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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 ENTITY SUCH AS ANIMALS.

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



H & H Specialties has manufactured curtain tracks for entertainment and performing arts facilities for over 40 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 requirements.

The following pages illustrate our standard product line. Our products are stocked and sold by established dealers throughout the United States, Canada, Mexico and many other countries, providing local sources for the supply, installation and maintenance of our 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


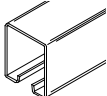

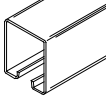

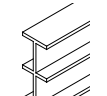

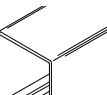

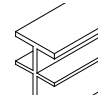

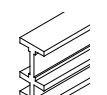

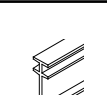

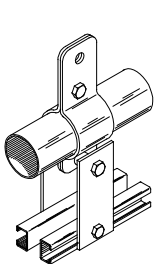

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- Stage Curtain Tracks
- Curtain Machines
- Stage Rigging
- Motorized Winches
- Cubicle Tracks

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CURTAIN TRACK SELECTION GUIDE

Model No.	Cross Section	Isometric View	Recommended Working Load ^{1,2}	Carrier Length ³	Estimated Shipping Weight	Usage	Page No.
			per carrier	inches	lb/ft		
101 116	 1-3/4"W x 2"H		3 5	1-3/16 1-5/16	2.5	Standard-duty straight track for curtains up to 40 feet. Can be walk-along or cord operated.	6-9
201 221 228	 1-3/4"W x 2"H		5 4 10	1-3/4 1-1/4 1-3/4	3	Black finished, medium-duty straight track for curtains up to 48 feet. Can be walk-along or cord operated.	10-15
301 316 328	 1"W x 2-1/2"H		5 7 7	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.	16-23
401 416 418 428	 2-5/8"W x 2-3/4"H		6 25 25 15	1-5/8 2-1/16 2-1/16 2-1/16	4.5	Model 401 straight track for curtains up to 60 feet. Can be walk-along or cord operated. Model Nos. 416, 418, and 428 for curtains of almost any length.	24-33
501 516	 1-5/8"W x 3-1/4"H		25 25	2-1/4	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.	34-38
601 616 628	 1"W x 3-3/8"H		5 7 7	1-5/16	2	Medium-duty curved or straight track for curtains up to 60 feet. Walk-along or cord operated. Cord operated tracks cannot be reversed curved.	39-43
701 716 728	 5/8"W x 1-11/16"H		2 4 4	1-1/16	1	Light-duty curved or straight track for curtains up to 40 feet. Walk-along use only.	44-45
818			25	2-1/8	9	Heavy-duty curved or straight open style track for TV studios. Available in single and double configurations for walk-along use only.	46
1018	 3-1/4"W x 9-3/8"H		25	2-1/4	10	Heavy-duty, exceptionally quiet open style straight track for professional theatre and TV studio use. Cord operated only.	47-49

1. Recommended working load per carrier for cord operated tracks. Total weight of drapery, track length, and model used will determine ease of operation of the track system. Curtain weight per carrier is based upon a typical spacing of 12" on center across the top of the curtain.
2. Hanger spacing dependent on carrier load, see page 4 for recommendations. Track hangers must be supported from overhead structure by appropriate means.
3. Per carrier. To determine stacking space, see explanation page 3.



ORDERING COMPLETE TRACKS

Individual bi-parting, one-way, or walk-along curtain tracks can be ordered on an even per-foot basis and supplied with components for normal operation. Model numbers for COMPLETE tracks are indicated by the model number of the carrier supplied with a suffix to further describe construction of the track. Note: COMPLETE tracks do not include hardware to attach hangers or floor block to building structure.

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

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

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

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 pieces	No. 410S-20 Track
120 feet	No. 414 Operating Line
	(Quantity of line = 2 times track length + 2 times curtain height)

Note: Bi-parting 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 once installed.

SUFFIX LEGEND:

- A- Aluminum
- B- Black
- C- Curved
- P- Premier
- S- Steel (or Straight for 500 Series)
- W- Walk-Along

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. Heavyweight and lined curtains require additional stacking space to accommodate the density of the fabric(s). A stacking space estimator is available on our website, www.hhspecialties.com, under the resources tab.

To determine minimum stacking space required for the hardware:

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. Total carrier length.
(qty. of carriers x carrier length from chart on page 2)
4. Total of Item Nos. 1-3 and add 10%.

EXAMPLE

Model 401S COMPLETE x 40 feet, bi-parting traveler. Estimate stacking space required for each half of track.

1. Length of Master Carrier: 4-3/8"
2. Length of End Pulley: 4-1/4"
3. Length of Each Carrier: 1-5/8"
20 carriers X 1-5/8" = 32-1/2"
4. Total: 4-3/8" + 4-1/4" + 32-1/2" = 41-1/8". Add 10% = 45-1/4" total stacking space per each half.

The 10% additional value calculated into the stacking space is considered an industry average. The value computed is the stacking space required for the track hardware. Heavy curtains and curtains with linings may require additional stacking space for the curtains themselves. Allowances should be made for those conditions. Consult your curtain supplier for additional information.

Note: The addition of rear fold guides (Series 100, 200, and 400) requires an extra 1/4" stacking space per carrier.



Curtain Weight Per Carrier (pounds)	RECOMMENDED TRACK HANGER SPACING (in Feet)										
	110A	110S	210B	310	410A	410S	510	610	710	810	1010
2	6	8	7.5	4.5	8	10	6	5	2.5	4	6
3	6	8	7.5	4	8	10	6	5	2	4	6
4	5.5	6.5	6.5	3.8	8	10	6	4.5	2	4	6
5	5	5.5	6.5	3.5	8	10	6	4.3	-	4	6
6	-	-	6.5	3.3	8	10	6	4.25	-	4	6
7	-	-	6	3.3	7	8	6	4	-	4	6
10	-	-	4	-	7	8	5.75	-	-	4	6
15	-	-	-	-	5.5	5.5	5	-	-	4	6
20	-	-	-	-	4	4	3.8	-	-	4	6
25	-	-	-	-	3.25	3.5	3.1	-	-	4	6

NOTES TO THE VALUES LISTED ON THIS CHART

- Note:** Recommended spacing of hangers is based upon the worst-case condition; curtains in the open or storage position based upon the various curtain weight per track listed. In this condition, the load subjected on the track and its associated hanging hardware is substantial. It is the customer's responsibility to determine the weight of the curtain to be supported by our track and determine the proper support spacing required. For curved tracks, additional hangers are required to stabilize the tracks. Consult the factory for curved applications.
- Curtain weight per carrier is based upon typical carrier spacing of 12" on center across the top of the curtain.
- The analysis of the curtain track and components presented in this chart is based upon generally accepted principles of structural engineering and the following specific analysis design guides:
 Aluminum Association, Aluminum Design Manual, 2005.
 American Iron & Steel Institute, North American Specification for the Design of Cold-Formed Steel Structural Members, 2007 Edition.
 All calculations are based upon a continuously supported span. Deflection criteria is based upon span/240.
- The values listed are based upon applications involving curtains only. Scenery carriers are available for several of our tracks. Consult the factory for your specific application when using scenery carriers. Scenery carriers may be found on page 54. **WARNING:** Do not use curtain track master carriers for supporting scenery.
- Recommended hanger spacing for 300 and 600 Series Tracks is based upon use of 306 or 606 Clamp Hanger. Consult factory when using ceiling hangers.
- Direct ceiling attachment of tracks (100, 200 and 400 Series) has not been evaluated as the support structure, method of attachment, and attachment requirements may vary widely from project to project. A qualified person should be consulted for this application.
- All recommendations stated are presented in good faith and based upon generally accepted engineering principles. The user, however, is cautioned that H & H Specialties Inc. cannot guarantee the accuracy of the data presented in this table for every situation. It is the customer's responsibility to determine the suitability of H & H Specialties' products for any given application, taking into account the specific requirements, the environment of use, and any possible peculiarities of the application.

When ordering COMPLETE Tracks³, a standard complement of components will be shipped as part of your track order as described on page 3. The quantity of hangers supplied is based upon the length of the track assembly, track model, and the curtain weight per carrier⁴. The chart below states quantities of hangers that will be shipped for each bi-parting COMPLETE Track ordered based upon the stated recommended working load per carrier on page 2, unless noted otherwise². For unusual project conditions, additional hangers may be ordered separately.

TRACK MODEL														
Track Length in Feet	101	116	201 221	228	301	316 328	401	416 ¹ 418 ¹ 428 ¹	416P ¹ 418P ¹	501 ¹ 516 ¹	601	616 628	701 716	728
20	6	6	6	8	8	10	6	6	6	6	6	8	9	11
22	6	8	6	8	10	10	6	6	6	8	8	8	10	12
24	6	8	8	8	10	10	6	8	8	8	8	8	11	13
26	8	8	8	10	10	12	6	8	8	8	10	10	12	14
28	8	8	8	10	10	12	6	8	8	8	10	10	13	15
30	8	8	8	10	12	12	8	8	8	8	10	10	13	16
32	8	10	8	10	12	14	8	8	8	10	10	10	14	17
34	8	10	8	12	14	14	8	10	10	10	10	12	15	18
36	8	10	8	12	14	14	8	10	10	10	10	12	16	19
38	10	10	10	12	14	16	8	10	10	10	12	12	17	20
40	10	10	10	12	14	16	8	10	10	10	12	12	17	21
42	10	12	10	14	14	16	8	10	10	12	14	14	-	-
44	10	12	10	14	16	18	10	10	10	12	14	14	-	-
46	10	12	10	14	16	18	10	12	12	12	14	14	-	-
48	10	12	10	14	16	18	10	12	12	12	14	14	-	-
50	12	12	12	16	18	20	10	12	12	12	14	16	-	-
52	12	14	12	16	18	20	10	12	12	14	14	16	-	-
54	12	14	12	16	18	20	10	12	12	14	14	16	-	-
56	12	14	12	16	18	22	10	14	14	14	16	16	-	-
58	12	14	12	18	20	22	12	14	14	14	16	18	-	-
60	12	14	12	18	20	22	12	14	14	14	16	18	-	-
62	14	16	14	18	22	24	12	14	14	16	18	18	-	-
64	14	16	14	18	22	24	12	14	14	16	18	18	-	-
66	-	16	14	20	22	24	12	14	14	16	18	20	-	-
68	-	-	14	20	22	26	12	16	16	16	18	20	-	-
70	-	-	14	20	22	26	12	16	16	16	18	20	-	-
72	-	-	14	20	24	26	14	16	16	18	18	20	-	-
74	-	-	-	-	24	28	14	16	16	18	20	22	-	-
76	-	-	-	-	24	28	14	16	16	18	20	22	-	-
78	-	-	-	-	26	28	14	18	18	18	20	22	-	-
80	-	-	-	-	26	30	14	18	18	18	20	22	-	--

1. Recommended Working Load for the purposes of this table for Model Nos. 416, 418, 501, and 516 is 15 pounds per carrier. When heavier curtains are supported on these models, additional hangers are required. Please contact the factory when ordering. Recommended track support spacing for these conditions may be found on page 4.
2. 700 Series Walk-Along Tracks are provided with hangers based upon a continuous track.
3. Pricing for COMPLETE Tracks is based upon our current Price List. Current price lists may be found on our website, www.hhspecialties.com.
4. **WARNING:** Do not use curtain track master carriers for supporting scenery. Scenery carriers may be found on page 54.



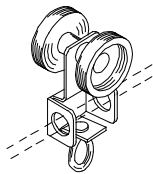
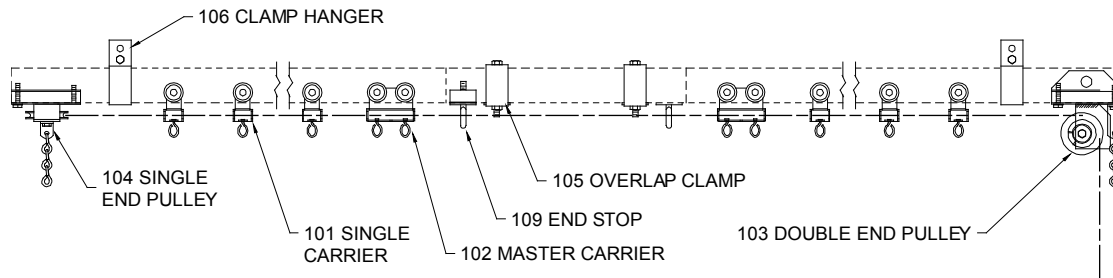
100 SERIES STANDARD-DUTY STRAIGHT TRACK

COMPLETE TRACK MODEL NUMBERS

101A 116A
101S 116S
101W 116W

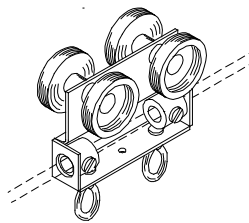
BLACK COMPLETE TRACK MODEL NUMBERS

101SB 116SB
101WB 116WB



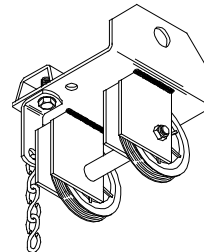
SINGLE CARRIER

2 polyethylene wheels riveted to plated steel body with swivel hook. Rubber bumpers may be ordered separately.
No. 101 - Zinc plated.
No. 101B - Black finish.



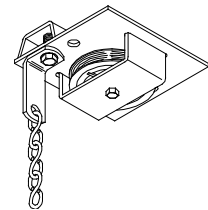
MASTER CARRIER

4 polyethylene wheels riveted to steel body with 2 swivel hooks. Supplied with 2 clamps for anchoring operating line or cable. 1 pair required for overlapping tracks.
No. 102 - Zinc plated.
No. 102B - Black finish.



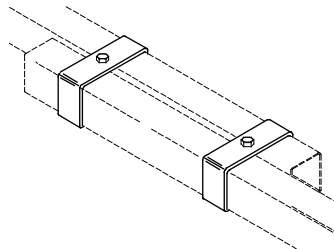
DOUBLE END PULLEY

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. 103 - Zinc plated.
No. 103B - Black finish.



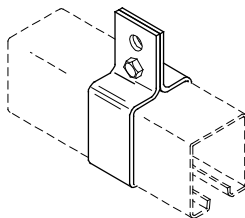
SINGLE END PULLEY

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. 104 - Zinc plated.
No. 104B - Black finish.



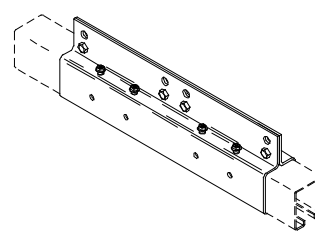
OVERLAP CLAMP

Formed steel clamps to align track at overlap. 1 set pictured.
No. 105 - Zinc plated.
No. 105B - Black finish.



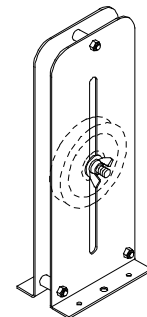
CLAMP HANGER

Formed steel brackets clamp to track. Adjusts to any position. Suspend track with welded chain or wire rope. 1 pair pictured.
No. 106 - Zinc plated.
No. 106B - Black finish.



SPLICE

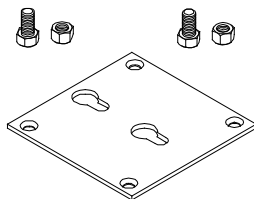
Formed steel brackets align and lock track sections together. 1 pair pictured.
No. 107 - Zinc plated.
No. 107B - Black finish.



No. 108 BLACK

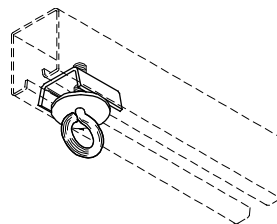
ADJUSTABLE FLOOR BLOCK

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



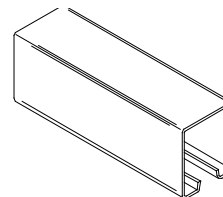
No. 108DK BLACK DETACHABLE FLOOR BLOCK KIT

7 gauge steel plate with hardware for use with No. 108 Adjustable Floor Block for quick release.



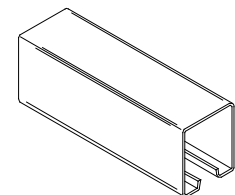
END STOP & CORD SUPPORT

Steel clamp with eye to support operating line and prevent carriers from traveling beyond desired location. 1 pair required for overlapping tracks. **DO NOT USE WITH PIVOT DEVICES.**
No. 109 - Zinc plated.
No. 109B - Black finish.



No. 110A TRACK

Mill finish 6063-T5 extruded aluminum 1-3/4" wide x 2" high, .080" thick. 16', 20' and 24' stock lengths.

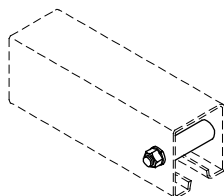


TRACK

16 gauge galvanized steel, roll-formed to 1-3/4" wide x 2" high.

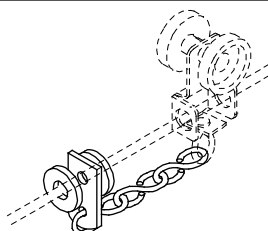
No. 110S- 8', 10', 12', 16', 18', 20', 24', and 26' stock lengths.

No. 110S-B- Semi-gloss black powder coat finish. 16', 20', and 24' stock lengths.



END STOP

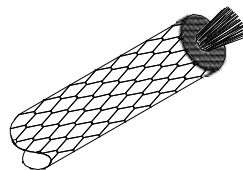
Bolt with horizontal pipe spacer to prevent carriers from traveling beyond desired location. For use with walk-along tracks and tracks with pivot devices.
No. 111 - Zinc plated.
No. 111B - Black finish.



REAR FOLD GUIDE

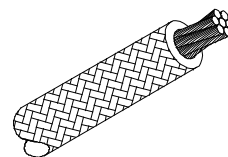
Allows curtain to fold at offstage edges. Supplied with 2 rubber bumpers.

No. 112 - for use with 1/4" operating line.
No. 112B - same as 112 in Black.
No. 113 - for use with 3/16" operating cable.
No. 113B - same as 113 in Black.
Note: Cannot be used with **No. 132 Overlap Master**.



No. 114 OPERATING LINE

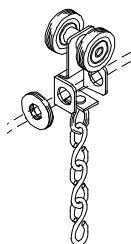
1/4" diameter black polyester braided over Dyneema core for manual operation.



