### RIG-I-FLEX® 140 SERIES CURTAIN TRACKS

**SPECIFICATIONS:**

**RIG-I-FLEX® Model 140 (240) Curtain Tracks**

Curtain tracks Model 140(1400BL) shall be of 11 gauge extruded aluminum I-Beam construction consisting of a center rib and top, intermediate and bottom flanges. Each curtain carrier (Model 4201(BL)) shall be spaced on 12" centers and shall be of steel construction to include two nylon-tired ball-bearing wheels rolling on two separate parallel treads. Each curtain carrier shall consist of a free-moving plated swivel to accommodate curtain snap hook. Live-end (Model 1403) and Dead-end (Model 1404) pulley blocks shall be equipped with sleeve-bearing wheels adequately guarded. Nylon snap-on spacers shall be attached to wheel supports of curtain carriers. The manufacturer shall furnish two end stops (Model 1458(BL) & 1459(BL)) or hanging clamps (Model 14208(BL)). Stretch-resistant operating cord (Model 1728 for hand operating tracks and Model 3529 for machine operated tracks) shall have synthetic or wire center and shall be of 1/4" or 3/16" diameter. Curves require ball-bearing spindles (Models 1458(BL) & 1459(BL)) and ball-bearing idlers (Model 1460(BL)). 1-1/4" I.D. stiffening pipe or the equivalent shall be used to support both straight and curved areas of all suspended curved tracks.

Model 140(240) as manufactured by Automatic Devices Company of Allentown, PA.

**RIG-I-FLEX® Model 140-R (240-R) Curtain Tracks**

Curtain tracks Model 1400(1400BL) shall be of 11 gauge extruded aluminum I-Beam construction consisting of a center rib and top, intermediate and bottom flanges. Each curtain carrier (Model 4237(BL)) shall be spaced on 12" centers and shall be of steel construction to include two solid nylon wheels rolling on two separate parallel treads. Each curtain carrier shall consist of a free-moving plated swivel to accommodate curtain snap hook. Live-end (Model 1403) and Dead-end (Model 1404) pulley blocks shall be equipped with sleeve-bearing wheels adequately guarded. Nylon snap-on spacers shall be attached to wheel supports of curtain carriers. The manufacturer shall furnish two end stops (Model 1458(BL) & 1459(BL)) or hanging clamps (Model 14208(BL)). Stretch-resistant operating cord (Model 1728 for hand operating tracks and Model 3529 for machine operated tracks) shall have synthetic or wire center and shall be of 1/4" or 3/16" diameter. Curves require ball-bearing spindles (Models 1458(BL) & 1459(BL)) and ball-bearing idlers (Model 1460(BL)). 1-1/4" I.D. stiffening pipe or the equivalent shall be used to support both straight and curved areas of all suspended curved tracks.

Model 140-R(240-R) as manufactured by Automatic Devices Company of Allentown, PA.

**140 RIG-I-FLEX® CWANA code**

<table>
<thead>
<tr>
<th>Parts Included</th>
<th>140 (240)</th>
<th>140-R (240-R)</th>
<th>141 (241)</th>
<th>141-R (241-R)</th>
<th>142 (242)</th>
<th>142-R (242-R)</th>
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<tbody>
<tr>
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</table>

BL = Black Finish
2XX Series Track
Systems have a black finish.
RIG-I-FLEX® Model 141 (241) Curtain Tracks (Straight Track System)

Curtain tracks (Model 1400(BL)) shall be of 11 gauge extruded aluminum I-Beam construction consisting of a center rib and top, intermediate and bottom flanges. Each curtain carrier (Model 4201(BL)) shall be spaced on 12” centers and shall be of steel construction to include two nylon-tired ball-bearing wheels rolling on two separate parallel treads. Each curtain carrier shall consist of a free-moving plated swivel to accommodate curtain snap hook. Live-end (Model 1403-B(BL)) and Dead-end (Model 1404(BL)) pulley blocks shall be equipped with sleeve-bearing wheels adequately guarded. Nylon snap-on spacers shall be attached to wheel supports of curtain carriers. The manufacturer shall furnish two end stops (Model 4209(BL)) for placement at track ends and a tension floor pulley (Model 2865(BL)) for increasing cord tension. Track shall be rigidly supported from ceiling clamps (Model 1423(BL)) or hanging clamps (Model 4208(BL)). Stretch-resistant operating cord (Model 1728 for hand operating tracks and Model 3529 for machine operated tracks) shall have synthetic or wire center and shall be of 1/4” or 3/16” diameter. 1-1/4” I.D. stiffening pipe or the equivalent shall be used to support all areas of all suspended curved tracks.

Model 141(241) as manufactured by Automatic Devices Company of Allentown, PA.

RIG-I-FLEX® Model 142-R (242-R) Curtain Tracks (Walk-Along Track System)

Curtain tracks (Model 1400(BL)) shall be of 11 gauge extruded aluminum I-Beam construction consisting of a center rib and top, intermediate and bottom flanges. Each curtain carrier (Model 4201(BL)) shall be spaced on 12” centers and shall be of steel construction to include two nylon-tired ball-bearing wheels rolling on two separate parallel treads. Each curtain carrier shall consist of a free-moving plated swivel to accommodate curtain snap hook. Nylon snap-on spacers shall be attached to wheel supports of curtain carriers. Track shall be rigidly supported from ceiling clamps (Model 1423(BL)) or hanging clamps (Model 4208(BL)). Curves shall be formed on-the-job or at the factory. This model track system is for walk-along operation only and does not include pulleys or other operating hardware. 1-1/4” I.D. stiffening pipe or the equivalent shall be used to support both straight and curved areas of all suspended curved tracks.

Model 142(242) as manufactured by Automatic Devices Company of Allentown, PA.

RIG-I-FLEX® Model 141-R (241-R) Curtain Tracks (Straight Track System)

Curtain tracks (Model 1400(BL)) shall be of 11 gauge extruded aluminum I-Beam construction consisting of a center rib and top, intermediate and bottom flanges. Each curtain carrier (Model 4201(BL)) shall be spaced on 12” centers and shall be of steel construction to include two nylon-tired ball-bearing wheels rolling on two separate parallel treads. Each curtain carrier shall consist of a free-moving plated swivel to accommodate curtain snap hook. Live-end (Model 1403-B(BL)) and Dead-end (Model 1404(BL)) pulley blocks shall be equipped with sleeve-bearing wheels adequately guarded. Nylon snap-on spacers shall be attached to wheel supports of curtain carriers. The manufacturer shall furnish two end stops (Model 4209(BL)) for placement at track ends and a tension floor pulley (Model 2865(BL)) for increasing cord tension. Track shall be rigidly supported from ceiling clamps (Model 1423(BL)) or hanging clamps (Model 4208(BL)). Stretch-resistant operating cord (Model 1728 for hand operating tracks and Model 3529 for machine operated tracks) shall have synthetic or wire center and shall be of 1/4” or 3/16” diameter. 1-1/4” I.D. stiffening pipe or the equivalent shall be used to support all areas of all suspended curved tracks.

Model 141-R(241-R) as manufactured by Automatic Devices Company of Allentown, PA.
RIG-I-FLEX® MODEL 140 (240)

RIG-I-FLEX is a versatile I-beam track which has been engineered for both curved (Model 140 (240)) and straight (Model 141 (241)) cord operated systems as well as for "walk-along" (Model 142 (242)) systems. It was designed for medium weight curtains on stages and TV studios and for enclosing areas in industrial plants. **Overall track length for cord operated systems should not exceed 60’ for biparts or 40’ for one-way draws.**

Model 140(240) utilizes spindles and idler brackets (NOT INCLUDED IN CWANA PRICING) for guiding the operating cord along the curved areas. The track can be curved on-the-job or at the factory (optional).

Manually operated cord-drawn curved tracks require more effort than straight tracks. Therefore, motorized systems should be used, especially where sharp curves are involved.

NOTE: track can be curved to a 2’ minimum radius for curves up to 90 degrees. For systems with curves greater than 90 degrees or systems with multiple curves, please contact the factory.

Track must be solidly anchored to an overhead structure with ceiling clamps. Pipe backbones are recommended for suspended systems.

This track cannot be used for cord operated reverse curved or serpentine layouts.

MODEL 140-R (240-R)

Model 140-R(240-R) is identical to Model 140(240) except that No. 4237(BL) Single Carriers and No. 1438(BL) Master Carriers are used instead of No. 4201(BL) and No. 1402(BL).

MODELS 141 AND 141-R (241 AND 241-R)

Model 141 is identical to Model 140(240) except that it is ENTIRELY STRAIGHT IN LAYOUT and No. 1403-B(BL) Live-End Pulley is used instead of No. 1403. Model 141-R(241-R) is identical to Model 141(241) except that No. 4237(BL) Single Carriers and No. 1438(BL) Master Carriers are used.

