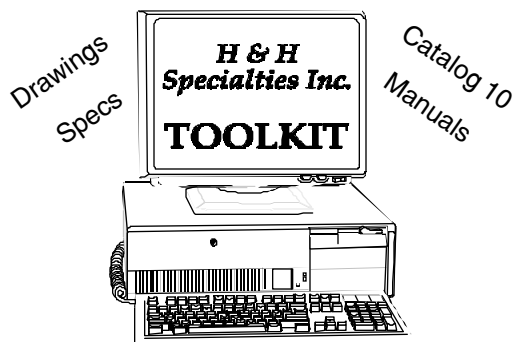


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† In Electronic Version Only

Catalog 10 on CD-ROM instructions:



"Click" on blue highlighted areas throughout catalog to access further information.

ATLAS SILK®

H & H Specialties has manufactured curtain tracks for entertainment and performing arts facilities for over 30 years under the Atlas Silk® Trademark. During this time, users have come to expect their equipment to accommodate increased loads, operate smoother, perform more difficult tasks and last longer. H & H Specialties has continually worked with architects, consultants and users in designing products to meet these demands.

The following pages illustrate our standard product line. Atlas Silk® products are stocked and sold by dealers throughout the United States, Canada and many other countries, providing local sources for the supply, installation and maintenance of standard equipment. In addition, the factory's design and manufacturing capabilities are available to create custom modified equipment for special applications.

Inquiries regarding any product, or custom equipment designed to your specifications, can be addressed to individual dealers or directly to the factory.


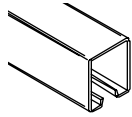

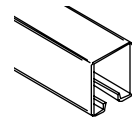

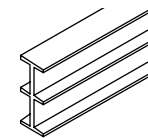

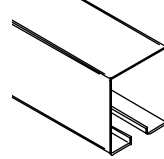

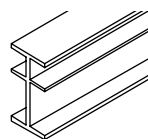

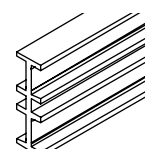

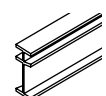

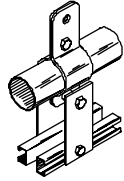
H & H Specialties Inc.
2203 Edwards Avenue
P.O. Box 9327
South El Monte, CA 91733
(626) 575-0776 - (800) 221-9995
FAX (626) 575-3004

- Stage Curtain Tracks
- Curtain Machines
- Stage Rigging
- Motorized Winches
- Cubicle Tracks

www.hhspecialties.com

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CURTAIN TRACK SELECTION GUIDE

Model No.	Cross Section	Isometric View	Working Load *1	Maximum Span *2	Stacking Space *3	Shipping Weight	Usage	Page No.
			lb/ft	feet	inches	lb/ft		
101 116 118	 1-3/4"W x 2"H		3 5 5	5-6	1-1/4	2.5	Standard duty straight track for curtains up to 40 feet. Can be walk-along or cord operated.	4-7
201 221	 1-3/4"W x 2"H		5 4	5-7	1-3/4 1-1/4	3	Black finished, medium duty straight track for curtains up to 48 feet. Can be walk-along or cord operated.	8-11
301 316 328	 1"W x 2-1/2"H		5 7 7	4-5	1-5/16	2	Standard duty curved or straight track for curtains up to 60 feet. Can be walk-along or cord operated. Cord operated tracks cannot be reverse curved. Ideal for TV studios or stage use.	12-17
401 416 418 428	 2-5/8"W x 2-3/4"H		6 25 25 15	5-7	1-3/4 2-1/8 2-1/8 2-1/8	4.5	Heavy duty straight track for curtains up to 60 feet. Can be walk-along or cord operated. Model Nos. 416, 418, 428 for curtains of almost any length.	18-25
501 516	 1-5/8"W x 3-3/16"H		25 25	5	2-3/8	4.5	Heavy duty curved or straight track for curtains of almost any length. Can be reverse curved for walk-along or cord operated use. Ideal for TV studios, stage, and auditorium dividers.	26-29
601 616 628	 1"W x 3-3/8"H		5 7 7	5-6	1-5/16	2	Medium duty curved or straight track for curtains up to 60 feet where track must span a longer distance between supports. Walk-along or cord operated. Cord operated tracks cannot be reverse curved.	30-33
701 716 728	 5/8"W x 1-11/16"H		3 5 5	4-5	1-1/16	1	Light duty curved or straight track for curtains up to 40 feet. Walk-along use only.	34-35
801	 3-1/4"W x 9-3/8"H		25	6-8	2-1/8	5	Heavy duty curved or straight track for TV studios. Available in single and double configurations for walk along use only.	36
1018			25	6-8	1-3/8	5.5	Heavy duty, exceptionally quiet straight track for professional theatre and TV studio use. Cord operated only.	37

*1 Maximum recommended for cord operated tracks. Total weight of drapery, track length, and model used will determine ease of operation of the track system.

*2 Maximum recommended distance between track hangers. Additional hangers may be required at curtain stacking ends. Track hangers must be supported from overhead structure by appropriate means.

*3 Per carrier. To determine stacking space, see explanation next page.

DISCLAIMER

The products in this catalog are designed for moving curtains or, in some cases, scenery.

NONE OF THE ITEMS SHOWN HEREIN ARE DESIGNED, INTENDED OR WARRANTED FOR THE USE OF LIFTING OR TRANSPORTING PEOPLE OR OTHER LIVING OBJECTS.

H & H Specialties Inc. makes no representation of the suitability of any product for any application unless specific engineering drawings are made by the factory and the products are installed in precisely the manner detailed by our engineering staff.

DETERMINING STACKING SPACE

Stacking space required for any curtain is determined by many variables. These include fabric type, added fullness and linings, if any. The carrier length will most often be the governing factor on light to medium weight curtains. Heavy-weight and lined curtains require additional stacking space to accommodate the density of the fabric(s).

To determine minimum stacking space:

1. Length of master carrier
(from dimensioned drawings in each track section)
2. Length of end pulley
(from dimensioned drawings in each track section)
3. Carrier length from chart at left
(qty. of carriers x carrier length)
4. Total of Item Nos. 1-3 and add 10%.

Note: Addition of rear fold guides on track requires an extra 1/4" stacking space per carrier.

ORDERING COMPLETE TRACKS

Individual stage tracks are normally ordered on a per-foot basis and supplied with a standard group of components for normal operation. This group includes track, one single carrier per foot, one pair of master carriers, double and single end pulleys, one set of overlap clamps, clamp hangers, floor block, one pair of end stops, and operating line. This is called a "COMPLETE" track. Model numbers for COMPLETE tracks are indicated by the model number of the carrier supplied with a suffix to further describe the track.

Example: Model No. 401S COMPLETE indicates use of No. 401 Single Carrier and corresponding No. 402 Master Carrier in No. 410S steel track.

If a 40 foot No. 401S COMPLETE stage track is required for manually operated bi-parting draperies 20 feet high, you would order the following:

40 feet No. 401S COMPLETE, 20 feet high.

Normal components for this track would include the following:

40 each	No. 401 Single Carrier
1 pair	No. 402 Master Carrier
1 each	No. 403 Double End Pulley
1 each	No. 404 Single End Pulley
1 set	No. 405 Overlap Clamp
8 pair	No. 406 Clamp Hanger
1 each	No. 408 Adjustable Floor Block
1 pair	No. 409 End Stop & Cord Support
2 each	No. 410S-20 Track
120 feet	No. 414 Operating Line (Quantity of line = 2 times track length + 2 times curtain height)

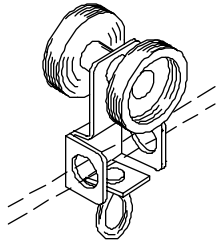
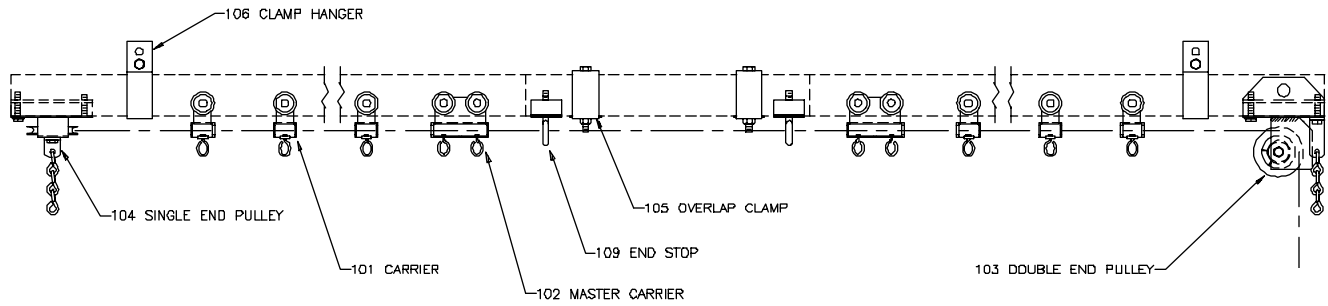
Stage curtain tracks are usually installed with a center overlap of 2 feet. Thus, a 40 foot COMPLETE track would have an overall length of 38 feet.

SUFFIX LEGEND:

A- Aluminum
 B- Black
 C- Curved
 P- Premier
 S- Steel
 W- Walk-Along

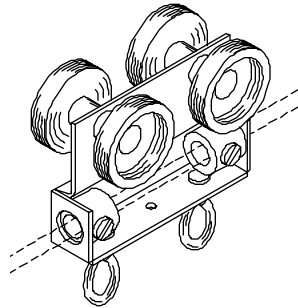
100 SERIES STANDARD DUTY STRAIGHT TRACK

**COMPLETE TRACK
MODEL NUMBERS**
101S 101A
116S 116A



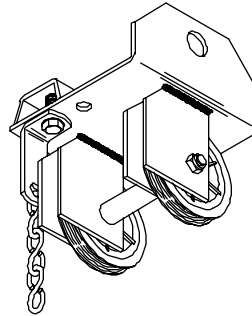
No. 101 SINGLE CARRIER

2 polyethylene wheels riveted to plated steel body with swivel hook.



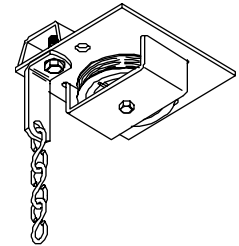
No. 102 MASTER CARRIER

4 polyethylene wheels riveted to steel body with 2 swivel hooks. Supplied with 2 clamps for anchoring line or cable. 1 pair required for overlapping tracks.



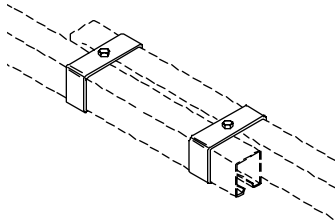
No. 103 DOUBLE END PULLEY

2-1/2" diameter Nylatron GS sheaves with shielded ball bearings. Steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge.



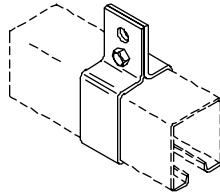
No. 104 SINGLE END PULLEY

2-1/2" diameter Nylatron GS sheave with shielded ball bearing. Steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge.



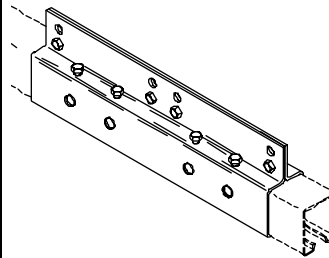
No. 105 OVERLAP CLAMP

Formed steel clamps to align track at overlap. 1 set pictured.



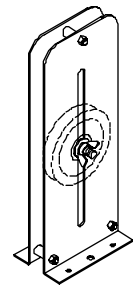
No. 106 CLAMP HANGER

Formed steel brackets clamp to track. Adjusts to any position. Suspend track with welded chain or wire rope. 1 pair pictured.



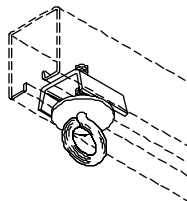
No. 107 SPLICE

Formed steel brackets align and lock track sections together. 1 pair pictured.



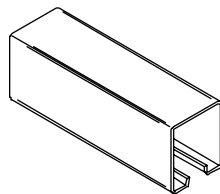
No. 108 ADJUSTABLE FLOOR BLOCK

4" diameter Nylatron GS sheave with shielded ball bearing in steel housing. 9° vertical adjustment.



No. 109 END STOP & CORD SUPPORT

Steel clamp with eye to support operating line and prevent carriers from travelling beyond desired location. 1 pair required for overlapping tracks.

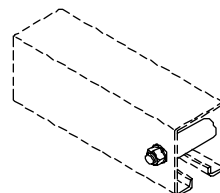


No. 110A TRACK

6063-T5 extruded aluminum .080" thick. 20' and 24' stock lengths.

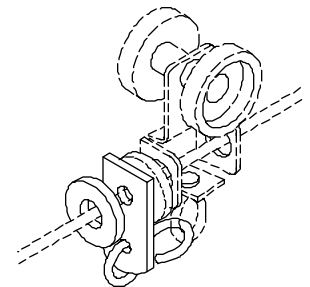
No. 110S TRACK

16 gauge roll-formed galvanized steel. 8', 10', 12', 16', 18', 20', 24' and 26' stock lengths.



No. 111 END STOP

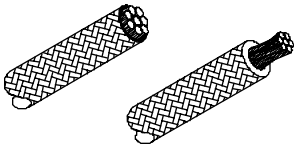
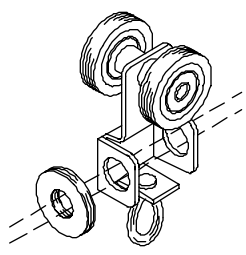
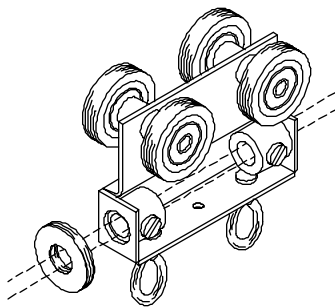
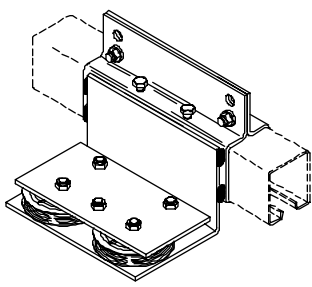
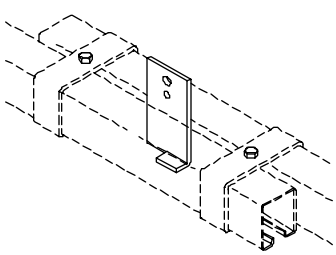
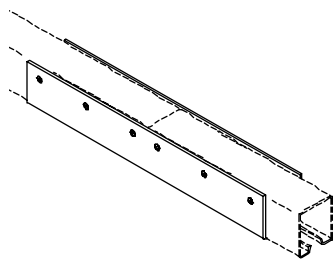
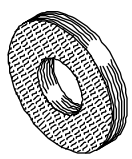
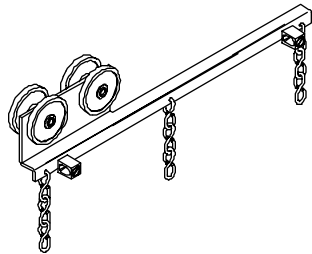
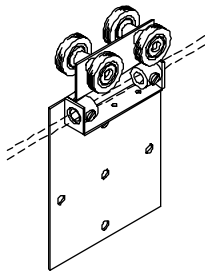

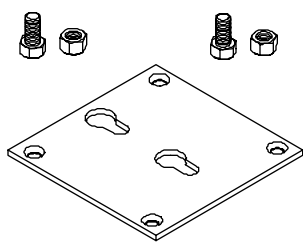
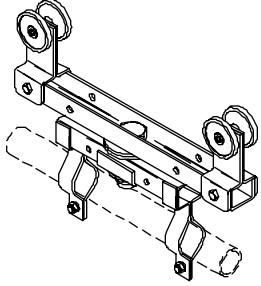
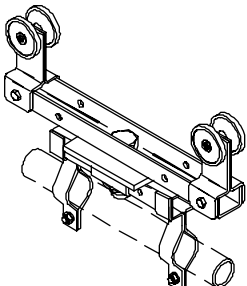
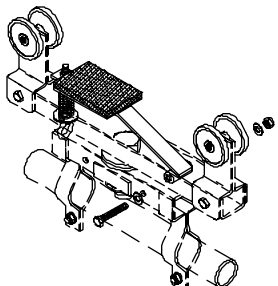
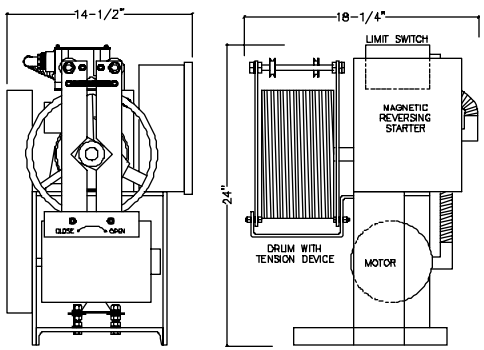
Bolt with horizontal pipe spacer to prevent carriers from travelling beyond desired location.



REAR FOLD GUIDE

Allows curtain to fold at offstage edges. Supplied with 1 rubber bumper.

No. 112 - for use with 1/4" operating line.
No. 113 - for use with 3/16" operating cable.

 <p>No. 114 OPERATING LINE 1/4" diameter black polyester double braided over solid polyester core for manual operation.</p> <p>OPERATING CABLE Black polyester jacket braided over 3/32" galvanized aircraft cable..</p> <p>No. 115 - 3/16" diameter No. 125 - 1/4" diameter</p>	 <p>No. 116 SINGLE CARRIER 2 nylon-tired ball bearing wheels riveted to steel body with swivel hook. Supplied with 1 rubber bumper.</p>	 <p>No. 117 MASTER CARRIER 4 nylon-tired ball bearing wheels riveted to steel body with 2 swivel hooks. Supplied with 2 rope clamps and 1 rubber bumper. 1 pair required for overlapping tracks.</p>	 <p>No. 121 CENTER TAKE-OFF Steel housing contains 2-1/2" diameter Nylatron GS sheaves with shielded ball bearings. Used when operating lines must be turned horizontally toward curtain machine or mule block.</p>
 <p>No. 126 CENTER PIPE SUPPORT Formed steel bracket used to support tracks at overlap.</p>	 <p>No. 127 CEILING SPLICE To align and lock track sections together on ceiling mounted tracks. 1 pair pictured.</p> <p>Note: Cannot be used with No. 132 overlap master or No. 10 pivot device.</p>	 <p>No. 130 ROUND RUBBER BUMPER 1/8" neoprene bumper placed between carriers to reduce noise.</p>	 <p>No. 132 OVERLAP MASTER 1-3/4" O.D. nylon wheels riveted to steel body with 9" offset arm. Used to overlap curtains on continuous track. Clamps provided to secure operating line. 1 pair required for overlapping curtains.</p>
 <p>No. 134 SIDE MASKING MASTER CARRIER No. 119 Master Carrier with 3-3/4" x 5-3/4" steel plate for attaching side masking frame. Supplied with 2 rope clamps.</p>	 <p>No. 135 TRIM CHAIN 3 links #10 single jack chain added to carriers to provide 3" of curtain height adjustment.</p>	 <p>No. 108DK DETACHABLE FLOOR BLOCK KIT 7 gauge steel plate with hardware for use with No. 108 Adjustable Floor Block for quick release.</p>	 <p>No. 10 PIVOT DEVICE Heavy steel construction with nylon wheels. Supplied with brackets for 1-3/8" O.D. pipe or tubing (recommended 6 foot maximum length). Allows masking draperies to be rotated to any angle. Working load limit: 75 pounds.</p>
 <p>No. 10X INDEXING PIVOT DEVICE Pivot device with special plate to index rotation at 22-1/2 degree increments. Supplied with brackets for 1-3/8" O.D. pipe or tubing (recommended 6 foot maximum length). Working load limit: 75 pounds.</p>	 <p>No. 108K BRAKE KIT Spring loaded arm with neoprene pad. Add to pivot device to prevent undesired movement along track.</p>	 <p>No. 454 Curtain Machine</p> <p>See pages 44-51 for curtain machines</p>	

GENERAL SPECIFICATIONS: STANDARD DUTY STRAIGHT TRACK

Provide **Model 101S** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 16 gauge galvanized steel, roll-formed to 1-3/4" wide X 2" high channel with continuous slot in bottom. Provide unspliced in lengths up to 26'.

Suspend track on 6' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Install end stop with cord support at each track end. Where lengths exceed 26', connect tracks with 12" long, two-piece splicing clamp of 12 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two polyethylene wheels fastened parallel to formed steel carrier body with swivel hook for attachment of curtain.

Master carriers shall be 4-wheel assemblies with formed steel bodies and two swivel hooks each. Connect to operating line with two machined steel cord clamps captured within each body.

Single and double end pulleys shall clamp securely to the underside of the track channel and shall contain 2-1/2" diameter sheaves enclosed in steel housings to prevent operating line from escaping the grooves. Nylatron GS sheaves shall be molded around shielded and greased ball bearings and grooved to accommodate up to 1/4" operating line.

Provide floor block in 12 gauge steel housing containing 4" Nylatron GS, ball bearing sheave. Sheave axle shall lock at any point within 9" vertical slots to allow tension adjustment of operating line.

Black operating line shall be 1/4" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core.

All steel components shall be zinc plated to resist corrosion.

Provide **Model 116S** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 16 gauge galvanized steel, roll-formed to 1-3/4" wide X 2" high channel with continuous slot in bottom. Provide unspliced in lengths up to 26'.

Suspend track on 6' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Install end stop with cord support at each track end. Where lengths exceed 26', connect tracks with 12" long, two-piece splicing clamp of 12 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two nylon-tired ball bearing wheels fastened parallel to formed steel carrier body with swivel hook for attachment of curtain.

Master carriers shall be 4-wheel assemblies with formed steel bodies and two swivel hooks each. Connect to operating line with two machined steel cord clamps captured within each body.

Single and double end pulleys shall clamp securely to the underside of the track channel and shall contain 2-1/2" diameter sheaves enclosed in steel housings to prevent operating line from escaping the grooves. Nylatron GS sheaves shall be molded around shielded and greased ball bearings and grooved to accommodate up to 1/4" operating line.

Provide floor block in 12 gauge steel housing containing 4" Nylatron GS, ball bearing sheave. Sheave axle shall lock at any point within 9" vertical slots to allow tension adjustment of operating line.

Black operating line shall be 1/4" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core.

All steel components shall be zinc plated to resist corrosion.

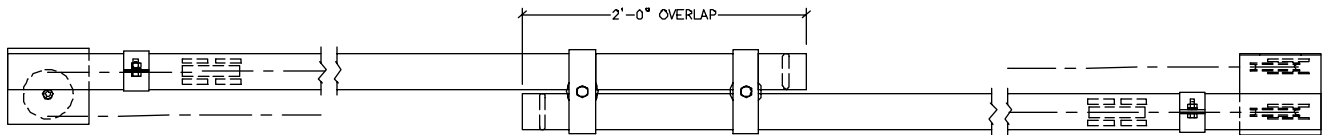
**100 SERIES
COMPLETE TRACK
COMPONENT GUIDE**

For COMPLETE tracks with aluminum channel, substitute 110A for 110S.

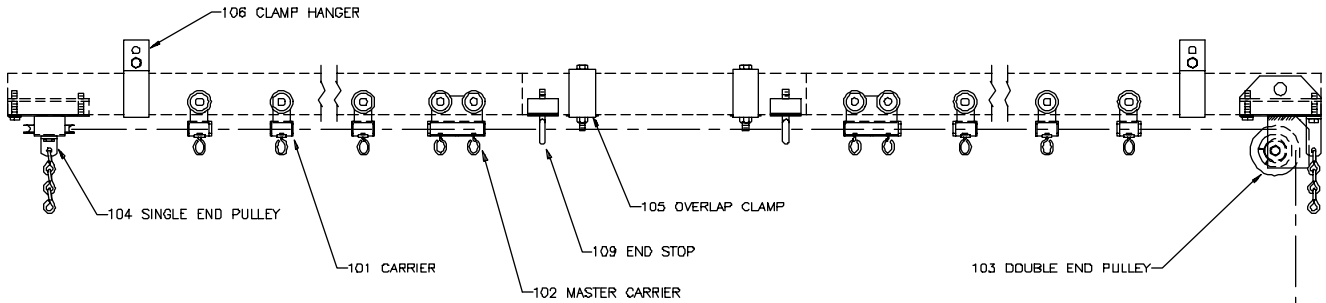
PART #	DESCRIPTION	101S	116S
101	Single Carrier	•	
102	Master Carrier	•	
103	Double End Pulley	•	•
104	Single End Pulley	•	•
105	Overlap Clamp	•	•
106	Clamp Hanger	•	•
107*	Splice	•	•
108	Adjustable Floor Block	•	•
109	End Stop & Cord Support	•	•
110S*	Track	•	•
114	1/4" Operating Line	•	•
116	Nylon B.B. Single Carrier		•
117	Nylon B.B. Master Carrier		•

* Track lengths and splices supplied as required from stock sizes.

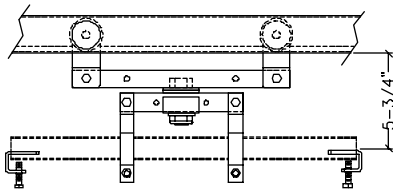
100 SERIES TRACK DIMENSION DETAIL



PLAN - MODEL 101S COMPLETE TRACK



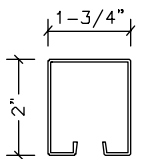
ELEVATION - MODEL 101S COMPLETE TRACK



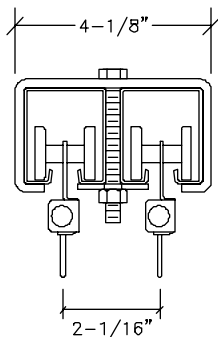
#10 PIVOT DEVICE

NO. 114 HAND LINE

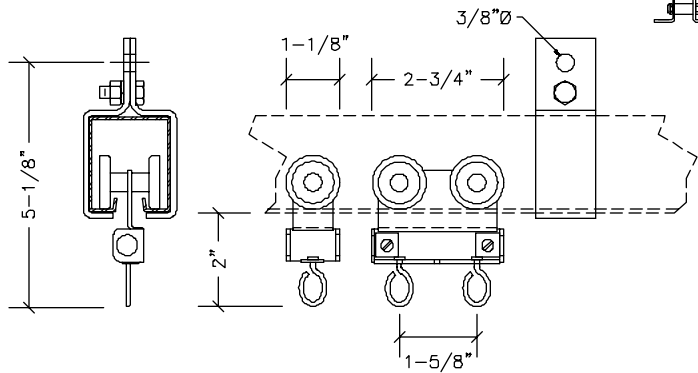
NO. 108 ADJUSTABLE FLOOR BLOCK



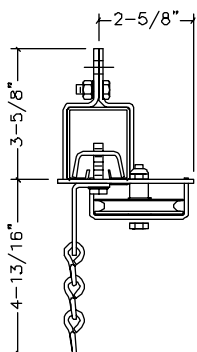
#110 TRACK



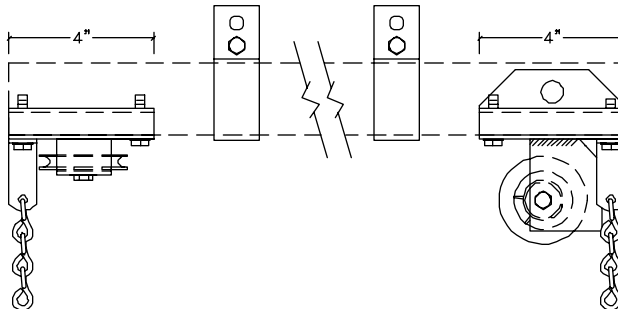
TRACKS AT CENTER OVERLAP



#101 SINGLE CARRIER AND #102 MASTER CARRIER



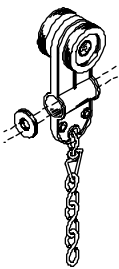
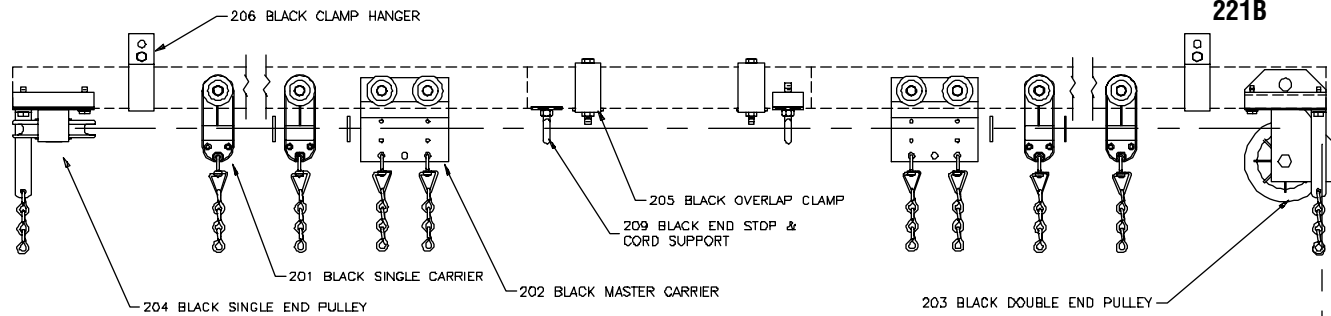
#104 SINGLE END PULLEY



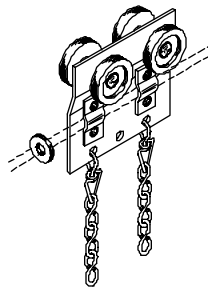
#103 DOUBLE END PULLEY

200 SERIES BLACK MEDIUM DUTY STRAIGHT TRACK

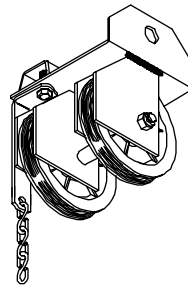
**COMPLETE TRACK
MODEL NUMBERS
201B
221B**



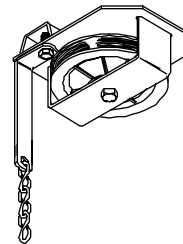
No. 201 BLACK SINGLE CARRIER
2 polyethylene wheels riveted to black Super Tough nylon body with shielded ball bearing. Heavy duty hook, swivel, and trim chain for curtain attachment. Supplied with 1 rubber bumper.



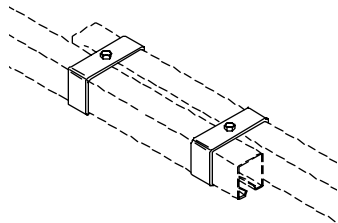
No. 202 BLACK MASTER CARRIER
4 polyethylene wheels riveted to steel body with 2 shielded ball bearings. 2 clamps provided for anchoring line or cable. Supplied with 1 rubber bumper. 1 pair required for overlapping tracks.



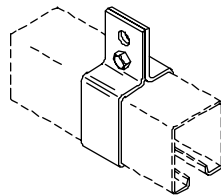
No. 203 BLACK DOUBLE END PULLEY
4" diameter Nylatron GS sheaves with shielded ball bearings. Steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge.



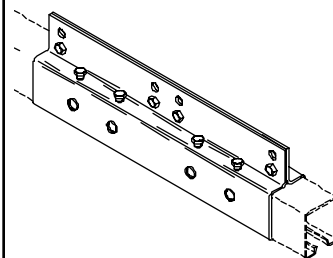
No. 204 BLACK SINGLE END PULLEY
4" diameter Nylatron GS sheave with shielded ball bearing. Steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge.



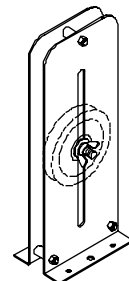
No. 205 BLACK OVERLAP CLAMP
Formed steel clamps to align track at overlap. 1 set pictured.



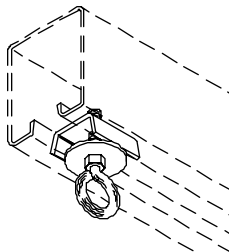
No. 206 BLACK CLAMP HANGER
Formed steel brackets clamp to track. Adjusts to any position. Suspend track with welded chain or wire rope. 1 pair pictured.



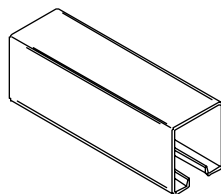
No. 207 BLACK SPLICE
Formed steel brackets align and lock track sections together. 1 pair pictured.