OPERATING CABLE

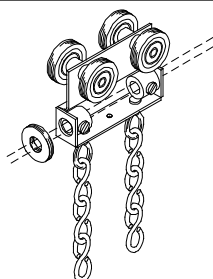
Black polyester jacket braided over 3/32" specialty cord wire ropd. For use with motorized tracks.

No. 115 - 3/16" diameter
No. 125 - 1/4" diameter



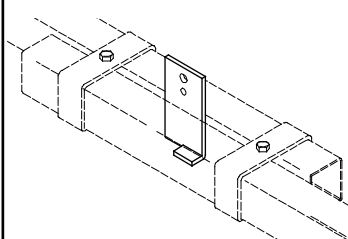
SINGLE CARRIER

2 nylon-tired shielded ball bearing wheels riveted to steel body with swivel hook and trim chain. Supplied with 1 No. 130 rubber bumper.
No. 116 - Zinc plated.
No. 116B - Black finish.



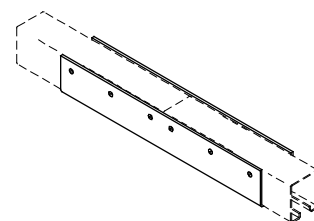
MASTER CARRIER

4 nylon-tired shielded ball bearing wheels riveted to steel body with 2 swivel hooks and trim chains. Supplied with 2 rope clamps and 1 No. 130 rubber bumper. 1 pair required for overlapping tracks.
No. 117 - Zinc finish.
No. 117B - Black finish.



CENTER PIPE SUPPORT

Formed steel bracket used to support tracks at overlap.
No. 126 - Zinc plated.
No. 126B - Black finish.



CEILING SPLICE

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

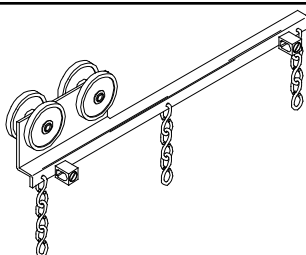
Note: Cannot be used with **No. 132 Overlap Master**, **No. 137 Locking Master** or **No. 10 Pivot Device** due to interference with the wheels.

No. 127 - Zinc plated.
No. 127B - Black finish.



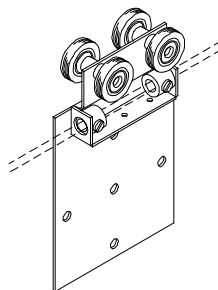
No. 130 ROUND RUBBER BUMPER

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



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.
No. 132 - Zinc plated.
No. 132B - Black finish.



No. 134 BLACK SIDE MASKING MASTER CARRIER

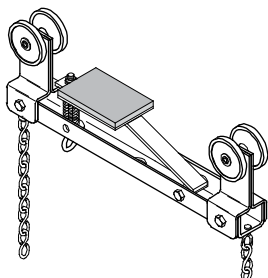
No. 117 Master Carrier with 3-3/4" x 5-3/4" steel plate for attaching side masking frame. Supplied with 2 rope clamps.



TRIM CHAIN

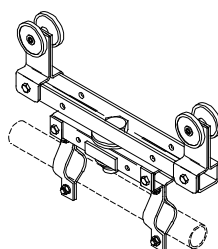
3 or 6 links No.10 single jack chain added to carriers to provide 3" or 6" of curtain height adjustment.

No. 135 - 3" Zinc plated.
No. 135B - 3" Black finish.
No. 135-6 - 6" Zinc plated.
No. 135B-6 - 6" Black finish.



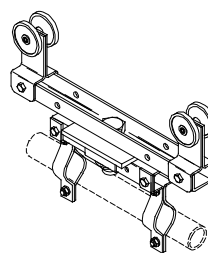
No. 137 BLACK LOCKING MASTER CARRIER

Heavy steel construction with nylon wheels and brake to keep master carrier in desired location. Equipped with swivels and trim chains for curtain attachment. **Note:** All carriers used with this device must have a trim chain of 6" total length.



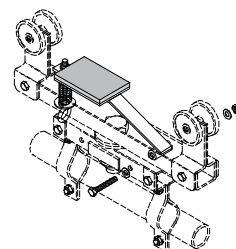
PIVOT DEVICE

Heavy steel construction with nylon wheels. Supplied with brackets for 1-3/8" O.D. pipe or tubing (6' max. recommended length). Allows masking draperies to be rotated to any angle.
 Working Load Limit: 60 pounds.
No. 10 - Zinc plated.
No. 10B - Black finish



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 (6' max. recommended length).
 Working Load Limit: 60 pounds.
No. 10X - Zinc plated.
No. 10XB - Black finish.



BRAKE KIT

Spring equipped arm with neoprene pad. Add to pivot device to prevent undesired movement along track.
No. 10BK - Zinc plated.
No. 10BKB - Black finish.



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 with continuous slot in bottom. Provide unspliced in lengths up to 26'.

Suspend track 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 overlapping 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 shielded 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 braided over Dyneema core.

All steel components shall be zinc plated to resist corrosion.

100 SERIES COMPLETE TRACK COMPONENT GUIDE

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

PART No.	DESCRIPTION	101S	101W	116S	116W
101	Single Carrier	•	•		
102	Master Carrier	•	•		
103	Double End Pulley	•		•	
104	Single End Pulley	•		•	
105	Overlap Clamp	•		•	
106	Clamp Hanger	•	•	•	•
107*	Splice	•	•	•	•
108	Black Adjustable Floor Block	•		•	
109	End Stop & Cord Support	•	•	•	•
110S*	Track	•	•	•	•
114	1/4" Operating Line	•		•	
116	Nylon B.B. Single Carrier			•	•

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

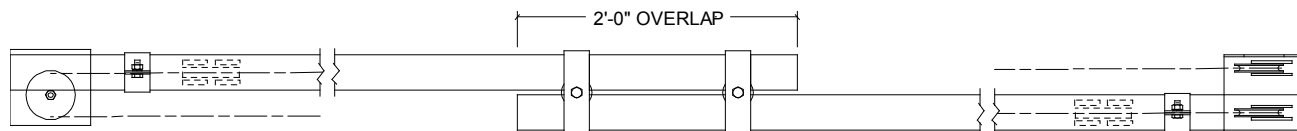
100 SERIES BLACK COMPLETE TRACK COMPONENT GUIDE

Note: Aluminum track is not offered in black.

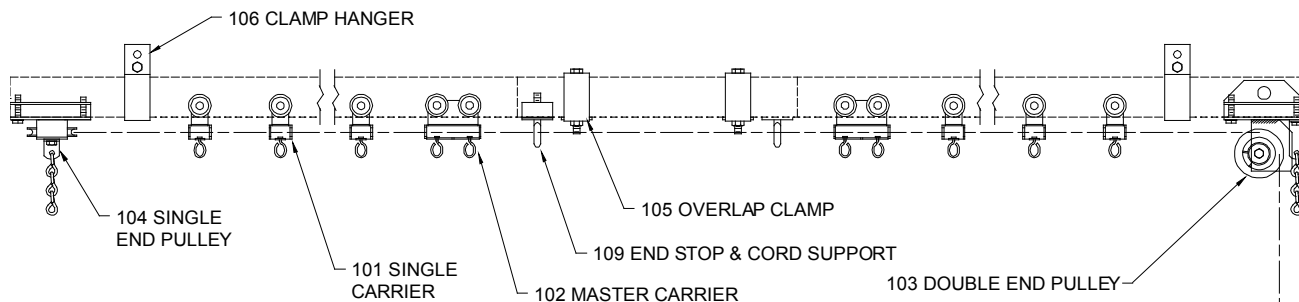
PART No.	DESCRIPTION	101SB	101WB	116SB	116WB
101B	Black Single Carrier	•	•		
102B	Black Master Carrier	•	•		
103B	Black Double End Pulley	•		•	
104B	Black Single End Pulley	•		•	
105B	Black Overlap Clamp	•		•	
106B	Black Clamp Hanger	•	•	•	•
107B*	Black Splice	•	•	•	•
108	Black Adjustable Floor Block	•		•	
109B	Black End Stop & Cord Support	•	•	•	•
110S-B*	Black Track	•	•	•	•
114	1/4" Operating Line	•		•	
116B	Black Nylon B.B. Single Carrier			•	•
117B	Black Nylon B.B. Master Carrier			•	•

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

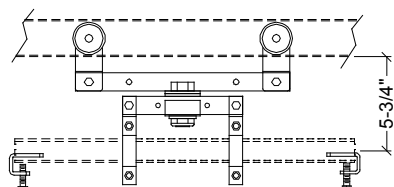
100 SERIES TRACK



PLAN - MODEL 101S COMPLETE TRACK



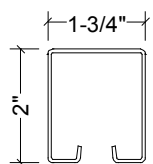
ELEVATION - MODEL 101S COMPLETE TRACK



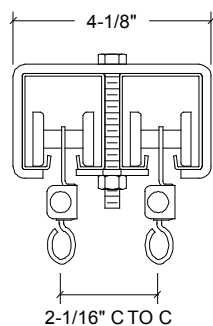
10 PIVOT DEVICE

114 OPERATING LINE

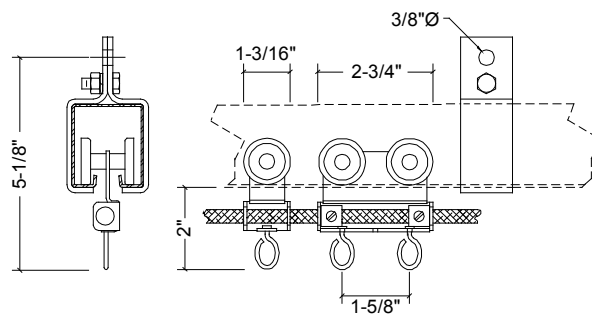
108 BLACKADJUSTABLE FLOOR BLOCK



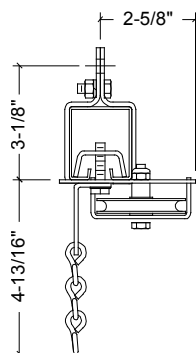
110 TRACK



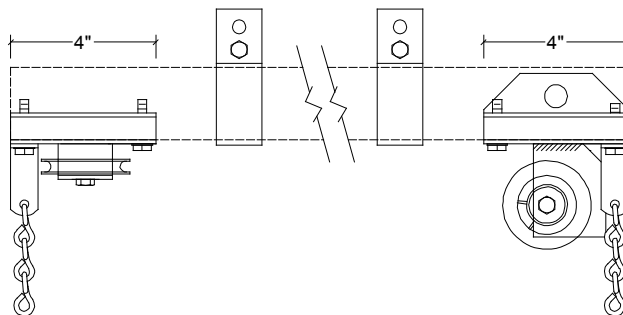
TRACKS AT CENTER OVERLAP



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 201S

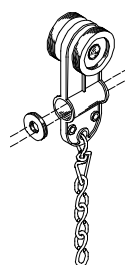
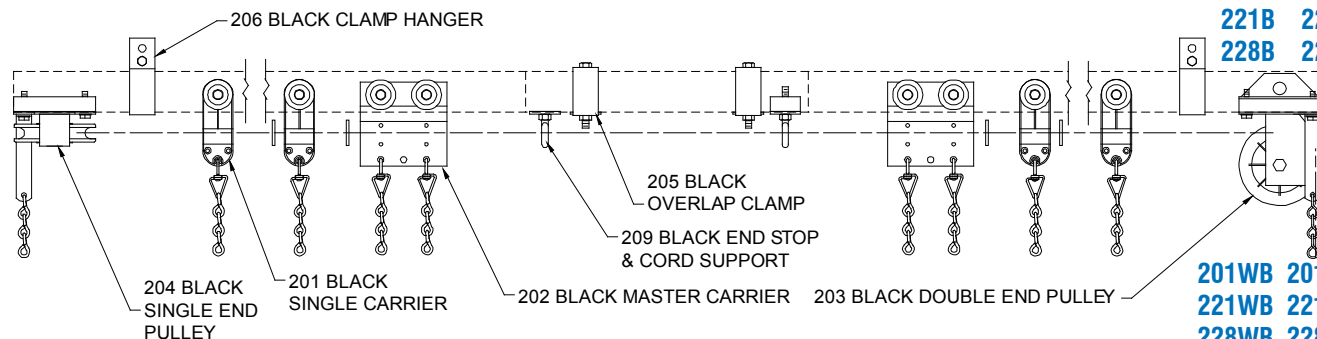
221B 221S

228B 228S

201WB 201WS

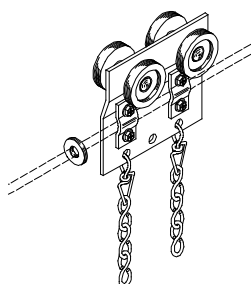
221WB 221WS

228WB 228WS



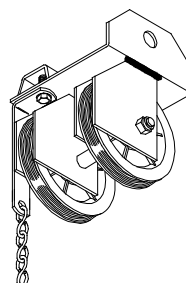
No. 201 BLACK SINGLE CARRIER

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 No. 231 rubber bumper.



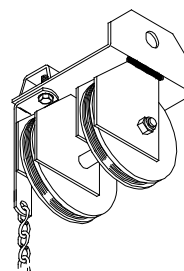
No. 202 BLACK MASTER CARRIER

4 polyethylene wheels riveted to steel body with 2 shielded ball bearings. 2 clamps provided for anchoring operating line or cable. Supplied with 1 No. 231 rubber bumper. 1 pair required for overlapping tracks.



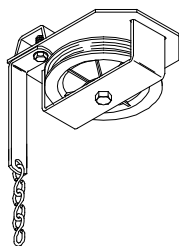
No. 203 BLACK DOUBLE END PULLEY

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



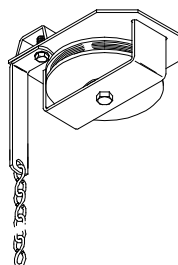
No. 203M BLACK DOUBLE END PULLEY

Heavy-duty 4" diameter Nylatron GSM sheaves with sealed precision ball bearings. Steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge. 3/16" groove for use with motorized tracks.



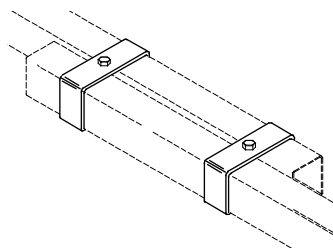
No. 204 BLACK SINGLE END PULLEY

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



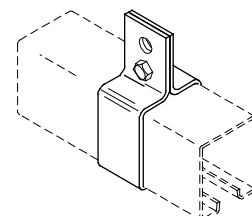
No. 204M BLACK SINGLE END PULLEY

Heavy-duty 4" diameter Nylatron GSM sheave with sealed precision ball bearings. Steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge. 3/16" groove for use with motorized tracks.



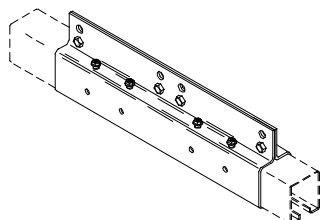
No. 205 BLACK OVERLAP CLAMP

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



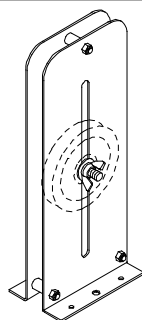
No. 206 BLACK CLAMP HANGER

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



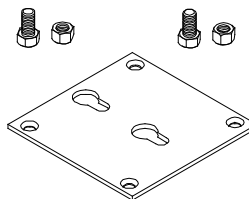
No. 207 BLACK SPLICE

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



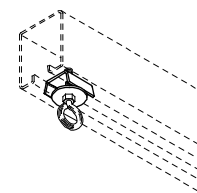
No. 208 BLACK ADJUSTABLE FLOOR BLOCK

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



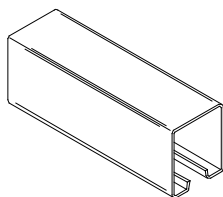
No. 208DK BLACK DETACHABLE FLOOR BLOCK KIT

7 gauge steel plate with hardware for use with No. 208 Adjustable Floor Block for quick release.



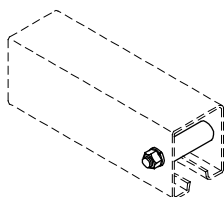
No. 209 BLACK END STOP & CORD SUPPORT

Steel clamp with eye to support operating line and prevent carriers from traveling beyond desired location. 1 pair required for overlapping tracks. **DO NOT USE WITH PIVOT DEVICES.**



No. 210B BLACK TRACK

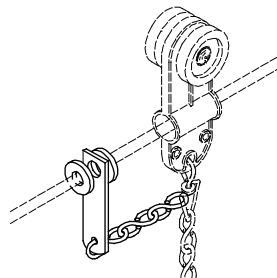
16 gauge galvanized steel, roll-formed to 1-3/4" wide x 2" high with semi-gloss black powder coat finish. 16', 20' and 24' stock lengths.



END STOP

Bolt with horizontal pipe spacer to prevent carriers from traveling beyond desired location. For use with walk-along tracks and tracks with pivot devices.

No. 211 - Black finish.



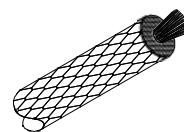
BLACK REAR FOLD GUIDE

For use with No. 201 carriers. Allows curtain to fold at offstage edges.

Supplied with 1 rubber bumper.

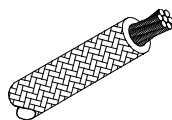
No. 212 - for use with 3/8" operating line.

No. 213 - for use with 3/16" operating cable.



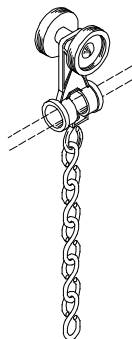
No. 214 BLACK OPERATING LINE

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



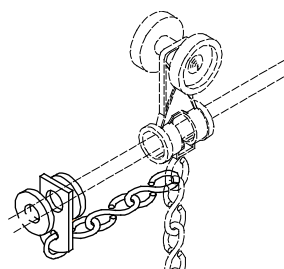
No. 215 BLACK OPERATING CABLE

3/16" diameter black polyester jacket braided over 3/32" specialty cord wire rope. For use with motorized tracks.



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.



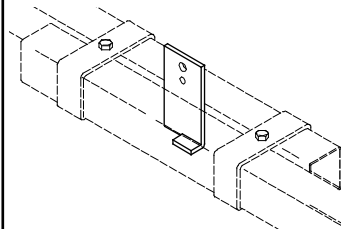
BLACK REAR FOLD GUIDE

For use with No. 221 carriers. Allows curtain to fold at offstage edges.