MODELS 142 AND 142-R (242 AND 242-R)

Model 142(242) is recommended for stage and TV studio cyclorama installations where it is necessary that the operator walk the curtain to its opened and closed positions. The track is curved on-the-job and can be bent to a minimum radius of 2’ (layout dependent). No cord or pulleys are supplied with "walk-along" tracks. Model 4252(BL) Master Carriers are used with the systems.

Model 142-R(242-R) is identical to Model 142(242) except that No. 4237(BL) Single Carriers and No. 4253(BL) Master Carriers are used.

A scaled drawing or template must accompany each inquiry or order for model 140(240) RIG-I-FLEX® curved tracks. Drawings are required so that the correct number of spindles and idler brackets can be quoted or supplied. When ordering, advise whether the track is to be ceiling mounted or suspended.
RIG-I-FLEX® 140 SERIES CURTAIN TRACKS

No. 1400 (BL) Channel
1 - 10 oz.
11 gauge extruded aluminum, mill-finish or anodized black finish [BL Models]. Obtainable in unspliced lengths up to 20'. May be curved on the job to recommended minimum radius of 2' (layout dependent). Center flange prevents tilting of carrier. Approximately: 1" wide x 2-1/2" high.

No. 4201 (BL) Single Carrier
1 - 4 oz.

No. 1402 (BL) Master Carrier
1 - 11 oz.
Used with Model 140 and 141 systems. Pivoting block assembly constructed of plated steel supported from 4 nylon-tired ball-bearing wheels. Snap-on nylon spacers reduce noise and friction. Two cord connectors provided for clamping cord to carrier. Carrier width: Approximately 3-1/4".

No. 4237 (BL) Single Carrier
1 - 3 oz.
Used on Model 140-R, 141-R and 142-R. Carrier spacing: 12". Same construction as No. 4201 except equipped with 2 solid nylon wheels. Carrier width: Approximately 1-3/8".

No. 1439 (BL) Master Carrier
1 – 10.5 oz.
Used with Model 140-R and 141-R tracks. Pivoting block assembly constructed of plated steel supported from 4 solid nylon wheels. Snap-on nylon spacers reduce noise and friction. Two cord connectors provided for clamping cord to carrier. Carrier width: Approximately 3-1/4".

No. 4252 (BL) Walk-Along Master Carrier
1 – 8 oz.
Used with Models 422 and 142 tracks. Pivoting block assembly constructed of plated steel supported from 4 nylon-tired ball-bearing wheels. Snap-on nylon spacers reduce noise and friction. Carrier width: Approximately 3".

No. 1402 (BL) Master Carrier
1 - 11 oz.
Used with Model 140 and 141 systems. Pivoting block assembly constructed of plated steel supported from 4 nylon-tired ball-bearing wheels. Snap-on nylon spacers reduce noise and friction. Two cord connectors provided for clamping cord to carrier. Carrier width: Approximately 3-1/4".

No. 4253 Walk-Along Master Carrier
1 – 8 oz.
Used with Models 422-R and 142-R tracks. Pivoting block assembly constructed of plated steel supported from 4 nylon-tired ball-bearing wheels. Snap-on nylon spacers reduce noise and friction. Carrier width: Approximately 3".
**1402A MASTER CARRIER WITH OVERLAP ARM**

1 - 12 oz

Master carrier with extension arm to allow curtains to overlap without overlapping the tracks at center. Fixed overlap 1' in front of 1'. Swivels spaced 6" on center. Model 4252A available for walk-along operation.

Dimensions: 15-1/2" L x 3-1/4" W

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**No. 4251 Scenery Carrier**

1 – 1 lb. 5 oz.

Used to traverse medium weight scenery panels. Normally used in pairs on a single panel. Maximum panel weight (2 carriers per panel) is 30 pounds.

Approximately: 4-3/8" long x 4-7/8" high x 1-1/2" wide.

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**No. 1403 Live End Pulley**

1 - 1 lb. 14 oz.

Painted steel construction, equipped with 2 oil-impregnated sleeve-bearing nylon wheels. Anchored to track end, no drilling required.

Pulley width: Approximately 7".

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**No. 1403-B Live End Pulley**

1 - 1 lb. 14 oz.

Used with straight track systems (Models 141 and 141-R). Same construction and components as 1403.

Pulley width: Approximately 3-1/4".

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**No. 1404 Dead End Pulley**

1 - 1 lb. 1 oz.

Painted steel construction, equipped with 1 oil-impregnated sleeve-bearing nylon wheel. Anchors to track end. No drilling required.

Pulley width: Approximately 5-1/4".

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**No. 1403-F Flying Live End Pulley**

1 – 2 lbs.

Used when track is operated by a flying type machine. Pulley routes operating lines 180 degrees and parallel above track, to the track-mounted flying machine.

Pulley width: 2-1/4".

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**No. 1403-A Center Take Off Live End Pulley**

1 – 3 lbs.

Used when the operating lines need to be routed perpendicular to the track.

NOTE: You must order an additional 1404 Dead-End pulley and MB-3 mule block when using this device. Additional pulleys may be needed to mule the operating line to the machine or floor pulley.

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**No. 4224 (BL) Splicing Clamp**

1 pr. - 11 oz.

Lock plate for joining track sections assuring proper vertical and horizontal track alignment. Track must be straight at splices.

Approximately: 8-1/4" long x 1" wide.
<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Weight</th>
<th>Use/Capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>4208 (BL) Ceiling Clamp</td>
<td>Used with Model 4208 Hanging Clamp (not included). Provides a 3/8&quot; hole parallel with the ceiling (perpendicular to the mounting hole of the 4208). Can be used with 2808, 1708, 4208 clamps.</td>
<td>1 - 6 oz.</td>
<td>Recommended spacing: 5’ with additional units added at curves and in stack areas. For use on ceiling-mounted installations. Adjustable to any location. Top plate can be mounted first, with the track clips added as the channel is installed. Approximately: 3-1/4&quot; wide x 1-1/2&quot; long.</td>
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<tr>
<td>4208 (BL) Hanging Clamp</td>
<td>Recommended spacing: 4’ with additional units at curves and in stack areas. Pipe batten recommended for suspended curved tracks.</td>
<td>1 pr. - 2-1/2 oz.</td>
<td>Used to mount 2 tracks, parallel with each other when the tracks are suspended. Standard track separation is 6&quot; center to center (NOTE: fabric will rub if 2 stacked curtains pass). Painted steel construction with 3 holes for attaching suspension hardware (not included). Approximately: 1&quot; wide x 1-3/16&quot; long x 2-1/8&quot; high.</td>
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<tr>
<td>1409 End Stop</td>
<td>Prevents carriers from moving beyond selected position in track. Used also as cord guide.</td>
<td>1 - 2 oz.</td>
<td>Cannot be used with Rotodrapers®. Proper hardware supplied with Rotodrapers®.</td>
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<tr>
<td>4020 (BL) Threaded Rod</td>
<td>Used with Model 4208 Hanging Clamp (not included). Provides a 3/8&quot; hole parallel with the ceiling (perpendicular to the mounting hole of the 4208).</td>
<td>1 – 4 oz.</td>
<td>For use with continuously curved track systems. Provides wider track spacing in the overlap. Suspended systems only. Approximately: 6&quot; wide x 1-1/2&quot; long x 3/8&quot; deep. Note: 2 required, sold individually.</td>
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<tr>
<td>1403 Double Track Wall Bracket</td>
<td>Used to mount 2 tracks, parallel with each other, to side walls. Standard track separation is 6&quot; center to center (NOTE: fabric will rub if 2 stacked curtains pass). Projection of track closest to the wall is 6&quot; (to center of track). Painted steel construction with 3 holes for attaching vertical leg. Also available in a single track version, Model 1483S.</td>
<td>1 – 2 lbs. 4 oz.</td>
<td>Approximately 1-3/8&quot;. Cannot be used with Rotodrapers®. Proper hardware supplied with Rotodrapers®.</td>
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<tr>
<td>407 Lap Clamp</td>
<td>For securing double-sectioned track at center overlap. Suspended systems only.</td>
<td>1 - 7 oz.</td>
<td>Cannot be used with Rotodrapers®. Proper hardware supplied with Rotodrapers®.</td>
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<tr>
<td>1407-A Lap Clamp</td>
<td>For use with continuously curved track systems. Provides wider track spacing in the overlap. Suspended systems only. Approximately: 6&quot; wide x 1-1/2&quot; long x 3/8&quot; deep. Note: 2 required, sold individually.</td>
<td>1 – 7 oz.</td>
<td>Cannot be used with Rotodrapers®. Proper hardware supplied with Rotodrapers®.</td>
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<tr>
<td>1482 Double Track Hanger</td>
<td>Used to mount 2 tracks, parallel with each other when the tracks are suspended. Standard track separation is 6&quot; center to center (NOTE: fabric will rub if 2 stacked curtains pass). Painted steel construction with 3 holes for attaching suspension hardware (not included). Approximately: 10&quot; long x 1-1/2&quot; high x 1-1/2&quot; deep.</td>
<td>1 – 20 oz.</td>
<td>Approximately: 10&quot; long x 1-1/2&quot; high x 1-1/2&quot; deep.</td>
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<tr>
<td>1407 End Stop</td>
<td>Identical to 4208 except installed in inverted position at bottom of channel. Used with track Models 142 &amp; 142-R.</td>
<td>1pr – 2 oz.</td>
<td>Identical to 4208 except installed in inverted position at bottom of channel. Used with track Models 142 &amp; 142-R. Note: 2 required, sold individually.</td>
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<tr>
<td>1420 (BL) Ceiling Clamp</td>
<td>Recommended spacing: 5’ with additional units added at curves and in stack areas. For use on ceiling-mounted installations. Adjustable to any location. Top plate can be mounted first, with the track clips added as the channel is installed. Approximately: 3-1/4&quot; wide x 1-1/2&quot; long.</td>
<td>1 - 6 oz.</td>
<td>Recommended spacing: 5’ with additional units added at curves and in stack areas. For use on ceiling-mounted installations. Adjustable to any location. Top plate can be mounted first, with the track clips added as the channel is installed. Approximately: 3-1/4&quot; wide x 1-1/2&quot; long.</td>
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<tr>
<td>1423 (BL) Ceiling Clamp</td>
<td>Used to mount 2 tracks, parallel with each other, to side walls. Standard track separation is 6&quot; center to center (NOTE: fabric will rub if 2 stacked curtains pass). Projection of track closest to the wall is 6&quot; (to center of track). Painted steel construction with 3 holes for attaching vertical leg. Also available in a single track version, Model 1483S.</td>
<td>1 – 2 lbs. 4 oz.</td>
<td>Approximately 1-3/8&quot;. Cannot be used with Rotodrapers®. Proper hardware supplied with Rotodrapers®.</td>
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<tr>
<td>1407-A Lap Clamp</td>
<td>For use with continuously curved track systems. Provides wider track spacing in the overlap. Suspended systems only. Approximately: 6&quot; wide x 1-1/2&quot; long x 3/8&quot; deep. Note: 2 required, sold individually.</td>
<td>1 – 7 oz.</td>
<td>Cannot be used with Rotodrapers®. Proper hardware supplied with Rotodrapers®.</td>
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</table>
No. 2865 (BL) Tension Floor Pulley
1 - 2 lbs.  
Plated steel construction, equipped with 1 oil-impregnated sleeve-bearing nylon wheel. Tension spring provides cord tension. Can be either wall or floor mounted. Spring-loaded latch maintains wheel in uppermost position during cording. Approximately: 1-1/2" long x 3-1/2" wide x 13" high.