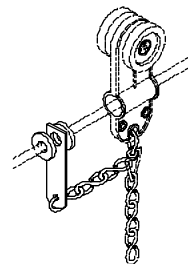
No. 208 BLACK ADJUSTABLE FLOOR BLOCK
4" diameter Nylatron GS sheave with shielded ball bearing in steel housing. 9" vertical adjustment.



No. 209 BLACK END STOP & CORD SUPPORT
Steel clamp with eye to support operating line and prevent carriers from travelling beyond desired location. 1 pair required for overlapping tracks.



No. 210B BLACK TRACK
14 gauge steel, roll-formed to 1-3/4" wide x 2" high with matte black finish. 20' and 24' stock lengths.



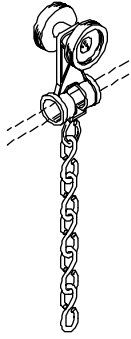
BLACK REAR FOLD GUIDE
For use with No. 201 carriers. Allows curtain to fold at offstage edges. Supplied with 1 rubber bumper.
No. 212 - for use with 3/8" operating line.
No. 213 - for use with 3/16" operating cable.



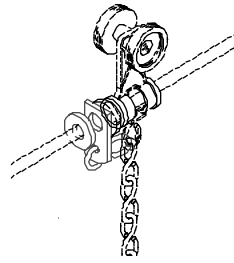
No. 214 BLACK OPERATING LINE
3/8" diameter black polyester double braided over solid polyester core for manual operation.



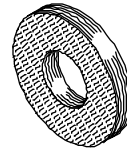
No. 215 BLACK OPERATING CABLE
3/16" diameter black polyester jacket braided over 3/32" galvanized aircraft cable.



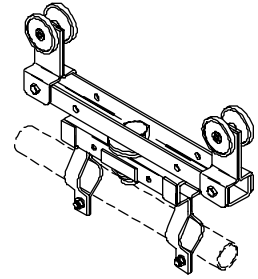
No. 221 BLACK SINGLE CARRIER
2 polyethylene wheels riveted to black Super Tough nylon body having free turning hook and trim chain for curtain attachment.



BLACK REAR FOLD GUIDE
For use with No. 221 carriers. Allows curtain to fold at offstage edges. Supplied with 1 rubber bumper.
No. 222 - for use with 3/8" operating line.
No. 223 - for use with 3/16" operating cable.



ROUND RUBBER BUMPER
1/8" neoprene bumper placed between carriers to reduce noise.
No. 230 - for use with 3/16" operating cable.
No. 231 - for use with 3/8" operating line.



No. 20 PIVOT DEVICE
Heavy steel construction with nylon wheels. Supplied with brackets for 1-3/8" O.D. pipe or tubing (recommended 6 foot maximum length). Allows masking draperies to be rotated to any angle. Black oxide finish.
Working load limit: 75 pounds.

THE EVOLUTION OF A BLACK TRACK

The 200 Series curtain track was originally conceived as a hybrid between the 100 Series standard duty and 400 Series heavy duty tracks. The smaller track was fitted with special carriers, larger end pulleys and 3/8" operating line to provide an economical, yet easily operated, medium duty track.

Through the years, demand increased for a track that would be less visible for touring shows, black box theatres, acoustical curtains and TV studios. The 200 Series took on a life of its own to meet that demand. The track itself was upgraded to 14 gauge steel and is now finished with a semi-gloss black powder coat. All of the steel components are now supplied with black oxide finish, and the carrier bodies are black Super Tough nylon.

Two types of carriers are produced for the 200 Series. The 201 single carrier and 202 master carrier are modified versions of the standard carriers for the 400 Series. A narrower wheel is substituted, but the ball bearing body, heavy duty hook, swivel and trim chain remain the same. The 221 carrier is similar to the 101 carrier, except that the black nylon body is sized to accept 3/8" operating line. The newly created model numbers for complete black tracks are 201B and 221B.

The Models **201S** and **221S** COMPLETE tracks are also available by assembling them as a composite of individual components from the 100, 200 and 400 Series. Contact the factory for further information.

200 SERIES COMPLETE TRACK COMPONENT GUIDE

PART #	DESCRIPTION	201B	221B	201S	221S
201	Single B.B. Carrier	•		•	
202	Master B.B. Carrier	•	•	•	•
203	4" Double End Pulley	•	•		
204	4" Single End Pulley	•	•		
205	Overlap Clamp	•	•		
206	Clamp Hanger	•	•		
207*	Splice	•	•		
208	4" Adjustable Floor Block	•	•		
209	End Stop & Cord Support	•	•		
210B*	Track	•	•		
214	3/8" Operating Line	•	•	•	•
221	Single Carrier		•		•
110S*	Track			•	•
403	4" Double End Pulley			•	•
404	4" Single End Pulley			•	•
105	Overlap Clamp			•	•
106	Clamp Hanger			•	•
107	Splice*			•	•
108	4" Adjustable Floor Block			•	•
109	End Stop & Cord Support			•	•

* Track lengths and splices supplied as required from stock sizes.

GENERAL SPECIFICATIONS: BLACK MEDIUM DUTY STRAIGHT TRACK

Provide **Model 201B** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 14 gauge steel, roll-formed to 1-3/4" wide X 2" high channel with continuous slot in bottom. Track shall be finished with a semi-gloss black powder coat. Provide unspliced in lengths up to 24'.

Suspend track on 7' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Install end stop with cord support at each track end. Where lengths exceed 24', connect tracks with 12" long, two-piece splicing clamp of 12 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two polyethylene wheels fastened parallel to carrier body and supplied with heavy duty hook, swivel eye and trim chain for attachment of curtain. Black Super Tough nylon shall be molded around shielded and greased ball bearing to form carrier body. Install round neoprene bumper between each carrier to reduce noise.

Master carriers shall be 4-wheel assemblies with bodies formed from 11 gauge steel with press-fit ball bearings. Connect to operating line with two formed steel cord clamps attached to each body. Supply each master carrier with two heavy duty hooks, swivel eyes and trim chains for attachment of leading edge of curtain.

Single and double end pulleys shall clamp securely to the underside of the track channel and shall contain 4" diameter sheaves enclosed in steel housings to prevent operating line from escaping the grooves. Sheaves shall be Nylatron GS molded around shielded and greased ball bearings and grooved to accommodate up to 3/8" operating line.

Provide floor block in 12 gauge steel housing containing 4" Nylatron GS, ball bearing sheave. Sheave axle shall lock at any point within 9" vertical slots to allow tension adjustment of operating line.

Black operating line shall be 3/8" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core.

All steel components shall be black oxide finished to resist corrosion.

Provide **Model 221B** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 14 gauge steel, roll-formed to 1-3/4" wide X 2" high channel with continuous slot in bottom. Track shall be finished with a semi-gloss black powder coat. Provide unspliced in lengths up to 24'.

Suspend track on 7' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Install end stop with cord support at each track end. Where lengths exceed 24', connect tracks with 12" long, two-piece splicing clamp of 12 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two polyethylene wheels fastened parallel to Super Tough nylon body with swivel hook for attachment of curtain.

Master carriers shall be 4-wheel assemblies with bodies formed from 11 gauge steel with press-fit ball bearings. Connect to operating line with two formed steel cord clamps attached to each body. Supply each master carrier with two heavy duty hooks, swivel eyes and trim chains for attachment of leading edge of curtain.

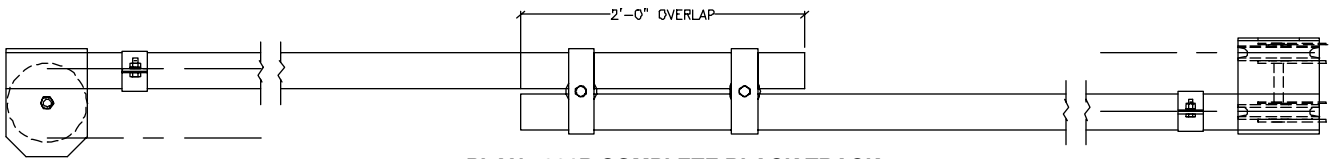
Single and double end pulleys shall clamp securely to the underside of the track channel and shall contain 4" diameter sheaves enclosed in steel housings to prevent operating line from escaping the grooves. Sheaves shall be Nylatron GS molded around shielded and greased ball bearings and grooved to accommodate up to 3/8" operating line.

Provide floor block in 12 gauge steel housing containing 4" Nylatron GS, ball bearing sheave. Sheave axle shall lock at any point within 9" vertical slots to allow tension adjustment of operating line.

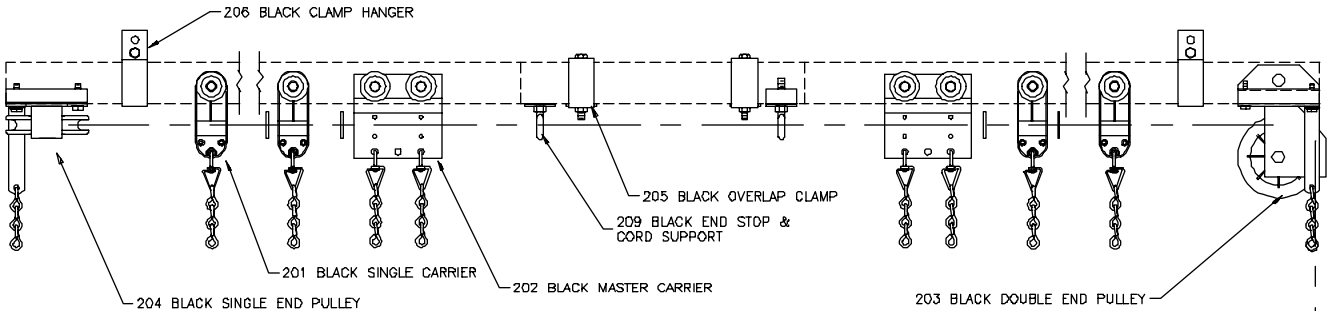
Black operating line shall be 3/8" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core.

All steel components shall be black oxide finished to resist corrosion.

200 SERIES TRACK DIMENSION DETAIL



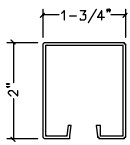
PLAN - 201B COMPLETE BLACK TRACK



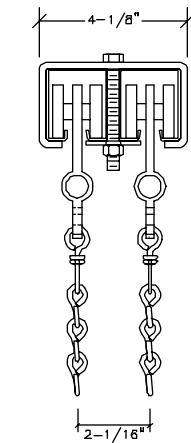
ELEVATION - 201B COMPLETE BLACK TRACK

214 BLACK OPERATING LINE (3/8")

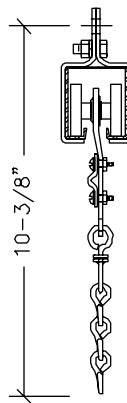
208 BLACK ADJUSTABLE FLOOR BLOCK



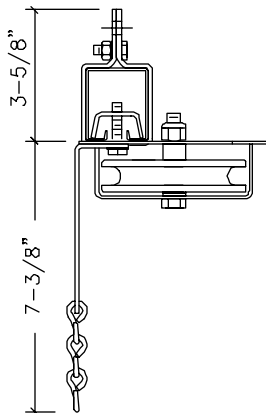
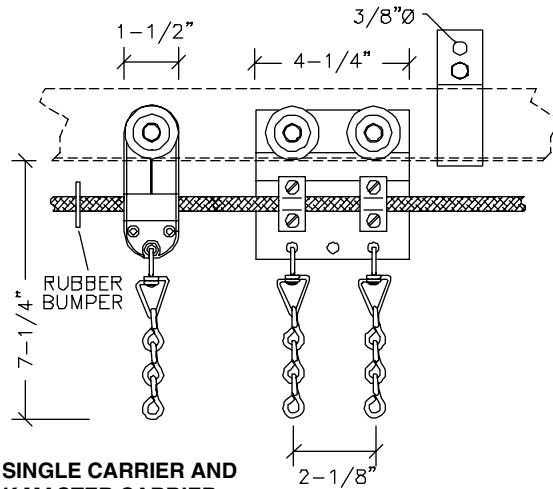
#210B BLACK TRACK



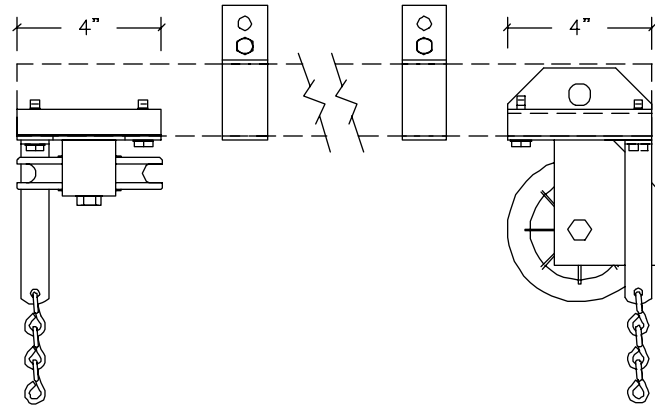
TRACKS AT CENTER OVERLAP



#201 BLACK SINGLE CARRIER AND #202 BLACK MASTER CARRIER



#204 BLACK SINGLE END PULLEY



#203 BLACK DOUBLE END PULLEY

300 SERIES STANDARD DUTY CURVED TRACK

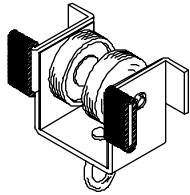
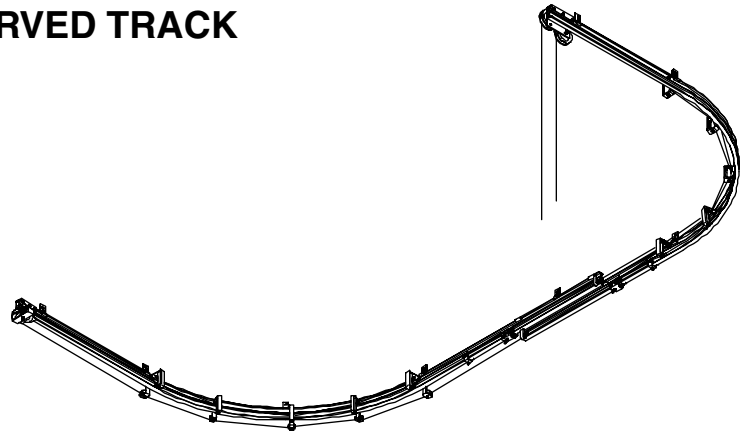
**COMPLETE TRACK
MODEL NUMBERS**

301A 301W
316A 316W
328A 328W

300B SERIES BLACK CURVED TRACK

**COMPLETE TRACK
MODEL NUMBERS**

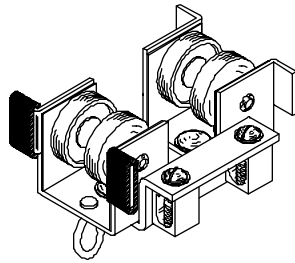
301AB 301WB
316AB 316WB
328AB 328WB



SINGLE CARRIER

2 Delrin wheels riveted to formed steel body with swivel hook. Nylatron glide strips reduce friction and noise. Supplied with 2 rubber bumpers.

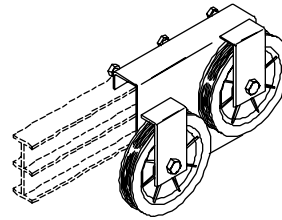
No. 301 - Zinc plated.
No. 301B - Black oxide finish.



MASTER CARRIER

2 No. 301 carriers swivel on formed steel body. Supplied with 2 clamps for anchoring line or cable. 1 pair required for overlapping tracks.

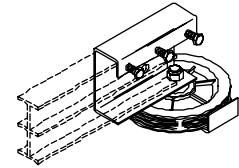
No. 302 - Zinc plated.
No. 302B - Black oxide finish.



DOUBLE END PULLEY

4" diameter Nylatron GS Sheaves with shielded ball bearings. Steel housing clamps to track.

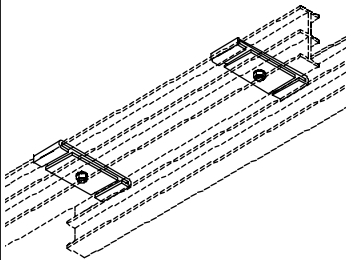
No. 303 - Zinc plated.
No. 303B - Black oxide finish.



SINGLE END PULLEY

4" diameter Nylatron GS Sheave with shielded ball bearings. Steel housing clamps to track.

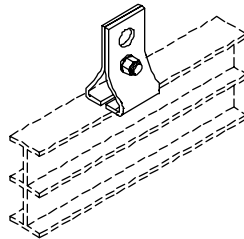
No. 304 - Zinc plated.
No. 304B - Black oxide finish.



OVERLAP CLAMP

Formed steel clamps align tracks at overlap. 1 pair pictured.

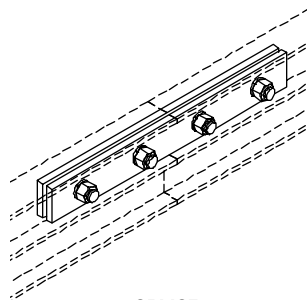
No. 305 - Zinc plated.
No. 305B - Black oxide finish.



CLAMP HANGER

Formed steel brackets clamp to track. Adjusts to any position. 1 pair pictured.

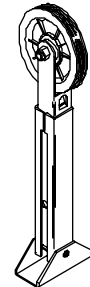
No. 306 - Zinc plated.
No. 306B - Black oxide finish.



SPLICE

Steel brackets align and lock track sections together. 1 pair pictured.

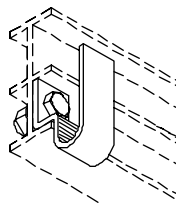
No. 307 - Zinc plated.
No. 307B - Black oxide finish.



TENSION FLOOR BLOCK

4" diameter Nylatron GS sheave with shielded ball bearings. Spring loaded steel housing maintains line tension.

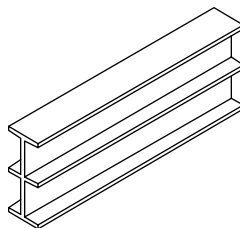
No. 308 - Zinc plated
No. 308B - Black oxide finish.



END STOP & CORD SUPPORT

Formed steel bracket bolts to track to support operating line and prevent carriers from travelling beyond desired location. 1 pair required for overlapping tracks.

No. 309 - Zinc plated.
No. 309B - Black oxide finish.

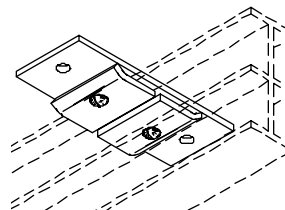


No. 310 TRACK

6063-T5 extruded aluminum .125" thick. 10', 20' and 24' stock lengths.

No. 310B BLACK TRACK

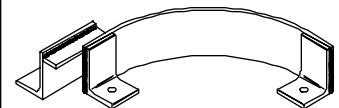
Class 1 black anodized. 20' stock lengths.



CEILING HANGER

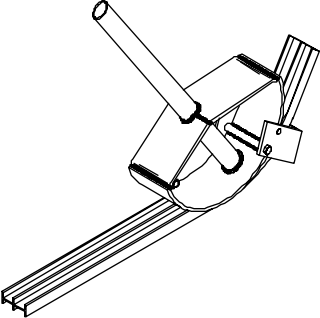
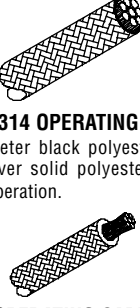
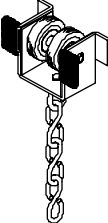
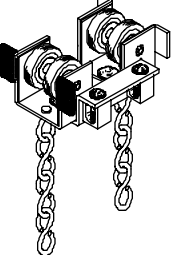
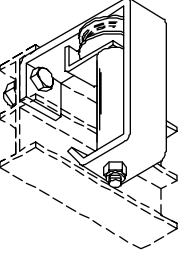
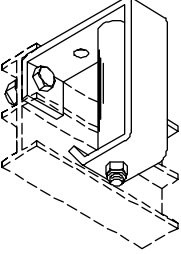
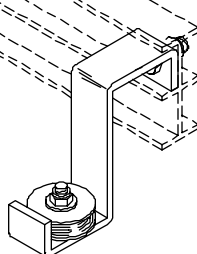
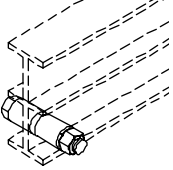
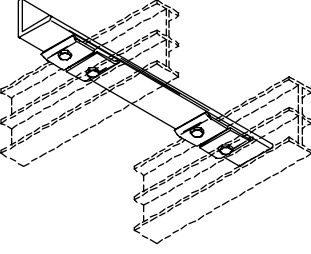
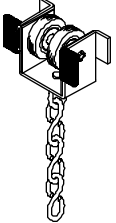
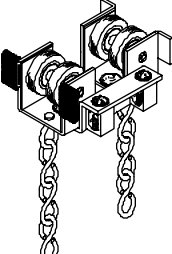

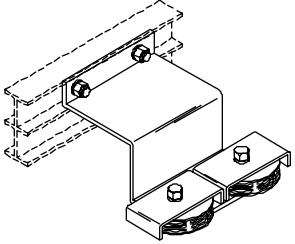
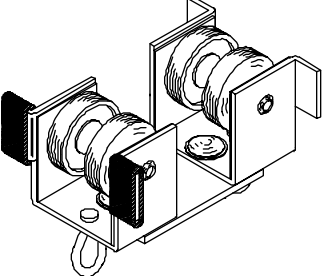
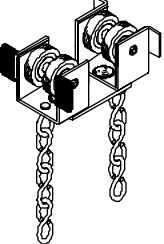
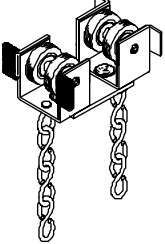
Tapped steel plate mounts flush to ceiling. Track clamps to bracket with offset clips.

No. 311 - Zinc plated.
No. 311B - Black oxide finish.



No. 312 BENDING TOOL

Steel tool designed for manual bending of aluminum tracks. Must be anchored to floor or stationary table.

 <p>No. 313 BENDING TOOL Heavy steel tool designed for manual, on-the-job bending of aluminum tracks.</p>	 <p>No. 314 OPERATING LINE 1/4" diameter black polyester double braided over solid polyester core for manual operation.</p> <p>OPERATING CABLE Black polyester jacket braided over 3/32" galvanized aircraft cable.</p> <p>No. 315- 3/16" diameter No. 325- 1/4" diameter</p>	 <p>SINGLE CARRIER Nylon-tired ball bearing wheels riveted to steel body with swivel hook and trim chain. Nylatron glide strips reduce friction and noise. Supplied with 2 rubber bumpers.</p> <p>No. 316 - Zinc plated. No. 316B - Black oxide finish.</p>	 <p>MASTER CARRIER 2 No. 316 carriers swivel on formed steel body. Supplied with 2 clamps for anchoring line or cable. 1 pair required for overlapping tracks.</p> <p>No. 317 - Zinc plated. No. 317B - Black oxide finish.</p>
 <p>DOUBLE SPINDLE Formed steel housing contains two ball bearing guides for line to follow curve. Mount to inside of curve on double end pulley section of track.</p> <p>No. 318 - Zinc plated. No. 318B - Black oxide finish.</p>	 <p>SINGLE SPINDLE Formed steel housing contains one ball bearing guide for line to follow track curve. Mount to inside of curve on single end pulley section of track.</p> <p>No. 319 - Zinc plated. No. 319B - Black oxide finish.</p>	 <p>OUTSIDE IDLER Formed steel housing contains one ball bearing guide for line to follow track curve. Mount to outside of curve on single end pulley section of track.</p> <p>No. 320 - Zinc plated. No. 320B - Black oxide finish.</p>	 <p>END STOP Bolt with steel spacers to prevent carriers from travelling beyond desired location.</p> <p>No. 321 - Zinc plated. No. 321B - Black oxide finish.</p>
 <p>DOUBLE TRACK CLAMP HANGER Angle bracket with mounting clips to secure double tracks together in studios and small theatres.</p> <p>No. 326, 6" track spacing. No. 327, 8" track spacing.</p>	 <p>SINGLE CARRIER Neoprene-tired ball bearing wheels riveted to formed steel body with swivel hook and trim chain. Nylatron glide strips reduce friction and noise. Supplied with 2 rubber bumpers.</p> <p>No. 328 - Zinc plated. No. 328B - Black oxide finish.</p>	 <p>MASTER CARRIER 2 No. 328 carriers swivel on formed steel body. Supplied with 2 clamps for anchoring line or cable. 1 pair required for overlapping tracks.</p> <p>No. 329 - Zinc plated. No. 329B - Black oxide finish.</p>	 <p>TRIM CHAIN 3 links #10 single jack chain added to carriers to provide 3" of curtain height adjustment.</p> <p>No. 335 - Zinc plated. No. 335B - Black oxide finish.</p>
 <p>No. 341 CENTER TAKE-OFF Special steel housing contains 2-1/2" diameter Nylatron GS sheaves with shielded ball bearings. Used when operating lines must be turned horizontally toward curtain machine or mule block.</p>	 <p>WALK-ALONG MASTER CARRIER 2 No. 301 carriers swivel on steel connecting plate. 1 pair suggested for each walk-along curtain.</p> <p>No. 342 - Zinc plated. No. 342B - Black oxide finish.</p>	 <p>WALK-ALONG MASTER CARRIER 2 No. 316 carriers swivel on steel connecting plate. 1 pair suggested for each walk-along curtain.</p> <p>No. 347 - Zinc plated. No. 347B - Black oxide finish.</p>	 <p>WALK-ALONG MASTER CARRIER 2 No. 328 carriers swivel on steel connecting plate. 1 pair suggested for each walk-along curtain.</p> <p>No. 349 - Zinc plated. No. 349B - Black oxide finish.</p>

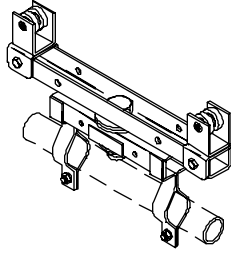


90 DEGREE TRACK CURVE

Factory bent with ends punched for splices

- No. 351** - 3'-4" radius
- No. 352** - 4'-0" radius
- No. 353** - 4'-8" radius
- No. 354** - 5'-4" radius
- No. 355** - 6'-0" radius
- No. 356** - 6'-8" radius

- No. 351B** - 3'-4" radius, class 1 black anodized.
- No. 352B** - 4'-0" radius, class 1 black anodized.

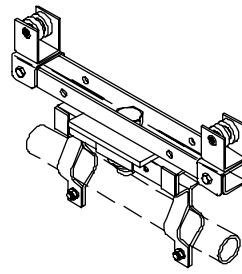


#30 PIVOT DEVICE

Heavy steel construction with nylon-tired ball bearing wheels. Supplied with brackets for 1-3/8" O.D. pipe or tubing (recommended 6 foot maximum length). Allows masking draperies to be rotated to any angle.

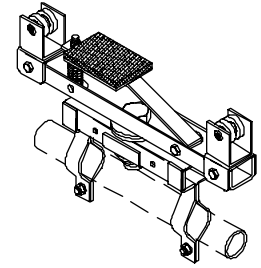
#30B PIVOT DEVICE

Same as above with black finish. Working load limit: 75 pounds.



#30X INDEXING PIVOT DEVICE

Pivot device with special plate to index rotation at 22-1/2 degree increments. Supplied with brackets for 1-3/8" O.D. pipe or tubing (recommended 6 foot maximum length). Working load limit: 75 pounds.

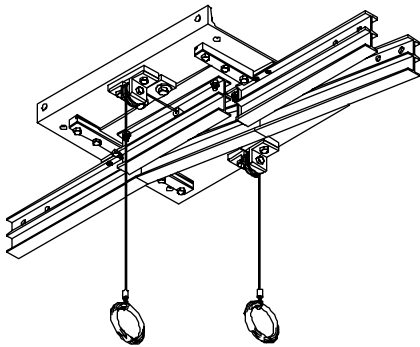


#30BK BRAKE KIT

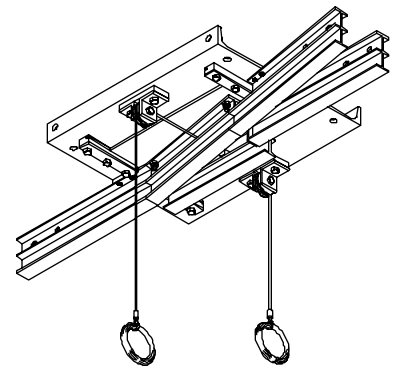
Spring loaded arm with neoprene pad. Add to pivot device to prevent undesired movement along track.

TRACK SWITCHING DEVICES

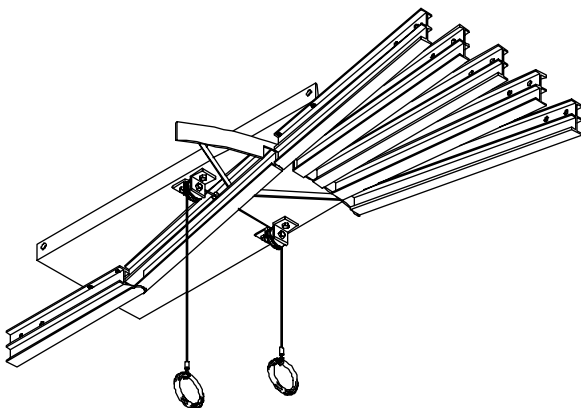
Switching devices enable walk-along curtains to be moved from one track to another, increasing the flexibility of drapery systems in TV studios and on dead hung stages. Each device consists of No. 310 track sections mounted to a precisely machined steel base with special mechanisms and rigging. Moving parts are indexed to their operating positions by spring-loaded buttons.



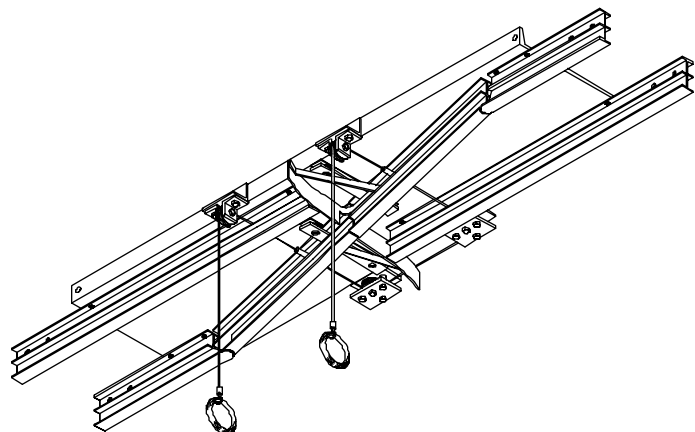
- No. 343L** - Switches between a straight track and a second track extending to the left.
- No. 343LB** - Same as above with black finish.



- No. 343R** - Switches between a straight track and a second track extending to the right.
- No. 343RB** - Same as above with black finish.

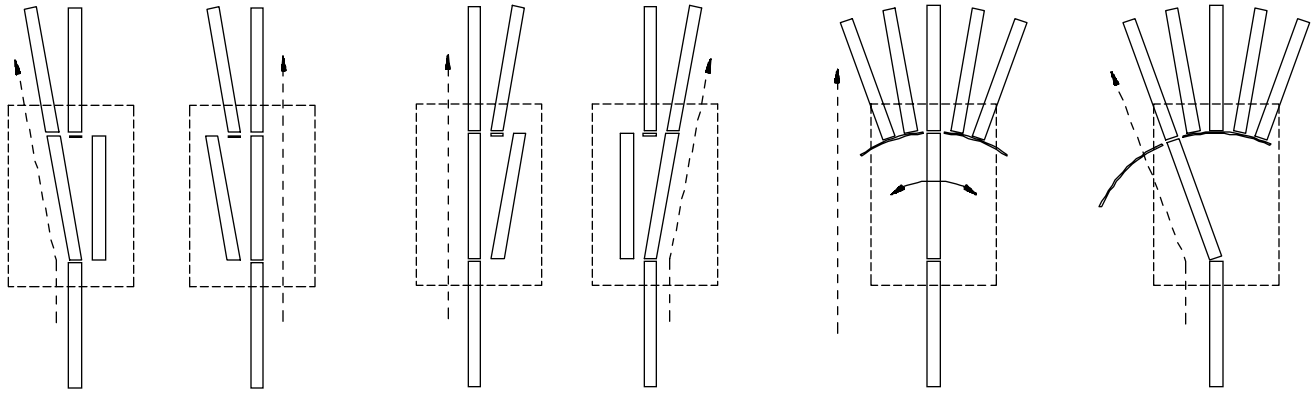


- No. 343-5** - Switches from one to as many as five tracks.



- No. 344** - Switches between two parallel tracks, spaced 8" apart.