Supplied with 1 rubber bumper.

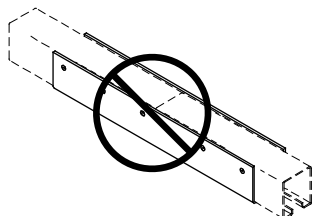
No. 222 - for use with 3/8" operating line.

No. 223 - for use with 3/16" operating cable.



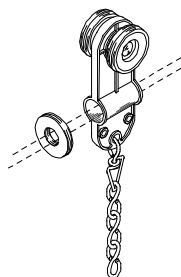
No. 226 BLACK CENTER PIPE SUPPORT

Formed steel bracket used to support tracks at overlap.



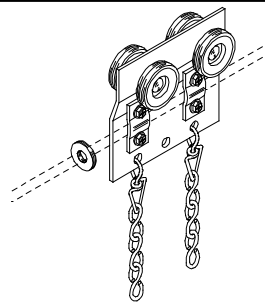
CEILING SPLICE NOT AVAILABLE

Note: Ceiling splice cannot be used with 200 Series Carriers and Pivot Devices due to interference with the wheels



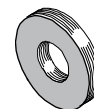
No. 228 BLACK SINGLE CARRIER

2 urethane-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. 229 BLACK MASTER CARRIER

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

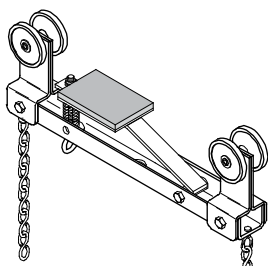


ROUND RUBBER BUMPER

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

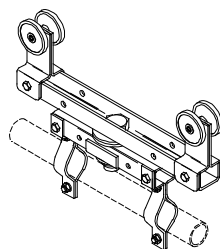
No. 230 - for use with 3/16" operating cable.

No. 231 - for use with 3/8" operating line.



No. 237 BLACK LOCKING MASTER CARRIER

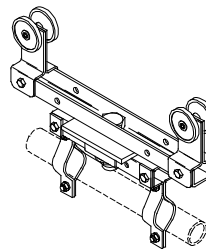
Heavy steel construction with nylon wheels and brake to keep master carrier in desired location. Equipped with swivels and trim chains for curtain attachment. Note: All carriers used with this device must have a trim chain of 6" total length.



No. 20 BLACK PIVOT DEVICE

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

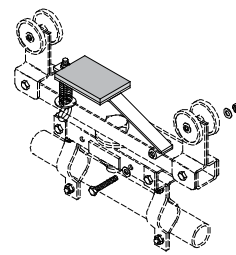
Working Load Limit: 60 pounds.



No. 20X BLACK 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 (6' max. recommended length).

Working Load Limit: 60 pounds.



No. 20BK BLACK BRAKE KIT

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



200 SERIES COMPLETE BLACK TRACK COMPONENT GUIDE

PART No.	DESCRIPTION	201B	221B	228B	201S**	221S**	228S**
201	Black Single Carrier	•			•		
202	Black Master Carrier	•	•		•	•	
203	Black Double End Pulley	•	•	•			
204	Black Single End Pulley	•	•	•			
205	Black Overlap Clamp	•	•	•			
206	Black Clamp Hanger	•	•	•			
207*	Black Splice	•	•	•			
208	Black Adjustable Floor Block	•	•	•	•	•	•
209	Black End Stop & Cord Support	•	•	•			
210B*	Black Track	•	•	•			
214	3/8" Operating Line	•	•	•	•	•	•
221	Black Single Carrier		•			•	
228	Black Urethane Single Carrier			•			•
229	Black Urethane Master Carrier			•			•
110S*	Track				•	•	•
403	Double End Pulley				•	•	•
404	Single End Pulley				•	•	•
105	Overlap Clamp				•	•	•
106	Clamp Hanger				•	•	•
107	Splice*				•	•	•
409	End Stop & Cord Support				•	•	•

* Track lengths and splices supplied as required from stock sizes. Ceiling splices not available due to interference with carrier wheels.

** Components in Models 201S , 221S and 228S are a mixture of black, zinc plated, and galvanized finish.

200 SERIES COMPLETE BLACK WALK-ALONG TRACK COMPONENT GUIDE

PART No.	DESCRIPTION	201WB	221WB	228WB	201WS**	221WS**	228WS**
201	Black Single Carrier	•			•		
202	Black Master Carrier	•	•		•	•	
206	Black Clamp Hanger	•	•	•			
207*	Black Splice	•	•	•			
209	Black End Stop & Cord Support	•	•	•			
210B*	Black Track	•	•	•			
221	Black Single Carrier		•			•	
228	Black Urethane Single Carrier			•			•
229	Black Urethane Master Carrier			•			•
110S*	Track				•	•	•
106	Clamp Hanger				•	•	•
107	Splice*				•	•	•
409	End Stop & Cord Support				•	•	•

* Track lengths and splices supplied as required from stock sizes. Ceiling splices not available due to interference with carrier wheels.

** Components in Models 201WS , 221WS and 228WS are a mixture of black, zinc plated, and galvanized finish.

GENERAL SPECIFICATIONS: BLACK MEDIUM-DUTY STRAIGHT TRACK

Provide **Model 201WB** 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 with continuous slot in bottom. Provide unspliced in lengths up to 24'.

Suspend track with two-piece clamp hanger formed from 11 gauge steel. 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 shielded ball bearing 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.

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

Track shall be finished with a semi-gloss black powder coat. All other steel components shall be black oxide finished.

GENERAL SPECIFICATIONS: (Continued)

Provide **Model 201B** 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 with continuous slot in bottom. Provide unspliced in lengths up to 24'.

Suspend track 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 shielded ball bearing 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 on operating line to reduce noise.

Master carriers shall be 4-wheel assemblies with bodies formed from 11 gauge steel with press-fit shielded 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 shielded 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 braided over Dyneema core.

Track shall be finished with a semi-gloss black powder coat. All other steel components shall be black oxide finished.

Provide **Model 228B** 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 with continuous slot in bottom. Provide unspliced in lengths up to 24'.

Suspend track 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 urethane-tired wheels fastened parallel to shielded ball bearing 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 on operating line to reduce noise.

Master carriers shall be 4-wheel assemblies with bodies formed from 11 gauge steel with press-fit shielded 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.

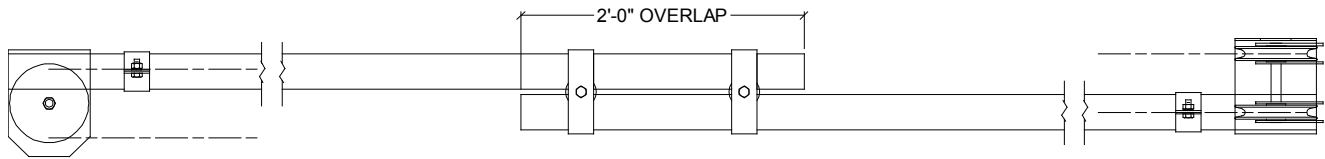
Provide floor block in 12 gauge steel housing containing 4" Nylatron GS shielded ball bearing sheave. Sheave axle shall lock at any point within 9" vertical slots to allow tension adjustment of operating line.

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

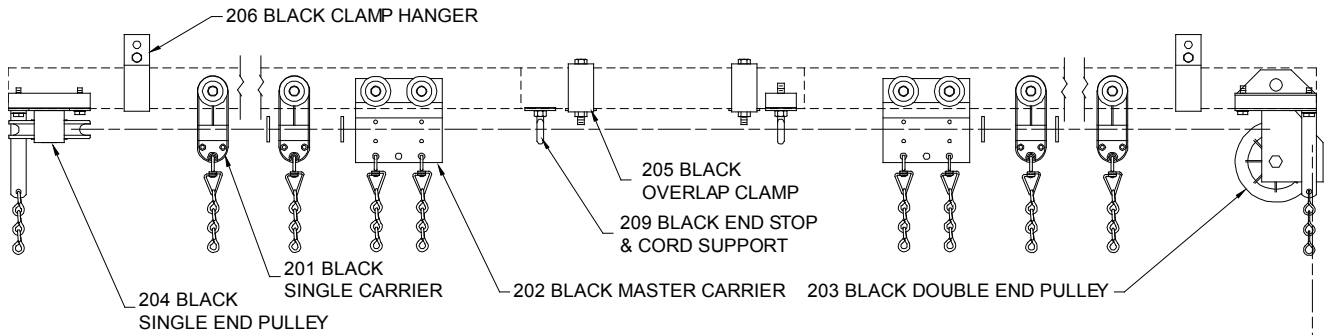
Track shall be finished with a semi-gloss black powder coat. All other steel components shall be black oxide finished.



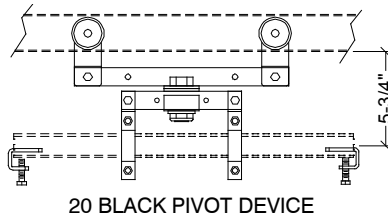
201B SERIES BLACK TRACK



PLAN - 201B COMPLETE BLACK TRACK

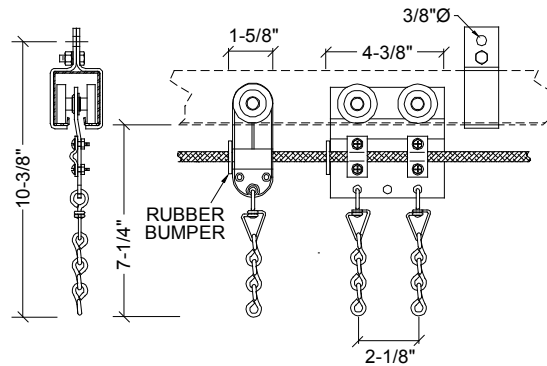
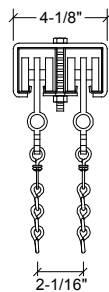
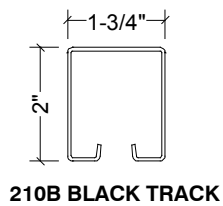


ELEVATION - 201B COMPLETE BLACK TRACK



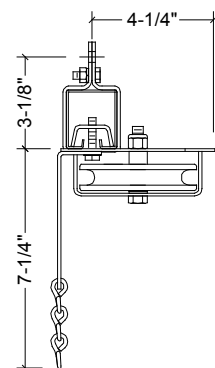
214 BLACK OPERATING LINE

208 BLACK ADJUSTABLE FLOOR BLOCK

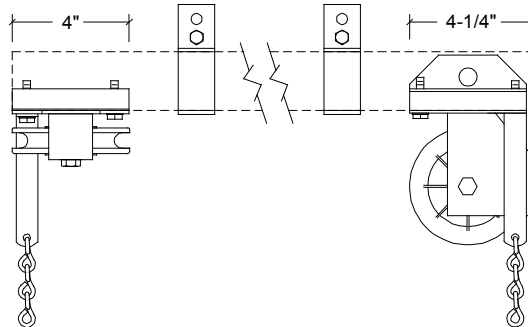


TRACKS AT CENTER OVERLAP

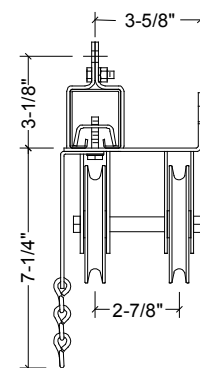
201 BLACK SINGLE CARRIER AND 202 BLACK MASTER CARRIER



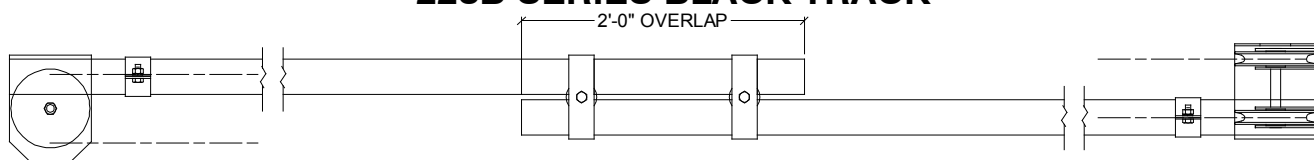
204 BLACK SINGLE END PULLEY



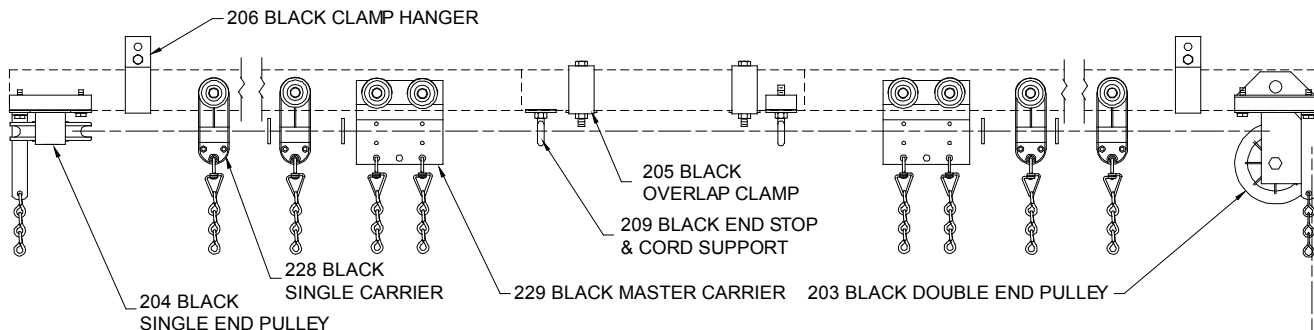
203 BLACK DOUBLE END PULLEY



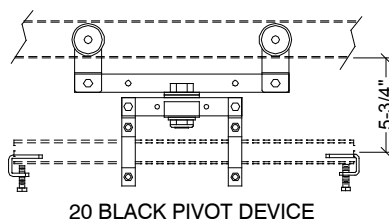
228B SERIES BLACK TRACK



PLAN - 228B COMPLETE BLACK TRACK

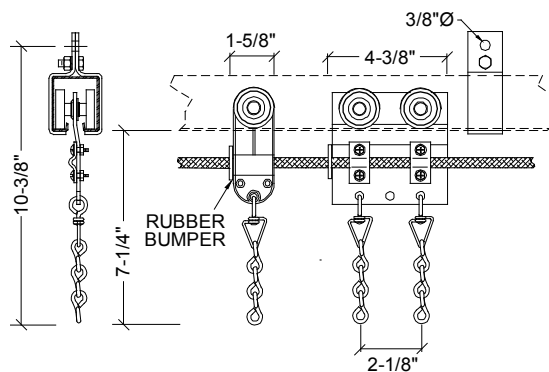
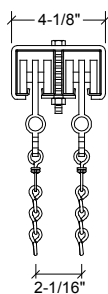
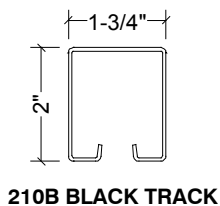


ELEVATION - 228B COMPLETE BLACK TRACK



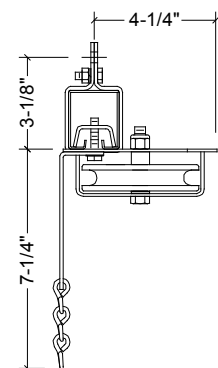
214 BLACK OPERATING LINE

208 BLACK ADJUSTABLE FLOOR BLOCK

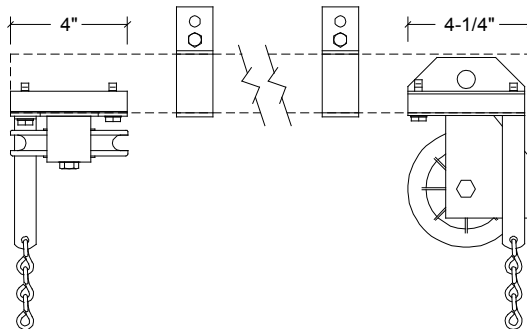


TRACKS AT CENTER OVERLAP

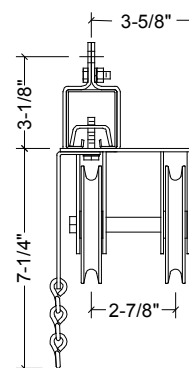
228 BLACK SINGLE CARRIER AND 229 BLACK MASTER CARRIER



204 BLACK SINGLE END PULLEY



203 BLACK DOUBLE END PULLEY





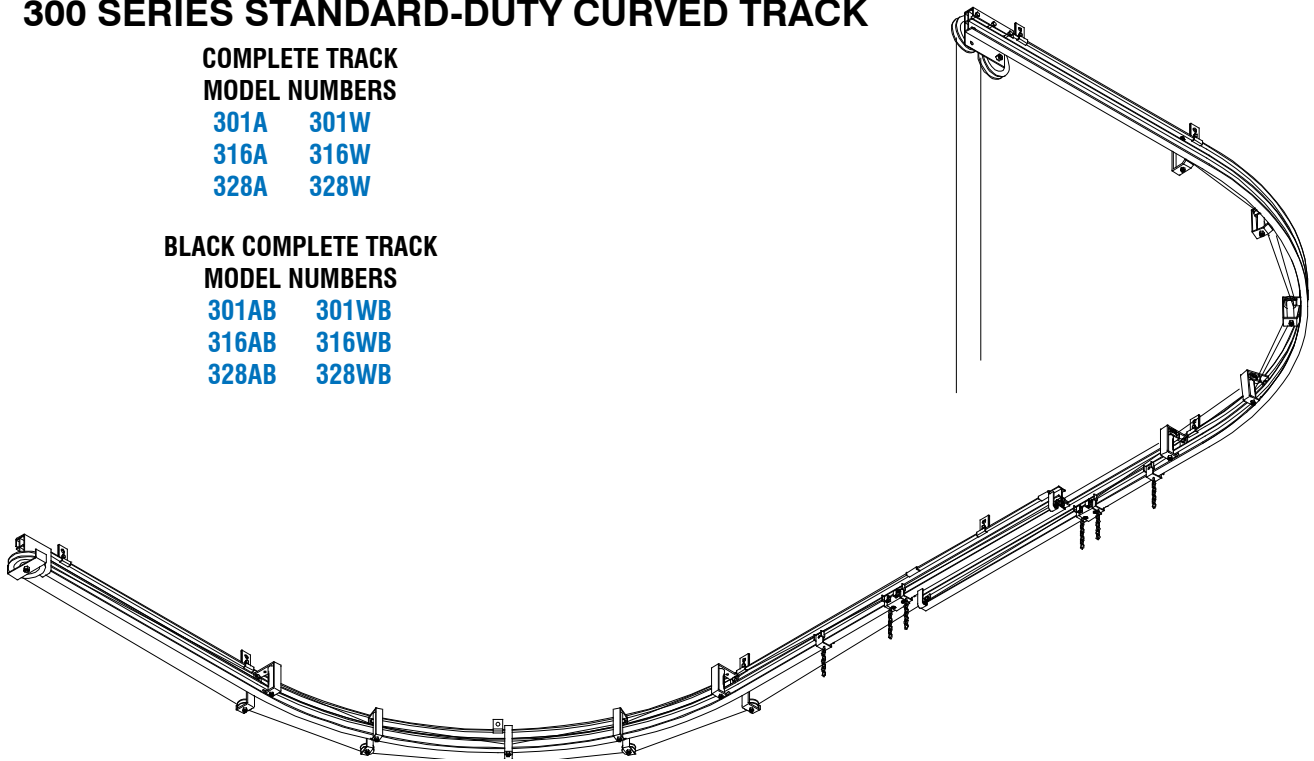
300 SERIES STANDARD-DUTY CURVED TRACK

COMPLETE TRACK MODEL NUMBERS

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

BLACK COMPLETE TRACK MODEL NUMBERS

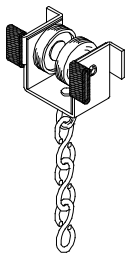
301AB	301WB
316AB	316WB
328AB	328WB



The 300 Series is a versatile track that can be used for straight or curved applications in TV studios, theatres, and many other types of facilities. It can be curved at the factory or on-the-job to suit project requirements. Walk-along tracks can be curved to virtually any shape and length. However, cord operated tracks cannot be rigged with reverse curves and are recommended for lengths up to 60'. Serpentine layouts and long lengths require the use of 500 Series track for cord operation (see page 34).