No. 1478 (BL) Suspension Strap  
1 pr. – 2 oz.  
Used to attach track to parallel overhead pipe batten. Strap length 6" from bottom of pipe. Model 1478-AL available with 8" strap length.

No. 1458 (BL) Spindle A  
1 - 14 oz.  
Consists of steel tubing equipped with 2 ball-bearings. Used for guiding cord around curves. Also has ball-bearing wheel for guiding return cord. Always placed on Live-End half of track on inside of curve. Minimum pocket width to accommodate spindles and idlers: Approximately 8".  
Not included with CWANA systems. Must be ordered separately.

No. 1459 (BL) Spindle B  
1 - 12 oz.  
Same as No. 1458 but without ball-bearing wheel. Always placed on Dead-End half of track on inside of curve. Minimum pocket width to accommodate spindles and idlers: Approximately 8".  
Not included with CWANA systems. Must be ordered separately.

No. 1460 (BL) Idler Bracket  
1 - 10 oz.  
Bracket includes ball-bearing wheel for guiding cord around curve. Always placed on the Dead-End half of the track on outside of curve.  
Not included with CWANA systems. Must be ordered separately.

No. 1460-A (BL)  
Used only at the overlap for track systems with a continuous radius.  
Not included with CWANA systems. Must be ordered separately.

No. 1478-A (BL) Suspension Strap  
1 pr. – 2 oz.  
Used to attach track to parallel overhead pipe batten. Strap length 6" from bottom of pipe. Model 1478-AL available with 8" strap length.

No. 1481-A (BL) Twist Strap  
1 – 2 oz.  
Used with Model 4208 hanging clamp (not included) and pipe clamp (also not included) to attach track to perpendicular overhead pipe batten. Strap length 4".

No. 1481 (BL) Twist Strap  
1 – 2 oz.  
Used with Model 4208 hanging clamp (not included) and pipe clamp (also not included) to attach track to perpendicular overhead pipe batten. Strap length 4".

No. 2865 (BL) Tension Floor Pulley  
1 - 2 lbs.  
Plated steel construction, equipped with 1 oil-impregnated sleeve-bearing nylon wheel. Tension spring provides cord tension. Can be either wall or floor mounted. Spring-loaded latch maintains wheel in uppermost position during cording. Approximately: 1-1/2" long x 3-1/2" wide x 13" high.
RIG-I-FLEX® 140 SERIES CURTAIN TRACKS

No. BT-1 Bending Tool
1 - 19 lbs. 4 oz.
For use with Models 1300, 1400 & 4200 tracks.
See page 81 for description of use.
Approximately: 48" long x 15" wide x 9" high.

No. BT-2 Bending Tool
1 - 4 lbs. 14 oz.
For use with Models 1300 & 1400 only.
See page 81 for description of use.
Approximately: 7-1/2" long x 9-1/2" wide x 3-1/2" high.

No. 1713 Pipe Clamp
1 pr. - 5 oz.
For 1" I.D. Schedule 40 pipe

No. 1714 Pipe Clamp
1 pr. - 7 oz.
For 1-1/4" I.D. Schedule 40 pipe

No. 1715 Pipe Clamp
1 pr. - 8 oz.
For 1-1/2" I.D. Schedule 40 pipe

No. BT-1 Bending Tool
1 - 19 lbs. 4 oz.
For use with Models 1300, 1400 & 4200 tracks.
See page 81 for description of use.
Approximately: 48" long x 15" wide x 9" high.

No. BT-2 Bending Tool
1 - 4 lbs. 14 oz.
For use with Models 1300 & 1400 only.
See page 81 for description of use.
Approximately: 7-1/2" long x 9-1/2" wide x 3-1/2" high.

No. 1713 Pipe Clamp
1 pr. - 5 oz.
For 1" I.D. Schedule 40 pipe

No. 1714 Pipe Clamp
1 pr. - 7 oz.
For 1-1/4" I.D. Schedule 40 pipe

No. 1715 Pipe Clamp
1 pr. - 8 oz.
For 1-1/2" I.D. Schedule 40 pipe

Need additional flexibility?
Consider adding a Rotodraper® to your track system.

No. 1728 Cord
100' - 2 lbs. 4 oz.
Synthetic center and stretch-resistant.
For manually-operated tracks.
1/4" (No. 8)

No. 3529 Cable
100' - 2 lbs. 7 oz.
Wire center with woven polyester cover.
Used with drum-drive machines.
3/16" (No. 6)

No. 14 Rotodraper®
1 - 4-1/2 lbs.
For use with 1400 and 4200 track.
Brackets formed of 11 gauge steel. Can support 75 lbs. maximum weight. Two Pipe Clamps supplied (clamps for 1" pipe standard). Two No. 400-C Clamps provided for connecting towlines.

Outfitting a TV or Photo Studio?
Don’t forget about our full line of track switches. Track switches make it easy to change backdrops, scenery panels, fabric and chromakey colors. You can “park” the various drops on side tracks and bring them onto the main track as needed.
Refer to page 76-78 for additional information.

2-Way Switcher-I®
Parallel Switch PTS-2
5-Way Switcher
1. 1403 Live End Pulley
2. 1423 Ceiling Clamp (4208 Hanging Clamp May Be Substituted)
3. 4201 Single Carrier
4. 1458 Spindle "A" (Quantity Will Vary)
5. 1460A Idler Bracket
6. 1459 Spindle "B" (Quantity Will Vary)
7. 1407A Lap Clamp (Quantity Will Vary)
   The 1407A is wider than 1407 to allow the two 1459 to fit in the overlap.
8. 1402 Master Carrier
9. 1404 Dead End Pulley
10. 1460 Idler Bracket
11. 1409A End Stop
12. 1400 Track to Floor Pulley or Machine Operator

Automatic Devices Company
2121 S. 12th St. Allentown, PA 18103

This drawing has been prepared as a service to our customer and is intended only to be suggestive in nature and is not to be used as an actual installation drawing. Prevailing job conditions and accepted practices must be taken into account when the equipment is installed.