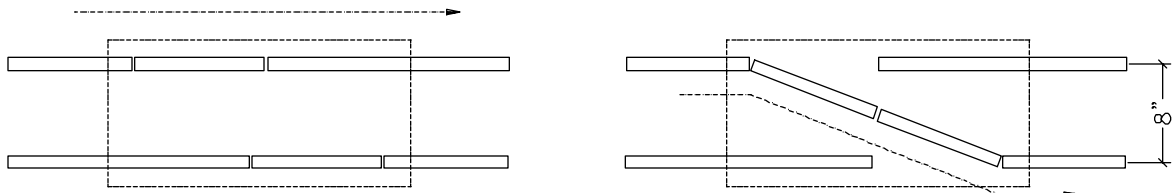
TRACK SWITCHING DEVICE OPERATING SCHEMATICS



NO. 343L, 343LB LEFT SWITCHING DEVICE

NO. 343R, 343RB RIGHT SWITCHING DEVICE

NO. 343-5 FAN SWITCHING DEVICE



NO. 344 PARALLEL SWITCHING DEVICE

300 SERIES COMPLETE TRACK COMPONENT GUIDE

PART #	DESCRIPTION	301A	301W	316A	316W	328A	328W
301	Single Carrier	●	●				
302	Master Carrier	●					
303	Double End Pulley	●		●		●	
304	Single End Pulley	●		●		●	
305	Overlap Clamp	●		●		●	
306	Clamp Hanger	●	●	●	●	●	●
307 **	Splice	●	●	●	●	●	●
308	Tension Floor Block	●		●		●	
309	End Stop & Cord Support	●		●		●	
310 **	Track	●	●	●	●	●	●
311	Ceiling Hanger	*	*	*	*	*	*
314	1/4" Operating Line	●		●		●	
316	Nylon B.B. Single Carrier			●	●		
317	Nylon B.B. Master Carrier			●			
318	Double Spindle	***		***		***	
319	Single Spindle	***		***		***	
320	Outside Idler	***		***		***	
321	End Stop		●		●		●
328	Neoprene B.B. Single Carrier					●	●
329	Neoprene B.B. Master Carrier					●	
342	Master Carrier		●				
347	Nylon B.B. Master Carrier				●		
349	Neoprene B.B. Master Carrier						●

* For ceiling mounted applications, No. 311 provided in lieu of No. 306 Clamp Hanger.

** Track lengths and splices supplied as required from stock sizes.

*** No. 318, 319, and 320 must be ordered as additional accessories. Quantity is determined by length of track and configuration of bend.

For COMPLETE Tracks with black finish, add suffix "B" to Part Number

Examples: 301W changes to 301WB or 328A changes to 328AB

GENERAL SPECIFICATIONS: STANDARD DUTY CURVED TRACK

Provide **Model 301A** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 2-1/2" I-beam, with 1" top, intermediate and bottom flanges, extruded from 6063-T5 aluminum. Provide unspliced in lengths up to 24'.

Suspend track on 5' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Install end stop with cord support at each track end. Where lengths exceed 24', connect tracks with 8" long, two-piece splicing clamp of 8 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two Delrin wheels fastened parallel to formed steel carrier body with swivel hook for attachment of curtain. Attach Nylatron wear strips at contact points between carriers and track to minimize friction and noise. Install two neoprene bumpers between carriers to further reduce noise.

Master carriers shall be two single carrier assemblies joined by a steel pivot body with two cord clamps for anchoring operating line.

Single and double end pulleys shall clamp securely to the track and shall contain 4" diameter sheaves enclosed in steel housings to prevent operating line from escaping the grooves. Sheaves shall be Nylatron GS molded around shielded and greased ball bearings.

Provide spring tension floor block in 3-piece, 14 gauge steel housing containing 4" Nylatron GS ball bearing sheave.

Black operating line shall be 1/4" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core. Install ball bearing idlers and spindles where necessary to guide operating line around inside and outside of track curves.

All steel components shall be zinc plated to resist corrosion.

Provide **Model 316A** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 2-1/2" I-beam, with 1" top, intermediate and bottom flanges, extruded from 6063-T5 aluminum. Provide unspliced in lengths up to 24'.

Suspend track on 5' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Install end stop with cord support at each track end. Where lengths exceed 24', connect tracks with 8" long, two-piece splicing clamp of 8 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two nylon-tired ball bearing wheels fastened parallel to formed steel carrier body with swivel hook for attachment of curtain. Attach Nylatron wear strips at contact points between carriers and track to minimize friction and noise. Install two neoprene bumpers between carriers to further reduce noise.

Master carriers shall be two single carrier assemblies joined by a steel pivot body with two cord clamps for anchoring operating line.

Single and double end pulleys shall clamp securely to the track and shall contain 4" diameter sheaves enclosed in steel housings to prevent operating line from escaping the grooves. Sheaves shall be Nylatron GS molded around shielded and greased ball bearings.

Provide spring tension floor block in 3-piece, 14 gauge steel housing containing 4" Nylatron GS ball bearing sheave.

Black operating line shall be 1/4" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core. Install ball bearing idlers and spindles where necessary to guide operating line around inside and outside of track curves.

All steel components shall be zinc plated to resist corrosion.

Provide **Model 328A** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 2-1/2" I-beam, with 1" top, intermediate and bottom flanges, extruded from 6063-T5 aluminum. Provide unspliced in lengths up to 24'.

Suspend track on 5' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Install end stop with cord support at each track end. Where lengths exceed 24', connect tracks with 8" long, two-piece splicing clamp of 8 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two neoprene-tired ball bearing wheels fastened parallel to formed steel carrier body with swivel hook for attachment of curtain. Attach Nylatron wear strips at contact points between carriers and track to minimize friction and noise. Install two neoprene bumpers between carriers to further reduce noise.

Master carriers shall be two single carrier assemblies joined by a steel pivot body with two cord clamps for anchoring operating line.

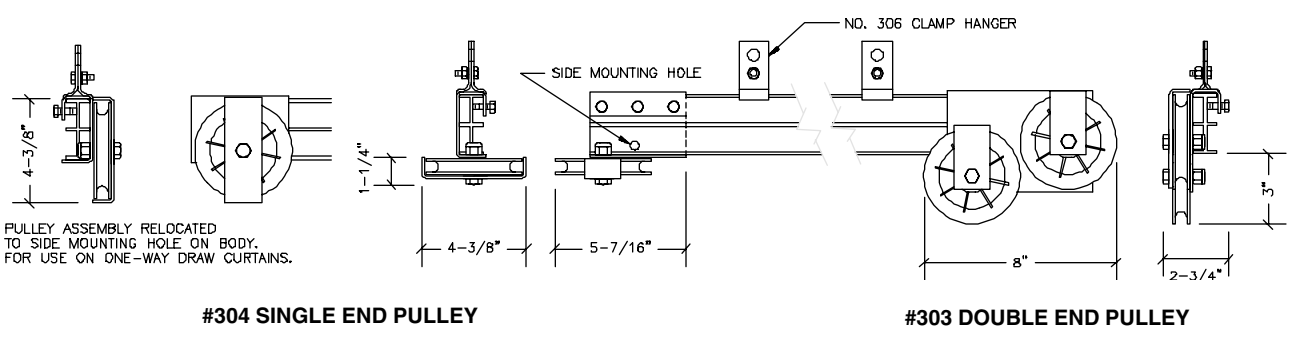
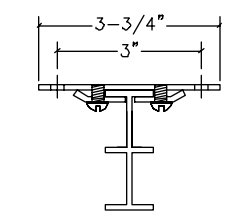
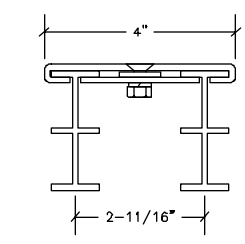
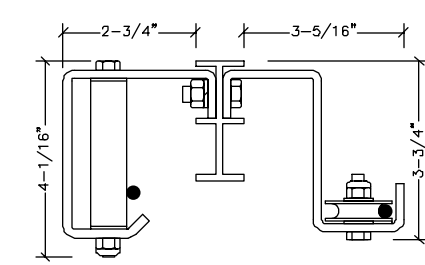
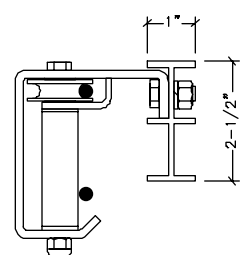
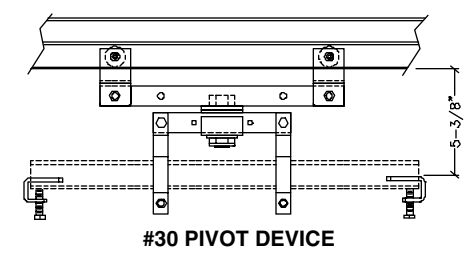
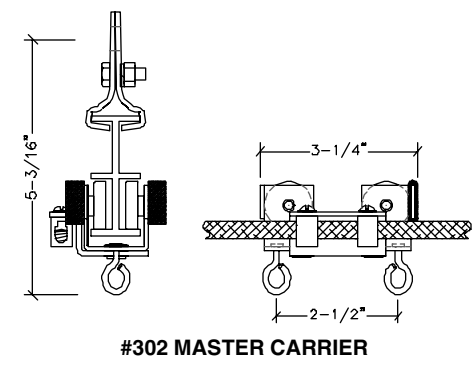
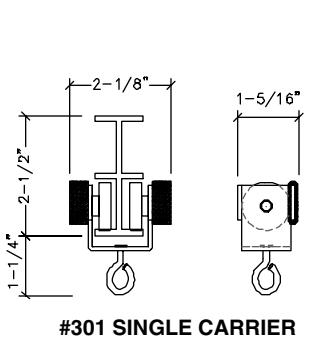
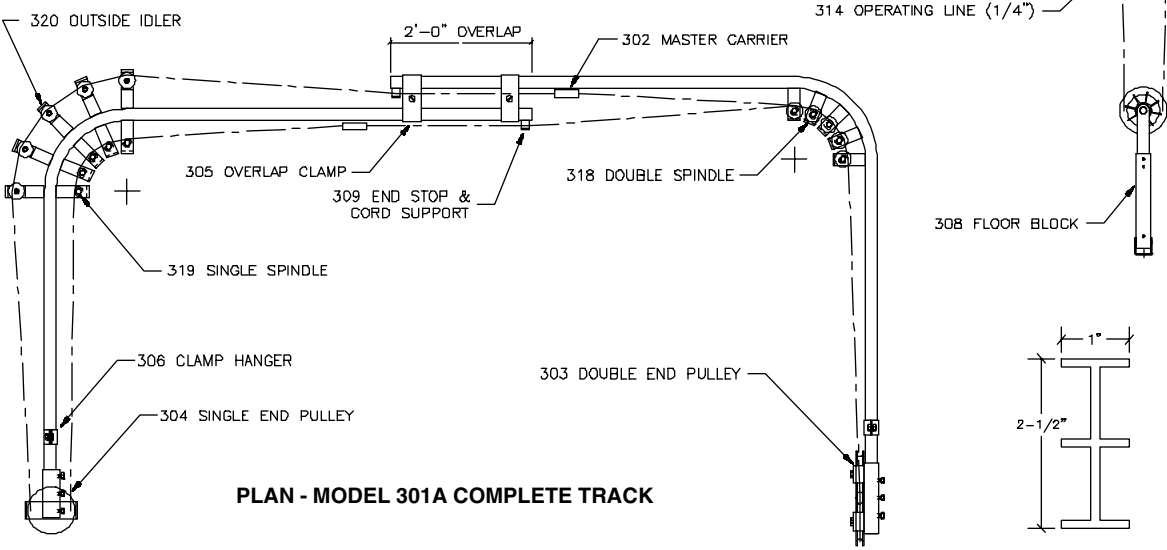
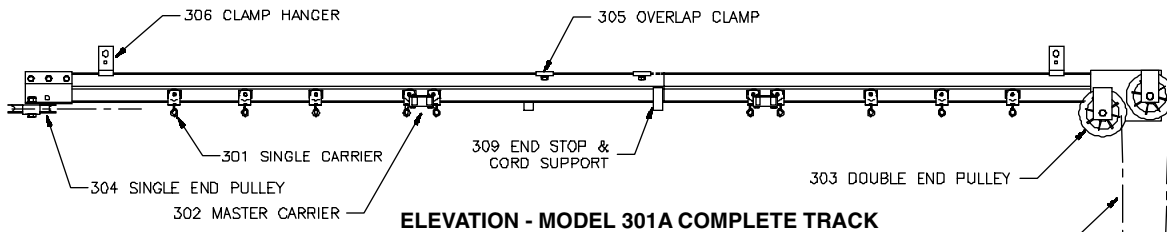
Single and double end pulleys shall clamp securely to the track and shall contain 4" diameter sheaves enclosed in steel housings to prevent operating line from escaping the grooves. Sheaves shall be Nylatron GS molded around shielded and greased ball bearings.

Provide spring tension floor block in 3-piece, 14 gauge steel housing containing 4" Nylatron GS ball bearing sheave.

Black operating line shall be 1/4" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core. Install ball bearing idlers and spindles where necessary to guide operating line around inside and outside of track curves.

All steel components shall be zinc plated to resist corrosion.

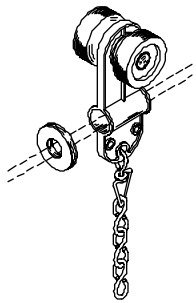
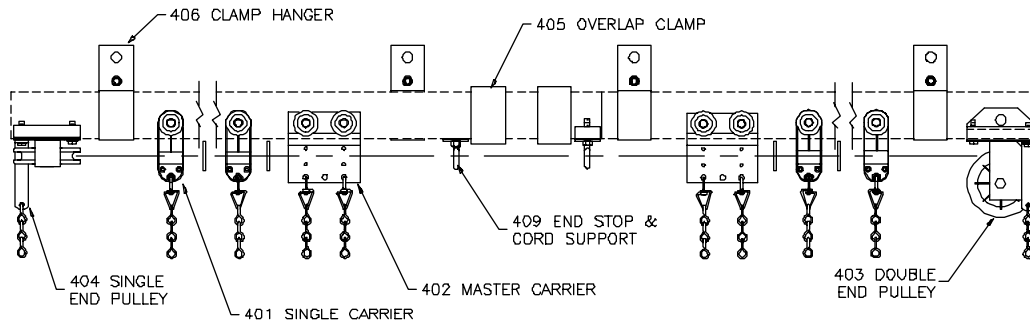
300 SERIES TRACK DIMENSION DETAIL



400 SERIES HEAVY DUTY STRAIGHT TRACK

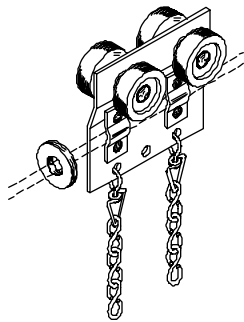
COMPLETE TRACK MODEL NUMBERS

401A	401S	
416A	416S	416P
418A	418S	418P
428A	428S	



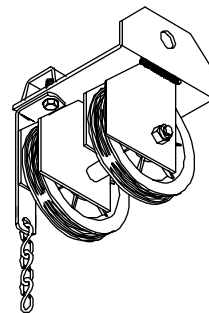
No. 401 SINGLE CARRIER

2 polyethylene wheels riveted to black Super Tough nylon body with shielded ball bearing. Heavy duty hook, swivel, and trim chain for curtain attachment. Supplied with 1 rubber bumper.



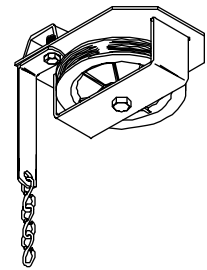
No. 402 MASTER CARRIER

4 polyethylene wheels riveted to steel body with 2 shielded ball bearings. 2 clamps provided for anchoring line or cable. Supplied with 1 rubber bumper. 1 pair required for overlapping tracks.



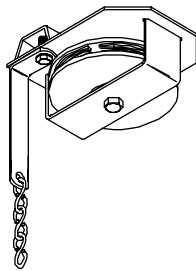
No. 403 DOUBLE END PULLEY

4" diameter Nylatron GS sheaves with shielded ball bearings. Steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge.



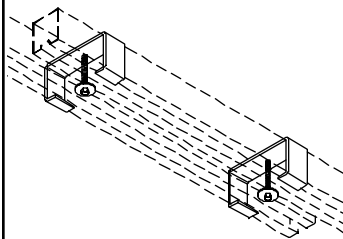
No. 404 SINGLE END PULLEY

4" diameter Nylatron GS sheave with shielded ball bearing. Steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge.



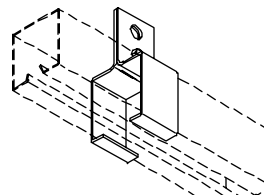
No. 404S SINGLE END PULLEY

4" diameter steel sheave with sealed precision ball bearings. Steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge.



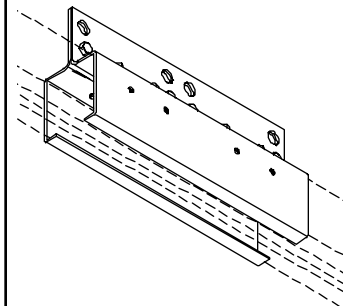
No. 405 OVERLAP CLAMP

Formed steel clamps to align track at overlap. 1 set pictured.



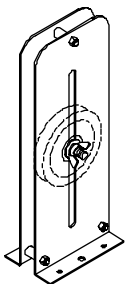
No. 406 CLAMP HANGER

Formed steel brackets clamp to track. Adjusts to any position. Suspend track with welded chain or wire rope. 1 pair pictured.



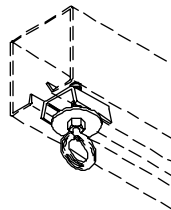
No. 407 SPLICE

Formed steel brackets align and lock track sections together. 1 pair pictured.



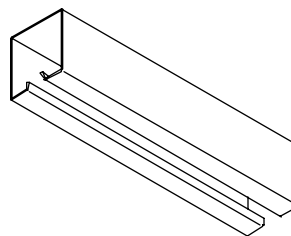
No. 408 ADJUSTABLE FLOOR BLOCK

4" diameter Nylatron GS sheave with shielded ball bearing in steel housing. 9" vertical adjustment.



No. 409 END STOP & CORD SUPPORT

Steel clamp with eye to support operating line and prevent carriers from travelling beyond desired location. 1 pair required for overlapping tracks.

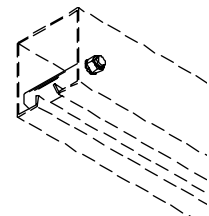


No. 410A TRACK

6063-T5 extruded aluminum .080" thick. 20" and 24" stock lengths.

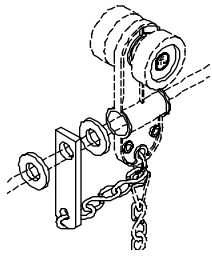
No. 410S TRACK

14 gauge galvanized steel roll-formed to 2-5/8" wide x 2-3/4" high. 16", 20", 24" and 26" stock lengths.



No. 411 END STOP

Bolt with steel spacer to prevent carriers from travelling beyond desired location.



REAR FOLD GUIDE

Allows curtain to fold at offstage edges. Supplied with 1 rubber bumper.

- No. 412 - for use with 3/8" operating line.
- No. 412A - for use with 1/2" operating line.
- No. 413 - for use with 3/16" operating cable.



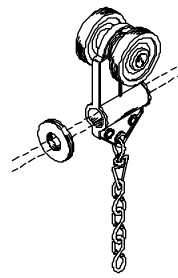
No. 414 OPERATING LINE

3/8" diameter black polyester double braided over solid polyester core for manual operation.



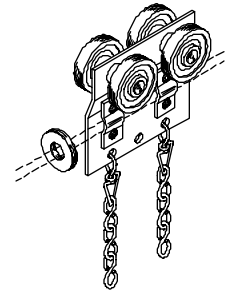
No. 415 OPERATING CABLE

3/16" diameter black polyester jacket braided over 3/32" galvanized aircraft cable for motor operation.



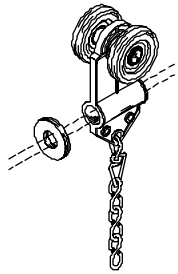
No. 416 SINGLE CARRIER

2 nylon-tired ball bearing wheels riveted to black Super Tough nylon body with heavy duty hook, swivel and trim chain for curtain attachment. Supplied with 1 rubber bumper.



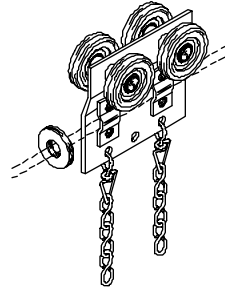
No. 417 MASTER CARRIER

4 nylon-tired ball bearing wheels riveted to steel body. 2 clamps provided for anchoring line or cable. Supplied with 1 rubber bumper. 1 pair required for overlapping tracks.



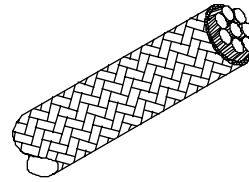
No. 418 SINGLE CARRIER

2 neoprene-tired ball bearing wheels riveted to black Super Tough nylon body with heavy duty hook, swivel and trim chain for curtain attachment. Supplied with 1 rubber bumper.



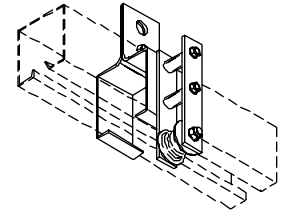
No. 419 MASTER CARRIER

4 neoprene-tired ball bearing wheels riveted to steel body. 2 clamps provided for anchoring line or cable. Supplied with 1 rubber bumper. 1 pair required for overlapping tracks.



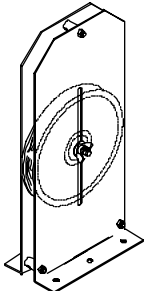
No. 420 OPERATING LINE

1/2" diameter black polyester double braided over solid polyester core for manual operation.



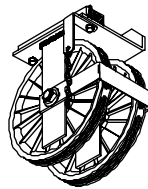
No. 421 CLAMP HANGER WITH IDLER

No. 406 clamp hanger with Nylatron ball bearing roller for supporting operating line or cable.



No. 422, 8" ADJUSTABLE FLOOR BLOCK

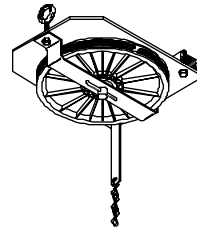
8" diameter Nylatron GS sheave with sealed precision ball bearings in heavy duty steel housing with 9" vertical adjustment. Grooved to accept up to 1/2" operating line.



8" DOUBLE END PULLEY

8" diameter Nylatron GS sheaves with sealed precision ball bearings. Heavy duty steel housing clamps to underside of track. Chain bracket for securing off-stage curtain edge.

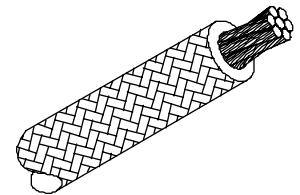
- No. 423 - Grooved for up to 1/2" operating line.
- No. 423M - Grooved for 3/16" operating cable.



8" SINGLE END PULLEY

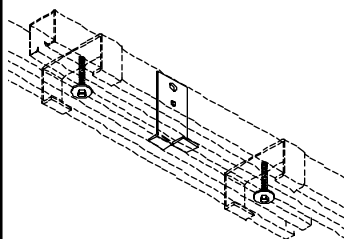
8" diameter Nylatron GS sheave with sealed precision ball bearings. Heavy duty steel housing clamps to underside of track. Chain bracket for securing off-stage curtain edge.

- No. 424 - Grooved for up to 1/2" operating line.
- No. 424M - Grooved for 3/16" operating cable.



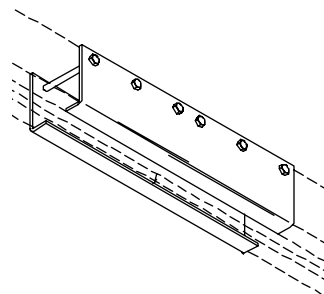
No. 425 OPERATING CABLE

3/8" black polyester double braided over solid polyester core reinforced with 3/32" galvanized aircraft cable. Extremely stretch resistant for heavy manual operation.



No. 426 CENTER PIPE SUPPORT

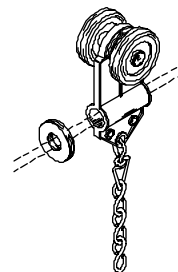
Formed steel bracket used to support tracks at overlap.



No. 427 CEILING SPLICE

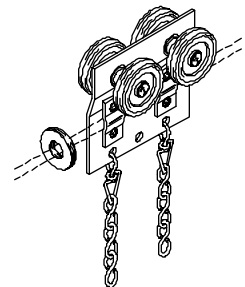
To align and lock track sections together on ceiling mounted tracks. 1 pair pictured.

Note: Cannot be used with No. 40 pivot device.



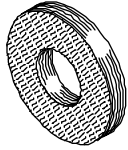
No. 428 SINGLE CARRIER

2 neoprene-tired wheels riveted to black Super Tough nylon body with shielded ball bearing. Heavy duty hook, swivel and trim chain for curtain attachment. Supplied with 1 rubber bumper.



NO. 429 MASTER CARRIER

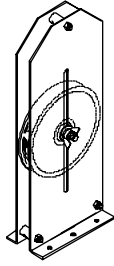
4 neoprene-tired wheels riveted to steel body with 2 shielded ball bearings. 2 clamps provided for anchoring line or cable. Supplied with 1 rubber bumper. 1 pair required for overlapping tracks.



ROUND RUBBER BUMPER

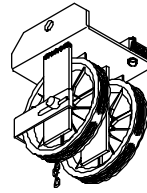
1/8" neoprene bumper placed between carriers to reduce noise.

- No. 430 - for use with 3/16" operating cable.
- No. 431 - for use with 3/8" operating line.
- No. 431A - for use with 1/2" operating line.



No. 432, 6" ADJUSTABLE FLOOR BLOCK

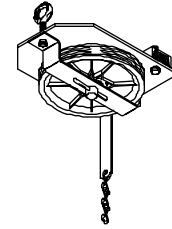
6" diameter Nylatron GS sheave with sealed precision ball bearings in heavy duty steel housing with 9" vertical adjustment. Grooved to accept up to 1/2" operating line.



6" DOUBLE END PULLEY

6" diameter Nylatron GS sheaves with precision sealed ball bearings. Heavy duty steel housing clamps to underside of track. Chain bracket for securing off-stage curtain edge.

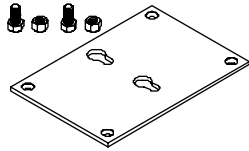
- No. 433 - Grooved for up to 1/2" operating line.
- No. 433M - Grooved for 3/16" operating cable.



6" SINGLE END PULLEY

6" diameter Nylatron GS sheave with sealed precision ball bearings. Heavy duty steel housing clamps to underside of track. Chain bracket for securing off-stage curtain edge.

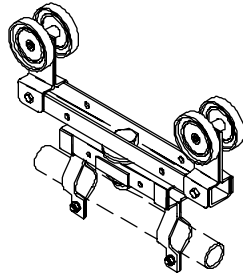
- No. 434 - Grooved for up to 1/2" operating line.
- No. 434M - Grooved for 3/16" operating cable.



DETACHABLE FLOOR BLOCK KIT

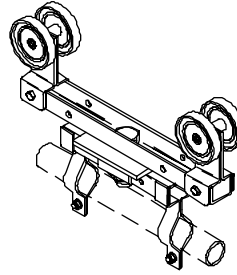
7 gauge steel plate with hardware for use with floor block for quick release.

- No. 408DK - use with No. 408 4" Floor Block.
- No. 422DK - use with No. 422 8" Floor Block.
- No. 432DK - use with No. 432 6" Floor Block.



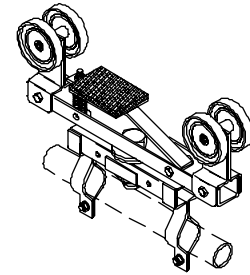
No. 40 PIVOT DEVICE

Heavy steel construction with nylon wheels. Supplied with brackets for 1-3/8" O.D. pipe or tubing (recommended 6 foot maximum length). Allows masking draperies to be rotated to any angle. Working load limit: 75 pounds.



No. 40X INDEXING PIVOT DEVICE

Pivot device with special plate to index rotation at 22-1/2 degree increments. Supplied with brackets for 1-3/8" O.D. pipe or tubing (recommended 6 foot maximum length). Working load limit: 75 pounds.



No. 40BK BRAKE KIT

Spring loaded arm with neoprene pad. Add to pivot device to prevent undesired movement along track.

400 SERIES COMPLETE TRACK COMPONENT GUIDE

PART #	DESCRIPTION	401S	416S	416P	418S	418P	428S
401	Single Carrier	•					
402	Master Carrier	•					
403	4" Double End Pulley	•					
404	4" Single End Pulley	•					
405	Overlap Clamp	•	•	•	•	•	•
406	Clamp Hanger	•	•	•	•	•	•
407*	Splice	•	•	•	•	•	•
408	4" Adjustable Floor Block	•					
409	End Stop & Cord Support	•	•	•	•	•	•
410S*	Track	•	•	•	•	•	•
412A	1/2" Rear Fold Guide			•		•	
414	3/8" Operating Line	•			•		•
416	Nylon B.B. Single Carrier		•	•			
417	Nylon B.B. Master Carrier		•	•			
418	Neoprene B.B. Single Carrier				•	•	
419	Neoprene B.B. Master Carrier				•	•	
420	1/2" Operating Line			•		•	
422	8" Adjustable Floor Block			•		•	
423	8" Double End Pulley			•		•	
424	8" Single End Pulley			•		•	
428	Neoprene Single Carrier						•
429	Neoprene Master Carrier						•
432	6" Adjustable Floor Block		•		•		•
433	6" Double End Pulley		•		•		•
434	6" Single End Pulley		•		•		•

* Track lengths and splices supplied as required from stock sizes.

For COMPLETE tracks with aluminum channel, substitute 410A for 410S.

GENERAL SPECIFICATIONS: HEAVY DUTY STRAIGHT TRACK

Provide **Model 401S** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 14 gauge galvanized steel, roll-formed to 2-5/8" wide X 2-3/4" high channel with continuous slot in bottom. Provide unspliced in lengths up to 26'.

Suspend track on 7' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Install end stop with cord support at each track end. Where lengths exceed 26', connect tracks with 12" long, two-piece splicing clamp of 12 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two polyethylene wheels fastened parallel to carrier body. Supply with heavy duty hook, swivel eye and trim chain for attachment of curtain. Black Super Tough nylon shall be molded around shielded and greased ball bearing to form carrier body. Install round neoprene bumper between each carrier to reduce noise.

Master carriers shall be 4-wheel assemblies with bodies formed from 11 gauge steel with press-fit ball bearings. Connect to operating line with two formed steel cord clamps attached to each body. Supply each master carrier with two heavy duty hooks, swivel eyes and trim chains for attachment of leading edge of curtain.

Single and double end pulleys shall clamp securely to the underside of the track channel and shall contain 4" diameter sheaves enclosed in steel housings to prevent operating line from escaping the grooves. Sheaves shall be Nylatron GS molded around shielded and greased ball bearings and grooved to accommodate up to 3/8" operating line.

Provide floor block in 12 gauge steel housing containing 4" Nylatron GS, ball bearing sheave. Sheave axle shall lock at any point within 9" vertical slots to allow tension adjustment of operating line.

Black operating line shall be 3/8" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core. All steel components shall be zinc plated to resist corrosion.

Provide **Model 416S** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 14 gauge galvanized steel, roll-formed to 2-5/8" wide X 2-3/4" high channel with continuous slot in bottom. Provide unspliced in lengths up to 26'.

Suspend track on 7' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Install end stop with cord support at each track end. Where lengths exceed 26', connect tracks with 12" long, two-piece splicing clamp of 12 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two nylon-tired ball bearing wheels fastened parallel to black Super Tough nylon carrier body. Supply with heavy duty hook, swivel eye and trim chain for attachment of curtain. Install round neoprene bumper between each carrier to reduce noise.

Master carriers shall be 4-wheel nylon-tired ball bearing assemblies with bodies formed from 11 gauge steel. Connect to operating line with two formed steel cord clamps attached to each body. Supply each master carrier with two heavy duty hooks, swivel eyes and trim chains for attachment of leading edge of curtain.

Single and double end pulleys shall clamp securely to the underside of the track channel and shall be equipped with 6" diameter Nylatron GS sheaves grooved for up to 1/2" operating line. Install two 5/8" sealed precision ball bearings in each sheave. Lock shaft to side plate on head end with 3/16" keeper pin to prevent rotation and install fine-threaded nylon insert lock nut.

Provide floor block in 12 gauge steel housing containing 6" Nylatron sheave with two 3/8" sealed precision ball bearings. Sheave axle shall lock at any point within 9" vertical slots to allow tension adjustment of operating line.