The ease of operation of a 300 Series track is dependant on several factors, including the radius of the curve. In general, the track operates best around gentle curves. Whenever possible, it is recommended that layouts be designed with a radius of 4 feet or larger. Tighter curves will result in a system that requires additional effort to operate.

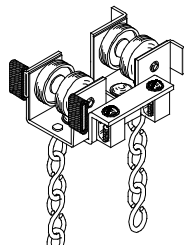
A variety of track switching devices are available for use with 300 Series Walk-Along tracks. These are illustrated on page 56.



SINGLE CARRIER

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

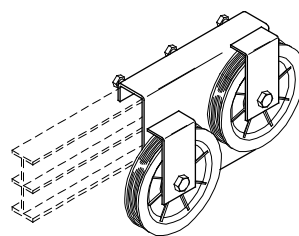
No. 301 - Zinc plated.
No. 301B - Black finish.



MASTER CARRIER

2 Delrin wheel assemblies with swivel hooks and trim chains pivot on formed steel body. 2 clamps for anchoring operating line or cable. Supplied with 2 rubber bumpers. 1 pair required for overlapping tracks.

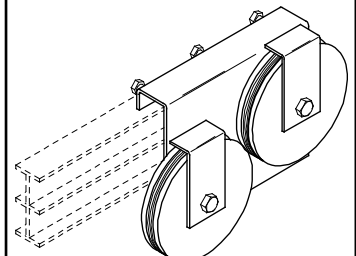
No. 302 - Zinc plated.
No. 302B - Black finish.



DOUBLE END PULLEY

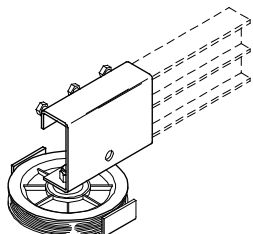
4" diameter Nylatron GS sheaves with shielded ball bearings. Steel housing clamps to track.

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



No. 303M BLACK DOUBLE END PULLEY

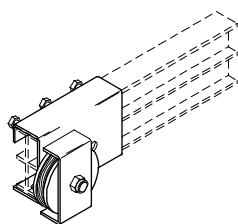
Heavy-duty 4" diameter Nylatron GSM sheaves with sealed precision ball bearings. Steel housing clamps to track. 3/16" groove for use with motorized tracks.



SINGLE END PULLEY

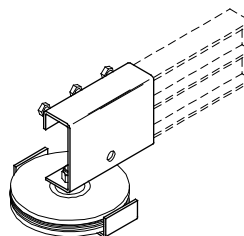
4" diameter Nylatron GS sheave with shielded ball bearings. Steel housing clamps to track. For use with bi-parting tracks.

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



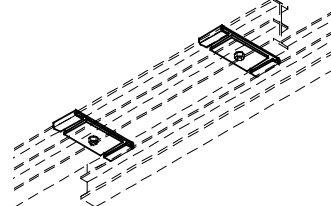
304A BLACK SINGLE END PULLEY

2-1/2" diameter steel sheave with sealed precision ball bearings. Steel housing clamps to track. For one-way draw operation.



304M BLACK SINGLE END PULLEY

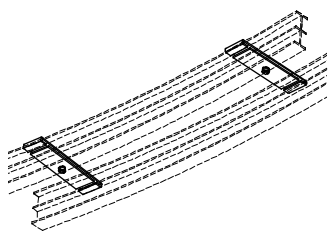
Heavy-duty 4" diameter Nylatron GSM sheave with sealed precision ball bearings. Steel housing clamps to track. 3/16" groove for use with bi-parting motorized tracks.



OVERLAP CLAMP

Formed steel clamps to align track at overlap. Tracks on 2 11/16" centers for straight overlap. 1 set pictured.

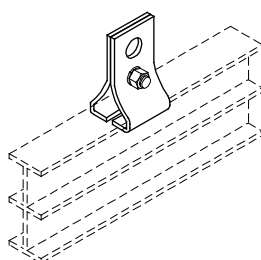
No. 305 straight overlap- Zinc plated.
No. 305B straight overlap- Black finish.



OVERLAP CLAMP

Formed steel clamps to align track at overlap. Tracks on 4 3/4" centers for curved overlap. 1 set pictured.

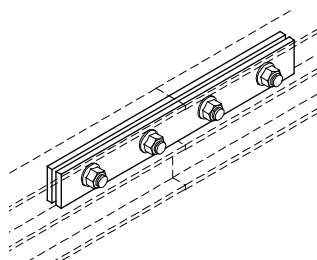
No. 305A curved overlap - Zinc plated.
No. 305AB curved overlap - Black finish.



CLAMP HANGER

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

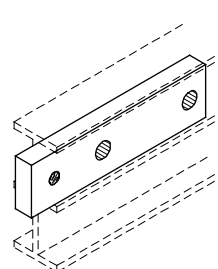
No. 306 - Zinc plated.
No. 306B - Black finish.



SPLICE

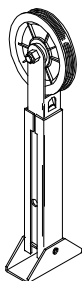
Aluminum plates align and lock track sections together. Track must be straight at joint. 1 pair pictured.

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



No. 307FX SPLICE DRILL FIXTURE

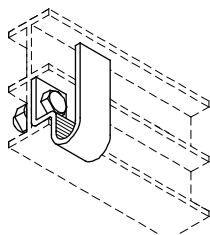
Hardened tool steel drill fixture for field drilling track for 307 splices.



TENSION FLOOR BLOCK

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

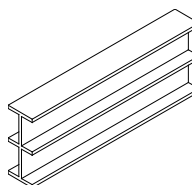
No. 308 - Zinc plated
No. 308B - Black finish.



END STOP & CORD SUPPORT

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

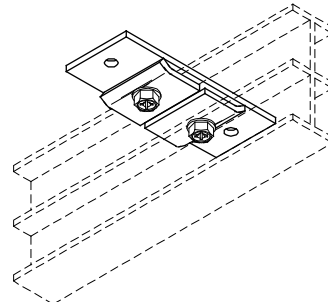
No. 309 - Zinc plated.
No. 309B - Black finish.



TRACK

6063-T5 extruded aluminum 1" wide x 2-1/2" high, .125" thick.

No. 310 - Mill finish. 10', 20' and 24' stock lengths.
No. 310B - Class 1 black anodized. 20' stock length.



CEILING HANGER

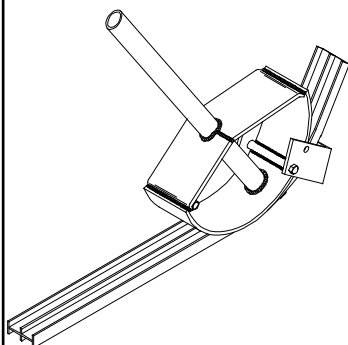
Steel plate mounts flush to ceiling. Track clamps to bracket with offset clips.

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



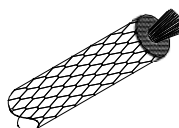
No. 312 BENDING TOOL

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



No. 313 BENDING TOOL

Heavy steel form designed for manual, on-the-job bending of aluminum tracks.



No. 314 OPERATING LINE

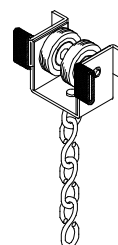
1/4" diameter black polyester braided over Dyneema core for manual operation.



OPERATING CABLE

Black polyester jacket braided over 3/32" specialty cord wire rope. For use with motorized tracks.

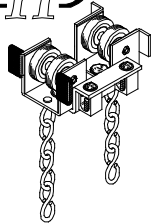
No. 315 - 3/16" diameter
No. 325 - 1/4" diameter



SINGLE CARRIER

Nylon-tired shielded 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.

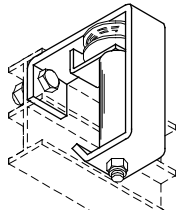
No. 316 - Zinc plated.
No. 316B - Black finish.



MASTER CARRIER

2 Nylon-tired shielded ball bearing wheel assemblies with swivel hooks and trim chains pivot on formed steel body. 2 clamps for anchoring operating line or cable. Supplied with 2 rubber bumpers. 1 pair required for overlapping tracks.

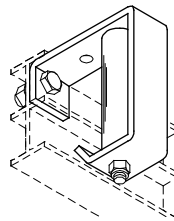
No. 317 - Zinc plated.
No. 317B - Black finish.



DOUBLE SPINDLE

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

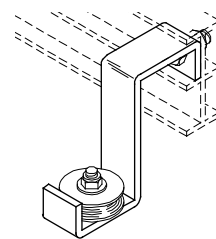
No. 318 - Zinc plated.
No. 318B - Black finish.



SINGLE SPINDLE

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

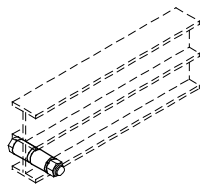
No. 319 - Zinc plated.
No. 319B - Black finish.



OUTSIDE IDLER

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

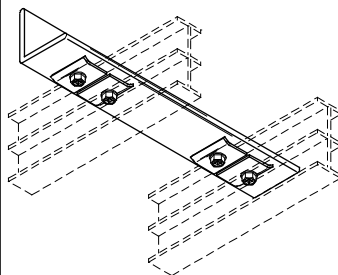
No. 320 - Zinc plated.
No. 320B - Black finish.



END STOP

Bolt with steel spacers to prevent carriers from traveling beyond desired location. For use with walk-along tracks.

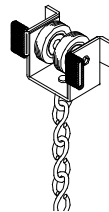
No. 321 - Zinc plated.
No. 321B - Black finish.



BLACK DOUBLE TRACK HANGER

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

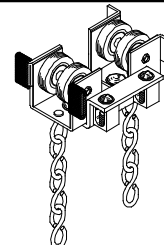
No. 326, 6" track spacing.
No. 327, 8" track spacing.



SINGLE CARRIER

Neoprene-tired shielded 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.

No. 328 - Zinc plated.
No. 328B - Black finish.



MASTER CARRIER

2 Neoprene-tired shielded ball bearing wheel assemblies with swivel hook and trim chain pivot on formed steel body. Supplied with 2 clamps for anchoring operating line or cable. Supplied with 2 rubber bumpers. 1 pair required for overlapping tracks.

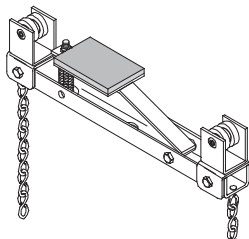
No. 329 - Zinc plated.
No. 329B - Black finish.



TRIM CHAIN

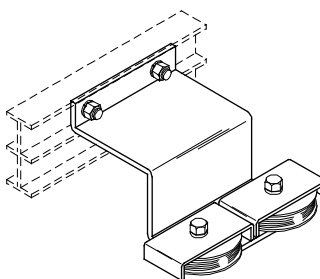
3 or 6 links No. 10 single jack chain added to carriers to provide 3" or 6" of curtain height adjustment.

No. 335 - 3" Zinc plated.
No. 335B - 3" Black finish.
No. 335-6 - 6" Zinc plated.
No. 335B-6 - 6" Black finish.



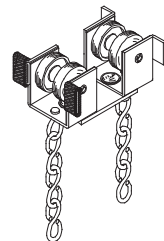
No. 337 BLACK LOCKING MASTER CARRIER

Heavy steel construction with nylon-tired shielded ball bearing wheels and brake to keep master carrier in desired location. Equipped with swivels and trim chains for curtain attachment. Note: All carriers used with this device must have a trim chain of 6" total length.



No. 341 CENTER TAKE-OFF

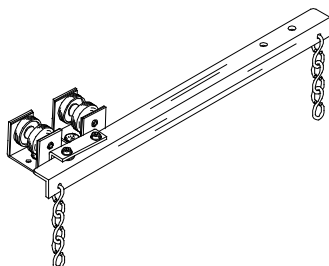
Special steel housing contains 2-1/2" diameter Nylatron GS sheaves with shielded ball bearings. Used when operating lines must be turned horizontally toward curtain machine or mule block.



WALK-ALONG MASTER CARRIER

2 Delrin wheel assemblies with swivel hook and trim chain pivot on steel connecting plate. Supplied with 2 rubber bumpers. 1 pair recommended for each walk-along curtain.

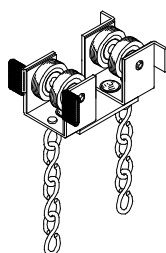
No. 342 - Zinc plated.
No. 342B - Black finish.



WALK-ALONG OVERLAP MASTER CARRIER

Overlap arm mounted to modified 302 master to provide curtain overlap on single track operation. 1 pair recommended for each walk-along curtain.

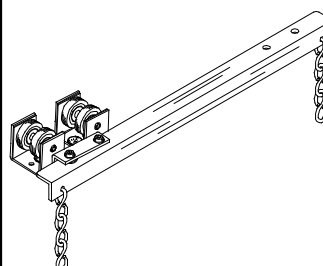
No. 342A - Zinc plated.
No. 342AB - Black finish.



WALK-ALONG MASTER CARRIER

2 Nylon-tired shielded ball bearing wheel assemblies with swivel hook and trim chain pivot on steel connecting plate. Supplied with 2 rubber bumpers. 1 pair recommended for each walk-along curtain.

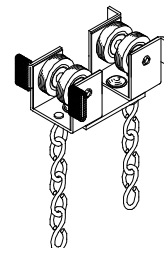
No. 347 - Zinc plated.
No. 347B - Black finish.



WALK-ALONG OVERLAP MASTER CARRIER

Overlap arm mounted to modified 317 master to provide curtain overlap on single track operation. 1 pair recommended for each walk-along curtain.


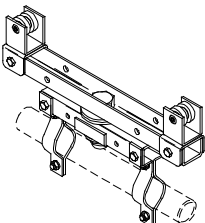
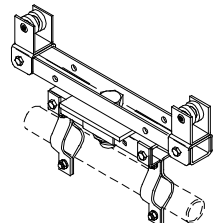
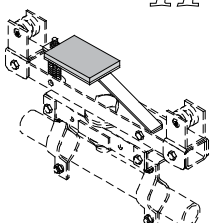
No. 347A - Zinc plated.
No. 347AB - Black finish.



WALK-ALONG MASTER CARRIER

2 Neoprene-tired shielded ball bearing wheel assemblies with swivel hook and trim chain pivot on steel connecting plate. Supplied with 2 rubber bumpers. 1 pair recommended for each walk-along curtain.

No. 349 - Zinc plated.
No. 349B - Black finish.

 <p>90 DEGREE TRACK CURVE Factory bent with ends punched for splices. Each end has 12" straight section before curve begins for splicing.</p> <p>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</p> <p>No. 351B - 3'-4" radius, Class 1 black anodized. No. 352B - 4'-0" radius, Class 1 black anodized.</p>	 <p>PIVOT DEVICE Heavy steel construction with nylon-tired shielded ball bearing wheels. Supplied with brackets for 1-3/8" O.D. pipe or tubing (6' max. recommended length). Allows masking draperies to be rotated to any angle. Working Load Limit: 60 pounds. No. 30 - Zinc plated. No. 30B - Black finish</p>	 <p>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 (6' max. recommended length). Working Load Limit: 60 pounds. No. 30X - Zinc plated. No. 30XB - Black finish.</p>	 <p>BRAKE KIT Spring equipped arm with neoprene pad. Add to pivot device to prevent undesired movement along track. No. 30BK - Zinc plated. No. 30BKB - Black finish.</p>
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GENERAL SPECIFICATIONS: STANDARD-DUTY WALK-ALONG TRACK

Provide **Model 301W** 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 mill finish 6063-T5 aluminum. Provide unspliced in lengths up to 24'.

Suspend track with two-piece clamp hanger formed from 11 gauge steel. Install end stops at each track end. Where lengths exceed 24', connect tracks with 8" long, two-piece splicing clamp.

Provide single carriers, spaced on 12" centers, constructed of two Delrin wheels riveted to formed steel carrier body with swivel hook and 3" trim chain 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 connected Delrin wheel assemblies pivoting on a steel body with swivel hooks and 3" trim chains.

All steel components shall be zinc plated to resist corrosion.

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 mill finish 6063-T5 aluminum. Provide unspliced in lengths up to 24'.

Suspend track 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.

Provide single carriers, spaced on 12" centers, constructed of two Delrin wheels riveted to formed steel carrier body with swivel hook and 3" trim chain 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 connected Delrin wheel assemblies with swivel hooks and 3" trim chains. Wheel assemblies pivot on a steel 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 shielded ball bearing sheave.

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



GENERAL SPECIFICATIONS: (Continued)

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 mill finish 6063-T5 aluminum. Provide unspliced in lengths up to 24'.

Suspend track 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.