Size Date
A 06/25/98

Installation Instructions
Description 140 Track Assembly Gar
Continuous Bi-Part

Scale NTS Sheet 1 of 1 DWG No. II-140CCBP-98
1. 1403 Live End Pulley
2. 1404 Dead End Pulley
3. 1402 Master Carrier
4. 1407 Lamp Clamp
5. 1409A End Stop
6. 1458 Spindle “A” (Quantities Will Vary)
7. 1459 Spindle “B” (Quantities Will Vary)
8. 1460 Idler (Quantities Will Vary)
9. 1423 Ceiling Clamp (4208 Hanging Clamp May Be Substituted)
10. 1400 Channel (Quantities Will Vary)
1. 1402 MASTER CARRIER  
2. 1403 LIVE END PULLEY  
3. 1404A DEAD END PULLEY  
4. 1458 SPINDLE “A” - (QUANTITIES WILL VARY)  
5. 4201 SINGLE CARRIER  
6. 1423 CEILING CLAMP (4208 HANGING CLAMP MAY BE SUBSTITUTED)  
7. 1400 CHANNEL  

AUTOMATIC DEVICES COMPANY  
2121 S. 12TH ST. ALLENTOWN, PA 18103  

THIS DRAWING HAS BEEN PREPARED AS A SERVICE TO OUR CUSTOMER AND IS INTENDED ONLY TO BE SUGGESTIVE IN NATURE AND IS NOT TO BE USED AS AN ACTUAL INSTALLATION DRAWING. PREVAILING JOB CONDITIONS AND ACCEPTED PRACTICES MUST BE TAKEN INTO ACCOUNT WHEN THE EQUIPMENT IS INSTALLED.

INSTALLATION INSTRUCTIONS  
140 TRACK ASSEMBLY  
CURVED 2-90° 1-WAY  

DRAWN BY:  
APPROVED BY:  
DESCRIPTION:  
GAR:  
SCALE: NTS  
SHEET: 1 OF 1  
DWG NO: 11-140C90-98  

REV  DATE:  
A  07/10/98
1. 1403A LIVE END PULLEY
2. 1404 DEAD END PULLEY
3. 1402 MASTER CARRIER
4. 4201 SINGLE CARRIER
5. 1407 LAP CLAMP
6. 4208 HANGING CLAMP (1423 CEILING CLAMP MAY BE SUBSTITUTED)
7. 1409A END STOP
8. 1400 TRACK
9. OPERATING CORD/CABLE

TO FLOOR PULLEY OR MACHINE OPERATOR
NOTES:

1. TRACK SYSTEM MUST BE MOUNTED DIRECTLY TO AN OVERHEAD STRUCTURE USING EITHER NO. 1423 CEILING CLAMPS OR NO. 4208 HANGING CLAMPS.

2. CABLE GOES TO FLOOR MOUNTED DRUM DRIVE CURTAIN MACHINE.

3. TRACK MUST BE CURVED WITH THIS SURFACE ON THE INSIDE OF THE BEND.
NOTES:

1. TRACK SYSTEM MUST BE MOUNTED DIRECTLY TO AN OVERHEAD STRUCTURE USING EITHER NO. 1423 CEILING CLAMPS OR NO. 4208 HANGING CLAMPS.
2. CORD GOES TO FLOOR PULLEY FOR HAND OPERATION.
3. TRACK MUST BE CURVED WITH THIS SURFACE ON THE INSIDE OF THE BEND.
1. 1400 CHANNEL
2. 4252 MASTER CARRIER
3. 4201 SINGLE CARRIER
4. 1423 CEILING CLAMP (4208 HANGING CLAMP MAY BE SUBSTITUTED)
5. 4209 END STOP
**NOTE:** NUMBER OF A,B,C VARIES ACCORDING TO RADIUS OF CURVES.

A—1458 SPINDLE  
B—1459 SPINDLE  
C—1460 IDLER BRACKET  
D—1403—A CENTER TAKE-OFF  
E—1409 END STOP

CHOICE OF CENTER TAKE-OFF POSITIONS WITH TRACK OVERLAP AS SHOWN

*WAS 719-2*
PAINTED OR POWDER COATED (BLACK) FORMED STEEL

MOLDED NYLON WHEEL

NYLON WHEELS WITH BRASS OR STEEL REDUCTION BUSHINGS
USED ONLY WITH STRAIGHT LAYOUTS, BI-PART OPERATION.

CANNOT BE USED WITH CURVED LAYOUTS.
MATERIAL: CRS PAINTED SATIN BLACK.
SWIVELS AND CARRIER BODIES - PLATED CRS
FOR USE WITH 1400 AND 4200 TRACKS ONLY
FOR WALK-ALONG OPERATION ONLY
THIS SECTION VIEW IS FOR TRACKS THAT ARE ALONG THEIR ENtIRE RUN ONLY. IT SHOULD NOT BE USED IF THE TRACKS ARE CURVED AT THE OVERLAP (CONTINUOUSLY CURVED TRACK SYSTEMS). FOR CONTINUOUSLY CURVED TRACK SYSTEMS SEE DRAWING # A-140SEC-CUROL-07.

THIS IS A SUSPENDED TRACK SYSTEM WITH NO PIPE BACKBONE.
THIS SECTION VIEW IS FOR TRACKS THAT ARE STRAIGHT AT THE OVERLAP ONLY. IT SHOULD NOT BE USED IF THE TRACKS ARE CURVED AT THE OVERLAP (CONTINUOUSLY CURVED TRACK SYSTEMS). FOR CONTINUOUSLY CURVED TRACK SYSTEMS SEE DRAWING # A-140SEC-CUROL-07.

THIS IS A SUSPENDED TRACK SYSTEM WITH PIPE BACKBONE.
1407A
LAP CLAMP

1408 HANGING CLAMP

1460
IDLER

1458
SPINDLE

1459
SPINDLE

93/8"

THIS SECTION VIEW IS FOR TRACKS THAT ARE STRAIGHT AT THE OVERLAP BUT CURVED ELSEWHERE IN THE LAYOUT. IT SHOULD NOT BE USED IF THE TRACKS ARE CURVED AT THE OVERLAP (CONTINUOUSLY CURVED TRACK SYSTEMS). FOR CONTINUOUSLY CURVED TRACK SYSTEMS SEE DRAWING # A-140SCUROL-10.

THIS IS A SUSPENDED TRACK SYSTEM WITH NO PIPE BACKBONE.
THIS SECTION VIEW IS FOR TRACKS THAT ARE STRAIGHT AT THE OVERLAP ONLY. IT SHOULD NOT BE USED IF THE TRACKS ARE CURVED AT THE OVERLAP (CONTINUOUSLY CURVED TRACK SYSTEMS). FOR CONTINUOUSLY CURVED TRACK SYSTEMS SEE DRAWING # A-140SEC-STROL-07.

THIS IS A SUSPENDED TRACK SYSTEM WITH PIPE BACKBONE.
FOR MOUNTING

VIEW A

VIEW B

NOTES:

1. CARRIER BODY PAINTED STEEL CONSTRUCTION.
2. NYLON-TIRED BALL-BEARING WHEELS.
3. FOR USE WITH 1400 TRACK ONLY.
SWITCH MUST BE DIRECTLY MOUNTED TO OVERHEAD STRUCTURE.

SWITCH MUST BE RIGIDLY MOUNTED TO OVERHEAD STRUCTURE USING MOUNTING HOLES PROVIDED IN THE BASE.

ADJOINING TRACKS (4) MUST HAVE A MINIMUM OF 4" STRAIGHT TRACK FOR SPLICING TO SWITCH.

MODEL 424 SPlice CLAMPS (4) SUPPLIED WITH SWITCH.

VIEW A-A
(LOOKING UP AT SWITCH)

A

MOUNTING HOLES (TYP)

B

HOLES FOR SPlicing ADJOINING TRACK

Cord and weight (2) used to operate switch from ground level. Using PR-1 positioning pole (not included).

SECTION B-B

8"

13"

18-1/2"

57"

60"

10"

5-1/4"

46-1/2"

B-PTS2-1-10
MATERIAL - PAINTED 1-1/2" x 1-1/2" ANGLE STEEL

3/16" x 3/4" BOLT WITH NUT & LOCKWASHER

1 1/2" x 1 1/2" x 1/8" ANGLE IRON

1400 TRACK

AUTOMATIC DEVICES COMPANY
2121 S. 12TH ST. ALLENTOWN, PA 18103

THIS DRAWING HAS BEEN PREPARED AS A SERVICE TO OUR CUSTOMER AND IS INTENDED ONLY TO BE SUGGESTIVE IN NATURE AND IS NOT TO BE USED AS AN ACTUAL INSTALLATION DRAWING. PREVAILING JOB CONDITIONS AND ACCEPTED PRACTICES MUST BE TAKEN INTO ACCOUNT WHEN THE EQUIPMENT IS INSTALLED.

SIZE A 06/08/10
DRAWN BY DJL
APPROVED BY
DESCRIPTION 1482 DOUBLE TRACK HANGER
SCALE 3/4"=1" SHEET 1 OF 1 DWG NO. A-1482-10
1. MATERIAL: PLATED STEEL.