Black operating line shall be 3/8" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core. All steel components shall be zinc plated to resist corrosion.

Provide **Model 416P** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 14 gauge galvanized steel, roll-formed to 2-5/8" wide X 2-3/4" high channel with continuous slot in bottom. Provide unspliced in lengths up to 26'.

Suspend track on 7' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Install end stop with cord support at each track end. Where lengths exceed 26', connect tracks with 12" long, two-piece splicing clamp of 12 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two nylon-tired ball bearing wheels fastened parallel to black Super Tough nylon carrier body. Supply with heavy duty hook, swivel eye and trim chain for attachment of curtain. Install rear fold guide and two round neoprene bumpers between each carrier to fold curtain at offstage edges and minimize noise.

Master carriers shall be 4-wheel nylon-tired ball bearing assemblies with bodies formed from 11 gauge steel. Connect to operating line with two formed steel cord clamps attached to each body. Supply each master carrier with two heavy duty hooks, swivel eyes and trim chains for attachment of leading edge of curtain.

Single and double end pulleys shall clamp securely to the underside of the track channel and shall be equipped with 8" diameter Nylatron GS sheaves grooved for 1/2" operating line. Install two 5/8" sealed precision ball bearings in each sheave. Lock shaft to side plate on head end with 3/16" keeper pin to prevent rotation and install fine-threaded nylon insert lock nut.

Provide floor block in 12 gauge steel housing containing 8" Nylatron sheave with two 3/8" sealed precision ball bearings. Sheave axle shall lock at any point within 9" vertical slots to allow tension adjustment of operating line.

Black operating line shall be 1/2" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core. All steel components shall be zinc plated to resist corrosion.

GENERAL SPECIFICATIONS: (continued) HEAVY DUTY STRAIGHT TRACK

Provide **Model 418S** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 14 gauge galvanized steel, roll-formed to 2-5/8" wide X 2-3/4" high channel with continuous slot in bottom. Provide unspliced in lengths up to 26'.

Suspend track on 7' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Install end stop with cord support at each track end. Where lengths exceed 26', connect tracks with 12' long, two-piece splicing clamp of 12 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two neoprene-tired ball bearing wheels fastened parallel to black Super Tough nylon carrier body. Supply with heavy duty hook, swivel eye and trim chain for attachment of curtain. Install round neoprene bumper between each carrier to reduce noise.

Master carriers shall be 4-wheel neoprene-tired ball bearing assemblies with bodies formed from 11 gauge steel. Connect to operating line with two formed steel cord clamps attached to each body. Supply each master carrier with two heavy duty hooks, swivel eyes and trim chains for attachment of leading edge of curtain.

Single and double end pulleys shall clamp securely to the underside of the track channel and shall be equipped with 6" diameter Nylatron GS sheaves grooved for up to 1/2" operating line. Install two 5/8" sealed precision ball bearings in each sheave. Lock shaft to side plate on head end with 3/16" keeper pin to prevent rotation and install fine-threaded nylon insert lock nut.

Provide floor block in 12 gauge steel housing containing 6" Nylatron sheave with two 3/8" sealed precision ball bearings. Sheave axle shall lock at any point within 9" vertical slots to allow tension adjustment of operating line.

Black operating line shall be 3/8" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core.

All steel components shall be zinc plated to resist corrosion.

Provide **Model 418P** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 14 gauge galvanized steel, roll-formed to 2-5/8" wide X 2-3/4" high channel with continuous slot in bottom. Provide unspliced in lengths up to 26'.

Suspend track on 7' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Install end stop with cord support at each track end. Where lengths exceed 26', connect tracks with 12' long, two-piece splicing clamp of 12 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two neoprene-tired ball bearing wheels fastened parallel to black Super Tough nylon carrier body. Supply with heavy duty hook, swivel eye and trim chain for attachment of curtain. Install rear fold guide and two round neoprene bumpers between each carrier to fold curtain at offstage edges and minimize noise.

Master carriers shall be 4-wheel neoprene-tired ball bearing assemblies with bodies formed from 11 gauge steel. Connect to operating line with two formed steel cord clamps attached to each body. Supply each master carrier with two heavy duty hooks, swivel eyes and trim chains for attachment of leading edge of curtain.

Single and double end pulleys shall clamp securely to the underside of the track channel and shall be equipped with 8" diameter Nylatron GS sheaves grooved for 1/2" operating line. Install two 5/8" sealed precision ball bearings in each sheave. Lock shaft to side plate on head end with 3/16" keeper pin to prevent rotation and install fine-threaded nylon insert lock nut.

Provide floor block in 12 gauge steel housing containing 8" Nylatron sheave with two 3/8" sealed precision ball bearings. Sheave axle shall lock at any point within 9" vertical slots to allow tension adjustment of operating line.

Black operating line shall be 1/2" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core.

All steel components shall be zinc plated to resist corrosion.

Provide **Model 428S** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 14 gauge galvanized steel, roll-formed to 2-5/8" wide X 2-3/4" high channel with continuous slot in bottom. Provide unspliced in lengths up to 26'.

Suspend track on 7' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Install end stop with cord support at each track end. Where lengths exceed 26', connect tracks with 12' long, two-piece splicing clamp of 12 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two neoprene-tired wheels fastened parallel to carrier body. Supply with heavy duty hook, swivel eye and trim chain for attachment of curtain. Black Super Tough nylon shall be molded around shielded and greased ball bearing to form carrier body. Install round neoprene bumper between each carrier to reduce noise.

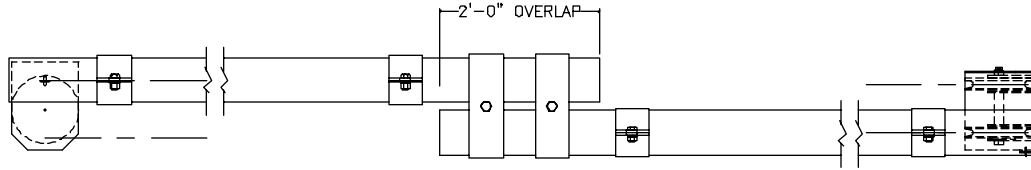
Master carriers shall be 4-wheel neoprene-tired assemblies with bodies formed from 11 gauge steel with press-fit ball bearings. Connect to operating line with two formed steel cord clamps attached to each body. Supply each master carrier with two heavy duty hooks, swivel eyes and trim chains for attachment of leading edge of curtain.

Single and double end pulleys shall clamp securely to the underside of the track channel and shall be equipped with 6" diameter Nylatron GS sheaves grooved for up to 1/2" operating line. Install two 5/8" sealed precision ball bearings in each sheave. Lock shaft to side plate on head end with 3/16" keeper pin to prevent rotation and install fine-threaded nylon insert lock nut.

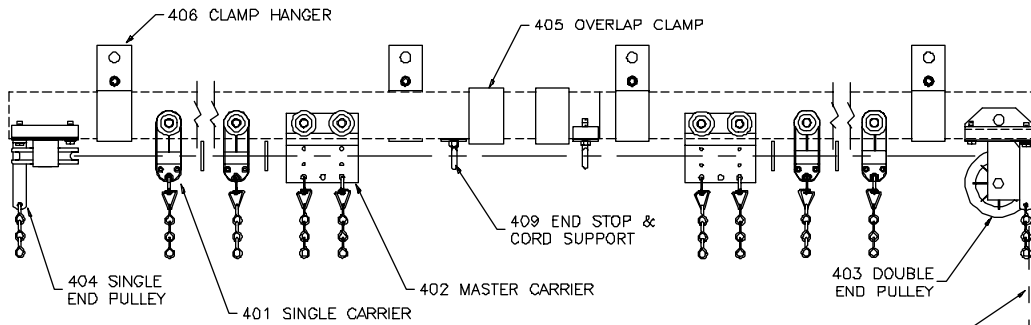
Provide floor block in 12 gauge steel housing containing 6" Nylatron sheave with two 3/8" sealed precision ball bearings. Sheave axle shall lock at any point within 9" vertical slots to allow tension adjustment of operating line.

Black operating line shall be 3/8" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core.

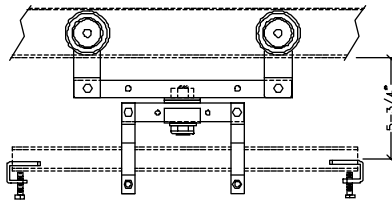
401S TRACK DIMENSION DETAIL



PLAN - MODEL 401S COMPLETE TRACK



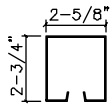
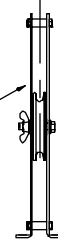
ELEVATION - MODEL 401S COMPLETE TRACK



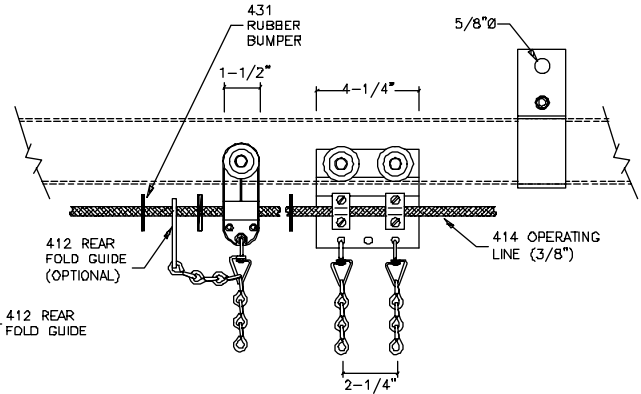
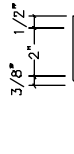
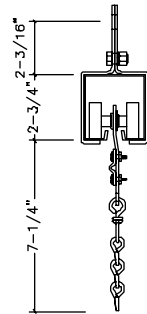
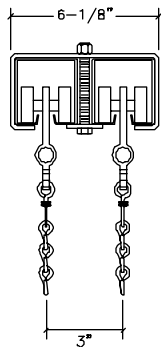
#40 PIVOT DEVICE

414 OPERATING LINE (3/8")

408 ADJUSTABLE FLOOR BLOCK

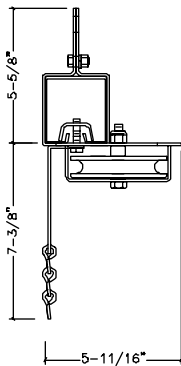


#410 TRACK

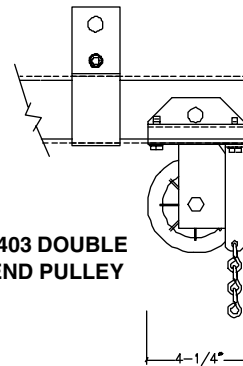


TRACKS AT CENTER OVERLAP

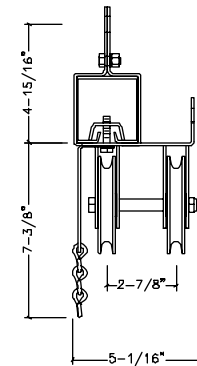
#401 SINGLE CARRIER AND #402 MASTER CARRIER



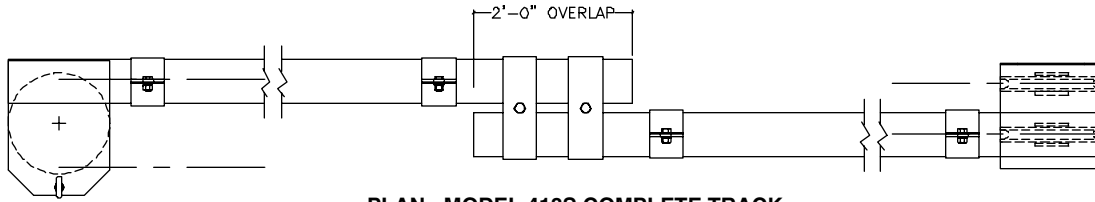
#404 SINGLE END PULLEY



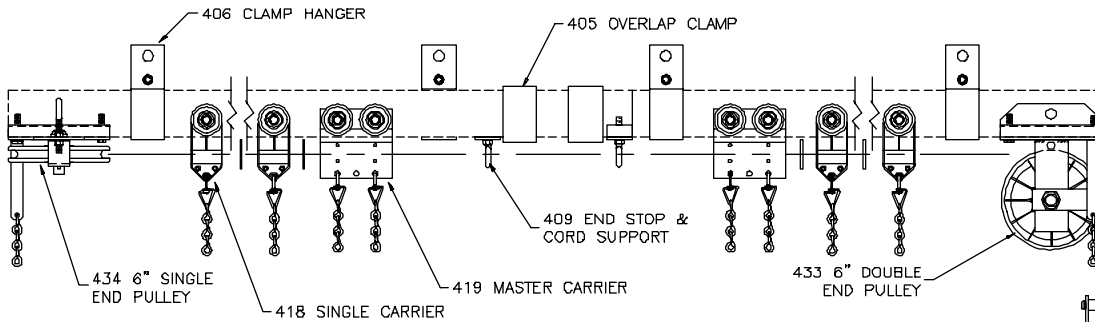
#403 DOUBLE END PULLEY



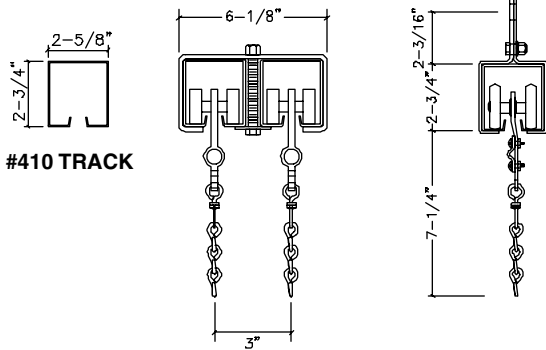
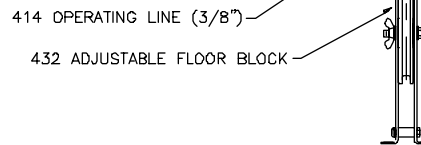
418S TRACK DIMENSION DETAIL



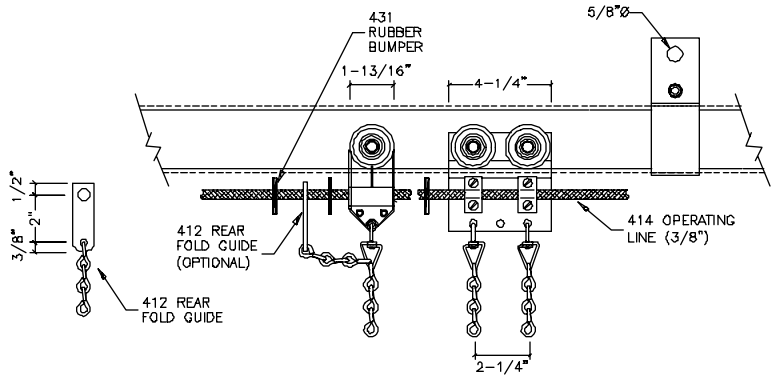
PLAN - MODEL 418S COMPLETE TRACK



ELEVATION - MODEL 418S COMPLETE TRACK

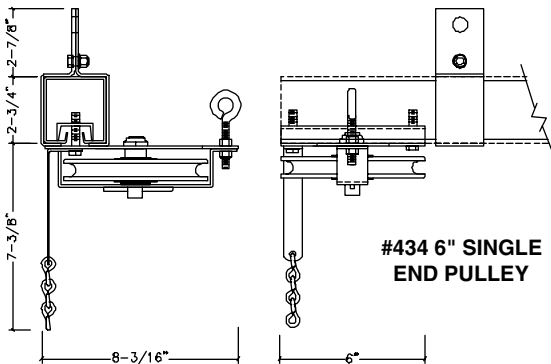


#410 TRACK

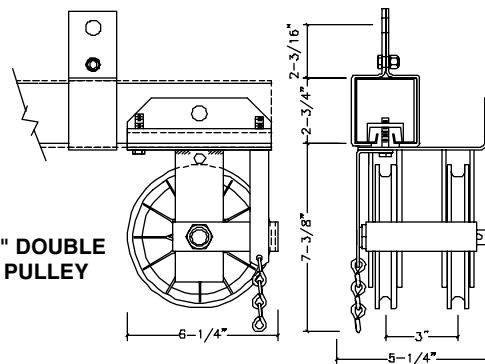


#418 SINGLE CARRIER AND #419 MASTER CARRIER

TRACKS AT CENTER OVERLAP

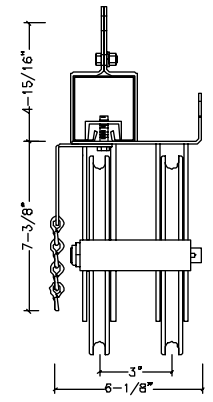
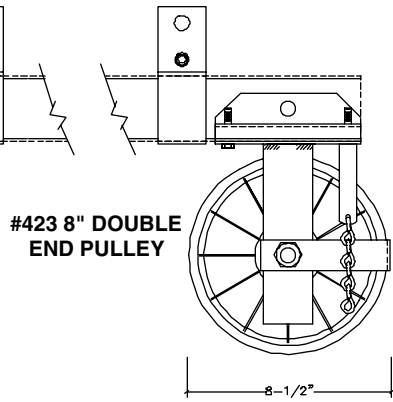
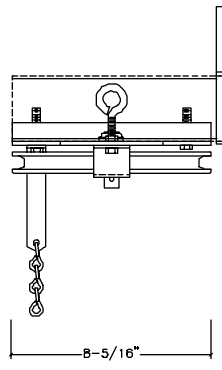
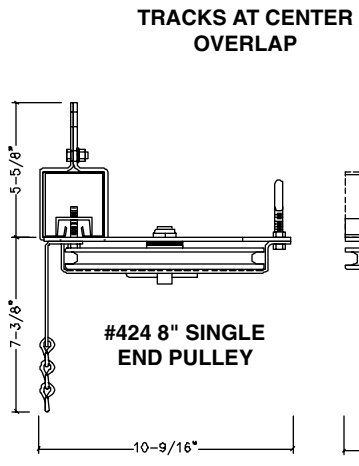
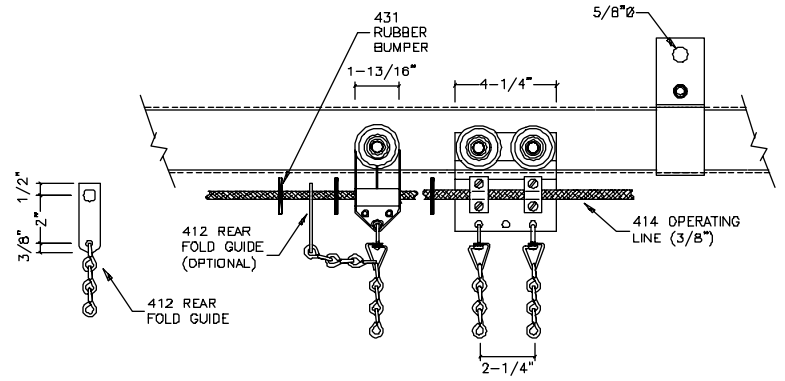
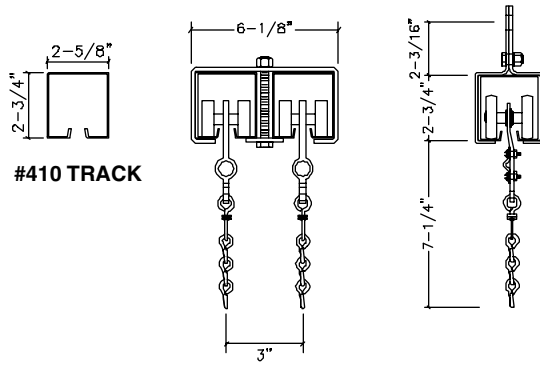
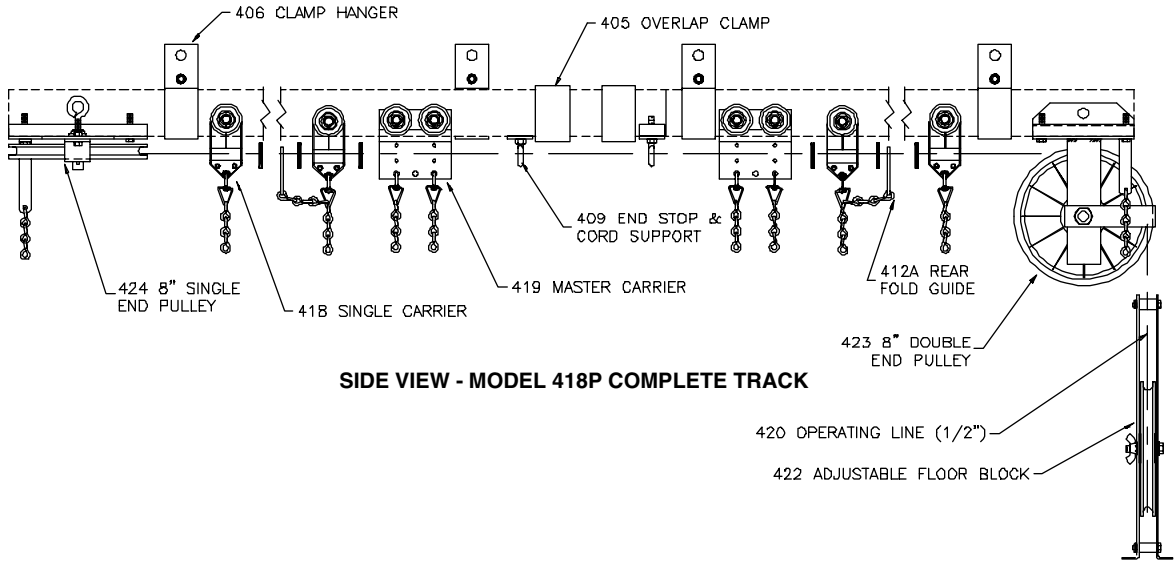
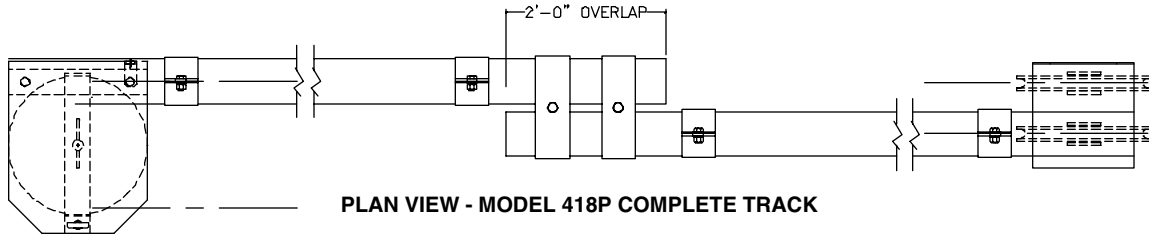


#434 6" SINGLE END PULLEY



#433 6" DOUBLE END PULLEY

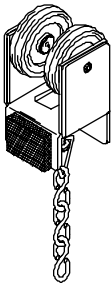
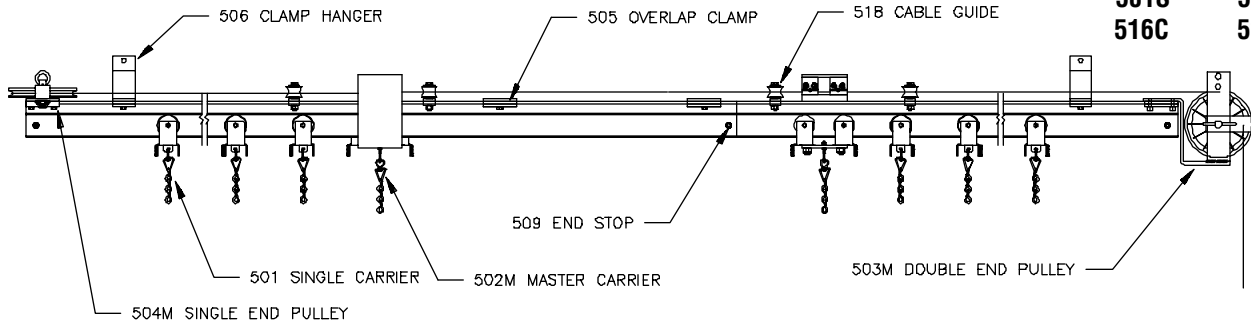
418P TRACK DIMENSION DETAIL



500 SERIES HEAVY DUTY CURVED TRACK

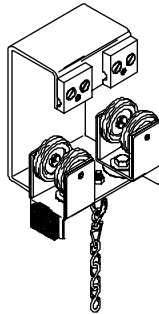
**COMPLETE TRACK
MODEL NUMBERS**

**501C 501W
501S 516S
516C 516W**



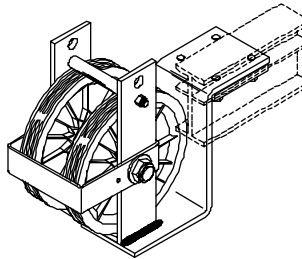
No. 501 SINGLE CARRIER

2 neoprene-tired ball bearing wheels riveted to plated steel body with heavy duty hook, swivel and trim chain. Nylatron glide strips and rubber bumper reduce friction and noise.



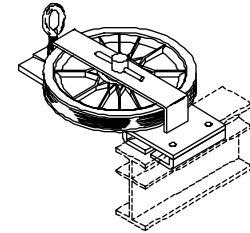
MASTER CARRIER

2 No. 501 carriers swivel on formed steel body with 2 clamps for anchoring line or cable. 1 pair required for overlapping tracks.
No. 502 - for 3/8" operating line.
No. 502M - for 3/16" operating cable.



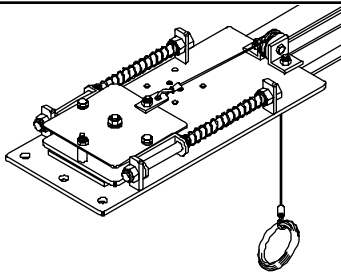
DOUBLE END PULLEY

6" diameter Nylatron GS sheaves with sealed precision ball bearings. Heavy duty steel housing clamps to top flange of track.
No. 503 - grooved for 3/8" operating line.
No. 503M - grooved for 3/16" operating cable.



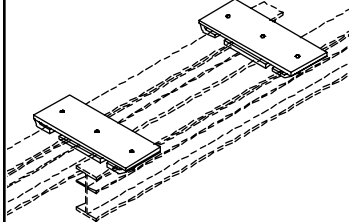
SINGLE END PULLEY

6" diameter Nylatron GS sheave with sealed precision ball bearings. Heavy duty steel housing clamps to top flange of track.
No. 504 - grooved for 3/8" operating line.
No. 504M - grooved for 3/16" operating cable.



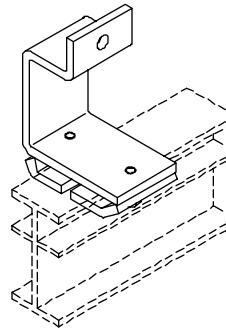
**No. 504T
TENSIONING END PULLEY**

4" diameter steel sheave with sealed precision ball bearings. Heavy duty steel housing clamps to top flange of track and provides constant cable tension on large motorized tracks.



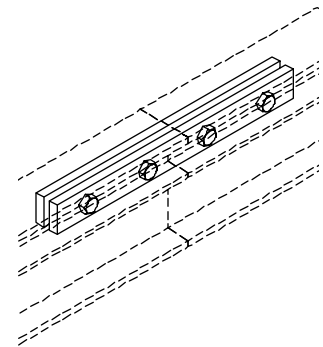
No. 505 OVERLAP CLAMP

Formed steel clamps align tracks at overlap. 1 set pictured.



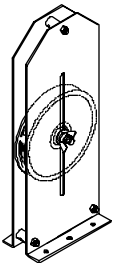
No. 506 CLAMP HANGER

Formed steel bracket for suspending track. Track clamps to bracket with offset clips.



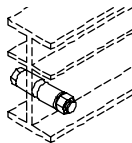
No. 507 SPLICE

Steel brackets align and lock track sections together. 1 pair pictured.



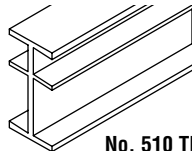
**No. 508, 6" ADJUSTABLE
FLOOR BLOCK**

6" diameter Nylatron GS sheave with sealed precision ball bearings in heavy duty steel housing with 9" vertical adjustment. Grooved to accept 3/8" operating line.



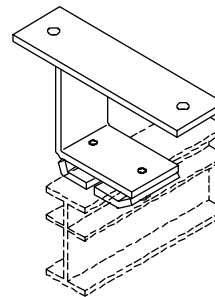
No. 509 END STOP

Bolt with steel spacers to prevent carriers from travelling beyond desired location. 2 pair required for overlapping tracks.



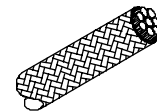
No. 510 TRACK

6063-T5 extruded aluminum .187" thick. 20" and 24" stock lengths.



No. 511 CEILING HANGER

Formed steel bracket mounts to ceiling. Track clamps to bracket with offset clips.



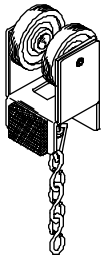
No. 514 OPERATING LINE

3/8" diameter black polyester double braided over solid polyester core for manual operation.



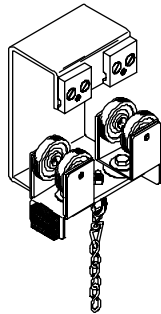
No. 515 OPERATING CABLE

3/16" diameter black polyester jacket braided over 3/32" galvanized aircraft cable.



No. 516 SINGLE CARRIER

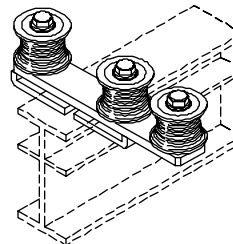
2 nylon-tired ball bearing wheels riveted to plated steel body with heavy duty hook, swivel and trim chain. Nylatron glide strips and rubber bumper reduce friction and noise.



MASTER CARRIER

2 No. 516 carriers swivel on formed steel body with 2 clamps for anchoring line or cable. 1 pair required for overlapping tracks.

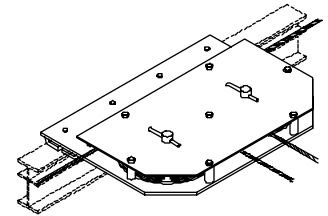
No. 517 - for 3/8" operating line.
No. 517M - for 3/16" operating cable.



CABLE GUIDE

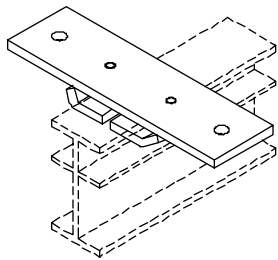
3 Nylatron GS rollers mounted to tapped steel bracket. Bracket mounts to track with offset clips. Suggested spacing: 5'. Additional guides required at each curve.

No. 518 - 5/16" shielded ball bearings.
No. 519 - 3/8" sealed precision ball bearings.



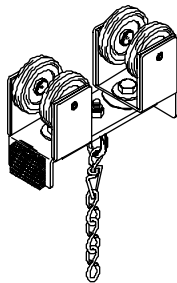
No. 521 CENTER TAKE-OFF PULLEY

Steel housing contains 6" diameter Nylatron GS sheaves with sealed precision ball bearings. Used when operating lines must be turned horizontally toward curtain machine or mule block.



No. 531 FLUSH CEILING HANGER

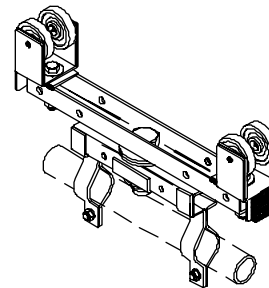
Tapped steel plate mounts flush to ceiling. Track clamps to bracket with offset clips. For use on walk-along tracks only.



WALK-ALONG MASTER CARRIER

2 single carriers swivel on steel connecting plate with heavy duty hook, swivel and trim chain.

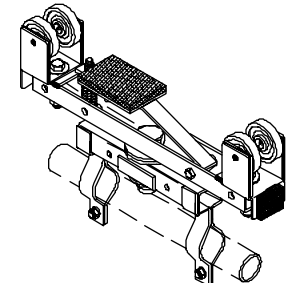
No. 502W - Neoprene-tired wheels.
No. 517W - Nylon-tired wheels



No. 50 PIVOT DEVICE

Heavy steel construction with nylon-tired ball bearing wheels. Supplied with brackets for 1-3/8" O.D. pipe or tubing (recommended 6 foot maximum length). Allows masking draperies to be rotated to any angle.

Working load limit: 75 pounds.



No. 50BK BRAKE KIT

Spring loaded arm with neoprene pad. Add to pivot device to prevent movement along track.

