SECTION CONTENT

Straight
Curve
Straight Spur
Optional Equipment and Devices
WHY LS?

- Maximum conveyor length per AC drive available
- Economical conveyance of loads up to 75 lbs. or 15 lbs. per roller
- Easily add slaved components; curves, spurs and transfers
- Increased driving force with optional keyed spools and high tension bands
- Full line of standard modular accessories
- Common applications include box, tote or tray transportation and minimum pressure accumulation

**LINESHAFT CONVEYOR - STRAIGHT**

**1.4 ROLLER**

- A = Between Frame (BF) (1" Increments)
- B = Overall Length (OAL) (Any Increment)
- C = Top of Roller (TOR)
- D = Overall Width (OAW)

**1.9 ROLLER**

**SIDE MOUNTED DRIVE**

- 20" TO 25"
- 10 3/4"
### Lineshaft Conveyor - Curve

<table>
<thead>
<tr>
<th>Degree</th>
<th>1.4&quot;</th>
<th>1.9&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10&quot; - 28&quot;</td>
<td>13&quot; - 39&quot;</td>
</tr>
<tr>
<td>B</td>
<td>46&quot; - 64&quot;</td>
<td>49&quot; - 75&quot;</td>
</tr>
<tr>
<td>C</td>
<td>11&quot; - 88&quot;</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>36&quot;</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>30°, 45°, 60° and 90°</td>
<td></td>
</tr>
</tbody>
</table>

- **A** = Between Frame (BF) (1" Increments)
- **B** = Outside Radius (OR)
- **C** = Top of Roller (TOR)
- **D** = Inside Radius (IR)
- **E** = Degree

Taper and straight rollers available for curves.

### 1.4 Tapered Roller

- Between Frame Width: 1 1/2"
- Drive Belt: 2 3/4"
- Drive SPOOL: 2"
- SPOOL GUARD: 2"

### 1.9 Tapered Roller

- Between Frame Width: 1 1/2"
- Drive Belt: 2 3/4"
- Drive SPOOL: 2"
- SPOOL GUARD: 2"

### 30° Curve

- D = 12"

### 45° Curve

- D = 12"

### 60° Curve

- D = 12"

Note: 30° curves are supplied with 12" minimum tangents.
## Lineshaft Conveyor - Straight Spur

**A** = Between Frame (BF)  
**B** = Top of Roller (TOR)  
**C** = Short Rail Length  
**D** = Long Rail Length  
**E** = Trunk Line Displacement  
**F** = Take Off Displacement  
**G** = Throat  
**H** = Shelf Bracket Length

### 30° Straight Spur Conveyor

<table>
<thead>
<tr>
<th>A (in.)</th>
<th>C (in.)</th>
<th>D (in.)</th>
<th>E (in.)</th>
<th>F (in.)</th>
<th>G (in.)</th>
<th>H (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Frame Width</td>
<td>Short Rail Length</td>
<td>Long Rail Length</td>
<td>Trunk Line Displacement</td>
<td>Take Off Displacement</td>
<td>Throat</td>
<td>Shelf Bracket Length</td>
</tr>
<tr>
<td>10</td>
<td>15</td>
<td>36</td>
<td>23</td>
<td>10 15/16</td>
<td>23 1/4</td>
<td>30 13/16</td>
</tr>
<tr>
<td>11</td>
<td>16</td>
<td>48</td>
<td>28</td>
<td>15 7/8</td>
<td>37 3/4</td>
<td>44 11/16</td>
</tr>
<tr>
<td>12</td>
<td>17</td>
<td>60</td>
<td>32</td>
<td>13/16</td>
<td>58 9/16</td>
<td>12 15/16</td>
</tr>
<tr>
<td>13</td>
<td>18</td>
<td>72</td>
<td>37</td>
<td>15/16</td>
<td>65 3/8</td>
<td>23 3/8</td>
</tr>
<tr>
<td>14</td>
<td>19</td>
<td>84</td>
<td>42</td>
<td>21 3/16</td>
<td>95 5/16</td>
<td>36 9/16</td>
</tr>
</tbody>
</table>