2. USED TO ATTACH TRACK TO PERPENDICULAR OVERHEAD PIPE BATTEN.

PIPE GRID
1-1/4" SCH. 40 PIPE (SUPPLIED BY OTHERS)

NO. 1481-A TWIST STRAP 1 2

NO. 4208 HANGING CLAMP (NOT INCLUDED)

NO. 1400 TRACK (NOT INCLUDED)
NOTES:

1. MATERIAL: PLATED STEEL.

2. USED TO ATTACH TRACK TO PARALLEL OVERHEAD PIPE BATTEN.

PIPE GRID
1-1/2" SCH. 40 PIPE

NO. 1478-A SUSPENSION STRAP

NO. 4208 HANGING CLAMP (NOT INCLUDED)

NO. 1400 TRACK
PIPE CLAMP BOLTS TO TOP HOLE OF STRAP

MATERIAL:
PLATED FORMED STEEL.

USED WITH PIPE CLAMP TO SUSPEND TRACK FROM PARALLEL PIPE OF OVERHEAD PIPE GRID

4201 SINGLE CARRIER, 1400 TRACK & 4208 HANGING CLAMP SHOW FOR ILLUSTRATIVE PURPOSES ONLY. THEY ARE NOT INCLUDED WITH 1478 STRAP
OUTSIDE HOLES CAN BE USED IF BOLTING THROUGH BEAM OR IF CENTER SCREW CANNOT BE USED.

MATERIAL: PLATED FORMED STEEL
MATERIAL: CRS PAINTED SATIN BLACK.
SWIVELS AND CARRIER BODIES - PLATED STEEL
FOR USE WITH 1400 AND 4200 TRACKS ONLY
FOR MANUAL CORD AND MACHINE OPERATION
NOTES:

1. USE NO. 14A ROTODRAPER WITH 1400 TRACK ONLY.
2. INDEXING PLATE (22-1/2° INCREMENTS).
3. #14W WHEEL ASSEMBLY.

1" SCH. 40 PIPE BATTEN (OPTIONAL)
NOTES:

1. USE NO. 14 ROTODRAPER WITH 1400 TRACK ONLY.

2. #14W WHEEL ASSEMBLY.

1" SCH. 40 PIPE BATTEN (OPTIONAL)
I. SUSPENDED TRACK  (bi-part operation)

1. If the track is to be curved in the field, curve it now. Please refer to ADC Form 404 for the curving procedure for this track, using the BT-2 bending tool. If track must be spliced, this should also be done at this time. Please refer to splicing instructions for suspended track systems (DWG A-4224). Make sure that the track sections will not be too large to handle.

2. Attach the live-end and dead-end pulleys to the appropriate ends of the track with the hardware provided. To properly align the live-end pulley make sure that it is on the inside of the curve and that the top wheel of the pulley is closest to the end of the track.

   NOTE: The live-end pulley mounting plate is supplied with two (2) sets of mounting holes to allow the pulley wheels to be reversed allowing the assembly to be mounted at either end of the track system.

   Attach a 1309 end stop through the track in front of the live-end pulley to prevent the curtain from interfering with the pulley's operation.

3. Clamp the two sections of track together at the center lap with the lap clamps and hardware provided. The track section with the live-end pulley should be the "front" (audience side) track at the center overlap.

4. Insert an equal amount of single carriers into the two (2) track sections. The carrier can be inserted at the open ends of the track at the center overlap. Be sure to attach the 4225 rubber bumpers to the carrier flanges facing the nearest end pulley, these bumpers help to reduce the operating noise of the track system. Refer to ADC form 743 for further information. Insert a master carrier into each side of the track system, making sure that the cord connectors on each master face the inside of the track curves.

5. Install the combination end-stop/cord hook assembly at the center overlap. This device will be used to guide the cord through the overlap. Hanging clamps can also be attached at this time. Spacing for the hanging clamps is 4 feet or less, with additional supports used at curves and the ends of the track.

6. The location of the spindles and idlers varies according to the amount of curve and the curve's radius. The spindles and idlers always mount to the track between the top and middle flange. Refer to ADC form 442 for further information.
Track layouts featuring a continuous curve require 1458 Spindle B's and 1460-A idlers at the overlap for cord alignment. The large 1407-A lap clamps is also used to provide 4" spacing between the track sections at the overlap.

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<td>1459 SPINDLE B</td>
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</tr>
<tr>
<td>1460 IDLER</td>
<td>OUTSIDE CURVE, DEAD-END HALF</td>
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7. The assembled track can now be raised and mounted in its permanent position.

**CORDING THE 140 CURVED TRACK SYSTEM**

1. Position the cord coil under the live-end pulley. Take one end of the coil and thread it up over the top wheel of the live-end pulley, and continue around the inside of the curved track threading the cord through the TOP of the 1458 spindle A's.

2. When the overlap is reached, thread the cord through the combination end stop/cord hook and continue along the inside of the curve. On continuous curve track lay-outs, the cord would pass through the 1460-A idler and 1459 Spindle B's at the overlap.

3. The cord should now be ready to be threaded through the cord connectors of the master carrier on the dead-end half of the track. Do not tighten these connectors at this time.

4. Continue along the inside of the curve of the dead-end half of the track system, threading the cord around the 1459 spindle B's to the dead-end pulley.

5. When the dead-end pulley is reached, run the cord around the pulley wheel and to the outside of the curve. The cord should now line up with the idler wheels on the outside of the dead-end section of the track. Thread the cord around the OUTSIDE of these wheels, to the master carrier of the opposite, (live-end) half of the track system. When the master carrier is reached, attach the cord to the NEAREST cord connector on the master carrier and tighten this connection.

6. Thread the other end of the cable coil through the floor pulley, align the floor pulley with the live-end pulley, and secure the floor pulley to the floor. Continue threading the operating cord up and over the lower wheel of the live-end pulley, then along the inside of the curve of the live-end half of the track system, threading the cord around the ROLLER TUBE of the 1458 spindle A's to the master carrier located on the live-end half of the track system. Insert the end of the cord through the second cord connector of the master carrier and remove the slack from the system. Tighten the cord connector.

8. Slide each master carrier toward the center overlap, as far as they will travel. Tighten the remaining cord connectors. The track is now ready for the curtain installation.

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See also Form: 711(CTO Only)       ADC FORM 741
Drawings: T-52369, T-1559, A4224       (6/96)
II. CEILING MOUNTED TRACK SYSTEMS  (bi-part operation)

1. If the track is to be curved in the field, curve it now. Please refer to ADC Form 404 for the curving procedure for this track, using the BT-2 bending tool. If track must be spliced, this should also be done at this time. Please refer to splicing instructions for suspended track systems (DWG A-4224). Make sure that the track sections will not be too large to handle.

2. Attach the live-end and dead-end pulleys to the appropriate ends of the track with the hardware provided. To properly align the live-end pulley make sure that it is on the inside of the curve and that the top wheel of the pulley is closest to the end of the track.

NOTE: The live-end pulley mounting plate is supplied with two (2) sets of mounting holes to allow the pulley wheels to be reversed allowing the assembly to be mounted at either end of the track system.

Attach a 1309 end stop through the track in front of the live-end pulley to prevent the curtain from interfering with the pulley's operation.

3. Ceiling mounted track systems can be attached to the overhead structure one of two ways:

   TYPE 1. Loosely attach the ceiling clamp’s base plate to the track with the side pressure plates provided. The clamps can be attached to the track on the ground and slid to the proper mounting position when the track is lifted into place. Once in position the base plate is fixed to the ceiling using the two outside mounting holes. Once the base plate is bolted to the ceiling, the side pressure plate bolts are tightened.

   TYPE 2. Scribe a line on the ceiling that follows the track centerline. Mount the base plates to the ceiling, centering them on the line. Use the center, counter sunk hole to mount the base plate. Lift track into position and secure it to the ceiling clamp using the side pressure plates provided.

4. With the track secured to the overhead structure, insert an equal amount of single carriers into the two (2) track sections. The carrier can be inserted at the open ends of the track at the center overlap. Be sure to attach the 4225 rubber bumpers to the carrier flanges facing the nearest end pulley. These bumpers help to reduce the operating noise of the track system. Refer to ADC form 743 for further information. Insert a master carrier into each side of the track system, making sure that the cord connectors on each master face the inside of the track curves.

5. Install the combination end-stop/cord hook assembly at the center overlap. This device will be used to guide the cord through the overlap.

6. The location of the spindles and idlers varies according to the amount of curve and the curve’s radius. The spindles and idlers always mount to the track between the top and middle flange. Refer to ADC form 442 for further information.

See also Form: 711(CTO Only) ADC FORM 741
Drawings: T-52369, T-1559, A4224 (6/96)
Track lay-outs featuring a continuous curve require 1458 Spindle B's and 1460-A idlers at the overlap for cord alignment. Note that a wider overlap is required for these devices.