500 SERIES COMPLETE TRACK COMPONENT GUIDE

PART #	DESCRIPTION	501C	501S	501W	516C	516S	516W
501	Neoprene B.B. Single Carrier	●	●	●			
502*	Neoprene B.B. Master Carrier	●	●				
502W	Walk-Along Master Carrier			●			
503*	Double End Pulley	●	●		●	●	
504*	Single End Pulley	●	●		●	●	
505	Overlap Clamp	●	●		●	●	
506	Clamp Hanger	***	***	***	***	***	***
507**	Splice	●	●	●	●	●	●
508*	Adjustable Floor Block	●	●		●	●	
509	End Stop	●	●	●	●	●	●
510**	Track	●	●	●	●	●	●
511	Ceiling Hanger	●	●		●	●	
514*	3/8" Operating Line						
516	Nylon B.B. Single Carrier				●	●	●
517*	Nylon B.B. Master Carrier				●	●	
517W	Walk-Along Master Carrier						●
518	Cable Guide	●	●		●	●	
531	Flush Ceiling Hanger			●			●

* For motorized applications, the suffix "M" is added to the master carrier and end pulley part numbers, the floor block is eliminated, and #515 cable is substituted for #514 hand line.

** Track lengths and splices supplied as required.

*** For suspended applications, #506 clamp hangers are substituted for the ceiling hangers.

GENERAL SPECIFICATIONS: HEAVY DUTY CURVED TRACK

Provide **Model 501C** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 3-3/8" I-beam, with 1-5/8" top, intermediate and bottom flanges, extruded from 6063-T5 aluminum. Track shall be factory curved and provided unspliced in lengths up to 24'.

Suspend track on 5' maximum centers with clamp hanger formed from 1/4" steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Where lengths exceed 24', connect tracks with 8" long, two-piece splicing clamp of 1/4" steel.

Provide single carriers, spaced on 12" centers, constructed of two neoprene-tired ball bearing wheels fastened parallel to formed steel carrier body with heavy duty hook, swivel and trim chain for attachment of curtain. Attach Nylatron wear strips at contact points between carriers and track to minimize friction and noise. Install neoprene bumpers to carriers to further reduce noise.

Master carriers shall be two single carrier assemblies joined by a steel pivot body with arm extending above track for anchoring operating line with two cord clamps.

Single and double end pulleys shall clamp securely to the top flange of the track and shall be equipped with 6" diameter Nylatron GS sheaves grooved for 3/8" operating line. Install two sealed 5/8" precision ball bearings in each sheave. Lock shaft to side plate on head end with 3/16" keeper pin to prevent rotation and install fine-threaded nylon insert lock nut.

Provide floor block in 12 gauge steel housing containing 6" Nylatron GS sheave with two 3/8" sealed precision ball bearings. Sheave axle shall lock at any point within 9" vertical slots to allow tension adjustment of operating line.

Black operating line shall be 3/8" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core.

Install guide assemblies on 5' centers to direct the operating line along the top of the track, allowing curves in any direction. Assembly shall consist of three Nylatron GS guide spools with two shielded ball bearings each mounted to 1/4" steel body and clamped to the top flange of the track.

All steel components shall be zinc plated to resist corrosion.

Provide **Model 516C** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 3-3/8" I-beam, with 1-5/8" top, intermediate and bottom flanges, extruded from 6063-T5 aluminum. Track shall be factory curved and provided unspliced in lengths up to 24'.

Suspend track on 5' maximum centers with clamp hanger formed from 1/4" steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Where lengths exceed 24', connect tracks with 8" long, two-piece splicing clamp of 1/4" steel.

Provide single carriers, spaced on 12" centers, constructed of two nylon-tired ball bearing wheels fastened parallel to formed steel carrier body with heavy duty hook, swivel and trim chain for attachment of curtain. Attach Nylatron wear strips at contact points between carriers and track to minimize friction and noise. Install neoprene bumpers to carriers to further reduce noise.

Master carriers shall be two single carrier assemblies joined by a steel pivot body with arm extending above track for anchoring operating line with two cord clamps.

Single and double end pulleys shall clamp securely to the top flange of the track and shall be equipped with 6" diameter Nylatron GS sheaves grooved for 3/8" operating line. Install two sealed 5/8" precision ball bearings in each sheave. Lock shaft to side plate on head end with 3/16" keeper pin to prevent rotation and install fine-threaded nylon insert lock nut on threaded end.

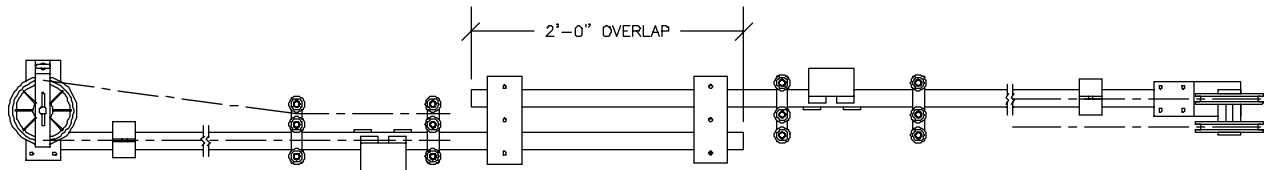
Provide floor block in 12 gauge steel housing containing 6" Nylatron GS sheave with two 3/8" sealed precision ball bearings. Sheave axle shall lock at any point within 9" vertical slots to allow tension adjustment of operating line.

Black operating line shall be 3/8" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core.

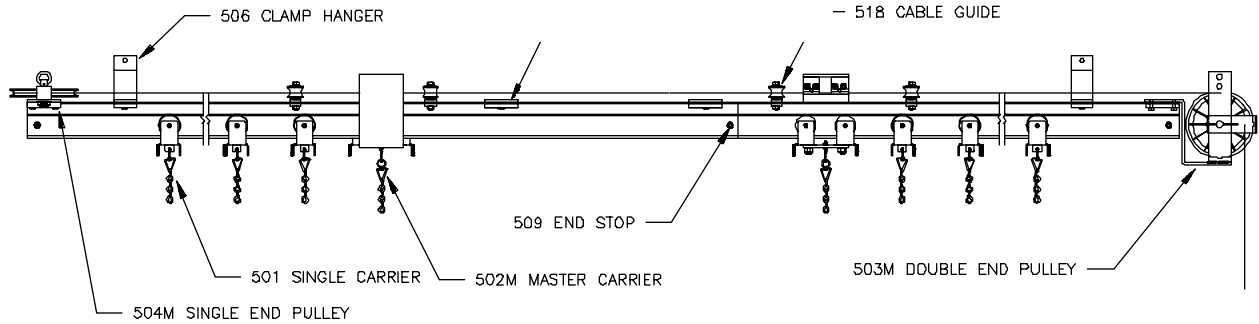
Install guide assemblies on 5' centers to direct the operating line along the top of the track, allowing curves in any direction. Assembly shall consist of three Nylatron GS guide spools with two shielded ball bearings each mounted to 1/4" steel body and clamped to the top flange of the track.

All steel components shall be zinc plated to resist corrosion.

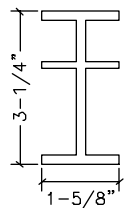
500 SERIES TRACK DIMENSION DETAIL



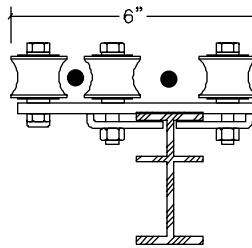
PLAN - MODEL 501C COMPLETE TRACK



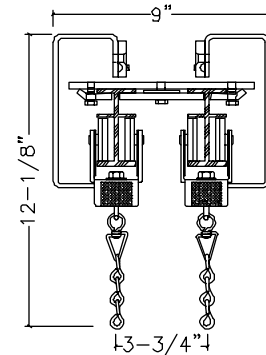
ELEVATION - MODEL 501C COMPLETE TRACK



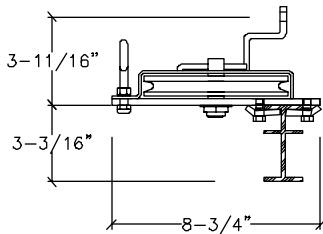
#510 TRACK



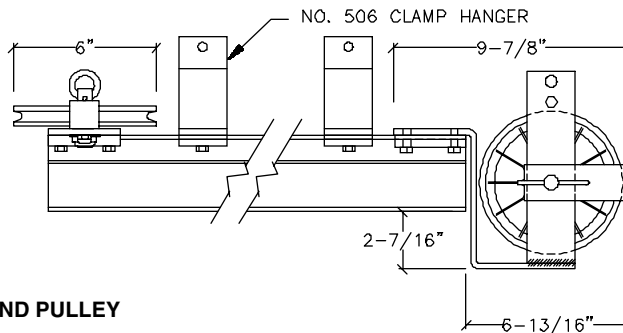
#518 CABLE GUIDE



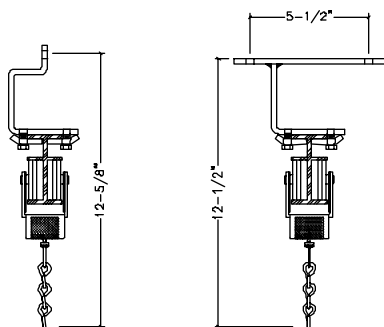
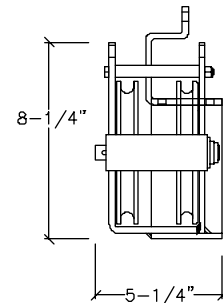
TRACKS AT CENTER OVERLAP



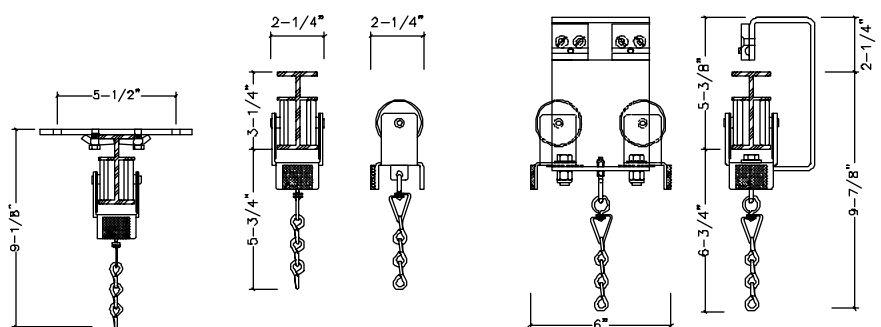
#504 SINGLE END PULLEY



#503 DOUBLE END PULLEY



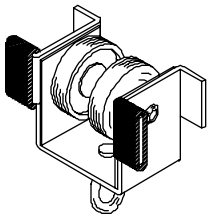
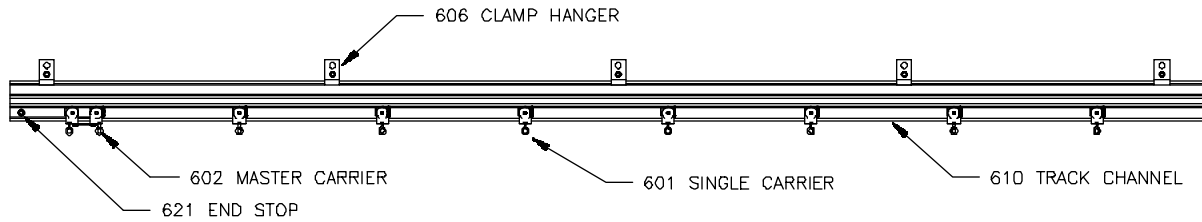
#506, #511 AND #531 TRACK HANGERS



#501 SINGLE CARRIER AND #502 MASTER CARRIER

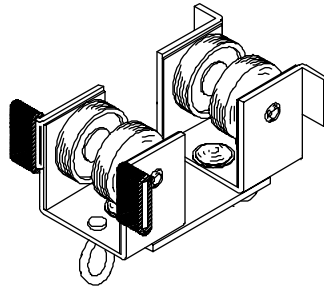
600 SERIES STANDARD DUTY CURVED TRACK

**COMPLETE TRACK
MODEL NUMBERS**
 601A 601W
 616A 616W
 628A 628W



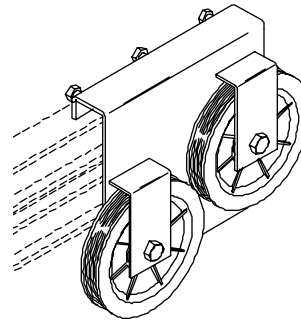
No. 601 SINGLE CARRIER

2 Delrin wheels riveted to plated steel body with swivel hook. Nylatron glide strips reduce friction and noise. Supplied with 2 rubber bumpers.



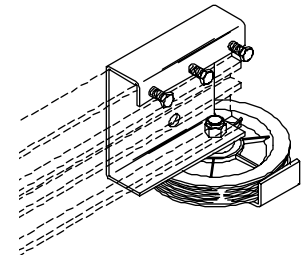
**No. 602 WALK-ALONG
MASTER CARRIER**

2 No. 601 carriers swivel on steel connecting plate. 1 pair suggested for each walk-along curtain.



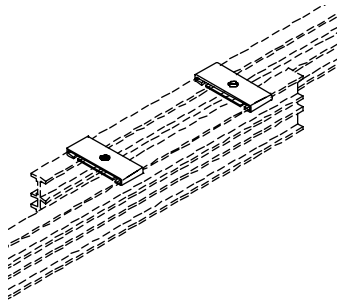
No. 603 DOUBLE END PULLEY

4" diameter Nylatron GS sheaves with shielded ball bearings. Steel housing clamps to track.



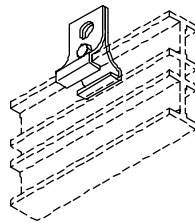
No. 604 SINGLE END PULLEY

4" diameter Nylatron GS sheave with shielded ball bearings. Steel housing clamps to track.



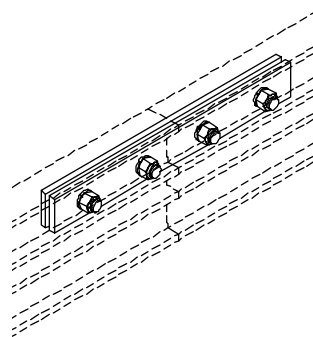
No. 605 OVERLAP CLAMP

Formed steel clamps align tracks at overlap. 1 pair pictured.



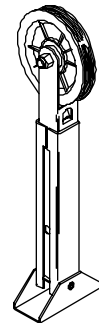
No. 606 CLAMP HANGER

Formed steel brackets clamp to track. Adjusts to any position. 1 pair pictured.



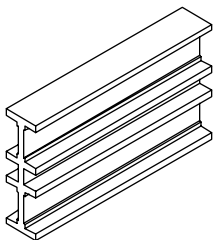
No. 607 SPLICE

Steel brackets align and lock track sections together. 1 pair pictured.



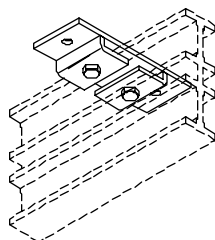
No. 608 TENSION FLOOR BLOCK

4" diameter Nylatron GS sheave with shielded ball bearings. Spring loaded steel housing maintains line tension.



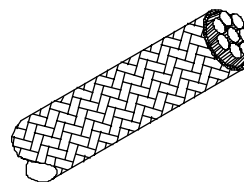
No. 610 TRACK

6063-T5 extruded aluminum .187" thick. 20' stock lengths.



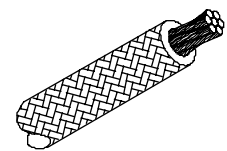
No. 611 CEILING HANGER

Tapped steel plate mounts flush to ceiling. Track clamps to bracket with offset clips.



No. 614 OPERATING LINE

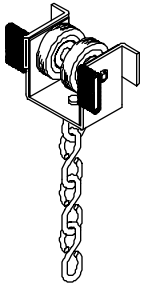
1/4" diameter black polyester double braided over solid polyester core for manual operation.



OPERATING CABLE

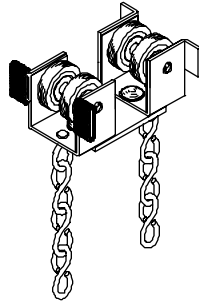
Black polyester jacket braided over 3/32" galvanized aircraft cable.

No. 615 - 3/16" diameter.
No. 625 - 1/4" diameter.



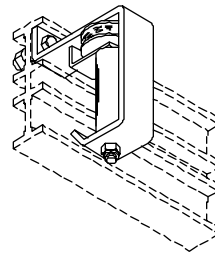
No. 616 SINGLE CARRIER

Nylon-tired ball bearing wheels riveted to steel body with swivel hook and trim chain. Nylatron glide strips reduce friction and noise. Supplied with 2 rubber bumpers.



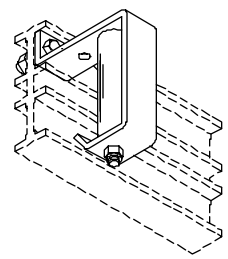
No. 617 WALK-ALONG MASTER CARRIER

2 No. 616 carriers swivel on steel connecting plate. 1 pair suggested for each walk-along curtain.



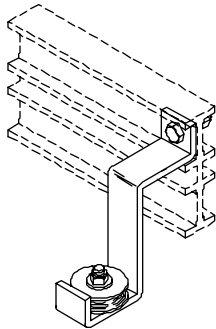
No. 618 DOUBLE SPINDLE

Formed steel housing contains two ball bearing guides for line to follow curve. Mount to inside of curve on double end pulley section of track.



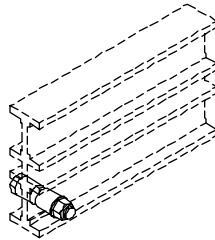
No. 619 SINGLE SPINDLE

Formed steel housing contains one ball bearing guide for line to follow track curve. Mount to inside of curve on single end pulley section of track.



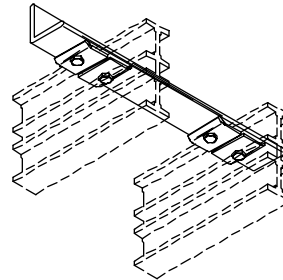
No. 620 OUTSIDE IDLER

Formed steel housing contains one ball bearing guide for line to follow track curve. Mount to outside of curve on single end pulley section of track.



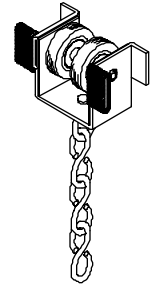
No. 621 END STOP

Bolt with steel spacers to prevent carriers from travelling beyond desired location.



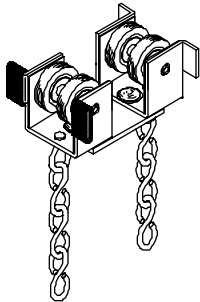
DOUBLE TRACK CLAMP HANGER

Angle bracket with mounting clips to secure double tracks together in studios and small theatres.



No. 628 SINGLE CARRIER

Neoprene-tired ball bearing wheels riveted to plated steel body with swivel hook and trim chain. Nylatron glide strips reduce friction and noise. Supplied with 2 rubber bumpers.



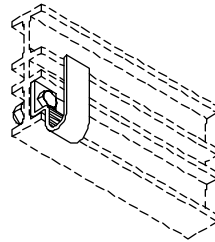
No. 629 WALK-ALONG MASTER CARRIER

2 No. 628 carriers swivel on steel connecting plate. 1 pair suggested for each walk-along curtain.



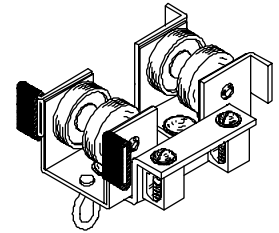
No. 635 TRIM CHAIN

3 links #10 jack chain added to carriers to provide 3" of curtain height adjustment.



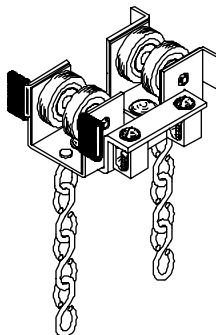
NO. 639 END STOP & CORD SUPPORT

Formed steel bracket bolts to track to support operating line and prevent carriers from travelling beyond desired location. 1 pair required for overlapping tracks.



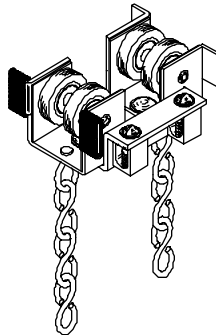
No. 642 MASTER CARRIER

2 No. 601 carriers swivel on formed steel body. Supplied with 2 clamps for anchoring line or cable. 1 pair required for overlapping tracks.



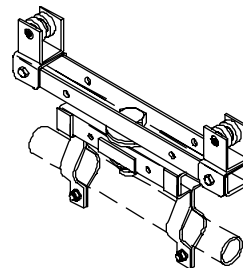
No. 647 MASTER CARRIER

2 No. 616 carriers swivel on formed steel body. Supplied with 2 clamps for anchoring line or cable. 1 pair required for overlapping tracks.



No. 649 MASTER CARRIER

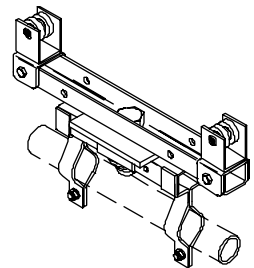
2 No. 628 carriers swivel on formed steel body. Supplied with 2 clamps for anchoring line or cable. 1 pair required for overlapping tracks.



#60 PIVOT DEVICE

Heavy steel construction with nylon-tired ball bearing wheels. Supplied with brackets for 1-3/8" O.D. pipe or tubing (recommended 6 foot maximum length). Allows masking draperies to be rotated to any angle.

Working load limit: 75 pounds.

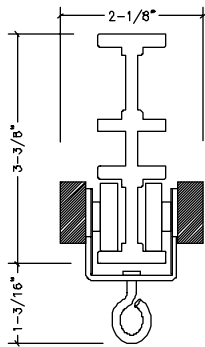


#60X INDEXING PIVOT DEVICE

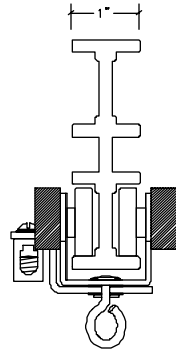
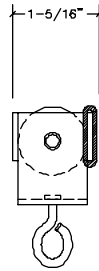
Pivot device with special plate to index rotation at 22-1/2 degree increments. Supplied with brackets for 1-3/8" O.D. pipe or tubing (recommended 6 foot maximum length).

Working load limit: 75 pounds.

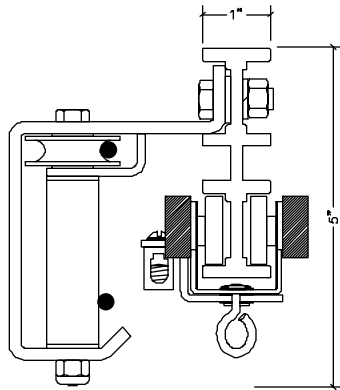
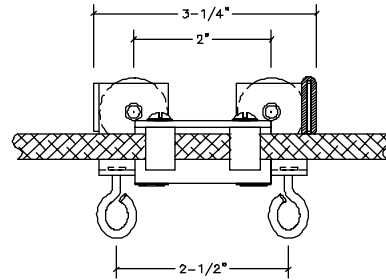
600 SERIES TRACK DIMENSION DETAIL



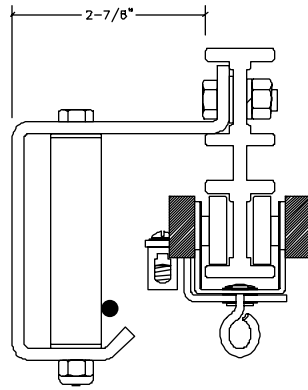
#601 SINGLE CARRIER



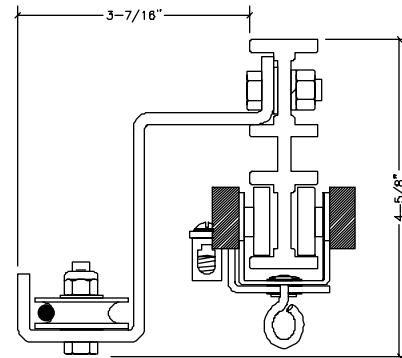
#642 MASTER CARRIER



#618 DOUBLE SPINDLE



#619 SINGLE SPINDLE



#620 OUTSIDE IDLER

600 SERIES COMPLETE TRACK COMPONENT GUIDE

PART #	DESCRIPTION	601A	601W	616A	616W	628A	628W
601	Single Carrier	●	●				
602	Master Carrier		●				
603	Double End Pulley	●		●		●	
604	Single End Pulley	●		●		●	
605	Overlap Clamp	●		●		●	
606	Clamp Hanger	●	●	●	●	●	●
607 **	Splice	●	●	●	●	●	●
608	Tension Floor Block	●		●		●	
610	Track	●	●	●	●	●	●
611 **	Ceiling Hanger	*	*	*	*	*	*
614	1/4" Operating Line	●		●		●	
616	Nylon B.B. Single Carrier			●	●		
617	Nylon B.B. Master Carrier				●		
618	Double Spindle	***		***		***	
619	Single Spindle	***		***		***	
620	Outside Idler	***		***		***	
621	End Stop		●		●		●
628	Neoprene B.B. Single Carrier					●	●
629	Neoprene B.B. Master Carrier						●
639	End Stop & Cord Support	●		●		●	
642	Master Carrier	●					
647	Nylon B.B. Master Carrier			●			
649	Neoprene B.B. Master Carrier					●	

* For ceiling mounted applications, No. 611 provided in lieu of No. 606 Clamp Hanger.
 ** Track lengths and splices supplied as required from stock sizes.
 *** No. 618, 619, and 620 must be ordered as additional accessories. Quantity is determined by length of track and configuration of bend.

GENERAL SPECIFICATIONS: STANDARD DUTY CURVED TRACK - WALK-ALONG

Provide **Model 601W** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 3-3/8" I-beam, with 1" top, intermediate and bottom flanges, extruded from 6063-T5 aluminum. Provide unspliced in lengths up to 20'.

Suspend track on 6' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Install end stop at each track end. Where lengths exceed 20', connect tracks with 8" long, two-piece splicing clamp of 8 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two Delrin wheels fastened parallel to formed steel carrier body with swivel hook for attachment of curtain. Attach Nylatron wear strips at contact points between carriers and track to minimize friction and noise. Install two neoprene bumpers between carriers to further reduce noise.

Master carriers shall be two single carrier assemblies joined by a steel connecting plate.

All steel components shall be zinc plated to resist corrosion.

Also available as **Model 616W** with nylon-tired ball bearing wheels and **Model 628W** with neoprene-tired ball bearing wheels.

GENERAL SPECIFICATIONS: STANDARD DUTY CURVED TRACK - RIGGED

Provide **Model 601A** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 3-3/8" I-beam, with 1" top, intermediate and bottom flanges, extruded from 6063-T5 aluminum. Provide unspliced in lengths up to 20'.

Suspend track on 6' maximum centers with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Install end stop with cord support at each track end. Where lengths exceed 20', connect tracks with 8" long, two-piece splicing clamp of 8 gauge steel.

Provide single carriers, spaced on 12" centers, constructed of two Delrin wheels fastened parallel to formed steel carrier body with swivel hook for attachment of curtain. Attach Nylatron wear strips at contact points between carriers and track to minimize friction and noise. Install two neoprene bumpers between carriers to further reduce noise.

Master carriers shall be two single carrier assemblies joined by a steel pivot body with two cord clamps for anchoring operating line.

Single and double end pulleys shall clamp securely to the track and shall contain 4" diameter sheaves enclosed in steel housings to prevent operating line from escaping the grooves. Sheaves shall be Nylatron GS molded around shielded and greased ball bearings.

Provide spring tension floor block in 3-piece, 14 gauge steel housing containing 4" Nylatron GS ball bearing sheave.

Black operating line shall be 1/4" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core. Install ball bearing idlers and spindles where necessary to guide operating line around inside and outside of track curves.

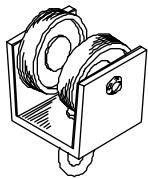
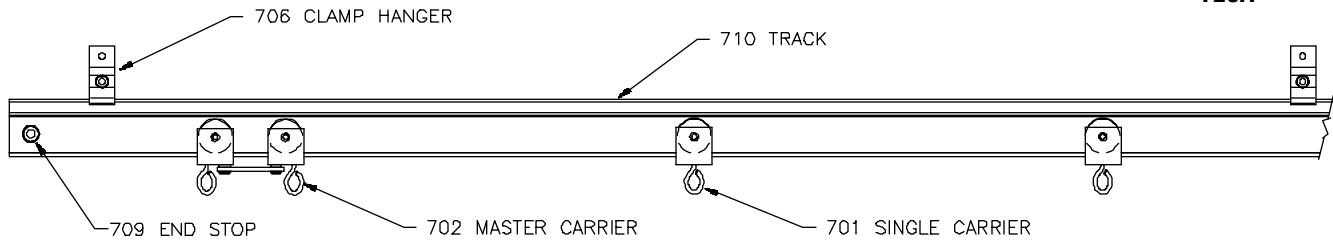
All steel components shall be zinc plated to resist corrosion.

Also available as **Model 616A** with nylon-tired ball bearing wheels and **Model 628A** with neoprene-tired ball bearing wheels.

700 SERIES LIGHT DUTY CURVED TRACK

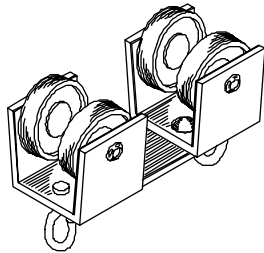
COMPLETE TRACK MODEL NUMBERS

701A
716A
728A



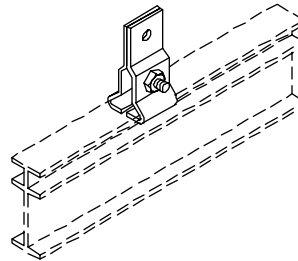
No. 701 SINGLE CARRIER

2 Delrin wheels riveted to extruded aluminum body with swivel hook. Nylatron glide strips reduce friction and noise.



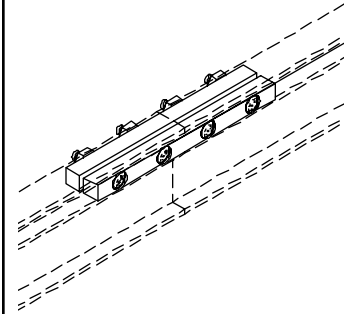
No. 702 MASTER CARRIER

2 No. 701 carriers swivel on steel connecting plate. 1 pair suggested for each walk-along curtain.



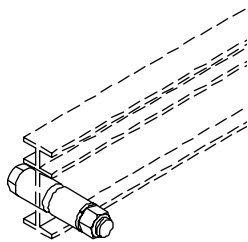
No. 706 CLAMP HANGER

Formed steel brackets clamp to track. Adjusts to any position. 1 pair pictured.



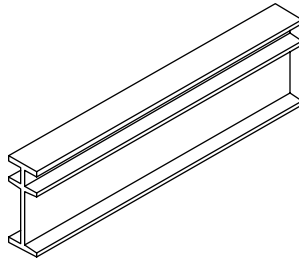
No. 707 SPLICE

Steel brackets align and lock track together. 1 pair pictured.



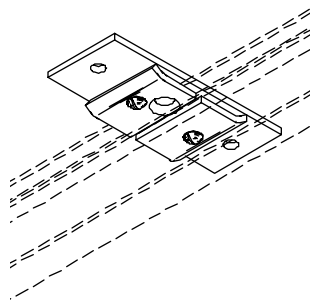
No. 709 END STOP

Bolt with steel spacers to prevent carriers from travelling beyond desired location. 1 pair required for each track.



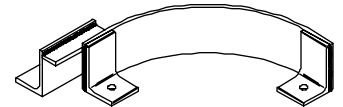
No. 710 TRACK

6063-T5 extruded aluminum .094" thick. 20' stock lengths.



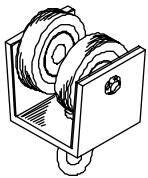
No. 711 CEILING HANGER

Tapped steel plate mounts flush to ceiling. Track clamps to bracket with offset clips.



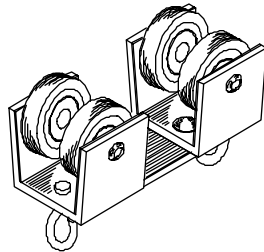
No. 712 TRACK BENDER

Steel tool designed for manual bending of aluminum tracks. Must be anchored to floor or stationary table.



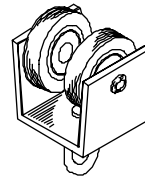
No. 716 SINGLE CARRIER

Nylon-tired ball bearing wheels riveted to extruded aluminum body with swivel hook. Nylatron glide strips reduce friction and noise.



