<thead>
<tr>
<th>ITEM#</th>
<th>SERIES</th>
<th>COLOR</th>
<th>A</th>
<th>B</th>
<th>C</th>
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<td>.005&quot;</td>
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**Linear Bearing Brake Kits**

*Includes Handle, Stud and Washers
Only applies to brake kits

**LINEAR BEARING BRAKE HANDLE KITS**

- Adjustable brake kit that can be added to any bearing
- Quick release to allow movement and easy to secure to semi-permanent position
- Machining required for linear bearing

### L - HANDLE KIT

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<thead>
<tr>
<th>ITEM#</th>
<th>SERIES</th>
<th>COLOR</th>
<th>MATERIAL</th>
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- Adjustable brake kit that can be added to any bearing
- Release to allow movement and easy to secure to semi-permanent position
- Machining required for linear bearing

### T - HANDLE KIT

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- Adjustable brake kit that can be added to any bearing
- Release to allow movement and easy to secure to semi-permanent position
- Machining required for linear bearing

### STAR - HANDLE KIT

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**HEX NUT BRAKE KIT**

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<td>657082</td>
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<td>5/16-18</td>
<td>.172&quot;</td>
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- Adjustable stop that can be added to any bearing
- Tightens to secure locking capability
- Machining required for linear bearing

**WING NUT BRAKE KIT**

<table>
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<th>ITEM#</th>
<th>SERIES</th>
<th>A</th>
<th>B</th>
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<th>D</th>
<th>E</th>
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<td>1.416&quot;</td>
<td>1.375&quot;</td>
<td>5/16-18</td>
<td>.150&quot;</td>
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</table>

- Adjustable stop that can be added to any bearing
- Tightens to secure locking capability
- Machining required for linear bearing
ECONOMY ROLLER WHEEL WITH BRASS BUSHING

- Use for guided linear motion
- Mounts to extrusion end or in T-Slot
- Made of high strength black nylatron
- Economy: brass bushing

<table>
<thead>
<tr>
<th>ITEM#</th>
<th>SERIES</th>
<th>COLOR</th>
<th>MATERIAL</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<td>.314&quot;</td>
<td>.625&quot;</td>
<td>1/4-20</td>
<td>.480&quot;</td>
<td>.240&quot;</td>
<td>.435&quot;</td>
<td>.125&quot;</td>
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<td>.812&quot;</td>
<td>.375&quot;</td>
<td>.750&quot;</td>
<td>5/16-18</td>
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<td>.314&quot;</td>
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<td>.125&quot;</td>
<td>.310&quot;</td>
<td>75 lbs</td>
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INCLUDED FASTENERS

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<tr>
<th>ROLLER #</th>
<th>SERIES</th>
<th>BOLT</th>
<th>T-NUT</th>
<th>WASHER</th>
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<tbody>
<tr>
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<td>10</td>
<td>1/4-20 Shoulder Bolt</td>
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<td>15</td>
<td>5/16-18 Shoulder Bolt</td>
<td>Economy</td>
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<tr>
<td>655223</td>
<td>10 to 15</td>
<td>1/4-20 Shoulder Bolt</td>
<td>Economy</td>
<td>Yes</td>
</tr>
</tbody>
</table>

DELUXE ROLLER WHEEL WITH BALL BEARINGS

- Use for guided linear motion
- Mounts to extrusion end or in T-Slot
- Made of high strength black nylatron
- Fasteners included
- Deluxe: ball bearings

<table>
<thead>
<tr>
<th>ITEM#</th>
<th>SERIES</th>
<th>COLOR</th>
<th>MATERIAL</th>
<th>A</th>
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<th>C</th>
<th>D</th>
<th>E</th>
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INCLUDED FASTENERS

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<th>WASHER</th>
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<tbody>
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<td>5/16-18 Shoulder Bolt</td>
<td>Economy</td>
<td>Yes</td>
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</tbody>
</table>
ROLLER WHEEL BRACKETS

- Ideal for framed doors
- Assembly part numbers include roller wheels
- Fasteners included for both assembly and bracket part numbers

<table>
<thead>
<tr>
<th>ITEM#</th>
<th>SERIES FOR EXTRUSION</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
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<th>T-NUT</th>
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<td>1/4-20 x 3/8&quot; Low Head SHCS</td>
<td>Standard</td>
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<tr>
<td>15</td>
<td>2 EA</td>
<td>5/16-18 x 5/8&quot; Low Head SHCS</td>
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</table>
ROLLER WHEEL ASSEMBLIES

- Ideal for framed doors
- Assembly part numbers include roller wheels
- Fasteners included for both assembly and bracket part numbers

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<th>ITEM #</th>
<th>SERIES</th>
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<td>1515</td>
<td>Deluxe</td>
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<td>1530</td>
<td>Economy</td>
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INCLUDED FASTENERS

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<tr>
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<th>SERIES</th>
<th>QTY</th>
<th>BOLT</th>
<th>T-NUT</th>
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</thead>
<tbody>
<tr>
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<td>1/4-20 x 3/8” LHSCS</td>
<td>Economy</td>
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<tr>
<td>699955 &amp; 651074</td>
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<td>2 ea</td>
<td>5/16-18 x 5/8” LHSCS</td>
<td>Economy</td>
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<th>ASSEMBLY PART #</th>
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