**HARDWARE**

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</tr>
<tr>
<td>OUTSIDE CURVE, DEAD-END HALF</td>
<td>1460 IDLER</td>
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**CORDING THE 140 CURVED TRACK SYSTEM**

1. Position the cord coil under the live-end pulley. Take one end of the coil and thread it up over the top wheel of the live-end pulley, and continue around the inside of the curved track threading the cord through the TOP of the 1458 spindle A's.

2. When the overlap is reached, thread the cord through the combination end stop/cord hook and continue along the inside of the curve. On continuous curve track lay-outs, the cord would pass through the 1460-A idler and 1459 Spindle B’s at the overlap.

3. The cord should now be ready to be threaded through the cord connectors of the master carrier on the dead-end half of the track. Do not tighten these connectors at this time.

4. Continue along the inside of the curve of the dead-end half of the track system, threading the cord around the 1459 spindle B's to the dead-end pulley.

5. When the dead-end pulley is reached, run the cord around the pulley wheel and to the outside of the curve. The cord should now line up with the idler wheels on the outside of the dead-end section of the track. Thread the cord around the OUTSIDE of these wheels, to the master carrier of the opposite, (live-end) half of the track system. When the master carrier is reached, attach the cord to the NEAREST cord connector on the master carrier and tighten this connection.

6. Thread the other end of the cable coil through the floor pulley, align the floor pulley with the live-end pulley, and secure the floor pulley to the floor. Continue threading the operating cord up and over the lower wheel of the live-end pulley, then along the inside of the curve of the live-end half of the track system, threading the cord around the ROLLER TUBE of the 1458 spindle A's to the master carrier located on the live-end half of the track system.

7. Insert the end of the cord through the second cord connector of the master carrier and remove the slack from the system. Tighten the cord connector.

8. Slide each master carrier toward the center overlap, as far as they will travel. Tighten the remaining cord connectors. The track is now ready for the curtain installation.
NOTES

- The maximum distance between track supports should not exceed 4'. Additional supports should be added at curves, splices and stack areas.

- Live-end and dead-end pulleys must be anchored firmly to the track.

- Suspended systems should have support lines attached at both ends of the track.

- The distance between carriers should not exceed 1 foot.

- Suspended, curved track should be supported by a 1 1/4" pipe backbone.

- Properly installed track should allow the curtain to traverse without causing any noticeable channel deflection.
I. SUSPENDED TRACK  (bi-part operation)

1. If the track is to be curved in the field, curve it now. Please refer to ADC Form 404 for the curving procedure for this track, using the BT-2 bending tool. If track must be spliced, this should also be done at this time. Please refer to splicing instructions for suspended track systems (DWG A-4224). Make sure that the track sections will not be too large to handle.

2. Attach the live-end and dead-end pulleys to the appropriate ends of the track with the hardware provided. To properly align the live-end pulley make sure that it is on the inside of the curve and that the top wheel of the pulley is closest to the end of the track.

   **NOTE:** The live-end pulley mounting plate is supplied with two (2) sets of mounting holes to allow the pulley wheels to be reversed allowing the assembly to be mounted at either end of the track system.

   Attach a 1309 end stop through the track in front of the live-end pulley to prevent the curtain from interfering with the pulley's operation.

3. Clamp the two sections of track together at the center lap with the lap clamps and hardware provided. The track section with the live-end pulley should be the "front" (audience side) track at the center overlap.

4. Insert an equal amount of single carriers into the two (2) track sections. The carrier can be inserted at the open ends of the track at the center overlap. Be sure to attach the 4225 rubber bumpers to the carrier flanges facing the nearest end pulley, these bumpers help to reduce the operating noise of the track system. Refer to ADC form 743 for further information. Insert a master carrier into each side of the track system, making sure that the cord connectors on each master face the inside of the track curves.

5. Install the combination end-stop/cord hook assembly at the center overlap. This device will be used to guide the cord through the overlap. Hanging clamps can also be attached at this time. Spacing for the hanging clamps is 4 feet or less, with additional supports used at curves and the ends of the track.

6. The location of the spindles and idlers varies according to the amount of curve and the curve's radius. The spindles and idlers always mount to the track between the top and middle flange. Refer to ADC form 442 for further information.
Track layouts featuring a continuous curve require 1458 Spindle B's and 1460-A idlers at the overlap for cord alignment. The large 1407-A lap clamps is also used to provide 4" spacing between the track sections at the overlap.

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7. The assembled track can now be raised and mounted in its permanent position.

**CORDING THE 140 CURVED TRACK SYSTEM**

1. Position the cable coil under the live-end pulley. Take one end of the coil and thread it up over the top wheel of the live-end pulley, and continue around the inside of the curved track threading the cord through the TOP of the 1458 spindle A's.

2. When the overlap is reached, thread the cable through the combination end stop/cord hook and continue along the inside of the curve. On continuous curve track lay-outs, the cable would pass through the 1460-A idler and 1459 Spindle B's at the overlap.

3. The cable should now be ready to be threaded through the cord connectors of the master carrier on the dead-end half of the track. Do not tighten these connectors at this time.

4. Continue along the inside of the curve of the dead-end half of the track system, threading the cord around the 1459 spindle B's to the dead-end pulley.

5. When the dead-end pulley is reached, run the cord around the pulley wheel and to the outside of the curve. The cord should now line up with the idler wheels on the outside of the dead-end section of the track. Thread the cord around the OUTSIDE of these wheels, to the master carrier of the opposite, (live-end) half of the track system. When the master carrier is reached, thread the cable through the cable connectors of the master carrier, but do not tighten the connectors.

6. Continue threading the cable around the roller of the Spindle A's and to the live end pulley of the track. Thread the cable over the remaining wheel of the live end pulley and down to the floor mounted machine. Pull several additional feet of cable and coil it next to the machine.

7. Disengage the drum from the drive shaft of the machine by backing out the thumb screw or set screw on the driving dog.

8. Thread the end from the longer coil of cable through the hole at the end of the drum and secure with the cable connector provided. Wrap the cable on the drum by turning the drum with the hand crank provided. Be sure to follow the grooves carefully to within 4 grooves of the opposite end of the drum, or with an amount of cable equal to the cable travel required.
9. Leaving at least one empty groove, wrap a minimum of 3 cable wraps in the opposite direction of the first cable, from the inner portion of the drum toward the open end of the drum. Thread the cable end through the hole in the drum and secure with the cable connector provided.

10. Operate the track system to the full open and full closed positions using the hand crank. Check for any interference or unusually high resistance in the track system. If the curtain track system operates properly, move the drum into position and secure to the drive shaft of the machine with the thumb or set screw.

DO NOT OPERATE THE MACHINE UNTIL THE LIMIT SWITCHES HAVE BEEN SET. SEE THE INSTRUCTIONS INCLUDED WITH THE CURTAIN MACHINE ON SETTING THE LIMIT SWITCHES.

II. CEILING MOUNTED TRACK SYSTEMS  (bi-part operation)

1. If the track is to be curved in the field, curve it now. Please refer to ADC Form 404 for the curving procedure for this track, using the BT-2 bending tool. If track must be spliced, this should also be done at this time. Please refer to splicing instructions for suspended track systems (DWG A-4224). Make sure that the track sections will not be too large to handle.

2. Attach the live-end and dead-end pulleys to the appropriate ends of the track with the hardware provided. To properly align the live-end pulley make sure that it is on the inside of the curve and that the top wheel of the pulley is closest to the end of the track.

NOTE: The live-end pulley mounting plate is supplied with two (2) sets of mounting holes to allow the pulley wheels to be reversed allowing the assembly to be mounted at either end of the track system.

Attach a 1309 end stop through the track in front of the live-end pulley to prevent the curtain from interfering with the pulley's operation.

3. Ceiling mounted track systems can be attached to the overhead structure one of two ways:

   TYPE 1. Loosely attach the ceiling clamp's base plate to the track with the side pressure plates provided. The clamps can be attached to the track on the ground and slid to the proper mounting position when the track is lifted into place. Once in position the base plate is fixed to the ceiling using the two outside mounting holes. Once the base plate is bolted to the ceiling, the side pressure plate bolts are tightened.

   TYPE 2. Scribe a line on the ceiling that follows the track centerline. Mount the base plates to the ceiling, centering them on the line. Use the center, counter sunk hole to mount the base plate. Lift track into position and secure it to the

See also Form: 711(CTO Only)  ADC FORM 741-A
Drawings: T-52369, T1559, A4224  (6/96)
4. With the track secured to the overhead structure, insert an equal amount of single carriers into the two (2) track sections. The carrier can be inserted at the open ends of the track at the center overlap. Be sure to attach the 4225 rubber bumpers to the carrier flanges facing the nearest end pulley; these bumpers help to reduce the operating noise of the track system. Refer to ADC form 743 for further information. Insert a master carrier into each side of the track system, making sure that the cord connectors on each master face the inside of the track curves.