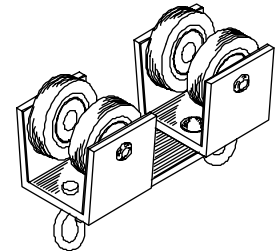
No. 717 MASTER CARRIER

2 No. 716 carriers swivel on steel connecting plate. 1 pair suggested for each walk-along curtain.



No. 728 SINGLE CARRIER

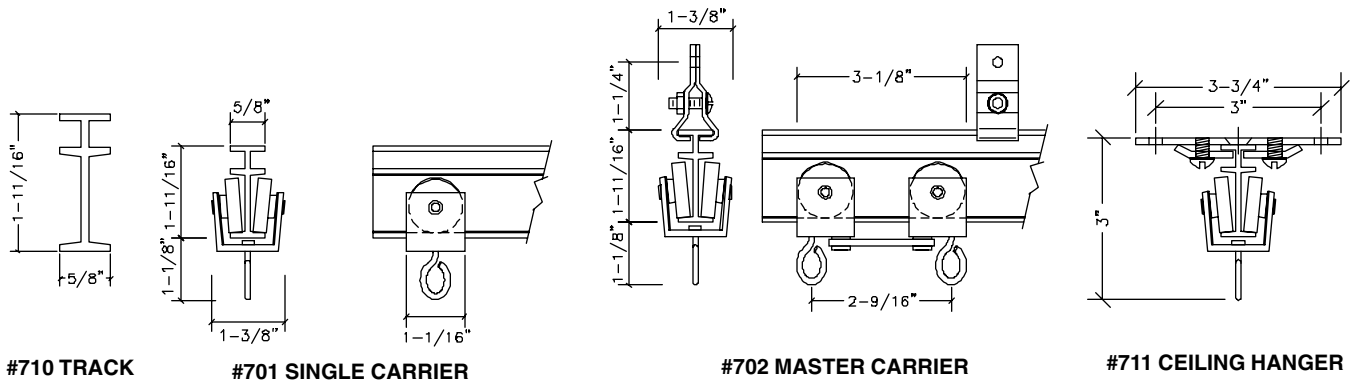
Neoprene-tired ball bearing wheels riveted to extruded aluminum body with swivel hook. Nylatron glide strips reduce friction and noise.



No. 729 MASTER CARRIER

2 No. 728 carriers swivel on steel connecting plate. 1 pair suggested for each walk-along curtain.

700 SERIES TRACK DIMENSION DETAIL



700 SERIES COMPLETE TRACK COMPONENT GUIDE

PART #	DESCRIPTION	701A	716A	728A
701	Single Carrier	●		
702	Master Carrier	●		
706	Clamp Hanger	●	●	●
707 *	Splice	●	●	●
709	End Stop	●	●	●
710 *	Track	●	●	●
711	Ceiling Hanger	**	**	**
716	Nylon B.B. Single Carrier		●	
717	Nylon B.B. Master Carrier		●	
728	Neoprene B.B. Master Carrier			●
729	Neoprene B.B. Master Carrier			●

* Track lengths and splices supplied as required.

** For ceiling mounted applications, No. 711 provided in lieu of No. 706 Clamp Hanger.

GENERAL SPECIFICATIONS: LIGHT DUTY CURVED TRACK

Provide **Model 701A** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be 1-11/16" I-beam, with 5/8" top, intermediate and bottom flanges, extruded from 6063-T5 aluminum. Provide unspliced in lengths up to 20'.

Suspend track on 5' maximum centers with two-piece clamp hanger formed from 14 gauge steel. Install end stop at each track end. Where lengths exceed 20', connect tracks with 4" long, two-piece splicing clamp of cold finished steel.

Provide single carriers, spaced on 12" centers, constructed of two Delrin wheels fastened parallel to extruded aluminum carrier body with swivel hook for attachment of curtain. Attach Nylatron wear strips at contact points between carriers and track to minimize friction and noise.

Master carriers shall be two single carrier assemblies joined by a steel connecting plate.

All steel components shall be zinc plated to resist corrosion.

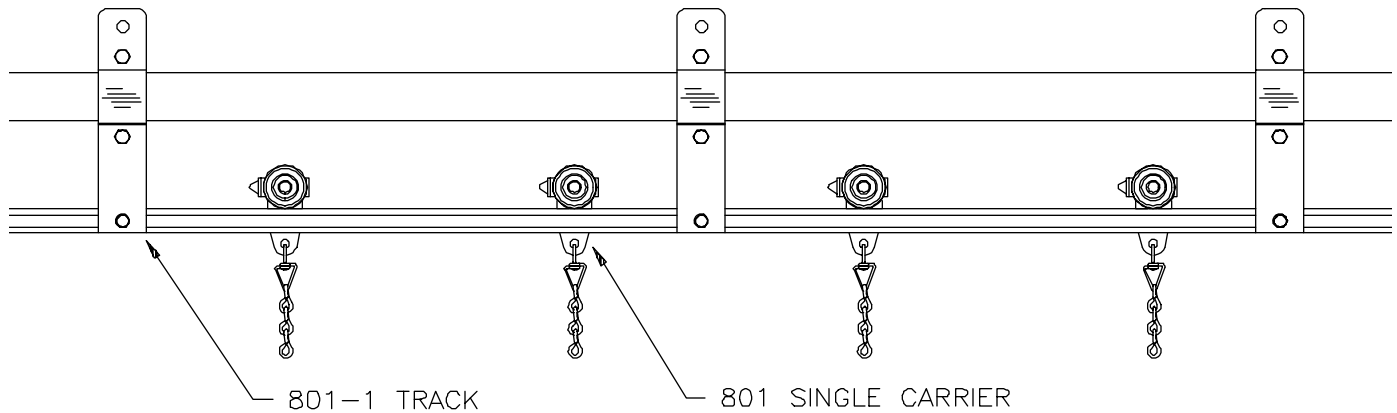
Also available as **Model 716A** with nylon-tired ball bearing wheels and **Model 728A** with neoprene-tired ball bearing wheels.

800 SERIES WALK-ALONG CYCLORAMA TRACK

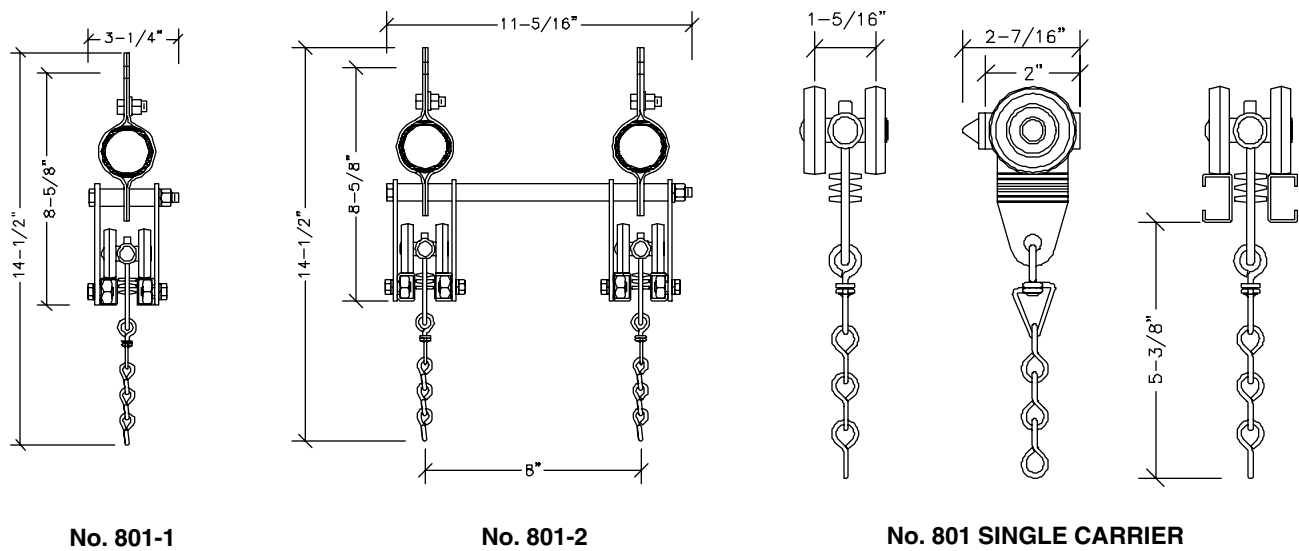
MODEL NUMBER

801-1

801-2



The 800 Series Cyclorama Track is especially suited for use in large television studios. Equipped with neoprene-tired ball bearing single carriers and neoprene bumpers to insure quiet operation. Track available curved to a minimum radius of 4 feet and in straight sections. Track sections available in 10 and 20 foot standard lengths.



No. 801-1

No. 801-2

No. 801 SINGLE CARRIER

GENERAL SPECIFICATIONS: WALK-ALONG CYCLORAMA TRACK

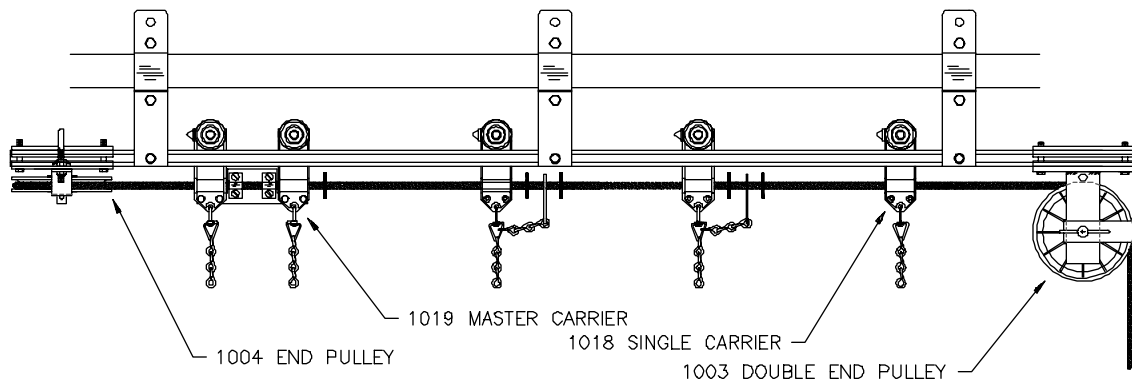
Provide **Model 801-1** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be constructed of carrier rails roll-formed from 16 gauge galvanized steel into 1" x 5/8" "C" channel. Two rails shall be suspended from 1-1/2" Sch. 40 pipe backbone on 2'-0" intervals by steel hanger assemblies creating a 3/4" continuous slot for passage of carrier bodies.

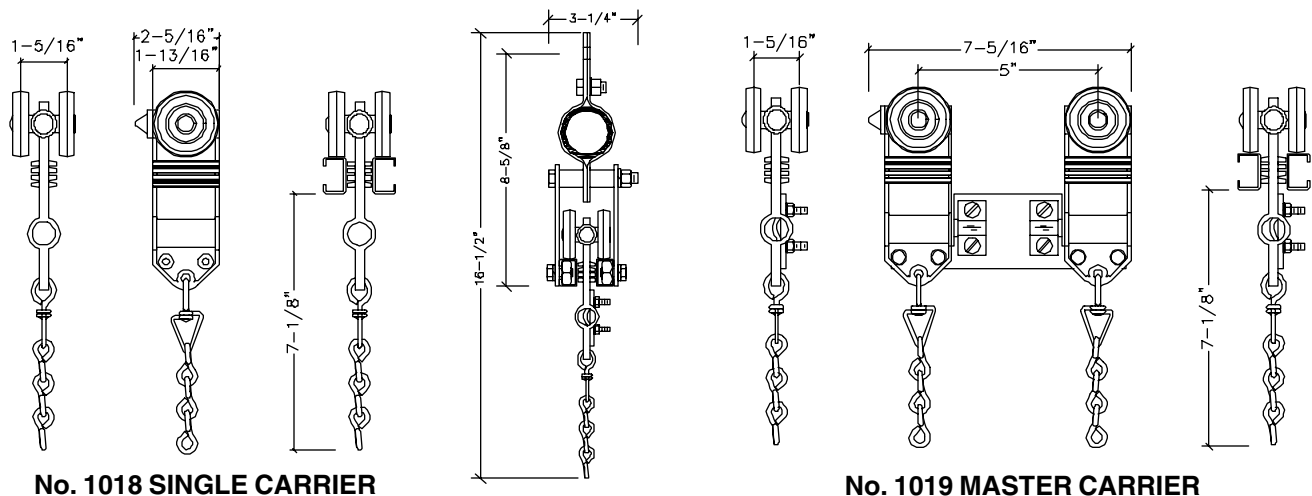
Provide single carriers, spaced on 12" centers, constructed of two neoprene-tired wheels fastened parallel to carrier body. Nylatron GS nylon shall be molded around shielded and greased ball bearing to form carrier body with integral glides to keep carrier aligned at all times. Install tapered neoprene bumper into carrier body to reduce noise. Supply with heavy duty hook, swivel eye and trim chain for attachment of curtain.

Also available as **Model 801-2** with two sets of rails, spaced 8" on center.

MODEL NO. 1018 HEAVY DUTY STRAIGHT STUDIO TRACK



Model No. 1018 Heavy Duty Straight Track was developed especially for use in television studios where an exceptionally quiet, heavy duty track is desired. Equipped with neoprene-tired ball bearing carriers and neoprene bumpers to insure the quietest operation available in a stage track. Track also furnished with rear fold guides which enable curtain to fold at offstage edges during operation. Track sections available in 10 and 20 foot standard lengths.



No. 1018 SINGLE CARRIER

No. 1019 MASTER CARRIER

GENERAL SPECIFICATIONS: HEAVY DUTY STRAIGHT STUDIO TRACK

Provide **Model 1018** as manufactured by H & H Specialties Inc., South El Monte, CA.

Track shall be constructed of carrier rails roll-formed from 16 gauge galvanized steel into 1" x 5/8" "C" channel. Two rails shall be suspended from 1-1/2" Sch. 40 pipe backbone on 2'-0" intervals by steel hanger assemblies creating a 3/4" continuous slot for passage of carrier bodies.

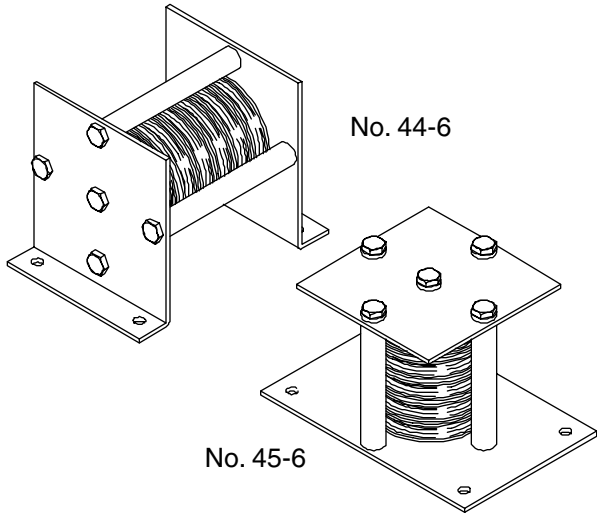
Provide single carriers, spaced on 12" centers, constructed of two neoprene-tired ball bearing wheels fastened parallel to Nylatron GS carrier body with integral glides to keep carrier aligned at all times. Install tapered neoprene bumper into carrier body to reduce noise. Supply with heavy duty hook, swivel eye and trim chain for attachment of curtain. Install rear fold guide and two round neoprene bumpers between each carrier to fold curtain at offstage edges and minimize noise.

Master carriers shall consist of two single carriers riveted to formed steel master plate. Connect to operating line with two formed steel cord clamps.

Single and double end pulleys shall bolt securely to the track rails and shall be equipped with 6" diameter Nylatron GS sheaves grooved for 1/2" operating line. Install two 5/8" sealed precision ball bearings in each sheave.

Provide floor block in 12 gauge steel housing containing 6" Nylatron GS sheave with two 3/8" sealed precision ball bearings. Sheave axle shall lock at any point within 9" vertical slots to allow tension adjustment of operating line.

Black operating line shall be 1/2" diameter, stretch-resistant rope with spun polyester outer jacket double braided over solid polyester core.



LIGHT DUTY RIGGING

Light duty stand-up pulleys and mule pulleys are designed for rigging contour curtains, gym dividers, and other light weight loads. Rugged steel housings contain 2-1/2" or 4" diameter Nylatron GS sheaves with shielded ball bearings. Each style is available in single and multiple sheave configurations.

H & H Specialties also manufactures many standard and custom items for medium and heavy duty rigging. Contact the factory for further information.

Working Load Limits* (At 150 ft/min)

Model No.	Capacity	Model No.	Capacity
44-1	25#	44-6	110#
44-2	45#	44-7	120#
44-3	65#	44-8	125#
44-4	80#	44-9	125#
44-5	95#	44-10	125#

* Max. load on any individual sheave: 25#

44 SERIES STAND-UP PULLEY

2-1/2" diameter Nylatron GS sheaves with shielded ball bearings mounted between 12 gauge steel side plates. Grooved for 1/4" rope.

Available up to 10 sheaves.

Working Load Limits* (At 150 ft/min)

Model No.	Capacity	Model No.	Capacity
45-1	25#	45-4	80#
45-2	45#	45-5	90#
45-3	65#	45-6	100#

* Max. load on any individual sheave: 25#

45 SERIES MULE PULLEY

2-1/2" diameter Nylatron GS sheaves with shielded ball bearings flush mounted to 10 gauge steel plate. Grooved for 1/4" rope.

Available up to 6 sheaves.

Working Load Limits* (At 200 ft/min)

Model No.	Capacity	Model No.	Capacity
46-1	40#	46-4	125#
46-2	70#	46-5	150#
46-3	100#	46-6	175#

* Max. load on any individual sheave: 40#

46 SERIES STAND-UP PULLEY

4" diameter Nylatron GS sheaves with shielded ball bearings mounted between 12 gauge steel side plates. Grooved for 3/8" rope.

Available up to 6 sheaves.

Working Load Limits* (At 200 ft/min)

Model No.	Capacity	Model No.	Capacity
47-1	40#	47-4	110#
47-2	70#	47-5	120#
47-3	100#	47-6	125#

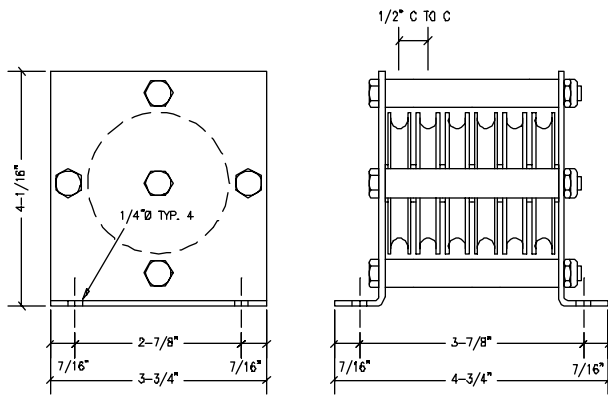
* Max. load on any individual sheave: 40#

47 SERIES MULE PULLEY

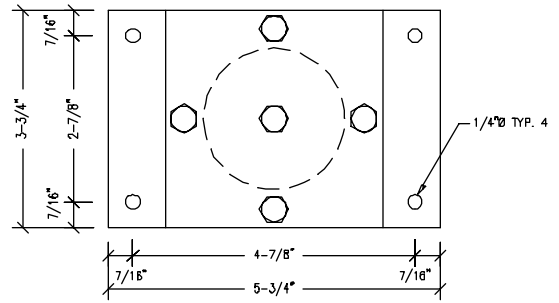
4" diameter Nylatron GS sheaves with shielded ball bearings flush mounted to 1/4" steel plate. Grooved for 3/8" rope.

Available up to 6 sheaves.

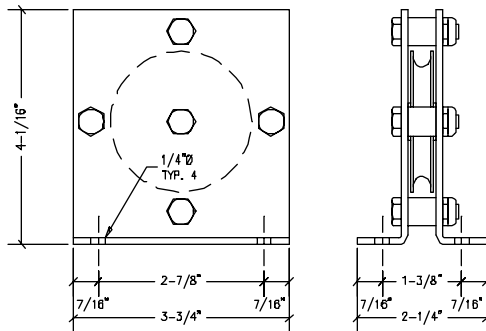
DIMENSION DRAWINGS



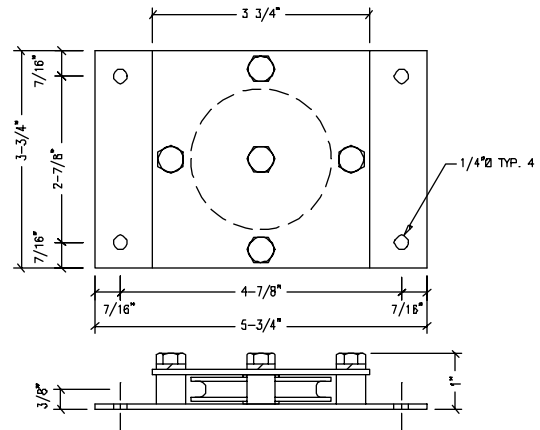
No. 44-6 Stand-up Pulley



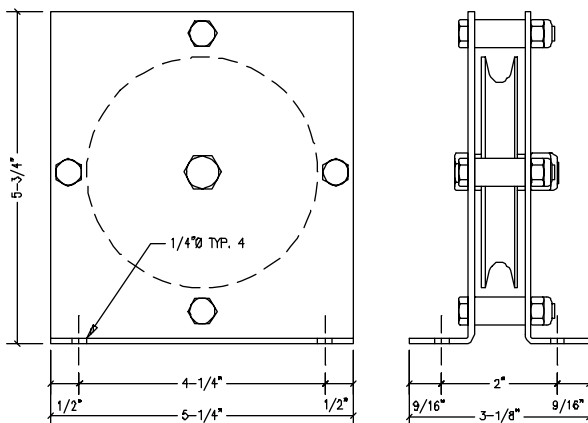
No. 45-6 Mule Pulley



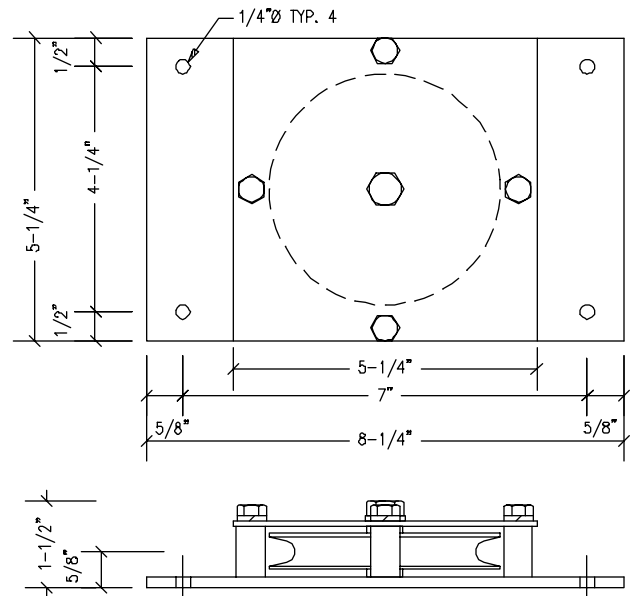
No. 44-1 Stand-up Pulley



No. 45-1 Mule Pulley



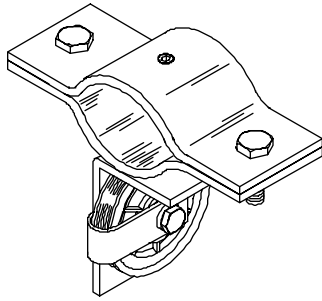
No. 46-1 Stand-up Pulley



No. 47-1 Mule Pulley

48 SERIES CONTOUR CURTAIN RIGGING

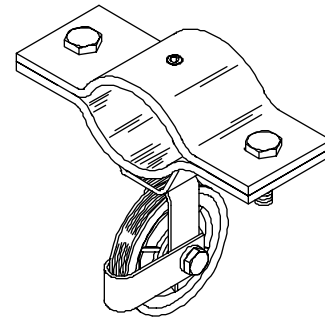
Special light duty pulleys are housed in assemblies designed to mount to 1-1/2" pipe batten, providing a method of rigging contour curtains whether they are straight, curved or serpentine in layout. Idler sheaves may be added to guide cables around curves.



No. 48 CONTOUR CURTAIN PULLEY

2-1/2" Nylatron GS sheave with shielded ball bearing in steel housing for mounting to pipe.

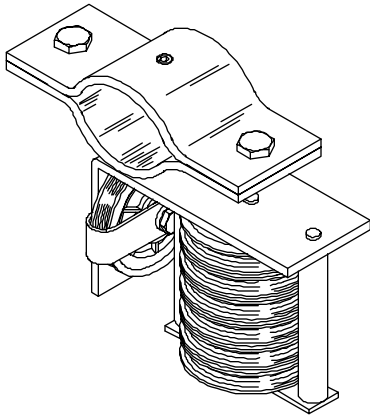
Working load limit: 25#



No. 48S CONTOUR SWIVEL PULLEY

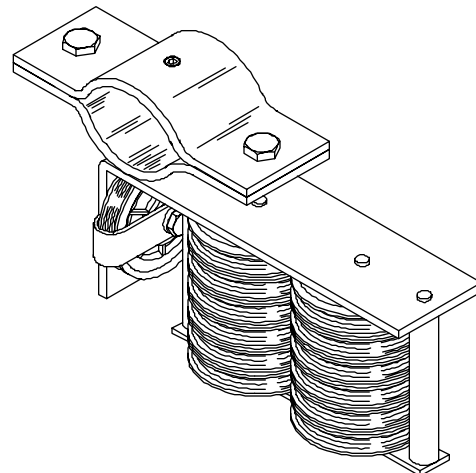
2-1/2" Nylatron GS sheave with shielded ball bearing in steel housing for mounting to pipe. Sheave swivels 360 degrees.

Working load limit: 25#



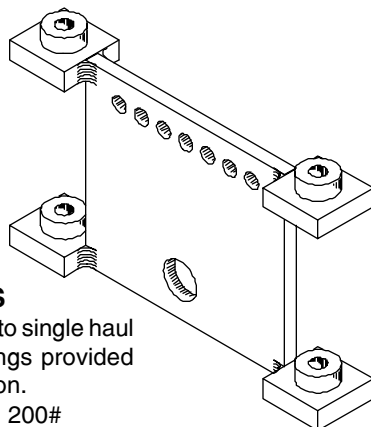
No. 48-6 CONTOUR PULLEY WITH 6 IDLERS

No. 48 contour curtain pulley with the addition of 1 column of horizontal idler sheaves. Suffix indicates number of idler sheaves, up to 6.



No. 48-12 CONTOUR PULLEY WITH 12 IDLERS

No. 48 contour curtain pulley with the addition of 2 columns of horizontal idler sheaves. Suffix indicates number of idler sheaves, up to 12.



No. 42 WIRE GUIDE CLEWS

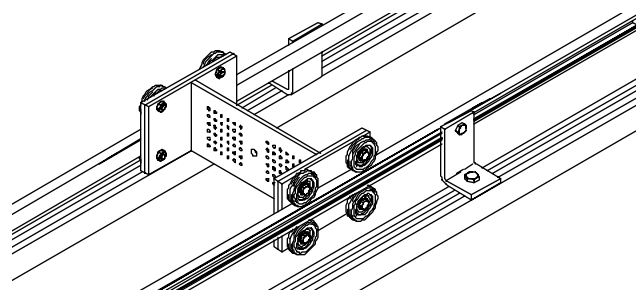
Clews combine lift lines into single haul line. Nylatron GS bushings provided for smooth, quiet operation.

Working load limit: 200#

42-6 - 6 lift lines.

42-12 - 12 lift lines.

For clews with higher working loads, please consult factory.

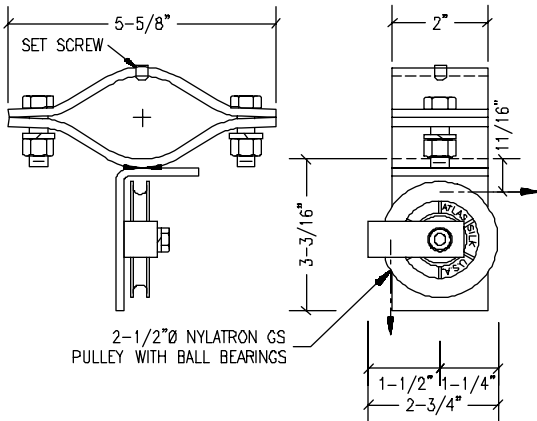


No. 43 ROLLER GUIDE CLEW

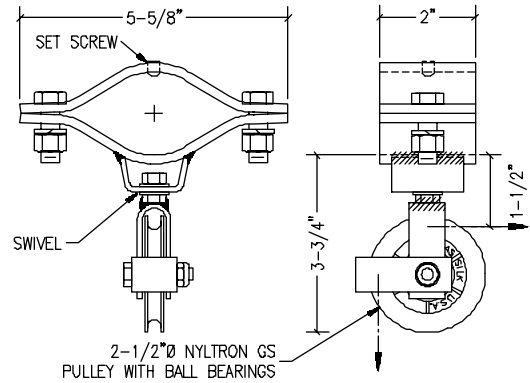
Multi-line clew constructed of 1/4" steel plate supported by 8 neoprene-tired ball bearing wheels. HDPE glide strips reduce friction and noise along a rigidly supported C-channel frame. Suffix indicates clew travel in feet.

No. 43x15 - 15 foot clew travel. No. 43x25 - 25 foot clew travel. No. 43x20 - 20 foot clew travel. No. 43x30 - 30 foot clew travel.

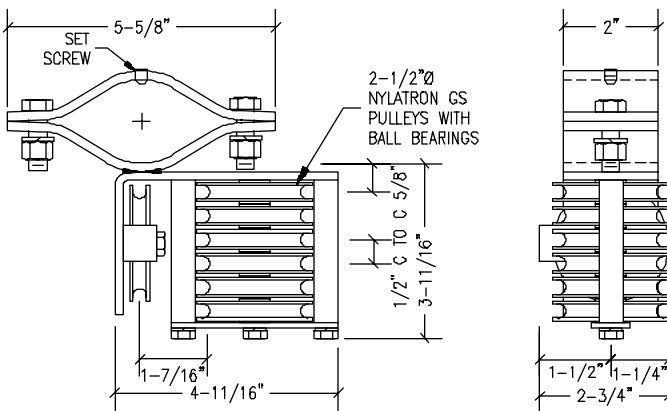
DIMENSION DRAWINGS



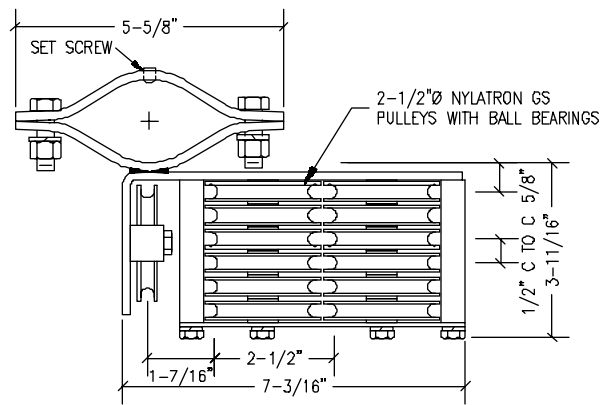
No. 48 Series Contour Pulley



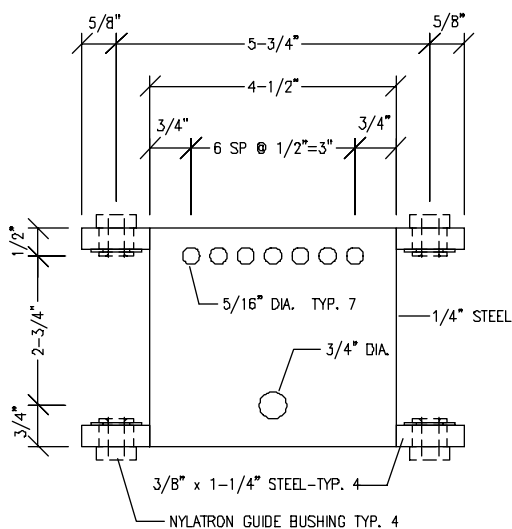
No. 48S Contour Swivel Pulley



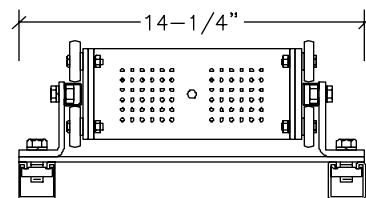
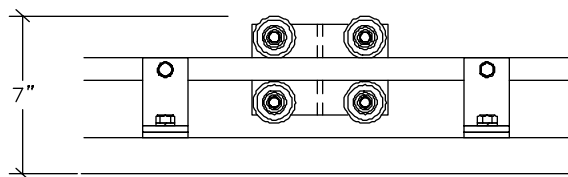
No. 48-6 Contour Pulley



No. 48-12 Contour Pulley

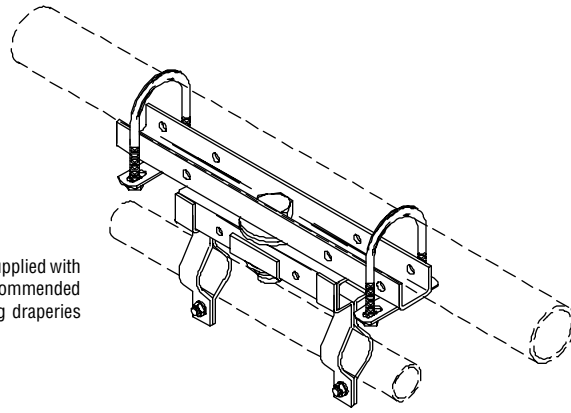


No. 42-6 Wire Guide Clew



No. 43 Roller Guide Clew

MISCELLANEOUS TRACK HARDWARE



NO. 6 PIVOT DEVICE

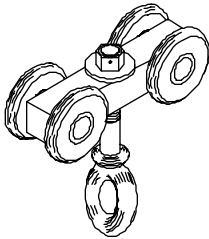
Heavy steel body U-bolts to pipe batten. Supplied with brackets for 1-3/8" O.D. pipe or tubing (recommended 6 foot maximum length). Allows masking draperies to be rotated to any angle.