### 45° Straight Spur Conveyor

<table>
<thead>
<tr>
<th>A (in.)</th>
<th>C (in.)</th>
<th>D (in.)</th>
<th>E (in.)</th>
<th>F (in.)</th>
<th>G (in.)</th>
<th>H (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Frame Width</td>
<td>Short Rail Length</td>
<td>Long Rail Length</td>
<td>Trunk Line Displacement</td>
<td>Take Off Displacement</td>
<td>Throat</td>
<td>Shelf Bracket Length</td>
</tr>
<tr>
<td>24</td>
<td>25</td>
<td>36</td>
<td>23</td>
<td>1/2</td>
<td>15/16</td>
<td>30 13/16</td>
</tr>
<tr>
<td>25</td>
<td>26</td>
<td>48</td>
<td>29</td>
<td>1/16</td>
<td>28 3/4</td>
<td>49 5/16</td>
</tr>
<tr>
<td>26</td>
<td>27</td>
<td>60</td>
<td>34</td>
<td>1/16</td>
<td>36 3/8</td>
<td>53 9/16</td>
</tr>
<tr>
<td>27</td>
<td>28</td>
<td>72</td>
<td>39</td>
<td>1/16</td>
<td>43 1/2</td>
<td>62 1/16</td>
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<td>28</td>
<td>29</td>
<td>84</td>
<td>44</td>
<td>1/16</td>
<td>50 3/4</td>
<td>68 3/4</td>
</tr>
</tbody>
</table>

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*Right Hand| Left Hand*

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<table>
<thead>
<tr>
<th>1.4” Roller</th>
<th>1.9” Roller</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10° - 28°</td>
</tr>
<tr>
<td>B</td>
<td>11° - 88°</td>
</tr>
</tbody>
</table>

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**Notes:**
- 30° Straight Spur Conveyor
- 45° Straight Spur Conveyor
- A = Between Frame (BF)  
- B = Top of Roller (TOR)  
- C = Short Rail Length  
- D = Long Rail Length  
- E = Trunk Line Displacement  
- F = Take Off Displacement  
- G = Throat  
- H = Shelf Bracket Length

---

*Image of conveyor system with dimensions and specifications.*
### 1.4" ROLLER

**MAXIMUM LENGTH (LINEAR FEET)**

<table>
<thead>
<tr>
<th>SPEED (FPM)</th>
<th>HP (Drive at End)</th>
<th>HP (Drive at Center)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1/2</td>
<td>3/4</td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>41</td>
<td>62</td>
</tr>
<tr>
<td>3</td>
<td>83</td>
<td>110</td>
</tr>
<tr>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>27</td>
<td>41</td>
</tr>
<tr>
<td>3</td>
<td>83</td>
<td>110</td>
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<tr>
<td>60</td>
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<td>2</td>
<td>27</td>
<td>41</td>
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<tr>
<td>3</td>
<td>41</td>
<td>61</td>
</tr>
<tr>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>3</td>
<td>27</td>
<td>40</td>
</tr>
<tr>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 1/2</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>30</td>
</tr>
</tbody>
</table>

**STANDARD SPECIFICATIONS**

- **ROLLERS** - 1.4" dia. x 18 ga. galvanized steel tubes, 5/16" spring retained hex axle, non-precision bearings with 1 1/2", 2" and 3" roller centers. 1.9" dia. x 16 ga. galvanized steel tubes, 7/16" spring retained hex axle, non-precision or precision bearings with 2", 3", 4" and 6" roller centers.
- **CURVE ROLLERS** - 1.4" dia. taper (1 1/2" to 1" dia) x 18 ga. zinc plated tube, 5/16" spring retained hex axle, non-precision bearings with 1 1/2" nominal roller centers. 1.9" dia. taper (2 1/2" to 1 11/16" dia.) x 14 ga. zinc plated tube, 7/16" spring retained hex axle, non-precision or precision bearings with 3" nominal roller centers.
- **FRAME** - 5 1/2" high x 1 1/2" flange x 12 ga. galvanized formed channel frames with bolt-on end couplers.
- **CONSTRUCTION** - Bolt-together frames, spreaders, end couplers and splice plates.
- **BETWEEN FRAME WIDTHS** - 1.4" dia. roller 10" to 28" and 1.9" dia. roller 13" to 39", both in 1" increments.
- **OVERALL LENGTH** - 1.4" dia. roller 3" to 70' and 1.9" dia. roller 3' to 110', both in any increment.
- **CURVE DEGREES** - 30°, 45°, 60° and 90°.
- **DRIVE STYLE** - Straight - Underhung, side mount or slave driven. Curve - Underhung or slave driven.
- **SPEED** - 25 to 120 FPM.