Provide single carriers, spaced on 12" centers, constructed of two nylon-tired shielded ball bearing wheels riveted to formed steel carrier body with swivel hook and 3" trim chain 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 connected nylon-tired ball bearing wheel assemblies with swivel hooks and 3" trim chains. Wheel assemblies pivot on a steel 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 shielded ball bearing sheave.

Black operating line shall be 1/4" diameter, stretch-resistant rope with spun polyester outer jacket braided over Dyneema 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 mill finish 6063-T5 aluminum. Provide unspliced in lengths up to 24'.

Suspend track 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.

Provide single carriers, spaced on 12" centers, constructed of two Neoprene-tired wheels riveted to formed steel carrier body with swivel hook and 3" trim chain 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 connected Neoprene-tired wheel assemblies with swivels and 3" trim chains. Wheel assemblies pivot on a steel 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 shielded ball bearing sheave.

Black operating line shall be 1/4" diameter, stretch-resistant rope with spun polyester outer jacket braided over Dyneema 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 COMPLETE TRACK COMPONENT GUIDE

PART No.	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. When ordering, please specify whether track is ceiling mounted or suspended..

** 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 curve.

300 SERIES BLACK COMPLETE TRACK COMPONENT GUIDE

PART No.	DESCRIPTION	301AB	301WB	316AB	316WB	328AB	328WB
301B	Black Single Carrier	•	•				
302B	Black Master Carrier	•					
303B	Black Double End Pulley	•		•		•	
304B	Black Single End Pulley	•		•		•	
305B	Black Overlap Clamp	•		•		•	
306B	Black Clamp Hanger	•	•	•	•	•	•
307B**	Black Splice	•	•	•	•	•	•
308B	Black Tension Floor Block	•		•		•	
309B	Black End Stop & Cord Support	•		•		•	
310-20B**	Black Track	•	•	•	•	•	•
311B	Black Ceiling Hanger	*	*	*	*	*	*
314	1/4" Operating Line	•		•		•	
316B	Black Nylon B.B. Single Carrier			•	•		
317B	Black Nylon B.B. Master Carrier			•			
318B	Black Double Spindle	***		***		***	
319B	Black Single Spindle	***		***		***	
320B	Black Outside idler	***		***		***	
321B	Black End Stop		•		•		•
328B	Black Neoprene B.B. Single Carrier					•	•
329B	Black Neoprene B.B. Master Carrier					•	
342B	Black Master Carrier		•				
347B	Black Nylon B.B. Master Carrier				•		
349B	Black Neoprene B.B. Master Carrier						•

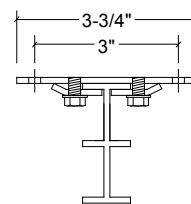
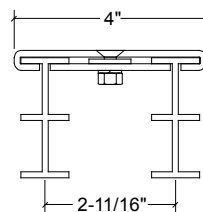
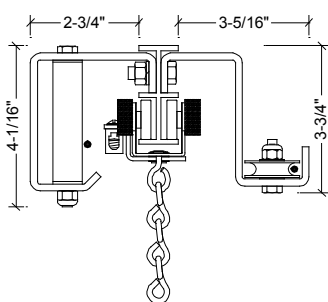
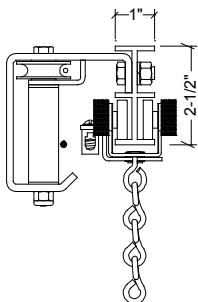
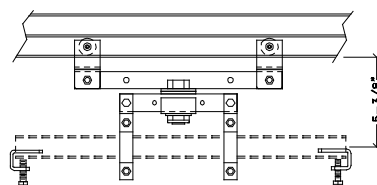
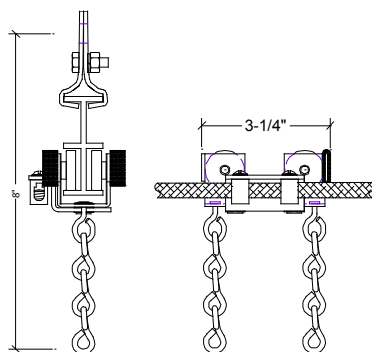
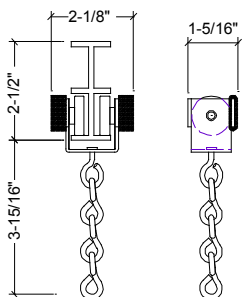
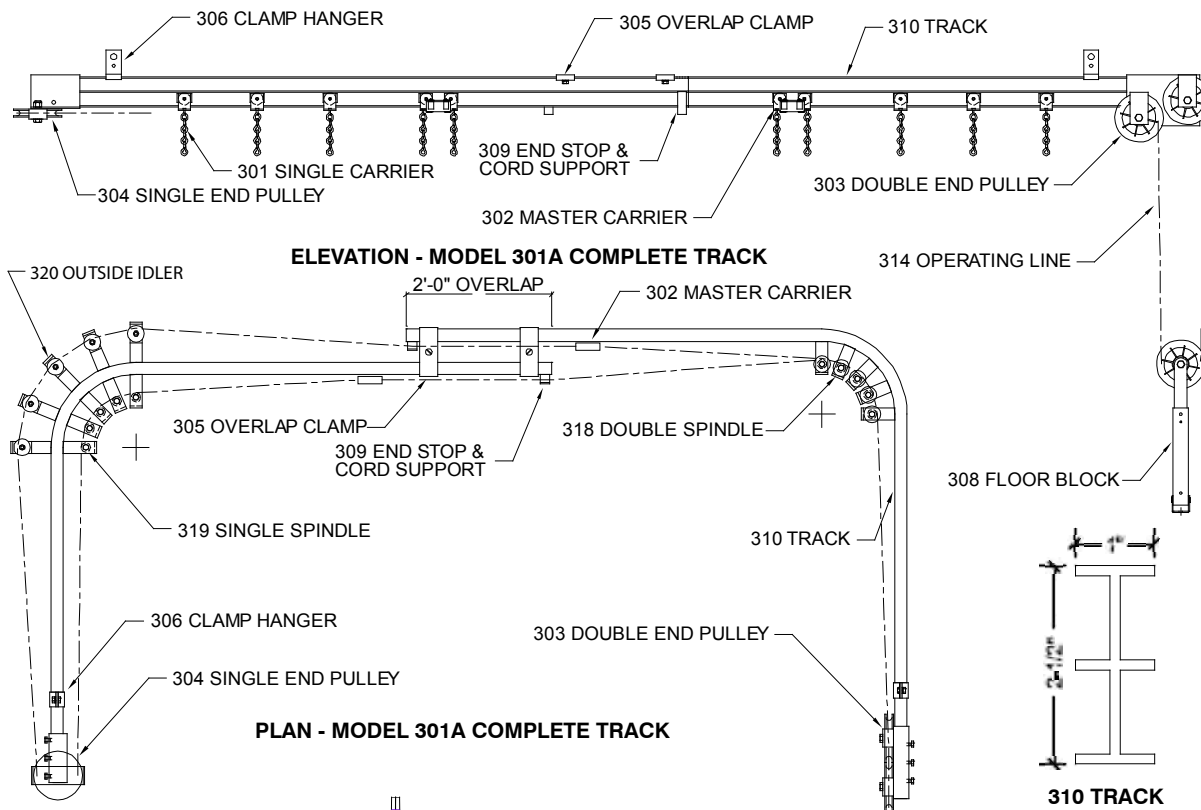
* For ceiling mounted applications, No. 311B provided in lieu of No. 306B Black Clamp Hanger. When ordering, please specify whether track is ceiling mounted or suspended..

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

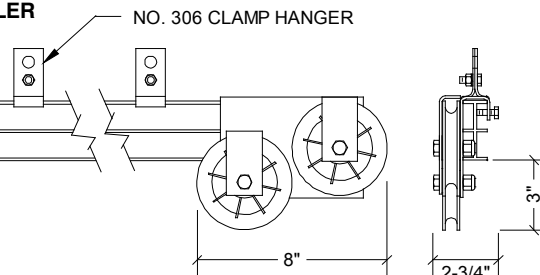
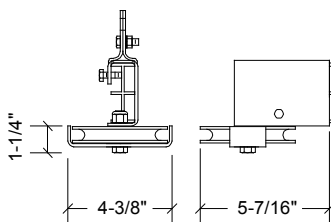
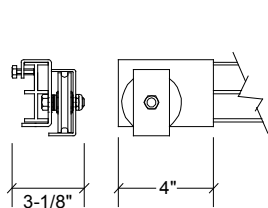
*** No. 318B, 319B, and 320B must be ordered as additional accessories. Quantity is determined by length of track and configuration of curve.



300 SERIES TRACK



318 DOUBLE SPINDLE 319 SINGLE SPINDLE 320 OUTSIDE IDLER



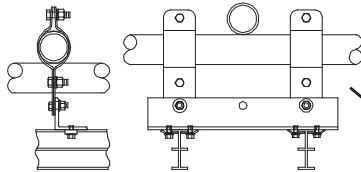
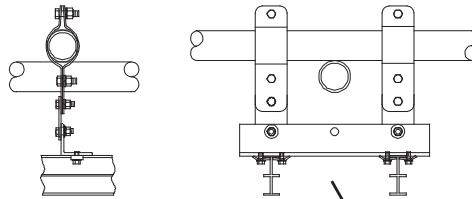
304A SINGLE END PULLEY

304 SINGLE END PULLEY

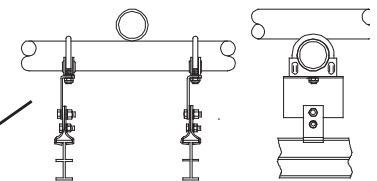
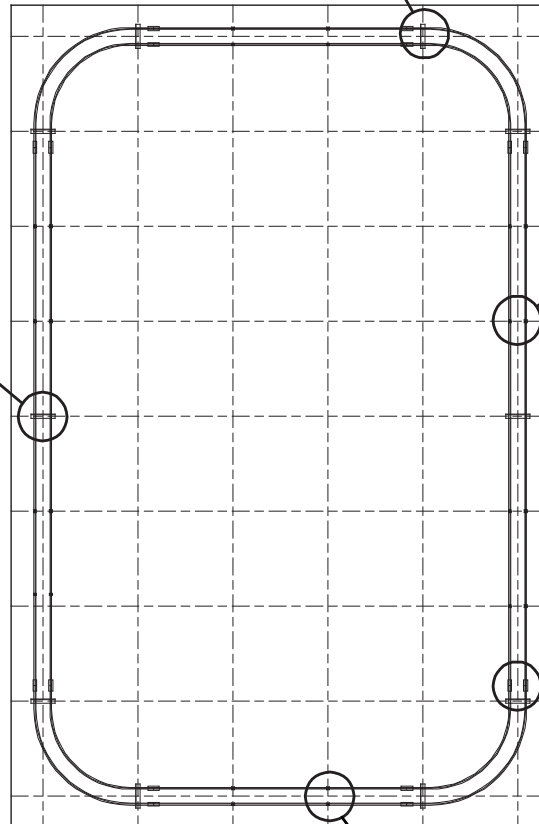
303 DOUBLE END PULLEY

300 SERIES PIPE GRID MOUNTED WALK-ALONG TRACK

435 PIPE CLAMP,
435X EXTENSION STRAP,
327 DOUBLE TRACK HANGER

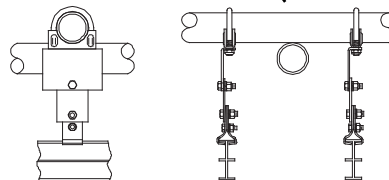
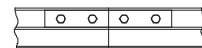


435 PIPE CLAMP,
327 DOUBLE TRACK HANGER



435R RIGHT ANGLE PIPE CLAMP,
306 TRACK HANGER

307 SPLICE



435R RIGHT ANGLE PIPE CLAMP,
435X EXTENSION STRAP,
306 TRACK HANGER

NOTE: THIS DRAWING IS SCHEMATIC IN NATURE
SHOWING TYPICAL USE OF ATTACHMENT
HARDWARE TO MOUNT TO A PIPE GRID.
ADDITIONAL SUPPORT MAY BE REQUIRED
TO SUPPORT THE CURVES.

See pages 54-55 for pipe clamps in Miscellaneous Track Hardware



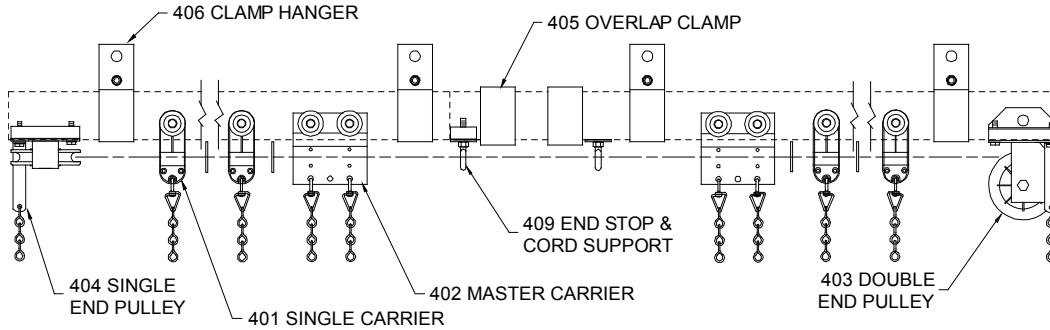
400 SERIES HEAVY-DUTY STRAIGHT TRACK

COMPLETE TRACK MODEL NUMBERS

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

BLACK COMPLETE TRACK MODEL NUMBERS

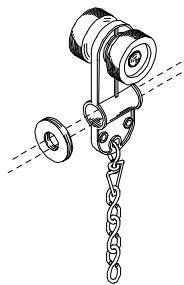
401SB	401WB
416SB	416PB
418SB	418PB
428SB	428WB



The 400 Series is a straight track offered in many models for a variety of project requirements. This heavy-duty track is available in galvanized steel, black powder-coated steel and mill finish aluminum. In addition to the traditional zinc plated finish, all hardware items are available in black finish to meet the demands of the theatrical industry.

Model 401S is recommended for moderately heavy curtains up to 60 feet in width. It utilizes ball bearing carriers with polyethylene wheels and 4" end pulleys. Model 428S is an economical upgrade to urethane wheels and 6" pulleys when a quiet track is desired for larger curtains.

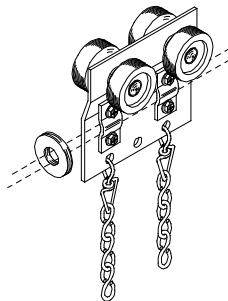
Models 416S and 418S feature improved carriers with a custom designed, sealed ball bearing in each wheel. The 416 carrier is equipped with nylon-tired wheels for minimized friction when moving heavy loads. The 418 carrier has been redesigned with a urethane tire that combines durability with quiet operation. Each is complemented by 6" end pulleys for rigging curtains of virtually any length. The Premier versions, Models 416P and 418P, are the best in heavy-duty straight tracks. They incorporate 1/2" operating line, rear fold guides and 8" end pulleys for maximum ease of operation of very heavy stage curtains.



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 No. 431 rubber bumper.

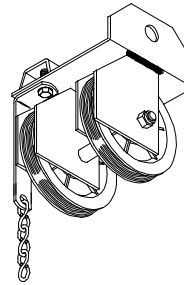
No. 401 - Zinc plated.
No. 401B - Black finish.



MASTER CARRIER

4 polyethylene wheels riveted to steel body with 2 shielded ball bearings. 2 clamps provided for anchoring operating line or cable. Supplied with 1 No. 431 rubber bumper. 1 pair required for overlapping tracks.

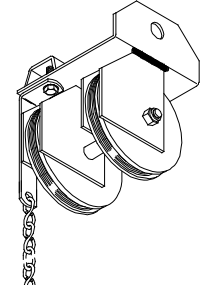
No. 402 - Zinc plated.
No. 402B - Black finish.



DOUBLE END PULLEY

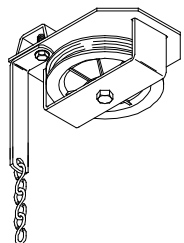
4" diameter Nylatron GS sheaves with shielded ball bearings. Steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge. 3/8" groove.

No. 403 - Zinc plated.
No. 403B - Black finish.



No. 403M BLACK DOUBLE END PULLEY

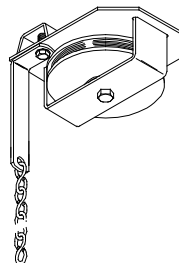
Heavy-duty 4" diameter Nylatron GSM sheaves with sealed precision ball bearings. Steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge. 3/16" groove for use with motorized tracks.



SINGLE END PULLEY

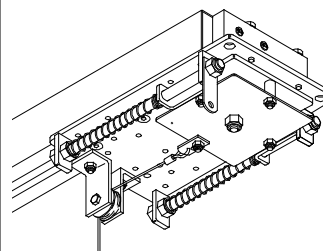
4" diameter Nylatron GS sheave with shielded ball bearing. Steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge. 3/8" groove.

No. 404 - Zinc plated.
No. 404B - Black finish.



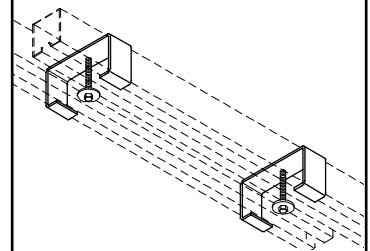
No. 404M BLACK SINGLE END PULLEY

Heavy-duty 4" diameter Nylatron sheave with sealed precision ball bearings. Steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge. 3/16" groove for use with motorized tracks.



No. 404T BLACK TENSIONING END PULLEY

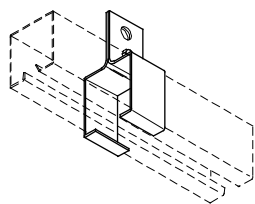
4" diameter Nylatron GSM sheave with sealed precision ball bearings grooved for 3/16" cable. Heavy-duty steel housing clamps to underside of track and provides constant cable tension on large motorized tracks.



OVERLAP CLAMP

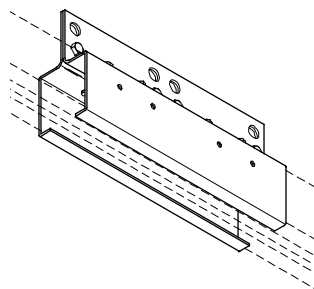
Formed steel clamps to align track at overlap. 1 set pictured.

No. 405 - Zinc plated.
No. 405B - Black finish.