NO. 6B PIVOT DEVICE

Same as above with black finish.

NO. 6X INDEXING PIVOT DEVICE

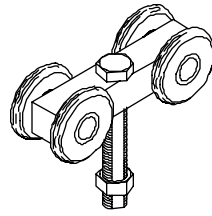
Pivot device with special plate to index rotation at 22-1/2 degree increments. Supplied with brackets for 1-3/8" O.D. pipe or tubing (recommended 6 foot maximum length)



No. 139BS SCENERY CARRIER WITH EYE

4 steel ball bearing wheels riveted to machined steel body for use with No. 110S track. 3/8" forged eyebolt swivels in body and provides attachment point for scenery.

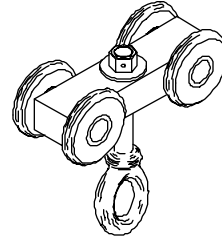
Working load limit: 150#



No. 140BS SCENERY CARRIER

4 steel ball bearing wheels riveted to machined steel body for use with No. 110S track. 1/2" milled tap bolt provided for scenery attachment.

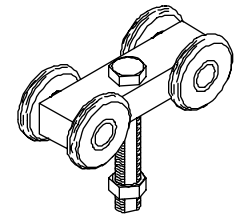
Working load limit: 150#



No. 439BS SCENERY CARRIER WITH EYE

4 steel ball bearing wheels riveted to machined steel body for use with No. 410S track. 3/8" forged eyebolt swivels in body and provides attachment point for scenery.

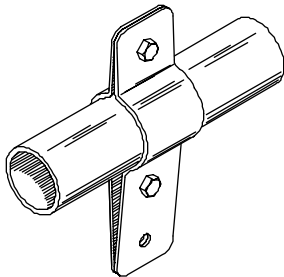
Working load limit: 150#



No. 440BS SCENERY CARRIER

4 steel ball bearing wheels riveted to machined steel body for use with No. 410S track. 1/2" milled tap bolt provided for scenery attachment.

Working load limit: 150#

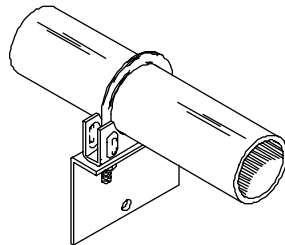


PIPE CLAMP

Formed 12 gauge steel brackets clamp to 1-1/4" or 1-1/2" standard pipe for suspending curtain tracks parallel to pipe.

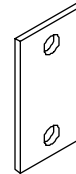
Working load limit: 150#

No. 435 - Zinc plated.
No. 435B - Black oxide finish.



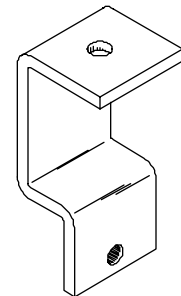
No. 435R RIGHT ANGLE PIPE CLAMP

Formed 12 gauge steel bracket U-bolts to 1-1/2" standard pipe for suspending curtain track perpendicular to pipe.



No. 435X EXTENSION STRAP

12 gauge steel strap with holes 1.9" apart. Used to extend pipe clamp when attaching to upper member of standard 1-1/2" pipe grid.



No. 448 ROD SUSPENSION BRACKET

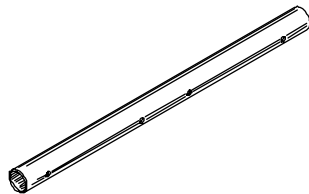
Formed 1/4" steel bracket with offset tab for suspending curtain track from 3/8" rod. Working load limit: 150 pounds.



No. 442-2

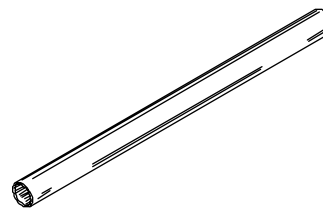
CAST IRON SASH WEIGHT

2 pound smooth cast iron weight with eye.



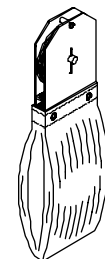
No. 447 SPLICE

1-9/16" X .156" steel tubing, 24" long, for use as internal sleeve for No. 445 pipe batten. With 4 drilled holes and (4) 3/8"-16 x 2-1/2" bolts and Nylock hex nuts.



No. 447A SPLICE

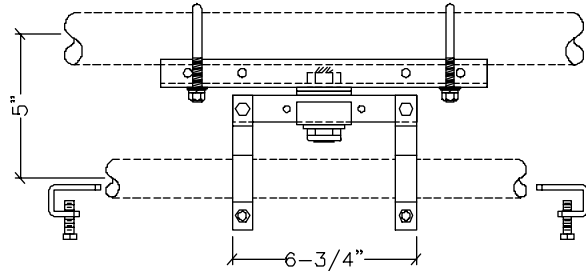
Same as 447 Splice except no attachment holes. (4) 3/8"-16 x 2-1/2" bolts and Nylock hex nuts provided.



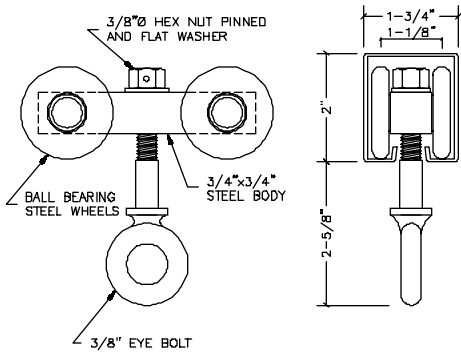
No. 643 SAND BAG TENSION PULLEY

6" Nylatron GS sheave with precision ball bearings in specially designed housing with heavy duty sand bag. For maintaining proper operating line tension on flying curtains. Supplied without sand.

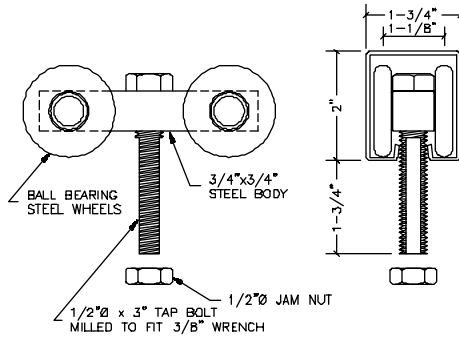
MISCELLANEOUS TRACK HARDWARE DIMENSIONS



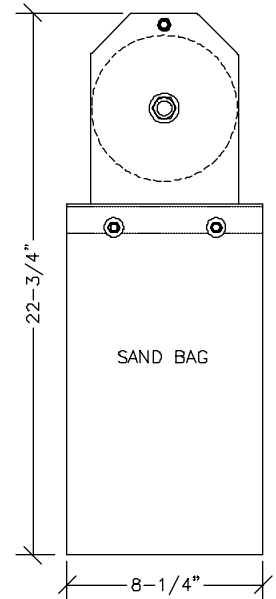
No. 6 Pivot Device



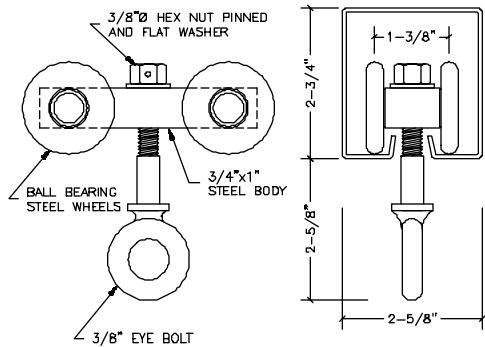
No. 139BS Scenery Carrier
with Eye



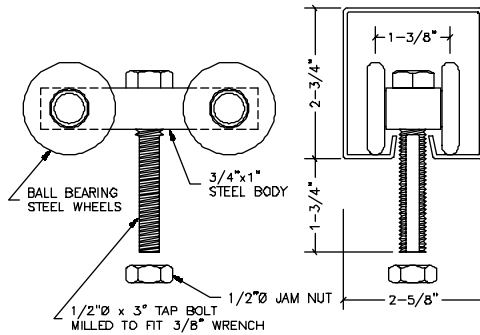
No. 140BS Scenery Carrier



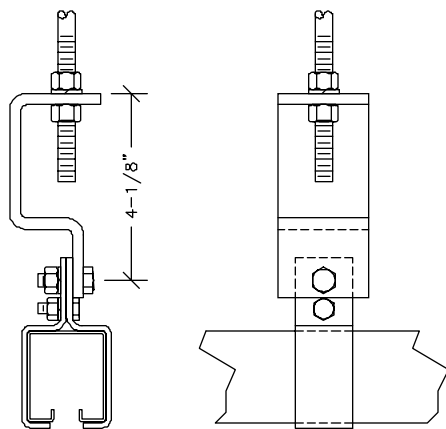
No. 643
Sand Bag
Tension Pulley



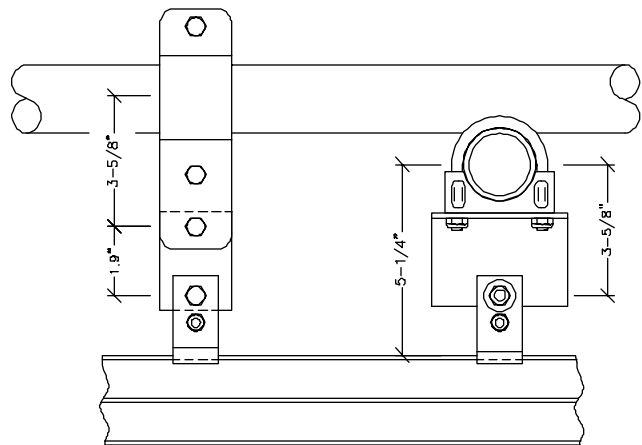
No. 439BS Scenery carrier
with Eye



No. 440BS Scenery Carrier



No. 448 Rod Suspension Hanger



No. 435 Pipe Clamp
with No. 435X
Extension Strap

No. 435R
Pipe Clamp

CURTAIN MACHINE SELECTION GUIDE

H & H Specialties manufactures a complete line of curtain machines for motorizing stage curtains. Draw machines for operating curtain tracks are available with grooved winding drums, traction drives or sprocket drives. Lift machines for contour and masking curtains are available with grooved winding drums or sprocket drives. All machines are equipped with magnetic reversing starters and limit switches for fully automatic operation between preset curtain positions. An unlimited number of remote control stations can be utilized, in addition to the local controls included on each machine. Each 1/3, 1/2 and 3/4 HP single phase motor is instantly reversing, eliminating the need for safety time-delay relays.

Most curtain machines may be modified with optional features including low voltage control circuits, three phase motors, additional limit switches for intermediate curtain positions, variable speed drives and motor brakes for precise positioning. Contact the factory for further information.

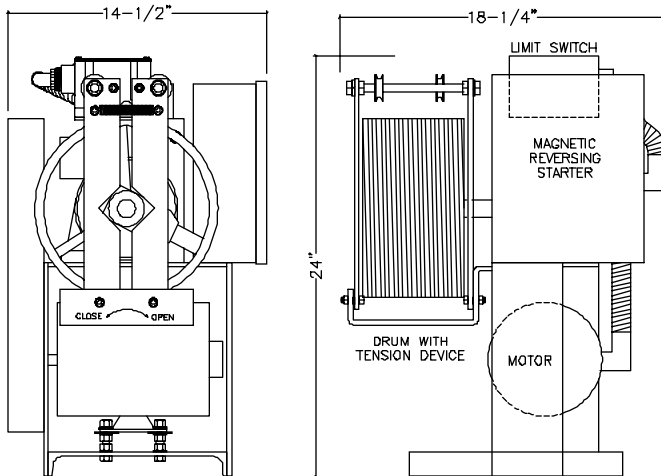
MODEL NO.	HP	PHASE	VOLTS (60Hz)	F.L.A.	OUTPUT TORQUE in./lb.	CABLE SPEED ft./min.	MAX. TRAVEL (ft.)	OUTPUT RPM	LIFT CAPACITY (lbs.)	APPROX. DIMS. (in.)			SHIPPING WEIGHT (lbs.)
										L	W	H	
454	1/3	1	115	4.4	487	89	45	34	-	18-1/4	15	24	135
454	1/2	1	115	6.0	731	89	45	34	-	18-1/4	15	24	140
454	3/4	1	115	8.2	1097	89	45	34	-	18-1/4	15	24	145
454VS†	1/2	1	115	11	542	4-124	45	2-47	-	17-1/2	15	24	155
454VS†	1	1	115	16	1084	4-124	45	2-47	-	17-1/2	15	24	160
455	1/3	1	115	4.4	383	54	40	41	110	24-1/2	14	14-1/2	105
455	1/2	1**	115	6.0	584	54	40	41	170	25-1/2	14	15	110
455	3/4	1**	115	8.2	876	54	40	41	260	26-1/2	14	15-1/2	115
455	1*	3	230	3.4	1057	57	40	43	335	28	15	15-1/2	125
459	1/3	1	115	4.4	314	78	UNL.	54	-	20	15-1/2	25	180
459	1/2	1**	115	6.0	472	78	UNL.	54	-	21	15-1/2	25	185
459	3/4	1**	115	8.2	708	78	UNL.	54	-	22	15-1/2	25	190
459	1*	3	230	3.4	850	84	UNL.	58	-	23	15-1/2	25	200
460	1/3	1	115	4.4	406	22	22	30	-	14-1/2	14-1/2	24	110
460	1/2	1	115	6.0	609	22	22	30	-	14-1/2	14-1/2	24	115
462	1/3	1	115	4.4	314	78	UNL.	54	-	38-1/2	9	21	160
462	1/2	1**	115	6.0	472	78	UNL.	54	-	38-1/2	9	21	165
462	3/4	1**	115	8.2	708	78	UNL.	54	-	38-1/2	9	21	170
462	1*	3	230	3.4	850	84	UNL.	58	-	38-1/2	9	21	180
466†	1/2	1	115	6.0	576	86	80	41	-	27	16	22	230
466†	3/4	1	115	8.2	864	86	80	41	-	27	16	22	235
467	1/2	1	115	6.3	698	69	80	33	140	32	26	17	195
467	3/4	1	115	8.5	1048	69	80	33	210	33	26	17	215
467	1*	3	230	4.1	1480	72	80	34	295	33	26	18	220
472	1/8	1	115	2.8	65	47	30	51	-	16	12	10-1/2	45
473	1/8	1	115	2.8	65	32	20	51	45	16	12	10-1/2	45

* Curtain motors with larger horsepower ratings available. Consult factory.

** Three phase motors also available. Some individual specifications may vary.

† In Electronic Catalog Only - "Click" on part number to view cut sheet.

MODEL NO. 454 DRAW CURTAIN MACHINE

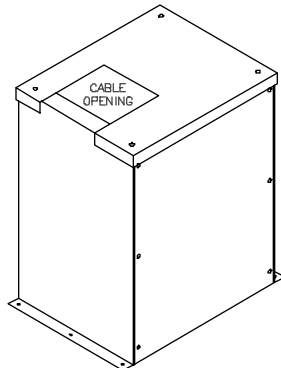


STANDARD FEATURES:

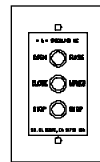
- Instantly reversing motor.
- Rotary limit switch.
- Cable tension device.
- Magnetic reversing starter.
- 10" x 5" drum grooved for 3/16" cable.
- Temporary power supply cord.
- Remote push button control station.

OPTIONAL FEATURES:

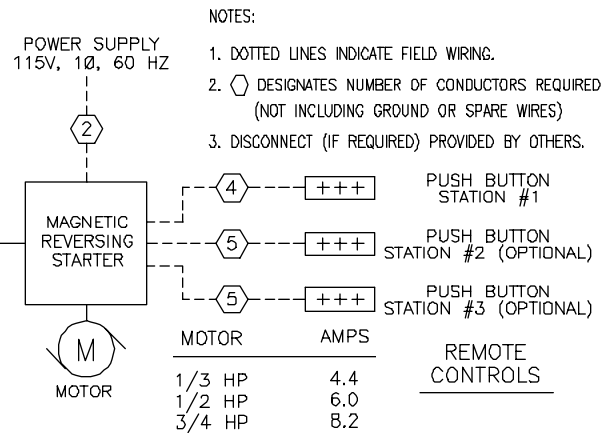
- Low voltage control circuit.
- Three phase motor and controls.
- 3 or 4-stop limits and controls.
- Variable speed drive and controls.
- 491x454 Curtain Machine Enclosure.



No. 481 Push Button Station
(one supplied with machine)



No. 491x454 Curtain Machine Enclosure
(optional) 24" wide x 27" high x 17-1/2" deep



Model No. 454 Riser Diagram

DRAW CURTAIN MACHINE:

Drum-style automatic curtain machine shall be capable of operating curtain between preset "open" and "close" positions at a cable speed of 89 feet per minute. Secure machine to heavy steel base for attachment to building structure.

Provide 10" diameter helically-grooved aluminum drum machined to accept 3/16" diameter operating cable. Drum shall be mounted to extended output shaft of gear reducer and secured by keyed steel hub. Install spring-loaded cable tension device onto drum to maintain proper tension and guide operating line.

Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined alloy steel worm and bronze gear shall operate in an oil bath within a cast aluminum housing with dual-lip oil seals on the output shafts to prevent leakage. The gear reducer shall have a AGMA service factor of at least 1.0 for continuous operation.

Unit shall be driven by 1/3 HP*, 115V single phase capacitor motor connected to reducer with guarded V-belt drive. Motor shall be instantly reversing type to allow motor to reverse rotation without stopping.

Starter cabinet shall be located at the machine, containing all the necessary contactors, circuit breakers, overloads and fuses to provide for reversing operation. Controls shall be automatic with electrical latch to hold run circuit until limit switch is reached or "stop" button is pushed. Provide mechanical and electrical interlocks between contactors to prevent accidental motor reversal. Mount three pushbuttons on cabinet for local "open", "close" and "stop" control. All field connections shall be made through terminal blocks in the starter cabinet.

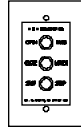
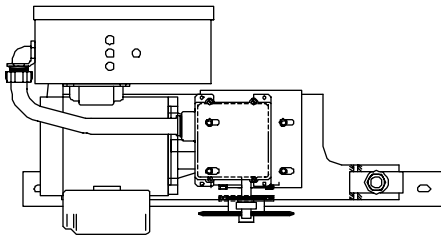
Provide two-stop mechanical, rotating shaft limit switch in separate NEMA 1 enclosure. Switch shall employ 36:1 worm gear reduction and shall operate two independently adjustable cams. Each cam shall activate a separate contact block for "open" and "close" positions.

Supply remote control station consisting of three pushbuttons mounted to stainless steel plate to fit standard single-gang switch box.

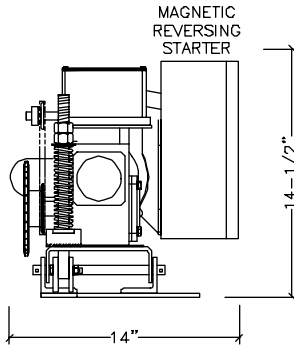
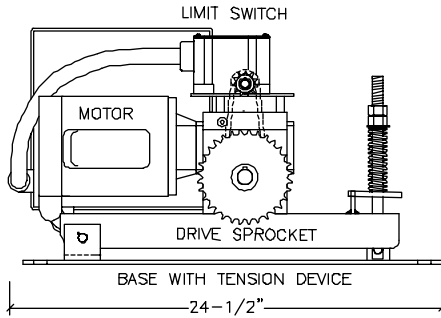
Model No. 454-1/3* as manufactured by H & H Specialties Inc.

* 1/2 HP and 3/4 HP motors also available.

MODEL NO. 455 MASKING MACHINE



No. 481 Push Button Station
(one supplied with machine)

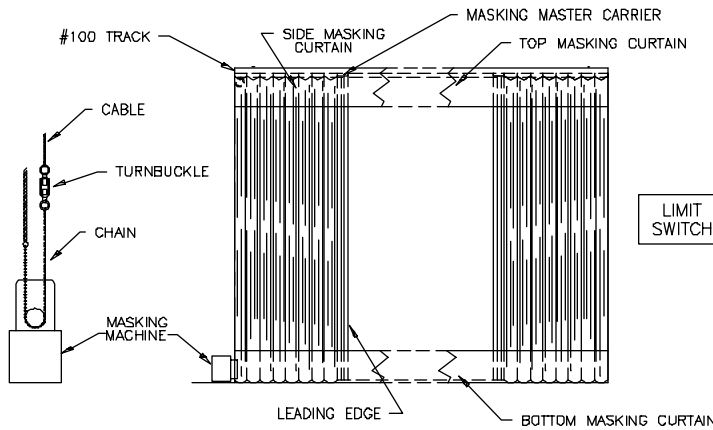


STANDARD FEATURES:

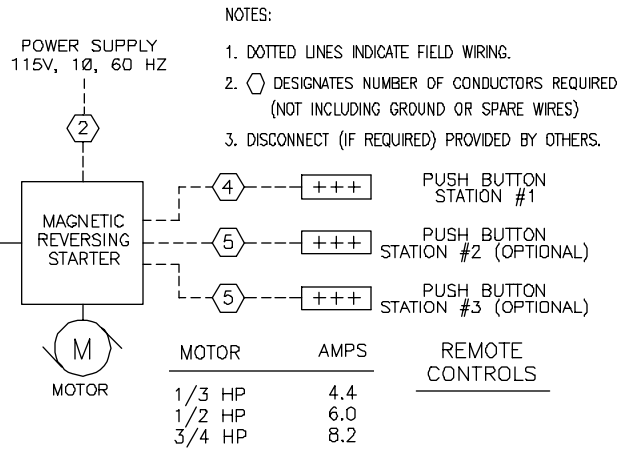
- Instantly reversing motor.
- Rotary limit switch.
- Magnetic reversing starter.
- #41 roller chain sprocket. (#40 sprocket on 3/4 HP machine)
- Temporary power supply cord.
- Remote push button station.

OPTIONAL FEATURES:

- Low voltage control circuit.
- Magnetic disc brake.
- Three phase motor and controls.
- 3 or 4-stop limits and controls.
- Variable speed drive and controls.
- Other cable speeds.



Model No. 455 Schematic



Model No. 455 Riser Diagram

MASKING MACHINE:

Sprocket drive automatic curtain machine shall be capable of operating curtain between preset "open" and "close" positions at a speed of 54 feet per minute. Secure machine to heavy steel base with integral spring-loaded device to maintain chain tension. Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined alloy steel worm and bronze gear shall operate in an oil bath within a cast housing with dual-lip oil seals on the output shaft to prevent leakage. The gear reducer shall have a AGMA service factor of at least 1.0 for continuous operation. Provide ANSI #41** roller chain sprocket keyed to output shaft of gear reducer.

Unit shall be driven by 1/3 HP*, 115V single phase capacitor motor directly coupled to the input shaft of the reducer. Motor shall be instantly reversing type to allow motor to reverse rotation without stopping.

Starter cabinet shall be located at the machine, containing all the necessary contactors, circuit breakers, overloads and fuses to provide for reversing operation. Controls shall be automatic with electrical latch to hold run circuit until limit switch is reached or "stop" button is pushed. Provide mechanical and electrical interlocks between contactors to prevent accidental motor reversal. Mount three pushbuttons on cabinet for local "open", "close" and "stop" control. All field connections shall be made through terminal blocks in the starter cabinet.

Provide two-stop mechanical, rotating shaft limit switch in separate NEMA 1 enclosure. Switch shall employ 72:1 worm gear reduction and shall operate two independently adjustable cams. Each cam shall activate a separate contact block for "open" and "close" positions.

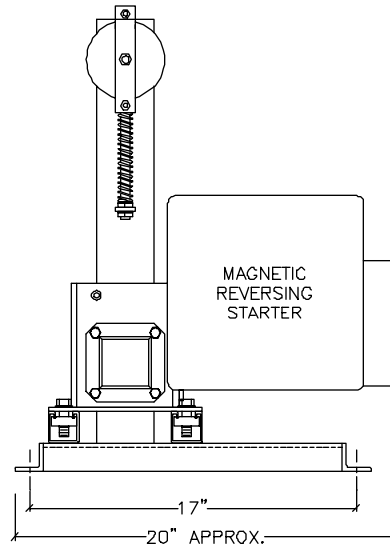
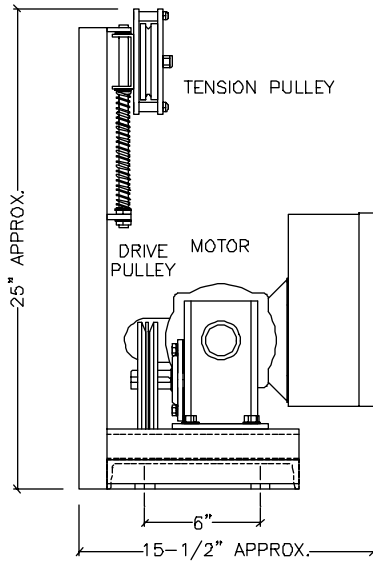
Supply remote control station consisting of three pushbuttons mounted to stainless steel plate to fit standard single-gang switch box.

Model No. 455-1/3* as manufactured by H & H Specialties Inc.

* 1/2 HP and 3/4 HP motors also available. Consult Factory for 455-1 specifications.

** #40 sprocket provided on 3/4 HP machine.

MODEL NO. 459 DRAW CURTAIN MACHINE

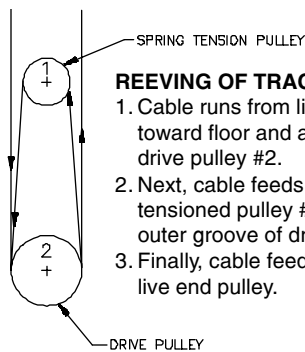


STANDARD FEATURES:

- Instantly reversing motor.
- Track mounted limit switches.
- Magnetic reversing starter.
- Double V-groove drive pulley.
- Spring-loaded tension pulley.
- Temporary power supply cord.
- Remote push button station.

OPTIONAL FEATURES:

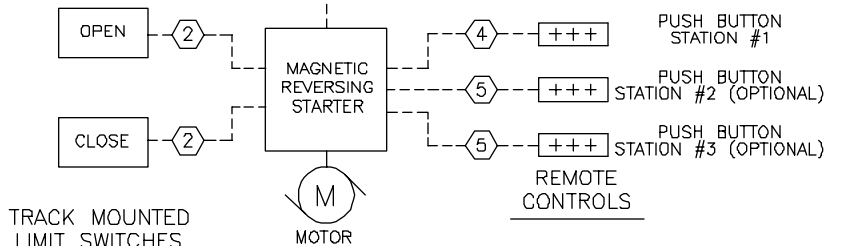
- Low voltage control circuit.
- Three phase motor and controls
- 3 or 4-stop limits and controls.
- Variable speed drive and controls.
- Other cable speeds.



REEVING OF TRACTION DRIVE CABLE:

1. Cable runs from live end pulley down toward floor and around inner groove of drive pulley #2.
2. Next, cable feeds around spring tensioned pulley #1 and back around outer groove of drive pulley #2.
3. Finally, cable feeds toward track and live end pulley.

MOTOR	AMPS	POWER SUPPLY 115V, 1Ø, 60 HZ
1/3 HP	4.4	
1/2 HP	6.0	
3/4 HP	8.2	



NOTES:

1. DOTTED LINES INDICATE FIELD WIRING.
2. ⬡ DESIGNATES NUMBER OF CONDUCTORS REQUIRED (NOT INCLUDING GROUND OR SPARE WIRES)
3. DISCONNECT (IF REQUIRED) PROVIDED BY OTHERS.

Model No. 459 Riser Diagram

DRAW CURTAIN MACHINE:

Traction drive automatic curtain machine shall be capable of operating curtain between preset "open" and "close" positions at a cable speed of 78 feet per minute. Secure machine to heavy steel base for attachment to building structure.

Provide 6" diameter cast iron drive pulley with double V-groove machined to accept 3/16" diameter operating cable. Mount pulley to output shaft of gear reducer and secure with keyed steel hub. Install spring-loaded, steel ball bearing pulley to maintain cable tension.

Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined alloy steel worm and bronze gear shall operate in an oil bath within a cast housing with dual-lip oil seals on the output shaft to prevent leakage. The gear reducer shall have a AGMA service factor of at least 1.0 for continuous operation.

Unit shall be driven by 1/3 HP*, 115V single phase capacitor motor directly coupled to the input shaft of the reducer. Motor shall be instantly reversing type to allow motor to reverse rotation without stopping.

Starter cabinet shall be located at the machine, containing all the necessary contactors, circuit breakers, overloads and fuses to provide for reversing operation. Controls shall be automatic with electrical latch to hold run circuit until limit switch is reached or "stop" button is pushed. Provide mechanical and electrical interlocks between contactors to prevent accidental motor reversal. Mount three pushbuttons on cabinet for local "open", "close" and "stop" control. All field connections shall be made through terminal blocks in the starter cabinet.

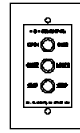
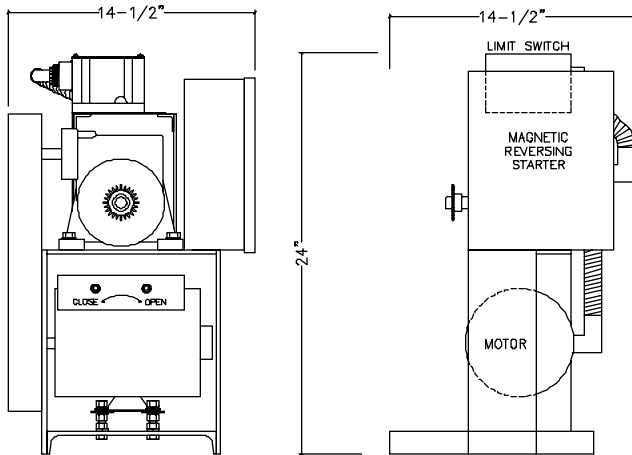
Provide two track mounted limit switch assemblies to automatically preset desired travel of curtain between "open" and "close" positions.

Supply remote control station consisting of three pushbuttons mounted to stainless steel plate to fit standard single-gang switch box.

Model No. 459-1/3* as manufactured by H & H Specialties Inc.

* 1/2 HP and 3/4 HP motors also available. Consult factory for 459-1 specifications.