Expanded product parameters available. For more information see Tech Handbook.
## ROLLER AND FRAME SPECIFICATIONS

### Straight

<table>
<thead>
<tr>
<th>ROLLER DIAMETER</th>
<th>BEARINGS</th>
<th>TUBE DETAIL</th>
<th>AXLE DETAIL</th>
<th>ROLLER SPACING</th>
<th>MAXIMUM LOAD PER ROLLER</th>
<th>GALVANIZED FRAME</th>
<th>MAXIMUM LOAD PER PRODUCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4&quot;</td>
<td>Non-Precision</td>
<td>18 Ga.</td>
<td>5/16&quot;</td>
<td>Hex</td>
<td>Spring</td>
<td>1 1/2&quot;, 2&quot; and 3&quot;</td>
<td>10 lbs.</td>
</tr>
<tr>
<td>1.9&quot;</td>
<td>Non-Precision or ABEC Precision</td>
<td>16 Ga.</td>
<td>Galvanized</td>
<td>7/16&quot;</td>
<td>Hex</td>
<td>2&quot;, 3&quot;, 4&quot; and 6&quot;</td>
<td>15 lbs.</td>
</tr>
</tbody>
</table>

### Curve

<table>
<thead>
<tr>
<th>CURVE TYPE</th>
<th>INSIDE RADIUS</th>
<th>ROLLER DIAMETER</th>
<th>BEARINGS</th>
<th>TUBE DETAIL</th>
<th>AXLE DETAIL</th>
<th>ROLLER SPACING</th>
<th>MAXIMUM LOAD PER ROLLER</th>
<th>MAXIMUM LOAD PER PRODUCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>30°, 45°, 60°, 90°</td>
<td>36°</td>
<td>1.4&quot; Tapered</td>
<td>Non-Precision</td>
<td>18 Ga.</td>
<td>5/16&quot;</td>
<td>Hex</td>
<td>Spring</td>
<td>1 1/2&quot; Nominal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1 1/2&quot; - 1&quot;)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30°, 45°, 60°, 90°</td>
<td>36°</td>
<td>1.9&quot; Tapered</td>
<td>Non-Precision or ABEC Precision</td>
<td>14 Ga.</td>
<td>7/16&quot;</td>
<td>Hex</td>
<td>Spring</td>
<td>3&quot; Nominal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2 1/2&quot; - 1 11/16&quot;)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Optional Equipment and Devices

#### Side Guides

- **Fixed Angle Side Guides**
  - Standard 2" high or 6" high, 12 ga. formed angle
- **Fixed Channel Side Guides**
  - Standard 3 1/2" high, 12 ga. formed channel
- **Adjustable Channel Side Guides**
  - Standard 1 5/8" high x 1" high, 12 ga. formed channel, width and height adjustable
- **Adjustable Angle Side Guides**
  - Angle guides typically formed, width adjustable
- **UHMW Lined Fixed Angle Side Guides**
  - Replaceable UHMW face provides wear protection for angle guides
- **Adjustable Rail UHMW Side Guides**
  - Replaceable UHMW face provides wear protection on rails, width and height adjustable
- **Skatewheel Side Guides**
  - Vertically mounted skatewheels
- **Bead Rail Side Guides**
  - Vertically mounted, tightly spaced small wheels supported by axles and a metal channel
**SUPPORTS** - Available in single or multi-tier and with caster options for portability. Supports are designed to be bolted to the conveyor frame. Supports are shipped loose.

**Multi-Tier Supports** - 3” x 1 1/2” x 12 ga. formed channel leg uprights (1500 lbs. capacity)

**Knee Brace Supports** - Formed angle brace adds stability to conveyor and leg supports

**Portable H-Stands** - 3” x 1 1/2” x 12 ga. formed channel leg uprights (800 lbs. capacity)

**CEILING HANGERS** - Allows conveyor to be suspended from the ceiling. Threaded rod is attached to support steel under the conveyor frame. Ceiling attachments to threaded rod by others.

**END STOPS** - Allows product to stop at the end of a conveyor line. Fixed and adjustable end stops are available. Fixed stops can include fork cut outs for unloading.

**Fixed Angle Stops** - Formed angle end stop bolted to top flange of conveyor frame

**Fixed Channel Stops** - Formed channel end stop bolted to conveyor end coupling

**Fixed Roller Stops** - 1.9” dia. rollers mounted in formed angle brackets, bolted to the top flange of conveyor frame

**Adjustable End Stops** - Formed steel adjustable end stop bolted to conveyor frame with manually adjusted stop position. Height is not adjustable.

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**OPTIONAL EQUIPMENT AND DEVICES**

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**Ceiling Hangers** - Allows conveyor to be suspended from the ceiling. Threaded rod is attached to support steel under the conveyor frame. Ceiling attachments to threaded rod by others.

**End Stops** - Allows product to stop at the end of a conveyor line. Fixed and adjustable end stops are available. Fixed stops can include fork cut outs for unloading.

**Fixed Angle Stops** - Formed angle end stop bolted to top flange of conveyor frame

**Fixed Channel Stops** - Formed channel end stop bolted to conveyor end coupling

**Fixed Roller Stops** - 1.9” dia. rollers mounted in formed angle brackets, bolted to the top flange of conveyor frame

**Adjustable End Stops** - Formed steel adjustable end stop bolted to conveyor frame with manually adjusted stop position. Height is not adjustable.
OPTIONAL EQUIPMENT AND DEVICES

**BLADE STOPS** - Pneumatically or manually operated blade and roller stop that pops up between rollers in order to accumulate product.