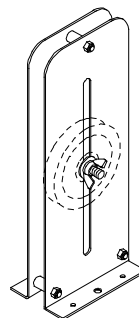
CLAMP HANGER

Formed steel brackets clamp to track. Adjusts to any position. Suspend track with welded chain or wire rope. 1 pair pictured.
No. 406 - Zinc plated.
No. 406B - Black finish.



SPLICE

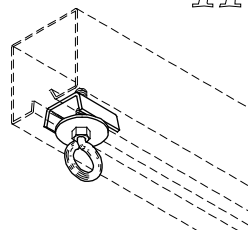
Formed steel brackets align and lock track sections together. 1 pair pictured.
No. 407 - Zinc plated.
No. 407B - Black finish.



No. 408 BLACK

ADJUSTABLE FLOOR BLOCK

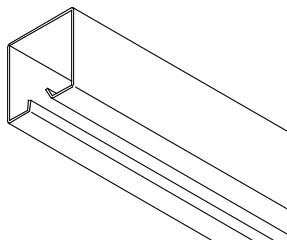
4" diameter Nylatron GS sheave with shielded ball bearing in steel housing. 9" vertical adjustment.



END STOP & CORD SUPPORT

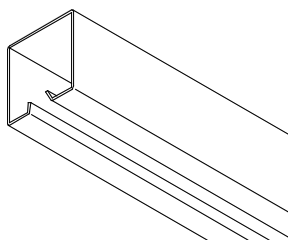
Steel clamp with eye to support operating line and prevent carriers from traveling beyond desired location. 1 pair required for overlapping tracks. **DO NOT USE WITH PIVOT DEVICES.**

No. 409 - Zinc plated.
No. 409B - Black finish.



No. 410A TRACK

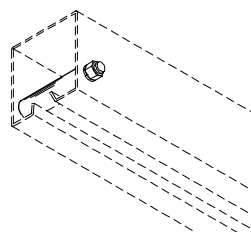
Mill finish 6063-T5 extruded aluminum 2-5/8" wide x 2-3/4" high, .080" thick. 20' and 24' stock lengths.



No. 410S TRACK

14 gauge galvanized steel, roll-formed to 2-5/8" wide x 2-3/4" high.

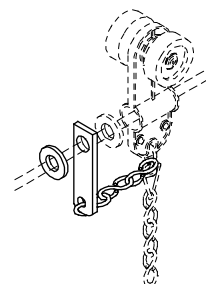
No. 410S- 16', 20', 24', and 26' stock lengths.
No. 410S-B- Semi-gloss black powder coat finish. 16', 20', and 24' stock lengths.



END STOP

Bolt with steel spacer to prevent carriers from traveling beyond desired location. For use with walk-along tracks and tracks with pivot devices.

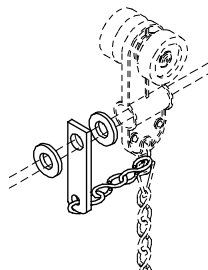
No. 411 - Zinc plated.
No. 411B - Black finish.



REAR FOLD GUIDE

Allows curtain to fold at offstage edges. Supplied with 1 No. 431 rubber bumper.

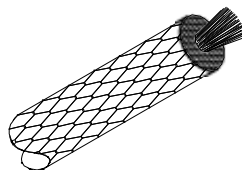
No. 412 - for use with 3/8" operating line.
No. 412B - same as 412 in Black



REAR FOLD GUIDE

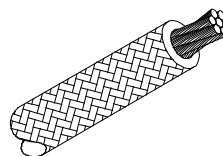
Allows curtain to fold at offstage edges. Supplied with 2 rubber bumpers.

No. 412A - for use with 1/2" operating line. Black finish.
No. 413 - for use with 3/16" operating cable.
No. 413B - same as 413 in Black



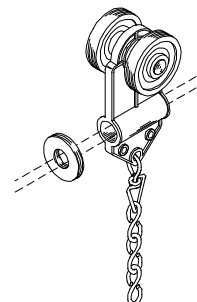
No. 414 OPERATING LINE

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



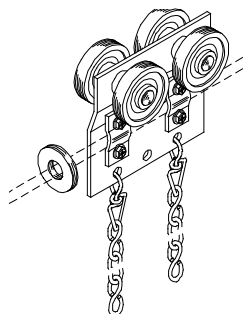
No. 415 OPERATING CABLE

3/16" diameter black polyester jacket braided over 3/32" specialty cord wire rope. For use with motorized tracks.



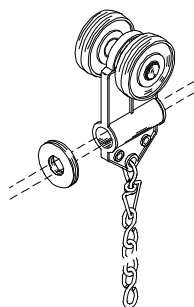
No. 416 BLACK SINGLE CARRIER

2 nylon-tired sealed ball bearing wheels riveted to black Super Tough nylon body with heavy-duty hook, swivel and 6" trim chain for curtain attachment. Supplied with 1 No. 431 rubber bumper.



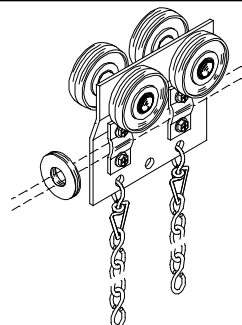
No. 417 BLACK MASTER CARRIER

4 nylon-tired sealed ball bearing wheels riveted to steel body. 2 clamps provided for anchoring operating line or cable. Supplied with 1 No. 431 rubber bumper. 1 pair required for overlapping tracks.



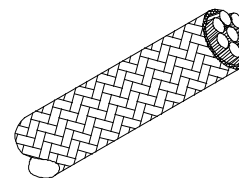
No. 418 BLACK SINGLE CARRIER

2 urethane-tired sealed ball bearing wheels riveted to black Super Tough nylon body with heavy-duty hook, swivel and 6" trim chain for curtain attachment. Supplied with 1 No. 431 rubber bumper.



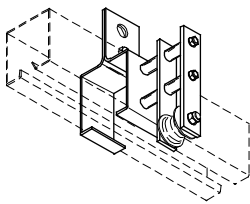
No. 419 BLACK MASTER CARRIER

4 urethane-tired sealed ball bearing wheels riveted to steel body. 2 clamps provided for anchoring operating line or cable. Supplied with 1 No. 431 rubber bumper. 1 pair required for overlapping tracks.



No. 420 OPERATING LINE

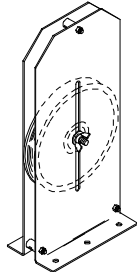
1/2" diameter black spun polyester braided over polyester core for manual operation.



CLAMP HANGER WITH IDLER

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

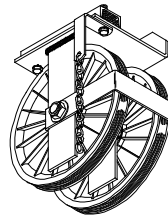
No. 421 - Zinc plated.
No. 421B - Black finish.



No. 422, BLACK 8"

ADJUSTABLE FLOOR BLOCK

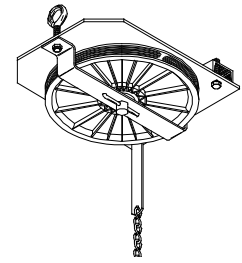
8" diameter Nylatron GS sheave with sealed precision ball bearings in heavy-duty steel housing with 9" vertical adjustment. Grooved to accept up to 1/2" operating line.



BLACK 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 offstage curtain edge.

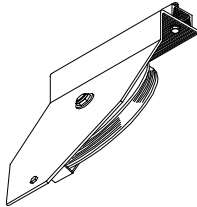
No. 423 - Grooved for up to 1/2" operating line.
No. 423M - Grooved for 3/16" operating cable.



BLACK 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 offstage curtain edge.

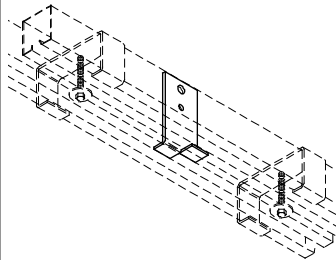
No. 424 - Grooved for up to 1/2" operating line.
No. 424M - Grooved for 3/16" operating cable.



BLACK 8" SLANTED 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 offstage curtain edge. Allows a narrower profile when installed.

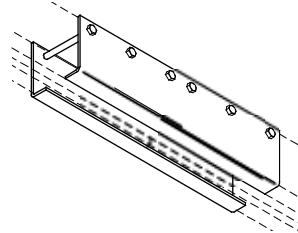
No. 424A - Grooved for up to 1/2" operating line.
No. 424AM - Grooved for 3/16" operating cable.



CENTER PIPE SUPPORT

Formed steel bracket used to support tracks at overlap.

No. 426 - Zinc plated.
No. 426B - Black finish.

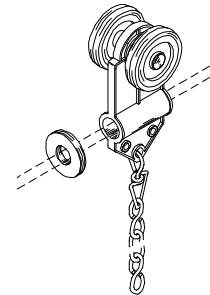


CEILING SPLICE

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

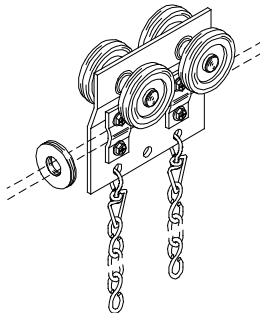
Note: Cannot be used with No. 437 Locking Master or No. 40 Pivot Device due to interference with the wheels.

No. 427 - Zinc plated.
No. 427B - Black finish.



No. 428 BLACK SINGLE CARRIER

2 urethane-tired wheels riveted to black Super Tough nylon body with shielded ball bearing. Heavy-duty hook, swivel and 6" trim chain for curtain attachment. Supplied with 1 No. 431 rubber bumper.



NO. 429 BLACK MASTER CARRIER

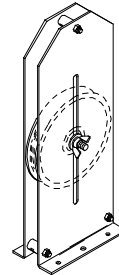
4 urethane-tired wheels riveted to steel body with 2 shielded ball bearings. 2 clamps provided for anchoring operating line or cable. Supplied with 1 No. 431 rubber bumper. 1 pair required for overlapping tracks.



ROUND RUBBER BUMPER

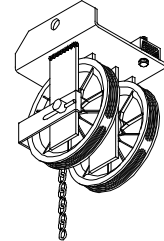
1/8" neoprene bumper placed between carriers on operating line to reduce noise.

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, BLACK 6" ADJUSTABLE FLOOR BLOCK

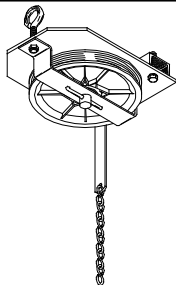
6" diameter Nylatron GS sheave with sealed precision ball bearings in heavy-duty steel housing with 9" vertical adjustment. Grooved to accept up to 1/2" operating line.



6" BLACK 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 offstage curtain edge.

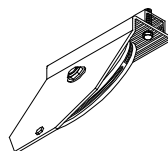
No. 433 - Grooved for up to 1/2" operating line.
No. 433M - Grooved for 3/16" operating cable.



6" BLACK 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 offstage curtain edge.

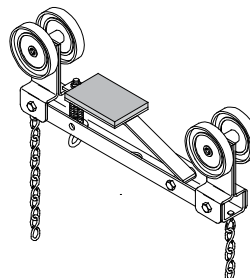
No. 434 - Grooved for up to 1/2" operating line.
No. 434M - Grooved for 3/16" operating cable.



BLACK 6" SLANTED SINGLE END PULLEY

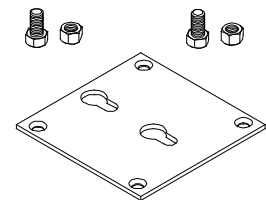
6" diameter Nylatron GS sheave with sealed precision ball bearings. Heavy duty steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge. Allows a narrower profile when installed.

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



No. 437 BLACK LOCKING MASTER CARRIER

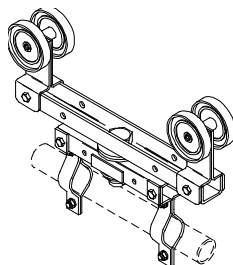
Heavy steel construction with nylon wheels and brake to keep master carrier in desired location. Equipped with swivels and trim chains for curtain attachment. Note: All carriers used with this device must have a trim chain of 6" total length.



BLACK DETACHABLE FLOOR BLOCK KIT

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

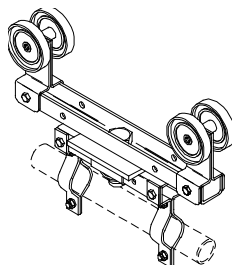
No. 408DK - use with No. 408 4" Floor Block.
No. 422DK - use with No. 422 8" Floor Block.
No. 432DK - use with No. 432 6" Floor Block.



40 PIVOT DEVICE

Heavy steel construction with nylon wheels. Supplied with brackets for 1-3/8" O.D. pipe or tubing (6' max. recommended length). Allows masking draperies to be rotated to any angle. Working Load Limit: 60 pounds.

No. 40 - Zinc plated.
No. 40B - Black finish.

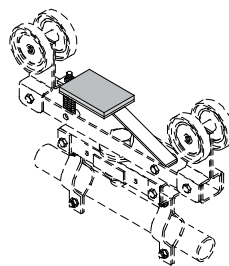


INDEXING PIVOT DEVICE

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 (6' max. recommended length).

Working Load Limit: 60 pounds.

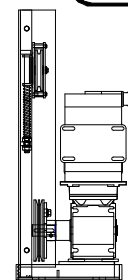
No. 40X - Zinc plated.
No. 40XB - Black finish.



BRAKE KIT

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

No. 40BK - Zinc plated.
No. 40BKB - Black finish.



No. 459 Curtain Machine

See pages 58-70
for curtain machines.

400 SERIES WALK-ALONG TRACK COMPONENT GUIDE

PART No.	DESCRIPTION	401W	416W	418W	428W
401	Single Carrier	•			
402	Master Carrier	•			
406	Clamp Hanger	•	•	•	•
407*	Splice	•	•	•	•
409	End Stop & Cord Support	•	•	•	•
410S*	Track	•	•	•	•
416	Black Nylon B.B. Single Carrier		•		
417	Black Nylon B.B. Master Carrier		•		
418	Black Urethane B.B. Single Carrier			•	
419	Black Urethane B.B. Master Carrier			•	
428	Black Urethane Single Carrier				•
429	Black Urethane Master Carrier				•

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

400 SERIES BLACK WALK-ALONG TRACK COMPONENT GUIDE

PART No.	DESCRIPTION	401WB	416WB	418WB	428WB
401B	Black Single Carrier	•			
402B	Black Master Carrier	•			
406B	Black Clamp Hanger	•	•	•	•
407B*	Black Splice	•	•	•	•
409B	Black End Stop & Cord Support	•	•	•	•
410S-B*	Black Track	•	•	•	•
416	Black Nylon B.B. Single Carrier		•		
417	Black Nylon B.B. Master Carrier		•		
418	Black Urethane B.B. Single Carrier			•	
419	Black Urethane B.B. Master Carrier			•	
428	Black Urethane Single Carrier				•
429	Black Urethane Master Carrier				•

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



400 SERIES COMPLETE TRACK COMPONENT GUIDE

PART No.	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	Black 4" Adjustable Floor Block	•					
409	End Stop & Cord Support	•	•	•	•	•	•
410S*	Track	•	•	•	•	•	•
412A	Black 1/2" Rear Fold Guide			•		•	
414	3/8" Operating Line	•	•		•		•
416	Black Nylon B.B. Single Carrier		•	•			
417	Black Nylon B.B. Master Carrier		•	•			
418	Black Urethane B.B. Single Carrier				•	•	
419	Black Urethane B.B. Master Carrier				•	•	
420	1/2" Operating Line			•		•	
421	Clamp Hanger with Idler			•		•	
422	Black 8" Adjustable Floor Block			•		•	
423	Black 8" Double End Pulley			•		•	
424	Black 8" Single End Pulley			•		•	
426	Center Pipe Support			•		•	
428	Black Urethane Single Carrier						•
429	Black Urethane Master Carrier						•
432	Black 6" Adjustable Floor Block		•		•		•
433	Black 6" Double End Pulley		•		•		•
434	Black 6" Single End Pulley		•		•		•

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

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

400 SERIES BLACK COMPLETE TRACK COMPONENT GUIDE

Note: Aluminum track is not offered in black.

PART No.	DESCRIPTION	401SB	416SB	416PB	418SB	418PB	428SB
401B	Black Single Carrier	•					
402B	Black Master Carrier	•					
403B	Black 4" Double End Pulley	•					
404B	Black 4" Single End Pulley	•					
405B	Black Overlap Clamp	•	•	•	•	•	•
406B	Black Clamp Hanger	•	•	•	•	•	•
407B*	Black Splice	•	•	•	•	•	•
408	Black 4" Adjustable Floor Block	•					
409B	Black End Stop & Cord Support	•	•	•	•	•	•
410S-B*	Black Track	•	•	•	•	•	•
412A	Black 1/2" Rear Fold Guide			•		•	
414	3/8" Operating Line	•	•		•		•
416	Black Nylon B.B. Single Carrier		•	•			
417	Black Nylon B.B. Master Carrier		•	•			
418	Black Urethane B.B. Single Carrier				•	•	
419	Black Urethane B.B. Master Carrier				•	•	
420	1/2" Operating Line			•		•	
421B	Black Clamp Hanger with Idler			•		•	
422	Black 8" Adjustable Floor Block			•		•	
423	Black 8" Double End Pulley			•		•	
424	Black 8" Single End Pulley			•		•	
426B	Black Center Pipe Support			•		•	
428	Black Urethane Single Carrier						•
429	Black Urethane Master Carrier						•
432	Black 6" Adjustable Floor Block		•		•		•
433	Black 6" Double End Pulley		•		•		•
434	Black 6" Single End Pulley		•		•		•

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

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 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 3" 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 on operating line 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 3" 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 shielded 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 braided over Dyneema 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 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 sealed ball bearing wheels fastened parallel to black Super Tough nylon carrier body. Supply with heavy-duty hook, swivel eye and 6" trim chain for attachment of curtain. Install round neoprene bumper between each carrier on operating line to reduce noise.

Master carriers shall be 4-wheel nylon-tired sealed 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 6" 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 braided over Dyneema 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 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 urethane-tired sealed ball bearing wheels fastened parallel to black Super Tough nylon carrier body. Supply with heavy-duty hook, swivel eye and 6" trim chain for attachment of curtain. Install rear fold guide and two round neoprene bumpers between each carrier on operating line to fold curtain at offstage edges and minimize noise.

Master carriers shall be 4-wheel urethane-tired sealed 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 6" trim chains for attachment of leading edge of curtain.