5. Install the combination end-stop/cord hook assembly at the center overlap. This device will be used to guide the cord through the overlap.

6. The location of the spindles and idlers varies according to the amount of curve and the curve’s radius. The spindles and idlers always mount to the track between the top and middle flange. Refer to ADC form 442 for further information.

---

**Track lay-outs featuring a continuous curve require 1458 Spindle B's and 1460-A idlers at the overlap for cord alignment. Note that a wider overlap is required for these devices.**

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</tr>
<tr>
<td>1459 SPINDLE B</td>
</tr>
<tr>
<td>INSIDE CURVE, DEAD-END HALF</td>
</tr>
<tr>
<td>1460 IDLER</td>
</tr>
<tr>
<td>OUTSIDE CURVE, DEAD-END HALF</td>
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</tbody>
</table>

**CORDING THE 140 CURVED TRACK SYSTEM**

1. Position the cable coil under the live-end pulley. Take one end of the coil and thread it up over the top wheel of the live-end pulley, and continue around the inside of the curved track threading the cord through the TOP of the 1458 spindle A's.

2. When the overlap is reached, thread the cable through the combination end stop/cord hook and continue along the inside of the curve. On continuous curve track lay-outs, the cable would pass through the 1460-A idler and 1459 Spindle B's at the overlap.

3. The cable should now be ready to be threaded through the cord connectors of the master carrier on the dead-end half of the track. Do not tighten these connectors at this time.

4. Continue along the inside of the curve of the dead-end half of the track system, threading the cord around the 1459 spindle B's to the dead-end pulley.

5. When the dead-end pulley is reached, run the cord around the pulley wheel and to the outside of the curve. The cord should now line up with the idler wheels on the outside of the dead-end section of the track. Thread the cord around the OUTSIDE of these wheels, to the master carrier of the opposite, (live-end) half of the track system. When the master carrier is reached, thread the cable through the cable connectors of the master carrier, but do not tighten the connectors.
6. Continue threading the cable around the roller of the Spindle A's and to the live end pulley of the track. Thread the cable over the remaining wheel of the live end pulley and down to the floor-mounted machine. Pull several additional feet of cable and coil it next to the machine.

7. Disengage the drum from the drive shaft of the machine by backing out the thumb screw or set screw on the driving dog.

8. Thread the end from the longer coil of cable through the hole at the end of the drum and secure with the cable connector provided. Wrap the cable on the drum by turning the drum with the hand crank provided. Be sure to follow the grooves carefully to within 4 grooves of the opposite end of the drum, or with an amount of cable equal to the cable travel required.

9. Leaving at least one empty groove, wrap a minimum of 3 cable wraps in the opposite direction of the first cable, from the inner portion of the drum toward the open end of the drum. Thread the cable end through the hole in the drum and secure with the cable connector provided.

10. Operate the track system to the full open and full closed positions using the hand crank. Check for any interference or unusually high resistance in the track system. If the curtain track system operates properly, move the drum into position and secure to the drive shaft of the machine with the thumb or set screw.

**NOTES**

- The maximum distance between track supports should not exceed 4’. Additional supports should be added at curves, splices and stack areas.

- Live-end and dead-end pulleys must be anchored firmly to the track.

- Suspended systems should have support lines attached at both ends of the track.

- The distance between carriers should not exceed 1 foot.

- Suspended, curved track should be supported by a 1 1/4” pipe back bone.

- Properly installed track should allow the curtain to traverse without causing any noticeable channel deflection.
INSTALLATION INSTRUCTIONS FOR RIG-I-FLEX
ADC MODELS 142 & 142-R WALK-DRAW SYSTEMS

NOTE: if the track is to be curved or cut, do so first. Be sure to file all cut ends
and remove all burs and filings from track, as they can cause binding and
premature wear on the carriers. If cutting is required, then it will be necessary to
re-drill the holes for the splice clamps. If re-drilling of the splice holes is required,
make sure that the track sections are properly aligned before drilling.

I. SUSPENDED INSTALLATIONS:

Hanging clamps are used for this type of installation, they can be mounted to the track at
this time. The maximum recommended space between hanging clamps is 4 feet.
Additional clamps are required at curves and splices.

1. Place the track and curves (if used) on the floor or a stable support for assembly.

2. If a center overlap is desired, overlap the tracks by the amount desired and attach the lap
   clamps to the track. Note that a minimum of 2 lap clamps
   Should be used.

3. Check all cut track ends for burrs and file if needed. Make all splices at this time. See
   splicing instructions and drawings for track being used. Splice bars for the model 1400
   track fit in the area between the middle and top flange of the track., One bar on each side.
   Be sure to check alignment of track vertical and horizontal components at the splice.

4. Insert the single and master carrier into the track sections. The master carriers need to be
   between the center overlap end of the section and the single carriers.

5. Install end stops to all open ends of the track system with the hardware provided.

6. Locate the positions for the hanging clamps and secure them to the track with the hardware
   provided. Note: The hanging clamps should be placed on either side of, and as close to,
   splices as possible. Also, hanging clamps should be located before and after curves if the
   radii are small, and along the curve if the radii are large.

7. It may be desirable to attach chains between carriers, especially on long tracks, or on
   tracks with heavy curtains where curtains will be pulled from either end. The chains will
   relieve the strain on the top of the curtain. It is often easier to push the folded curtain
   around curves rather than pull it around the curve from one end.
II. Ceiling mount installations:
This type of mounting can be installed one of two ways.

**Type 1.** Loosely attach the ceiling clamp's base plate to the track with the side pressure plates provided. The clamps can be installed on the track on the ground and slid to the proper mounting position when the track is lifted into place. Once in position the base plate is fixed to the ceiling using the two outside mounting holes. Once the base plate is bolted to the ceiling, the side pressure plate bolts are tightened.

**Type 2.** Scribe a line on the ceiling that follows the track centerline. Mount the base plates to the ceiling, centering them on the line. Use the center, counter sunk hole to mount the base plate. Lift track into position and secure it to the ceiling clamp using the side pressure plates provided.

1. Place the track and curves (if used) on the floor or a stable support for assembly.
2. If a center overlap is desired, overlap the tracks by the amount desired and mark tracks on bottom flange with end location of opposite track.
3. Check all cut track ends for burrs and file if needed. Make all splices at this time. See splicing instructions and drawings for track being used. Splice bars for the model 4200 track fit in the area between the middle and top flange of the track., One bar on each side. Be sure to check alignment of track vertical and horizontal components at the splice.
4. Insert the single and master carrier into the track sections. The master carriers need to be between the center overlap end of the section and the single carriers.
5. Install end stops to all open ends of the track system with the hardware provided.
6. Locate the positions for the ceiling clamps according to the information provided above and secure them to the track with the hardware provided. Note: that ceiling clamps should be placed on either side of, and as close to, splices as possible. Also, ceiling clamps should be located before and after curves if the radii are small, and along the curve if the radii are large.
7. It may be desirable to attach chains between carriers, especially on long tracks, or on tracks with heavy curtains where curtains will be pulled from either end. The chains will relieve the strain on the top of the curtain. It is often easier to push the folded curtain around curves rather than pull it around the curve from one end.
IMPORTANT NOTES:

- It is essential that the track be properly aligned when mounted and spliced. If the track is not aligned, the carriers will not travel properly, especially at the splice joints.

- If the track is not a closed loop, the carriers may be added after the track is installed. If it is a closed loop, the carriers must be added before the final section of track is spliced.

- Four wheeled master carriers should be used on all leading edges of the curtain. Using master carriers on the leading edges of the curtain will help eliminate the tipping tendency of the carriers and make for a smoother operation.

- End stops must be added at all track ends to ensure safe operation. A baton or towline should be attached to all leading edge master carriers.

- A 1 1/4" pipe batten backbone or equivalent is recommended for all suspended tracks to reduce sway and provide additional support for the track.
SUGGESTED IDLER AND SPINDLE SPACING ON CURVED MODELS 140 AND 420 CURTAIN TRACKS

(BASED ON 90 DEGREE CURVES)

<table>
<thead>
<tr>
<th>CURVE RADIUS</th>
<th>SPINDLE SPACING</th>
<th>NUMBER REQUIRED</th>
<th>CURVE RADIUS</th>
<th>SPINDLE SPACING</th>
<th>NUMBER REQUIRED</th>
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<td>72&quot;</td>
<td>7</td>
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</table>

**NOTES:**

1. On curved, bi-parting tracks where the track is straight at the overlap, an equal amount of spindle A located on the inside of the live-end curve, spindle B located on the inside of the dead-end curve, and idler brackets which are located on the outside of the dead-end curve are required for proper operation.

2. If the track is curved through the overlap, a special 1460A idler bracket is used at the overlap to prevent the operating cord from rubbing against the cut end of the track. Two additional spindles B are also needed inside the overlap.

3. One-way draw tracks require only spindles type A mounted on the inside of the curve, as the cord is always on the inside of the curve.