*Pneumatic Pop-Up Blade Stops* - Used to stop products in the conveying line. Mounted to underside of conveyor. Pneumatic cylinder raises blade. Load capacity is rated for maximum accumulated back pressure of 75 lbs.

*Manual Pop-Up Blade Stops* - Used to stop products in the conveying line. Mounted to underside of conveyor. Side handle for manually raising blade. Load capacity is rated for maximum accumulated back pressure of 75 lbs.

**HERRINGBONE** - Consists of 2 parallel lanes powered by a common drive. Rollers are skewed in order to center product. Products can infeed from parallel lanes and discharge into a single lane.
**URETHANE BELT TRANSFER DEVICES**

**Standard Flow** - Slaved from other lineshaft sections. Transfer belts are raised pneumatically above conveying surface to transfer product at 90° onto another conveyor line.

**Reverse Flow** - Slaved from other lineshaft sections. Transfer belts are raised pneumatically above conveying surface to transfer product at 90° onto another conveyor line. Product transfers opposite that of the standard flow device.

**Load Capacity** - Maximum package weight is 75 lbs.

**Transfer Belts** - Four powered 3/8" dia. urethane belts are pneumatically lifted 3/4" above roller surface

**Belt Transfer Standard Belt Centers**

<table>
<thead>
<tr>
<th>Roller Diameter</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4&quot;</td>
<td>7 5/8&quot;</td>
<td>4 1/2&quot;</td>
<td>1 1/2&quot;</td>
<td>1/4&quot;</td>
<td>3&quot;</td>
</tr>
<tr>
<td>1.9&quot;</td>
<td>10 1/2&quot;</td>
<td>3 1/2&quot;</td>
<td>3&quot;</td>
<td>1/4&quot;</td>
<td>3 1/2&quot;</td>
</tr>
</tbody>
</table>

**Urethane Belt Transfer Options** - Drive package, custom belt centers, fifth belt strand optional, timing belt in place of jump chain and end guard kit.
URETHANE BELT TRANSFER DEVICES (CONTINUED)

Bi-Directional - Tread rollers are slaved from other lineshaft sections. Transfer belts are independently powered by a separate drive and are pneumatically raised above conveying surface to transfer products at 90°, in either direction, onto another conveyor line.

Dual Lane - Slaved from other lineshaft sections. Transfer belts are pneumatically raised above the conveying surface to transfer product at 90° onto another parallel conveying line. Available in split standard flow and reverse.

Load Capacity - Maximum package weight is 75 lbs.

Transfer Belts - Four powered 3/8" dia. urethane belts are pneumatically lifted 3/4" above roller surface

贝尔转移标准滚轮中心

<table>
<thead>
<tr>
<th>ROLLER DIAMETER</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4&quot;</td>
<td>7 5/8&quot;</td>
<td>4 1/2&quot;</td>
<td>1 1/2&quot;</td>
<td>1/4&quot;</td>
<td>3&quot;</td>
</tr>
<tr>
<td>1.9&quot;</td>
<td>10 1/2&quot;</td>
<td>3 1/2&quot;</td>
<td>3&quot;</td>
<td>1/4&quot;</td>
<td>3 1/2&quot;</td>
</tr>
</tbody>
</table>

Urethane Belt Transfer Options - Drive package, custom belt centers, fifth belt strand optional, timing belt in place of jump chain and end guard kit.
**OPTIONAL EQUIPMENT AND DEVICES**

**PNEUMATIC ROLLER BRAKE** - Bolts to spreaders underneath standard lineshaft conveyor straight sections. It is used to stop all rollers in a specific area to halt or accumulate product. Load capacity is rated for maximum accumulated back pressure of 75 lbs.

**SPRING ASSISTED LIFT GATE SECTION** - Power transmitted from other lineshaft sections at the infeed end. Gate sections provide easy access for personnel and equipment. The gate rests against a support which is mounted to the next conveyor in line. Power cannot be transmitted through the end of the gate. Another power supply must be supplied for conveyors beyond the end of the gate section. Springs provide counter-balancing forces to assist in raising and lowering of the gate. Available with fold-away legs for a self supporting gate.

**SKewed ROLLERS** - Utilized to align products to one side of the conveyor

**ROLLER COATINGS OR SLEEVES** - Rollers available with urethane and vinyl sleeves. Coatings available in cast urethane, millable urethane, black rubber, food grade and other materials based on the application.