MODEL NO. 460 MASKING MACHINE



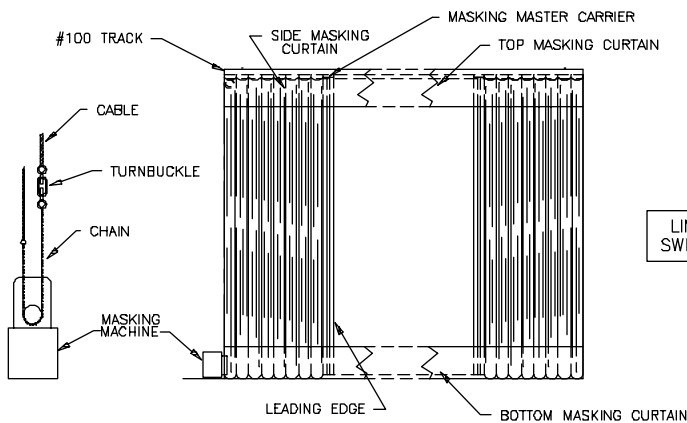
**No. 481
Push Button
Station**
(one supplied
with machine)

STANDARD FEATURES:

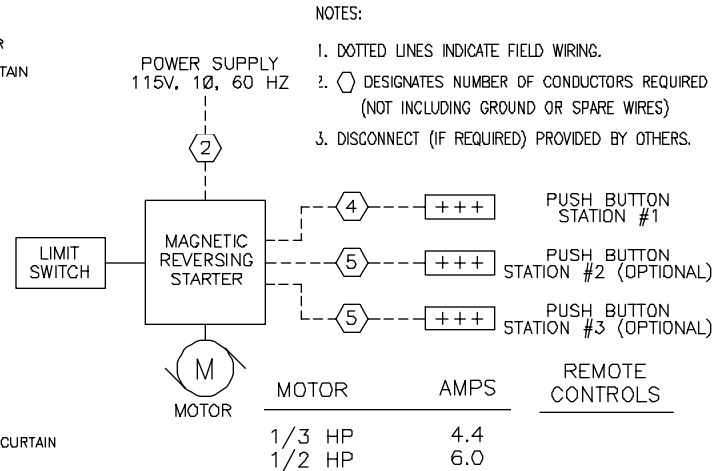
- Instantly reversing motor.
- Rotary limit switch.
- Magnetic reversing starter.
- #35 roller chain sprocket.
- Temporary power supply cord .
- Remote push button station.

OPTIONAL FEATURES:

- Low voltage control circuit.
- Three phase motor and controls.
- 3 or 4-stop limits and controls.
- Variable speed drive and controls.
- Other cable speeds.



Model No. 460 Masking Schematic



Model No. 460 Riser Diagram

NOTES:

1. DOTTED LINES INDICATE FIELD WIRING.
2. (2) DESIGNATES NUMBER OF CONDUCTORS REQUIRED (NOT INCLUDING GROUND OR SPARE WIRES)
3. DISCONNECT (IF REQUIRED) PROVIDED BY OTHERS.

MASKING MACHINE:

Sprocket drive automatic curtain machine shall be capable of operating curtain between preset "open" and "close" positions at a cable speed of 22 feet per minute. Secure machine to heavy steel base for attachment to building structure.

Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined alloy steel worm and bronze gear shall operate in an oil bath within a cast aluminum housing with dual-lip oil seals on the output shaft to prevent leakage. The gear reducer shall have a AGMA service factor of at least 1.0 for continuous operation. Provide ANSI #35 roller chain sprocket keyed to output shaft of gear reducer.

Unit shall be driven by 1/3* HP, 115V single phase capacitor motor connected to reducer with guarded V-belt drive. Motor shall be instantly reversing type to allow motor to reverse rotation without stopping.

Starter cabinet shall be located at the machine, containing all the necessary contactors, circuit breakers, overloads and fuses to provide for reversing operation. Controls shall be automatic with electrical latch to hold run circuit until limit switch is reached or "stop" button is pushed. Provide mechanical and electrical interlocks between contactors to prevent accidental motor reversal. Mount three pushbuttons on cabinet for local "open", "close" and "stop" control. All field connections shall be made through terminal blocks in the starter cabinet.

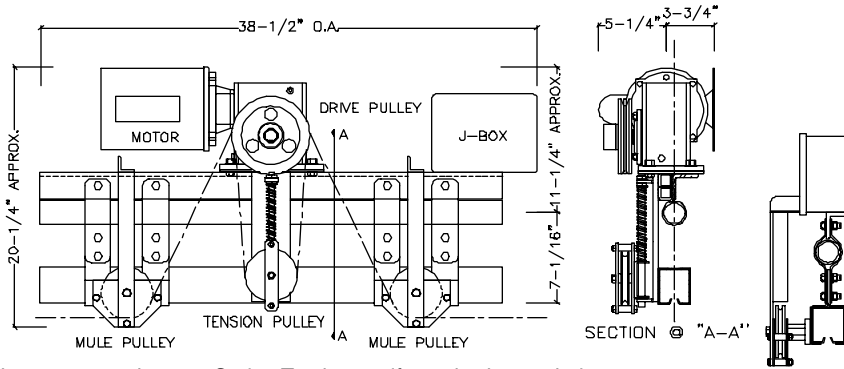
Provide two-stop mechanical, rotating shaft limit switch in separate NEMA 1 enclosure. Switch shall employ 72:1 worm gear reduction and shall operate two independently adjustable cams. Each cam shall activate a separate contact block for "open" and "close" positions.

Supply remote control station consisting of three pushbuttons mounted to stainless steel plate to fit standard single-gang switch box.

Model No. 460-1/3* as manufactured by H & H Specialties Inc.

* 1/2 HP motor also available.

MODEL NO. 462 DRAW CURTAIN MACHINE



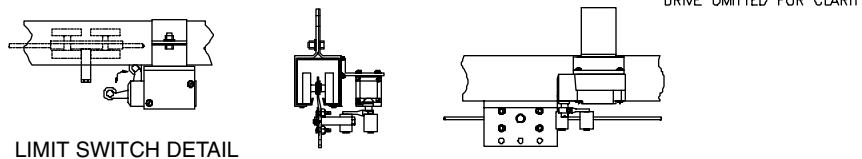
STANDARD FEATURES:

- Instantly reversing motor.
- Track mounted limit switches.
- Remote mounted Magnetic reversing starter.
- Double V-groove sheave.
- Spring-loaded tension pulley.
- Temporary power supply cord.
- Remote push button station.

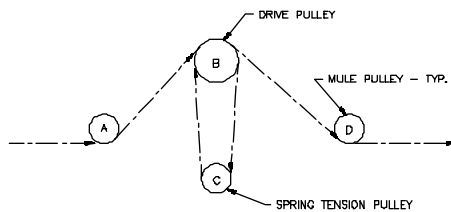
OPTIONAL FEATURES:

- Low voltage control circuit.
- Three phase motor and controls.
- 3 or 4-stop limits and controls.
- Variable speed drive and controls.
- Other cable speeds.

Shown mounted to 400 Series Track, specify track when ordering.



LIMIT SWITCH DETAIL

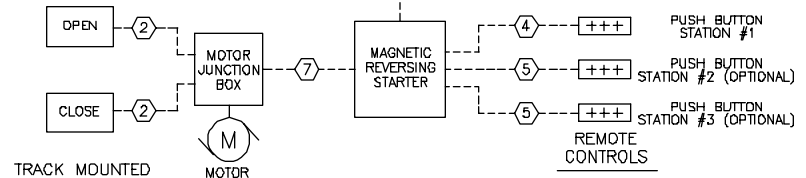


REEVING OF OPERATING CABLE:

1. Reeve cable under sheave "A" to inner groove on drive pulley "B".
2. Next, reeve cable around spring tension idler "C" and around outer groove of drive pulley "B".
3. Finally, reeve cable under mule sheave "D" toward center overlap.

NOTES:

1. DOTTED LINES INDICATE FIELD WIRING.
2. \square DESIGNATES NUMBER OF CONDUCTORS REQUIRED (NOT INCLUDING GROUND OR SPARE WIRES)
3. DISCONNECT (IF REQUIRED) PROVIDED BY OTHERS.



Model No. 462 Riser Diagram

MOTOR	AMPS
1/3 HP	4.4
1/2 HP	6.0
3/4 HP	8.2

TRACK MOUNTED DRAW CURTAIN MACHINE:

Traction drive automatic curtain machine shall be capable of operating curtain between preset "open" and "close" positions at a cable speed of 78 feet per minute. Machine shall be secured to fabricated steel base designed to attach onto 1-1/2" pipe batten above curtain track. Incorporate two 4" steel ball bearing pulleys to align operating cable with curtain track.

Provide 6" diameter cast iron drive pulley with double V-groove machined to accept 3/16" diameter operating cable. Mount pulley to output shaft of gear reducer and secure with keyed steel hub. Install spring-loaded, steel ball bearing pulley to maintain cable tension.

Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined alloy steel worm and bronze gear shall operate in an oil bath within a cast housing with dual-lip oil seals on the output shaft to prevent leakage. The gear reducer shall have a AGMA service factor of at least 1.0 for continuous operation.

Unit shall be driven by 1/3 HP*, 115V single phase capacitor motor directly coupled to the input shaft of the reducer. Motor shall be instantly reversing type to allow motor to reverse rotation without stopping. Install junction box on motor with terminal blocks for connecting motor leads and limit switches.

Starter cabinet shall be a separate NEMA 1 enclosure containing all the necessary contactors, circuit breakers, overloads and fuses to provide for reversing operation. Controls shall be automatic with electrical latch to hold run circuit until limit switch is reached or "stop" button is pushed. Provide mechanical and electrical interlocks between contactors to prevent accidental motor reversal. Mount three pushbuttons on cabinet for local "open", "close" and "stop" control. All field connections shall be made through terminal blocks in the starter cabinet.

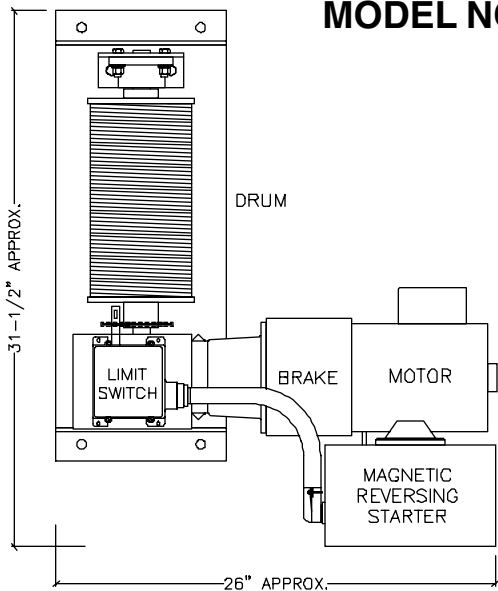
Provide two track mounted limit switch assemblies to automatically preset desired travel of curtain between "open" and "close" positions.

Supply remote control station consisting of three pushbuttons mounted to stainless steel plate to fit standard single-gang switch box.

Model No. 462-1/3* as manufactured by H & H Specialties Inc.

* 1/2 HP and 3/4 HP motors also available. Consult factory for 462-1 specifications.

MODEL NO. 467 LIFT CURTAIN MACHINE

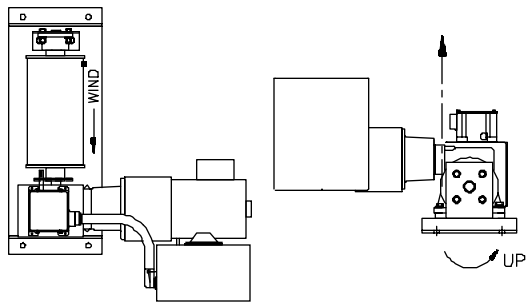
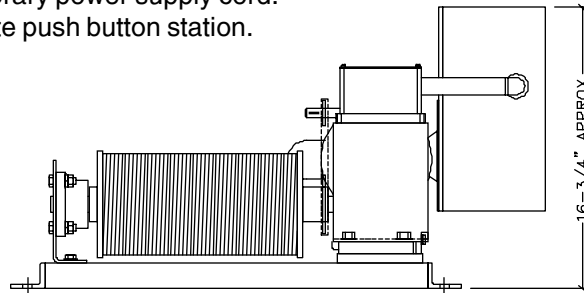


STANDARD FEATURES:

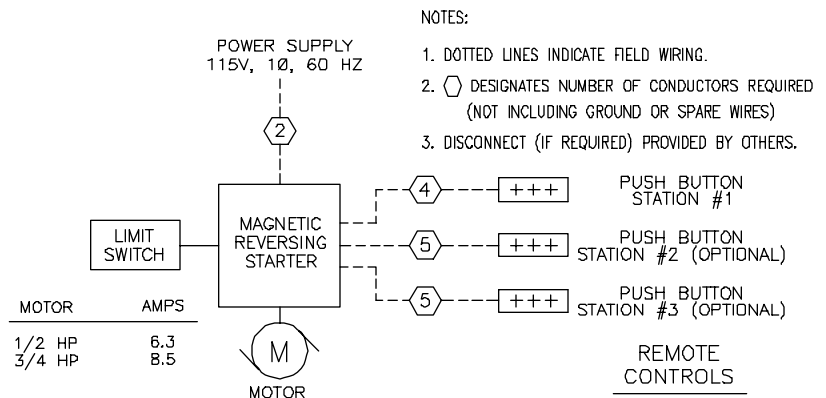
- Instantly reversing motor.
- Rotary limit switch.
- Magnetic reversing starter.
- Magnetic disc brake.
- 12" long grooved cable drum.
- Temporary power supply cord.
- Remote push button station.

OPTIONAL FEATURES:

- Low voltage control circuit.
- Other cable speeds (Lift capacity will vary).



Model No. 467 Reeving Schematic



Model No. 467 Riser Diagram

LIFT CURTAIN MACHINE:

Automatic lift curtain machine shall be capable of operating curtain between preset "open" and "close" positions at a speed of 69 feet per minute. Precision machined steel winding drum shall be directly coupled to gearmotor with brake and mounted to heavy steel channel base.

Provide helically-grooved 8" diameter drum for 3/16" cable lift line. Drum shall be of sufficient length to provide for 80 feet of lift plus three dead wraps. Drum shall be keyed directly to the output shaft of the gear reducer at one end and supported by a flange block at the other end. Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined alloy steel worm and bronze gear shall operate in an oil bath within a cast housing with dual-lip oil seals on the output shaft to prevent leakage. The gear reducer shall have a AGMA service factor of at least 1.0 for continuous operation.

Unit shall be driven by 1/2 HP*, 115V single phase capacitor motor directly coupled to the input shaft of the reducer. Motor shall be instantly reversing type to allow motor to reverse rotation without stopping. A "fail-safe" brake rated at 3 ft-lb shall be integral to the gearmotor.

Starter cabinet shall be located at the machine, containing all the necessary contactors, circuit breakers, overloads and fuses to provide for reversing operation. Controls shall be automatic with electrical latch to hold run circuit until limit switch is reached or "stop" button is pushed. Provide mechanical and electrical interlocks between contactors to prevent accidental motor reversal. Mount three pushbuttons on cabinet for local "open", "close" and "stop" control. All field connections shall be made through terminal blocks in the starter cabinet.

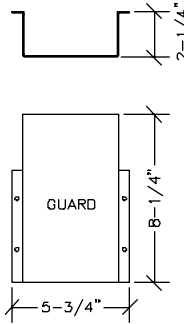
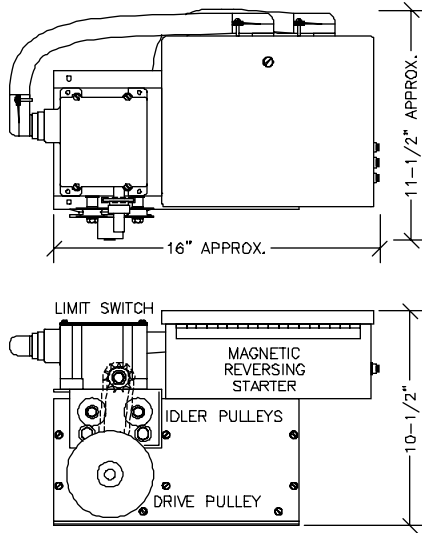
Provide two-stop mechanical, rotating shaft limit switch in separate NEMA 1 enclosure. Switch shall employ 72:1 worm gear reduction and shall operate two independently adjustable cams. Each cam shall activate a separate contact block for "open" and "close" positions.

Supply remote control station consisting of three pushbuttons mounted to stainless steel plate to fit standard single-gang switch box.

Model No. 467-1/2* as manufactured by H & H Specialties Inc.

* 3/4 HP motor also available. Consult factory for 467-1 specifications.

MODEL NO. 472 DRAW CURTAIN MACHINE



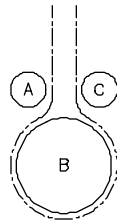
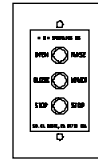
STANDARD FEATURES:

- Rotary limit switch.
- Magnetic reversing starter.
- Magnetic disc brake.
- 4" V-groove drive pulley.
- Temporary power supply cord.
- Remote push button station.

OPTIONAL FEATURES:

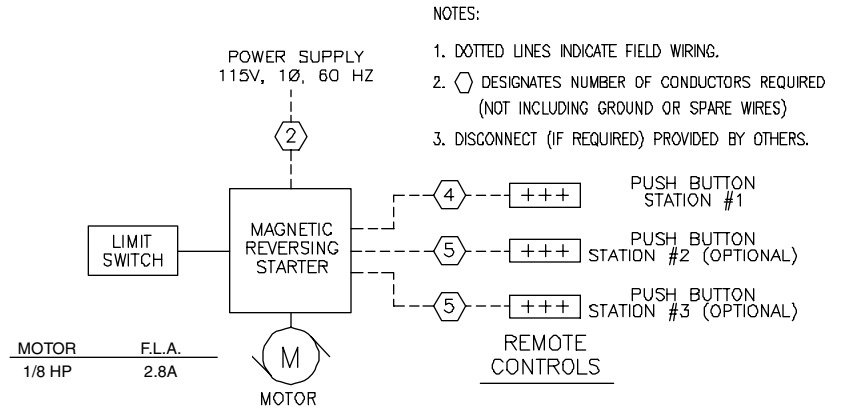
- 3 or 4-stop limits and controls.
- Low voltage control circuit.

No. 481
Push Button Station
(one supplied with machine)

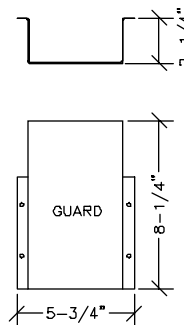
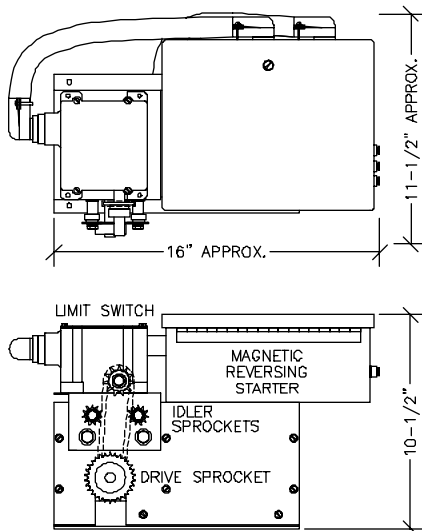


1. Cable/Chain travels down inside of idler "A" and outside of drive pulley/sprocket "B".
2. Cable/chain continues up inside idler "C".

Model No. 472/473 Reeving Diagram



MODEL NO. 473 MASKING MACHINE



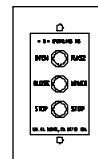
STANDARD FEATURES:

- Rotary limit switch.
- Magnetic reversing starter.
- Magnetic disc brake.
- #25 roller chain sprocket.
- Temporary power supply cord.
- Remote push button station.

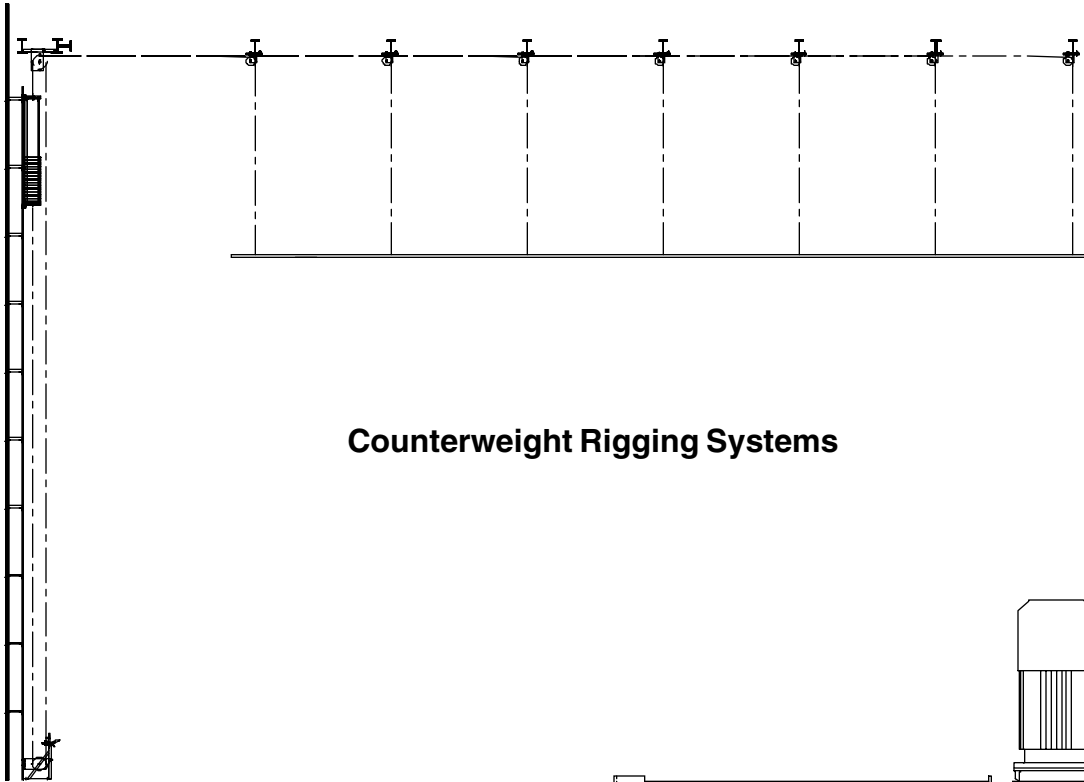
OPTIONAL FEATURES:

- 3 or 4-stop limits and controls.
- Low voltage control circuit.

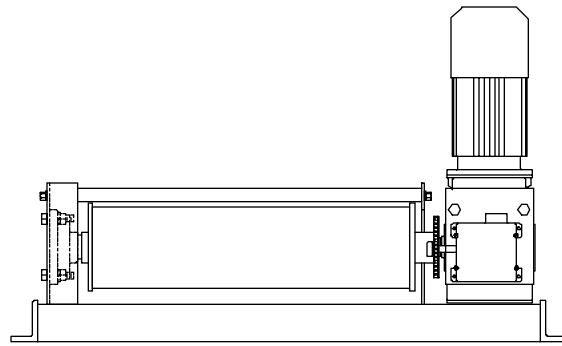
No. 481
Push Button Station
(one supplied with machine)



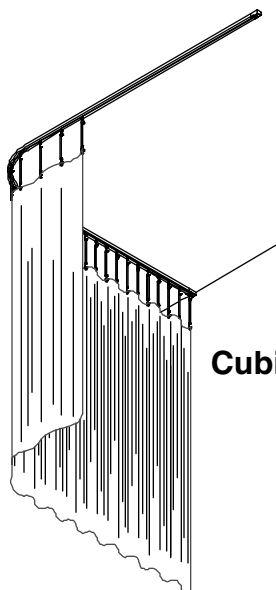
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Counterweight Rigging Systems



Motorized Winches



Cubicle Tracks

For information on products not listed in this catalog,
please contact the factory at:

H & H Specialties Inc.

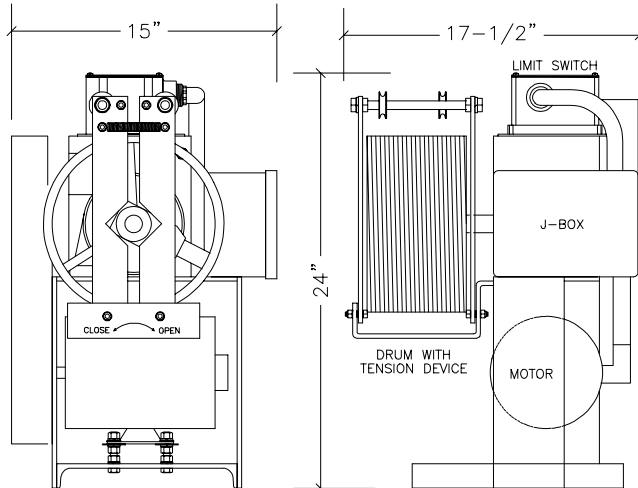
P.O. Box 9327 • South El Monte, CA 91733
626 575-0776 • 800 221-9995 • Fax 626 575-3004
email: sales@hhspecialties.com

ACKNOWLEDGEMENTS

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MODEL NO. 454VS DRAW CURTAIN MACHINE

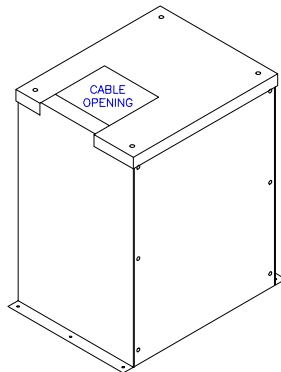


STANDARD FEATURES:

- Variable Speed (4-124 fpm)
- Rotary limit switch.
- Cable tension device.
- Adjustable frequency AC drive.
- 10" x 5" drum grooved for 3/16" cable.
- Temporary power supply cord.
- Remote push button control station.

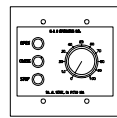
OPTIONAL FEATURES:

- Low voltage control circuit.
- 3 or 4-stop limits and controls.
- 491x454 Curtain Machine Enclosure.

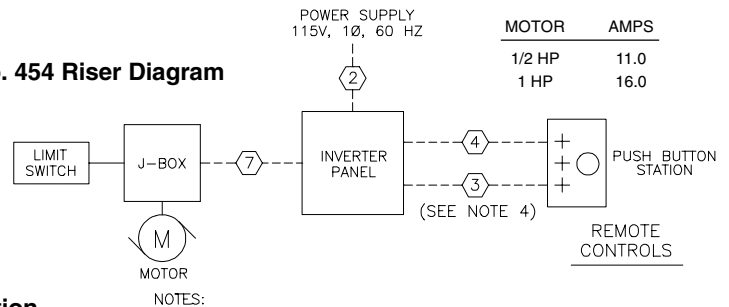


No. 491x454 Curtain Machine Enclosure
(optional) 24" wide x 27" high x 20" deep

Model No. 454 Riser Diagram



No. 481VS Control Station
(one supplied with machine)



NOTES:

1. DOTTED LINES INDICATE FIELD WIRING.
2. ◻ DESIGNATES NUMBER OF CONDUCTORS REQUIRED (NOT INCLUDING GROUND OR SPARE WIRES)
3. DISCONNECT (IF REQUIRED) PROVIDED BY OTHERS.
4. SPEED CONTROL WIRE: 3 COND./16 AWG SHIELDED - 200' MAX.

DRAW CURTAIN MACHINE:

Drum-style automatic curtain machine shall be capable of operating curtain between preset "open" and "close" positions at a variable cable speed from 4 to 124 feet per minute at full motor torque. Secure machine to heavy steel base for attachment to building structure.

Provide 10" diameter helically-grooved aluminum drum machined to accept 3/16" diameter operating cable. Drum shall be mounted to extended output shaft of gear reducer and secured by keyed steel hub. Install spring-loaded cable tension device onto drum to maintain proper tension and guide operating line.

Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined alloy steel worm and bronze gear shall operate in an oil bath within a cast aluminum housing with dual-lip oil seals on the output shafts to prevent leakage. The gear reducer shall have a AGMA service factor of at least 1.0 for continuous operation. Unit shall be driven by 1/2 HP, 230V three phase motor connected to reducer with guarded V-belt drive.

Inverter cabinet shall contain adjustable frequency AC drive, RFI filter, motor choke, and control relays for automatic operation between limit switches. The output voltage shall be sinewave coded PWM operating a 16 kHz, providing 200% starting torque, high efficiency and low noise. Provide trimpot adjustments for minimum speed, maximum speed, acceleration, deceleration, slip compensation and current limit. Mount three pushbuttons on cabinet for local "open", "close" and "stop" control. Inverter cabinet shall be wall mounted, requiring 115 VAC, single phase input, and field wired to junction box on machine and remote control station.

Provide two-stop mechanical, rotating shaft limit switch in separate NEMA 1 enclosure. Switch shall employ 36:1 worm gear reduction and shall operate two independently adjustable cams. Each cam shall activate a separate contact block for "open" and "close" positions.

Supply remote control station consisting of three pushbuttons and one rotary speed control pot mounted to stainless steel plate to fit standard double-gang switch box.

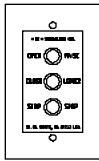
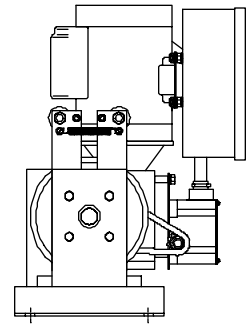
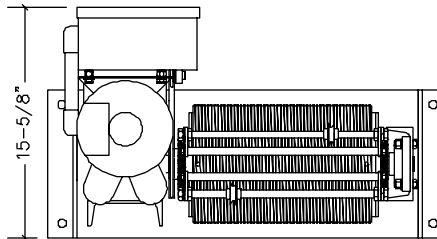
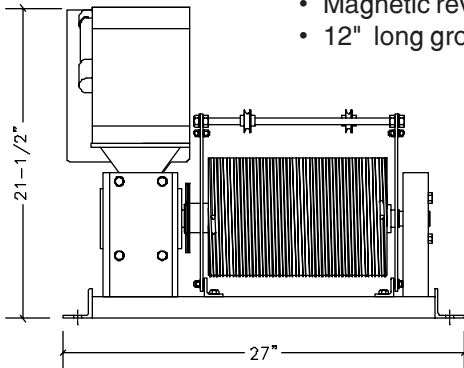
Model No. 454VS-1/2* as manufactured by H & H Specialties Inc.

*1 HP motor also available

MODEL NO. 466 DRAW CURTAIN MACHINE

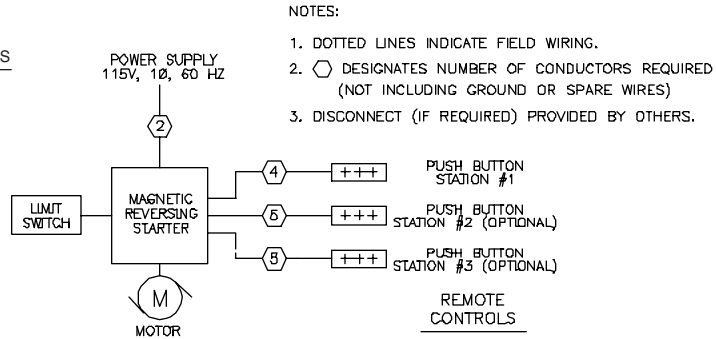
STANDARD FEATURES:

- Instantly reversing motor.
- Rotary limit switch.
- Magnetic reversing starter.
- 12" long grooved cable drum.
- Cable tension device
- Remote push button station.
- Temporary power supply cord.



**No. 481
Push Button Station**
(one supplied with machine)

MOTOR	AMPS
1/2 HP	6.0
3/4 HP	8.2



Model No. 466 Riser Diagram

DRAW CURTAIN MACHINE:

Automatic draw curtain machine shall be capable of operating curtain between preset "open" and "close" positions at a speed of 86 feet per minute. Precision machined steel winding drum shall be directly coupled to gearmotor and mounted to heavy steel channel base.

Provide helically-grooved drum of at least 8" diameter for 3/16" operating line. Drum shall be of sufficient length to provide for 80 feet of travel plus three dead wraps. Drum shall be keyed directly to the output shaft of the gear reducer at one end and supported by a flange block at the other end. Install spring-loaded cable tension device onto drum base to maintain proper tension and guide operating line.

Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined alloy steel worm and bronze gear shall operate in an oil bath within a cast housing with dual-lip oil seals on the output shafts to prevent leakage. The gear reducer shall have a AGMA service factor of at least 1.0 for continuous operation.

Unit shall be driven by 1/2 HP*, 120V single phase capacitor motor directly coupled to the input shaft of the reducer. Motor shall be instantly reversing type to allow motor to reverse rotation without stopping.

Starter cabinet shall be located at the machine, containing all the necessary contactors, circuit breakers, overloads and fuses to provide for reversing operation. Controls shall be automatic with electrical latch to hold run circuit until limit switch is reached or "stop" button is pushed. Provide mechanical and electrical interlocks between contactors to prevent accidental motor reversal. Mount three pushbuttons on cabinet for local "open", "close" and "stop" control. All field connections shall be made through terminal blocks in the starter cabinet.

Provide two-stop mechanical, rotating shaft limit switch in separate NEMA 1 enclosure. Switch shall employ 72:1 worm gear reduction and shall operate two independently adjustable cams. Each cam shall activate a separate contact block for "open" and "close" positions.

Supply remote control station consisting of three pushbuttons mounted to stainless steel plate to fit standard single-gang switch box.

Model No. 466-1/2 as manufactured by H & H Specialties Inc.

* 3/4 HP motor also available.