4. Due to the potential for cord sag, spacing greater than 84" between spindles or idlers is not recommended.
1. Follow standard assembly drawings and installation instructions for the particular track to be installed. Tracks that utilize Center Take-Off Pulleys incorporate a dead end pulley in place of the live end pulley. Make the substitution of a dead end pulley for the live end pulley in the instructions. Assemble the track to the point in the instructions where it is ready for cord installation.

2. The CTO device can be located along the track only in areas where the return cord is in an open area. The CTO device can be attached to the track at any point between the dead-end pulley and the center overlap. Note that the device must not interfere with the placement of spindles or idler brackets.

3. The operating cord can be installed either before the track is raised to its final position, or after the track is in place. Starting at the CTO device thread the cord around one of the CTO's sheaves, through the track idler brackets (if used), around the sheave of one dead-end pulley, through one of the master carriers to the other side of the track. Continue through the idlers on the opposite side (if used), around the other dead-end, and back through the other master carrier. Continue past the center overlap, through the remaining idlers (if used), to the CTO. Thread the cord around the remaining sheave of the CTO device.

4. An additional mule block is usually used to mule the cords down a to a floor mounted curtain machine. The mule block can be ceiling, or wall mounted. Run cords from the CTO to the mule block, and then down to the curtain machine making sure that the lines remain in alignment. Connect cords to the curtain machine's grooved cable drum.

5. It is very important that the track be securely braced in every direction so that it does not sway during operation. The use of a CTO device will create a load perpendicular to the track as the system operates. Make sure to add supports to the system that allow for this additional loading. Any movement of the track will affect the cable tension.

6. Locate the master carrier(s) an equal distance from the ends of their track(s) and secure to the operating cable.

7. Test the track and machine operation prior to attaching curtain to the track system.
INSTRUCTIONS FOR USING THE BT-1 BENDING TOOL

IMPORTANT: DO NOT BEND THE TRACK COMPLETELY AROUND THE BENDING TOOL SHOE. THE RADIUS OF THE SHOE IS 7” AND THE MINIMUM RADIUS FOR THE TRACK IS 24”. THE TRACK MUST BE ADVANCED AS IT IS BENT ON THE TOOL.

(READ ALL OF THE FOLLOWING INSTRUCTIONS PRIOR TO CURVING THE TRACK)

1. A full scale chalk drawing of the curved portion of the track must be drawn on the floor or work bench in order to check the curving operation’s progress. The radius of this full scale drawing can be drawn using a wooden plank or string with a length equal to the radius of the required curve. Be sure to allow at least 1’ of straight track at each end of the curve to assure correct alignment.

2. Use a marker, or wax pencil to mark the location of the center of the curve on the top flange of the track.

3. Place marks on the top of the track in both directions out from the center line mark in 3” increments or a distance of 1.5 times the radius of the curve.

4. Slide the track into the bender and line up the FIRST mark of either end of the marked section with the apex of the bender’s shoe.

5. Pull back SLIGHTLY on the bending tool's lever pipe. This should put a SLIGHT bend in the track, usually around 5 degrees.

6. Move the track forward or backward in the bender and align the second mark on the track with the apex of the bender's shoe. Pull back SLIGHTLY on the bending tool's lever pipe.

7. Continue this process until all the marks have a slight bend.

8. Check the track radius against the chalk drawing by laying it on top of the chalk line.

9. In most cases the formed radius will be too large, which is desirable. Repeat steps 4 through 8 until the required curve is formed.

11. If the radius becomes too tight during this process you can remove some of the curve by placing the apex of the curve against a wall, securing one end of the track, and pushing the other end toward the wall. Keep in mind that this is for SLIGHT adjustments only. The key to bending the track correctly is to bend in small multiple steps, checking the radius against the chalk line while you do it, avoiding curving the track too tightly.
INSTRUCTIONS FOR USING THE BT-2 BENDING TOOL

IMPORTANT NOTE: DO NOT BEND THE TRACK COMPLETELY AROUND THE BENDING TOOL SHOE. THE RADIUS OF THE SHOE IS 7" AND THE MINIMUM RADIUS FOR THE TRACK IS 24". THE TRACK MUST BE ADVANCED AS IT IS BENT ON THE TOOL.

(READ ALL OF THE FOLLOWING INSTRUCTIONS PRIOR TO CURVING THE TRACK)

1. A full scale chalk drawing of the curved portion of the track must be drawn on the floor, or work bench in order to check curving progress. The radius of this full scale drawing can be drawn using chalk attached to a wooden plank, or string, with a length equal to the radius of the required curve. Be sure to allow at least 1' of straight track at each end of the curve to assure alignment of the track.

2. Use a marker or wax pencil to mark the location of the center of the curve on the top flange of the track.

3. Place marks on the top of the track in both directions out from the center line mark in 3" increments, or a distance of 1.5 times the radius of the curve.

4. Secure the BT-2 tool to the floor, or work bench making sure that ample room exists to walk the track around the tool.

5. Slide the track into the bender and line up the FIRST mark of either end of the marked section with the apex of the tool's shoe.

6. Pull SLIGHTLY on the longest section of track coming out of the shoe. This should put a SLIGHT bend in the track, usually around 5 degrees.

7. Move the track forward or backward in the bender and align the second mark on the track with the apex of the tool's shoe. Pull SLIGHTLY on the longest section of track coming out of the shoe.

8. Continue this process, repeating steps 6 and 7 until a slight bend exists at each mark unless the track is beginning to curve more that the drawn template. If this occurs the individual bends are too severe for the overall bend required and must be straightened.

9. Check the track radius against the chalk drawing by laying it on top of the chalk line.

10. In most cases the formed radius will be too large, which is desirable. Repeat steps 5 through 9 until the required curve is formed.

11. If the radius becomes too tight during this process you can remove some of the curve. The key to bending the track correctly is to bend in small multiple steps, checking the radius against the chalk line while you do it, avoiding curving the track too tightly.
Two 1/4" diameter bolts are supplied with all Rotodrapers (except Models 06 & 06A) and are to be installed 2" from the ends of the track as illustrated above. To install the bolts, drill a 1/4" clearance hole in front of each end stop. Insert the bolts with spacing tubes (if included) as shown above. These bolts are used to add additional protection against the possibility of the Rotodraper coming out of the track.

Install bolt after Rotodrapers are installed in tracks.
1. After the cable has been threaded through the pulleys, carriers and track, place the excess cable on the floor beneath the live-end pulley. Make sure to pull at least an extra 5 feet of cord all the way through. At this time the machine should be mounted beneath the live-end pulley. A plumb line may be used to ensure proper alignment between the machine and the live-end pulley.

2. Disengage the drum from the drive shaft by loosening the thumb screw on the driving dog (see Photo 1). Thread the end of the cable through the hole in one end of the drum.

3. Fasten the end of cable to the inside of the drum with cord the cable connector provided. The cord clamps will be in a cloth bag, tied to the machine (see Photo 2).
4. Following the grooves carefully, wrap the cable on the drum to within 4 grooves of the far end of the drum, or with an amount of cable equal to the amount of cable travel required plus 5 feet. Remove all slack in the system by pulling the other end of the cable. Be careful not to make the cord too taut! Damage to track components and curtain machine may occur if cable is too taut.

5. Leaving at least 1 empty groove, wind 3 wraps of the cord around the drum in the opposite direction of the first cable. Feed the end of the cable through the hole in the drum and secure it with a cord connector (see Photo 1). Cut off any excess cable. Your drum should now look the drum in Photo 4 below.

6. Turn the drum until the hole of the driving dog lines up with the hole in the drum spoke. Engage the drum by tightening the thumb screw. (See photo 1)

7. The machine is now ready for limit switch adjustment. DO NOT OPERATE THE MACHINE UNTIL THE LIMIT SWITCHES HAVE BEEN SET. Directions for limit switch adjustment are located in the machine manual that accompanied the machine.
IMPORTANT NOTES

- All wire-centered cable stretches during its first few weeks of use. It is strongly recommended that periodic checks be made, and excess slack be taken out, especially during the first few weeks of operation.

- Do not use cable that is larger than what will nest properly in the grooves of the cable drum (3/16” in most cases).

- In order to maintain a proper fleet angle, the machine's drum should never be less than 10 feet from the live-end pulley. A plumb line should be run from the center of the live-end pulley to the floor to ensure that the drum is vertically in line with the live-end pulley.

- Always use a covered wire center cable. Uncoated steel cable will damage the aluminum drum and the track components.

"FLYING MACHINES"

When the machine is to be mounted on top of the track ("Flying configuration"), follow the previous instructions for threading the cable. Mount the machine to the top of the track with the angle bracket supplied with the machine. Steel track must be drilled and tapped to fasten the angle bracket. Eye bolts for securing the machine to the overhead structure are also furnished on the base. A special live-end pulley must be used to guide the cable up and over the top of the track to the machine. The machine must be mounted to the track at least 10 feet from the flying live-end pulley.


End of Instructions