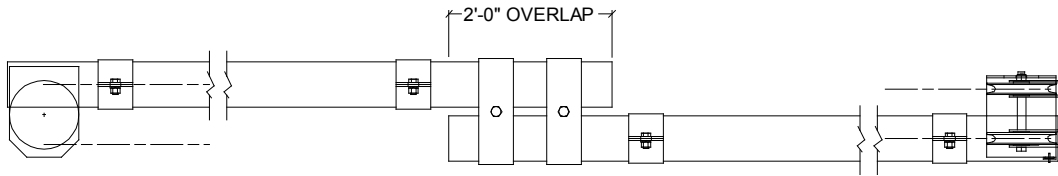
Single and double end pulleys shall clamp securely to the underside of the track channel and shall be equipped with 8" diameter Nylatron GS sheaves grooved for 1/2" operating line. Install two 5/8" sealed precision ball bearings in each sheave. Lock shaft to side plate on head end with 3/16" keeper pin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

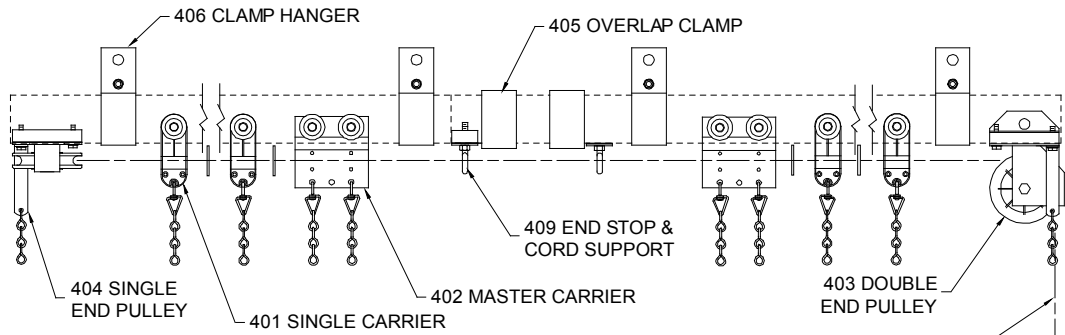
Black operating line shall be 1/2" diameter, stretch-resistant rope with spun polyester outer jacket braided over polyester core.

All steel components shall be zinc plated to resist corrosion.

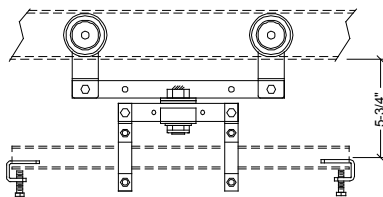
401S TRACK



PLAN - MODEL 401S COMPLETE TRACK



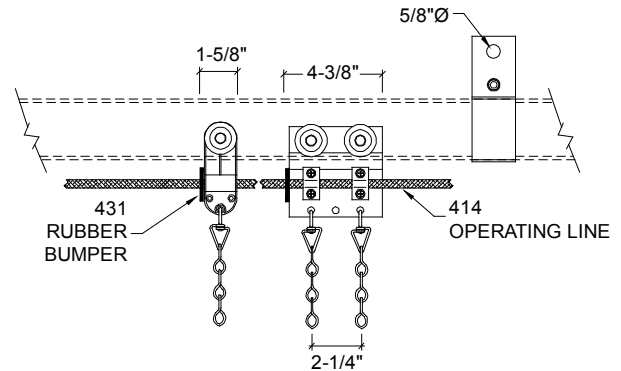
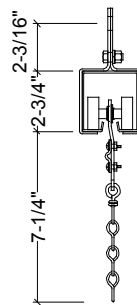
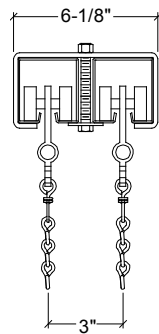
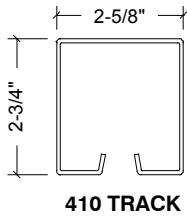
ELEVATION - MODEL 401S COMPLETE TRACK



40 PIVOT DEVICE

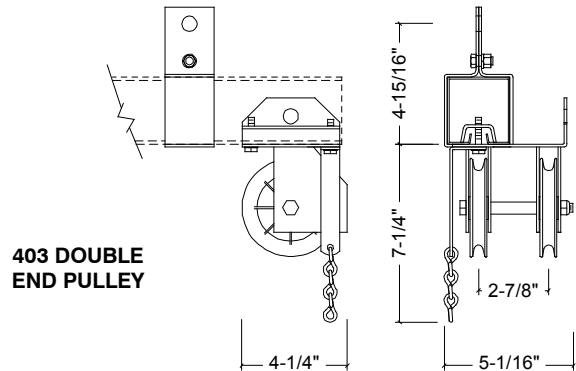
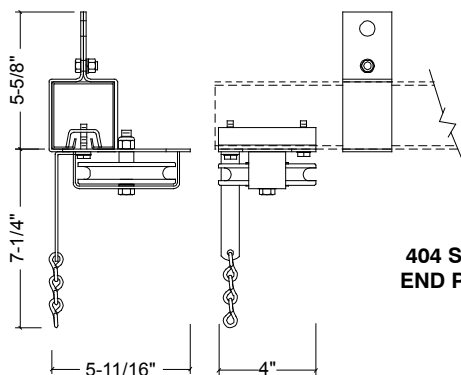
414 OPERATING LINE

408 BLACK ADJUSTABLE FLOOR BLOCK

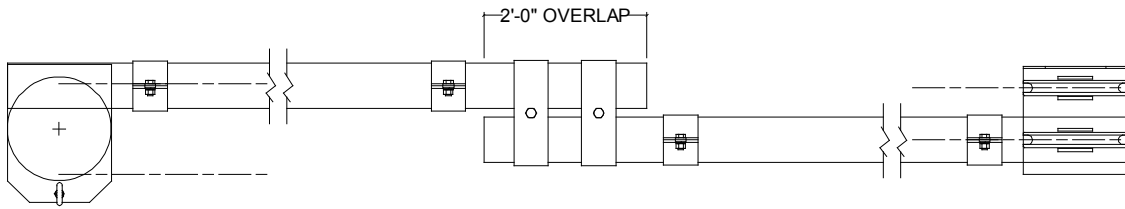


TRACKS AT CENTER OVERLAP

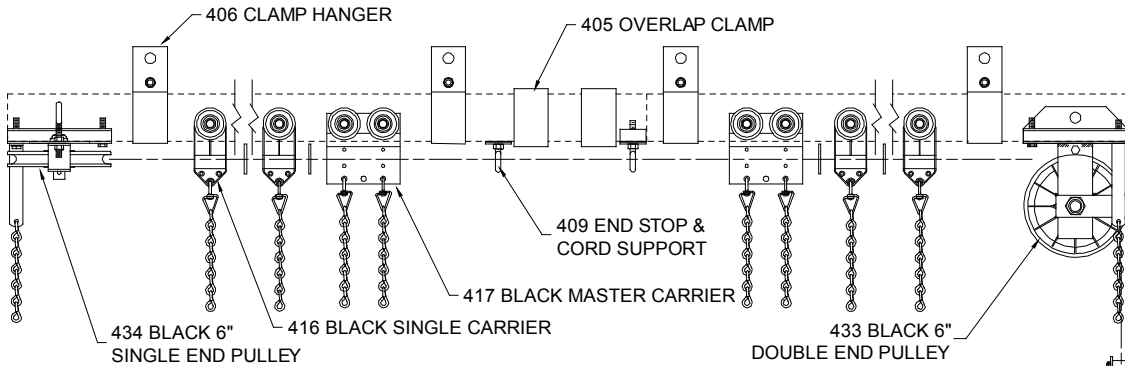
401 SINGLE CARRIER AND 402 MASTER CARRIER



416S TRACK

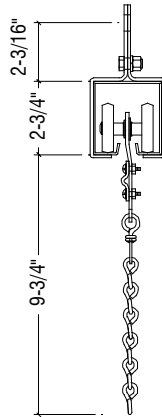
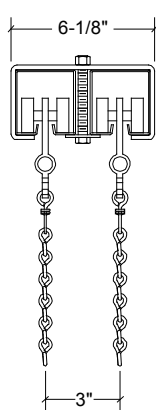
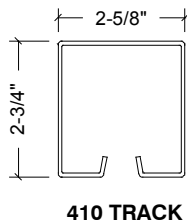


PLAN - MODEL 416S COMPLETE TRACK

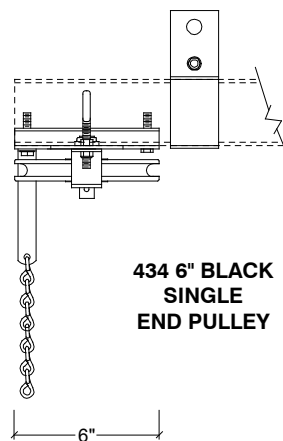
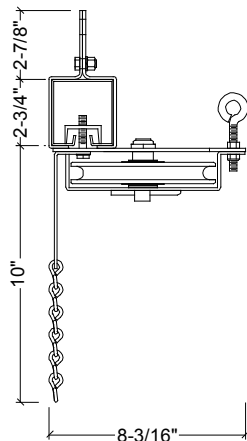


ELEVATION - MODEL 416S COMPLETE TRACK

NOTE: 418S dimensions similar.

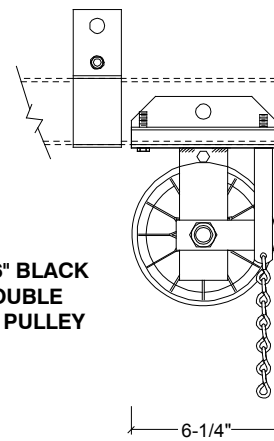


TRACKS AT CENTER OVERLAP

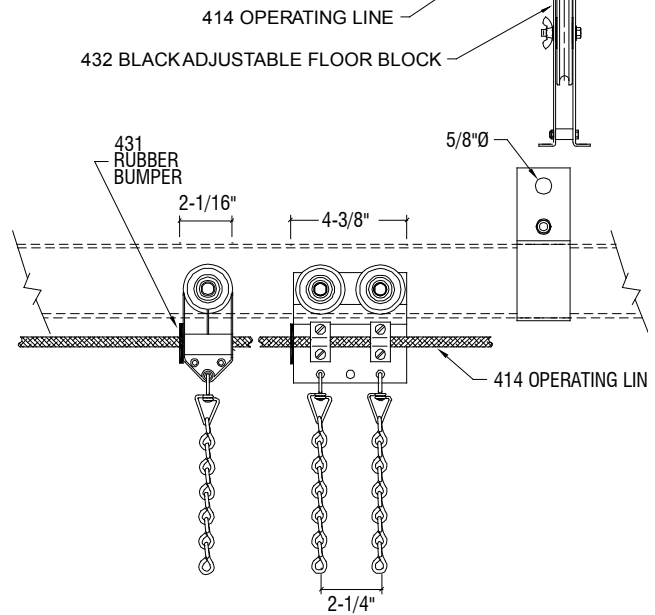
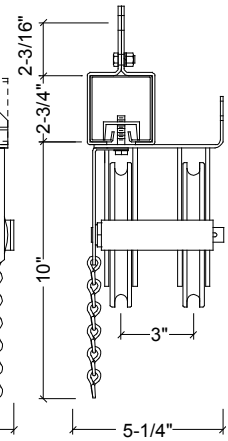


434 6" BLACK SINGLE END PULLEY

416 BLACK SINGLE CARRIER AND 417 BLACK MASTER CARRIER

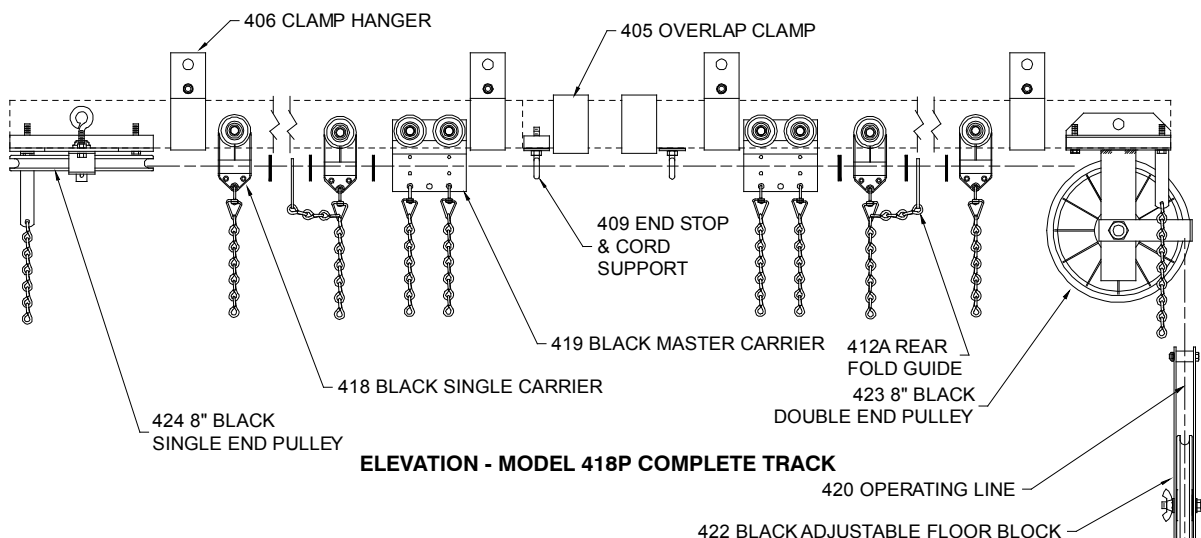
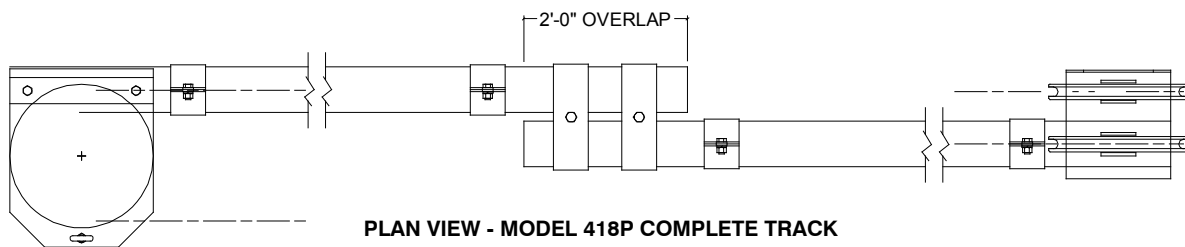


433 6" BLACK DOUBLE END PULLEY

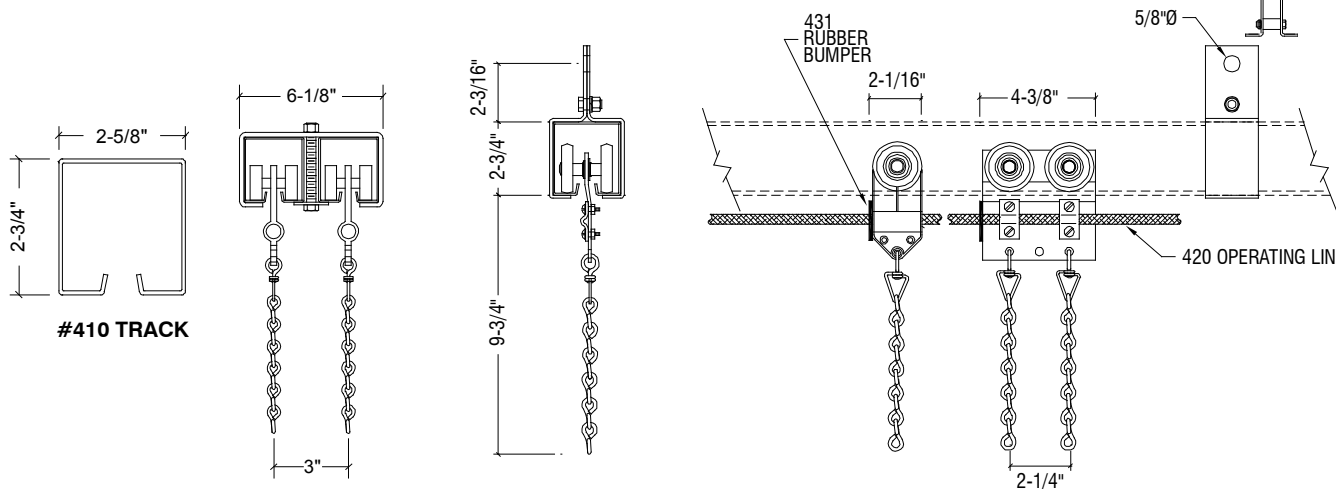




418P TRACK

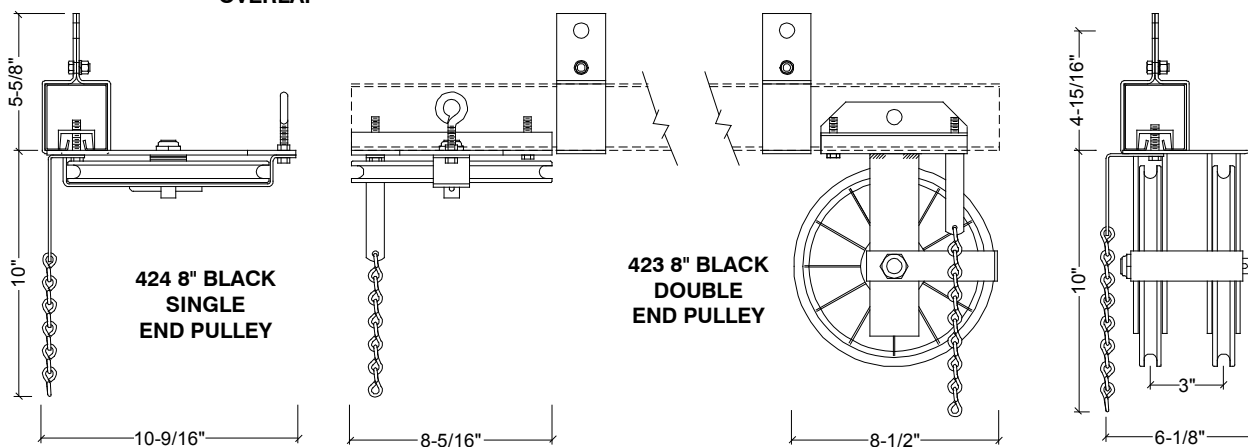


NOTE: 416P dimensions similar.

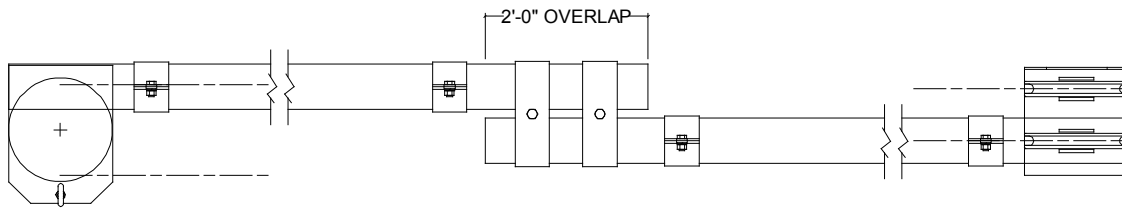


TRACKS AT CENTER OVERLAP

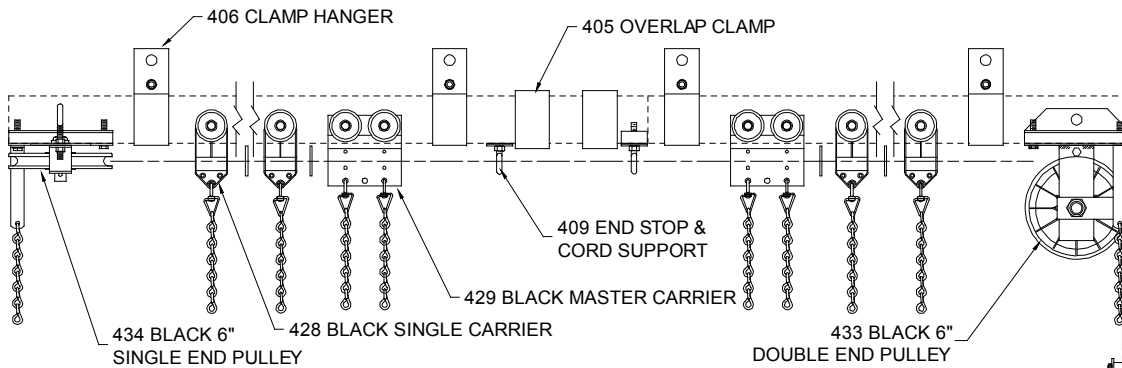
418 BLACK SINGLE CARRIER AND 419 BLACK MASTER CARRIER



428S TRACK

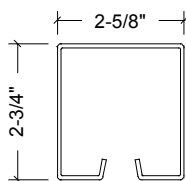


PLAN - MODEL 428S COMPLETE TRACK

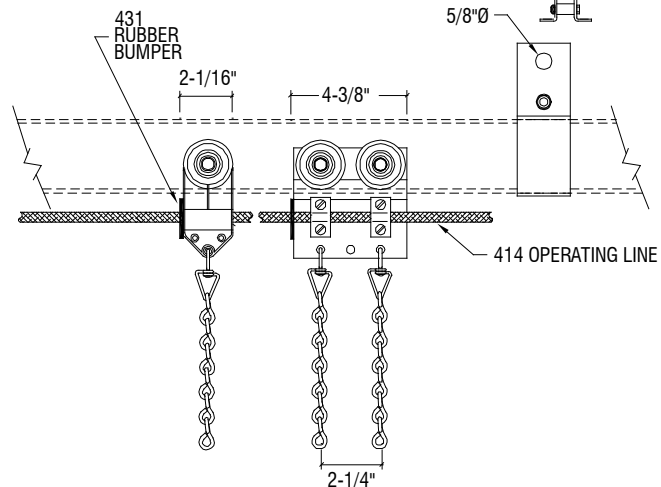
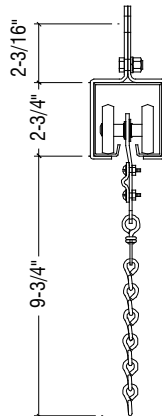
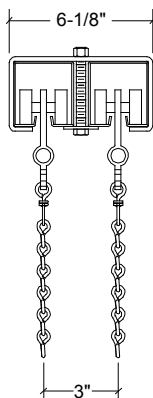


ELEVATION - MODEL 428S COMPLETE TRACK

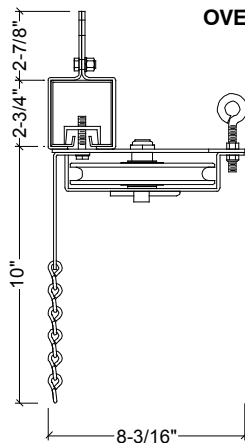
414 OPERATING LINE
432 BLACK ADJUSTABLE FLOOR BLOCK



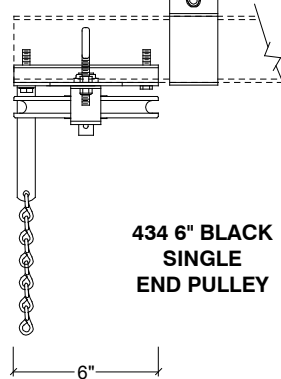
410 TRACK



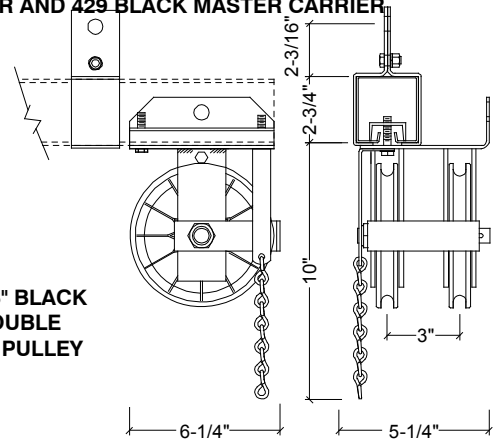
TRACKS AT CENTER OVERLAP



434 6" BLACK SINGLE END PULLEY



428 BLACK SINGLE CARRIER AND 429 BLACK MASTER CARRIER



433 6" BLACK DOUBLE END PULLEY



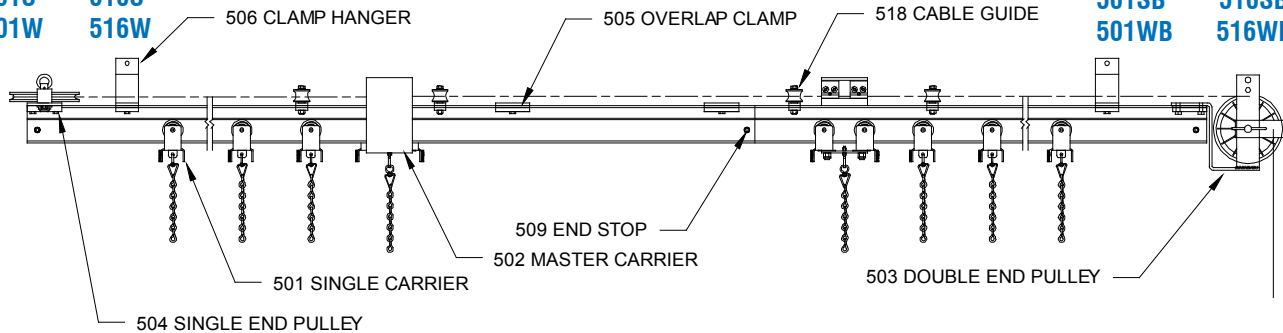
500 SERIES HEAVY-DUTY CURVED TRACK

COMPLETE TRACK MODEL NUMBERS

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

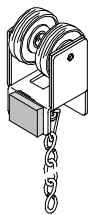
COMPLETE BLACK TRACK MODEL NUMBERS

501CB 516CB
501SB 516SB
501WB 516WB



The 500 Series is a heavy-duty track that can be used for straight or curved applications in TV studios, theatres, and many other types of facilities. Curves are typically formed at the factory to suit your project requirements. Walk-along tracks can be curved to virtually any shape or length. Cord operated tracks can be rigged with serpentine or reverse curves. The 500 Series is most often motorized, or manually cord operated for short runs and light weight curtains.

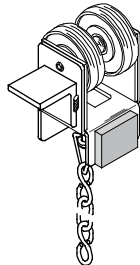
The ease of operation of a 500 Series track is dependent on several factors, including the radius of the curve and whether reverse bends are part of the track layout. In general, the track operates best around a gentle curve. Whenever possible, it is recommended that layouts be designed with radius of 4 feet, or larger. Tighter curves will result in a system that requires additional effort to operate.



SINGLE CARRIER

2 urethane-tired sealed ball bearing wheels riveted to plated steel body with heavy-duty hook, swivel and 6" trim chain. Nylatron glide strips and rubber bumper reduce friction and noise.

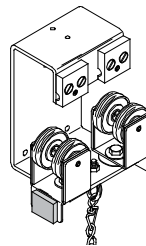
No. 501 - Zinc plated.
No. 501B - Black finish.



TRAILING CARRIER w/ ARM

No. 501 urethane-tired sealed ball bearing carrier with arm for use with 526 Carrier Stop.

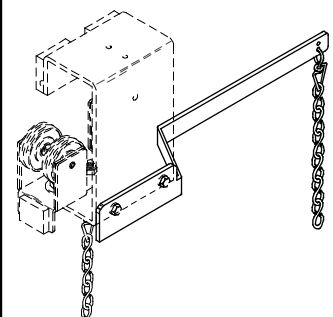
No. 501X - Zinc Plated.
No. 501XB - Black finish.



MASTER CARRIER

2 urethane-tired sealed ball bearing wheel assemblies pivot on formed steel body with 2 clamps for anchoring line or cable. 1 pair required for overlapping tracks.

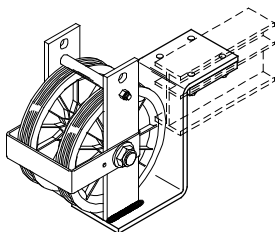
No. 502 - for 3/8" operating line.
No. 502B - Black finish.
No. 502M - for 3/16" operating cable.
No. 502MB - Black finish.



MASTER CARRIER EXTENSION ARM KIT

Formed steel bracket to allow curtain to travel under single end pulley.

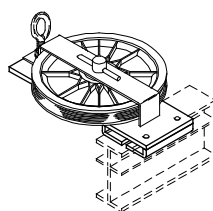
No. 502A - Zinc plated.
No. 502AB - Black finish.



DOUBLE END PULLEY

6" diameter Nylatron GS sheaves with sealed precision ball bearings. Heavy-duty steel housing clamps to top flange of track.

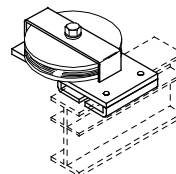
No. 503 - grooved for 3/8" operating line.
No. 503B - Black finish.
No. 503M - grooved for 3/16" operating cable.
No. 503MB - Black finish.



SINGLE END PULLEY

6" diameter Nylatron GS sheave with sealed precision ball bearings. Heavy-duty steel housing clamps to top flange of track.

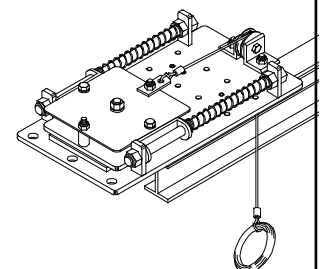
No. 504 - grooved for 3/8" operating line.
No. 504B - Black finish.
No. 504M - grooved for 3/16" operating cable.
No. 504MB - Black finish.



No. 504A

BLACK SINGLE END PULLEY

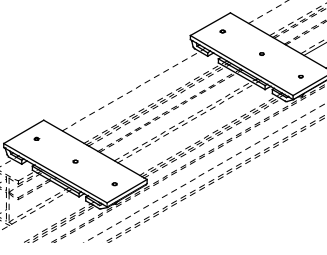
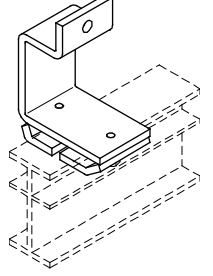
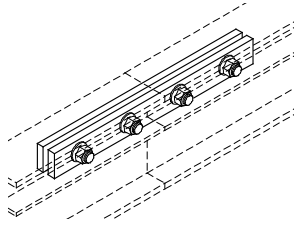
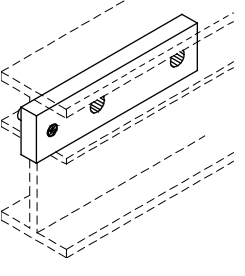
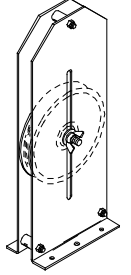
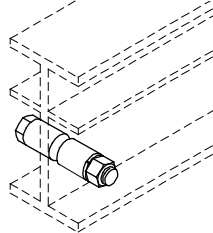
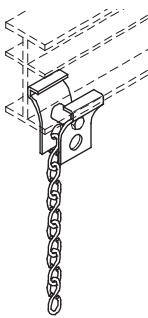
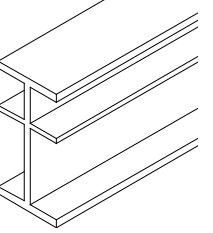
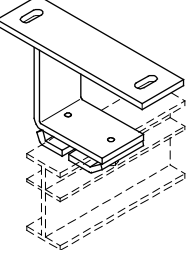
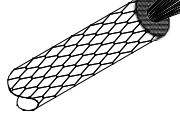
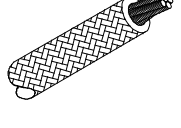
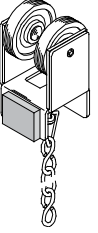
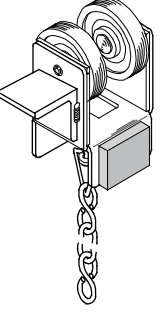
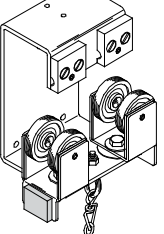
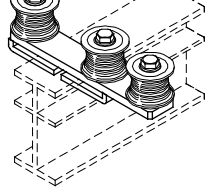
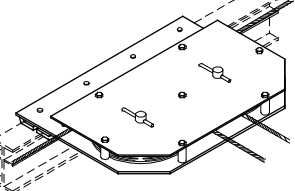
4" diameter Nylatron GS sheave grooved for 3/16" cable with sealed precision ball bearings. Heavy-duty steel housing clamps to top flange of track. Black finish.

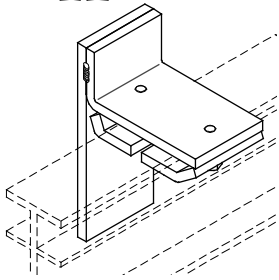


TENSIONING END PULLEY

4" diameter Nylatron GSM sheave with sealed precision ball bearings grooved for 3/16" cable. Heavy-duty steel housing clamps to top flange of track and provides constant cable tension on large motorized tracks.

No. 504T - Zinc plated.
No. 504TB - Black finish.

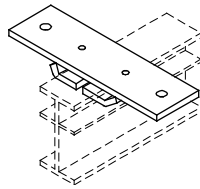
 <p>OVERLAP CLAMP Formed steel clamps to align track at overlap. 1 set pictured. No. 505 - Zinc plated. No. 505B - Black finish.</p>	 <p>CLAMP HANGER Formed steel bracket for suspending track. Track clamps to bracket with offset clips. No. 506 - Zinc plated. No. 506B - Black finish.</p>	 <p>SPLICE Steel plates align and lock track sections together. Track must be straight at joint. 1 pair pictured. No. 507 - Zinc plated. No. 507B - Black finish.</p>	 <p>No. 507FX SPLICE DRILL FIXTURE Hardened tool steel drill fixture for field drilling of track for 507 splices.</p>
 <p>No. 508, BLACK 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.</p>	 <p>END STOP Bolt with steel spacers to prevent carriers from traveling beyond desired location. 2 pair required for overlapping tracks. No. 509 - Zinc plated. No. 509B - Black finish.</p>	 <p>END STOP/CURTAIN SUPPORT Formed steel bracket attaches to bottom of track. 6" trim chain to support offstage edge of curtain. No. 509A - Zinc plated. No. 509AB - Black finish.</p>	 <p>TRACK 6063-T5 extruded aluminum 1-5/8" wide x 3-1/4" high, .187" thick. 20" and 24" stock lengths. No. 510 - Mill finish. No. 510B - Class 1 black anodized.</p>
 <p>CEILING HANGER Formed steel bracket mounts to ceiling. Track clamps to bracket with offset clips. No. 511 - Zinc Plated. No. 511B - Black finish.</p>	 <p>No. 514 OPERATING LINE 3/8" diameter black polyester braided over Dyneema core for manual operation.</p>	 <p>No. 515 OPERATING CABLE Black polyester jacket braided over 3/32" specialty cord wire rope. For use with motorized tracks.</p>	 <p>SINGLE CARRIER 2 nylon-tired sealed ball bearing wheels riveted to plated steel body with heavy-duty hook, swivel and 6" trim chain. Nylatron glide strips and rubber bumper reduce friction and noise. No. 516 - Zinc Plated. No. 516B - Black finish.</p>
 <p>TRAILING CARRIER w/ ARM No. 516 nylon-tired sealed ball bearing carrier with arm for use with 526 Carrier Stop. No. 516X - Zinc Plated. No. 516XB - Black finish.</p>	 <p>MASTER CARRIER 2 nylon-tired sealed ball bearing wheel assemblies pivot 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. 517B - Black finish. No. 517M - for 3/16" operating cable. No. 517MB - Black finish.</p>	 <p>CABLE GUIDE 3 Nylatron GS rollers mounted to 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. 518B - Black finish. No. 519 - 3/8" sealed precision ball bearings. No. 519B - Black finish.</p>	 <p>No. 521 CENTER TAKE-OFF PULLEY Steel housing contains 6" diameter Nylatron GS sheaves with sealed precision ball bearings. Used when operating lines or cable must be turned horizontally.</p>



CARRIER STOP

Used with 501X or 516X single carriers to keep offstage edge of curtain from traveling past desired position on track.

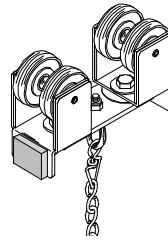
No. 526 - Zinc plated.
No. 526B - Black finish.



FLUSH CEILING HANGER

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

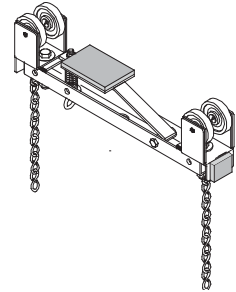
No. 531 - Zinc plated.
No. 531B - Black Finish.



WALK-ALONG MASTER CARRIER

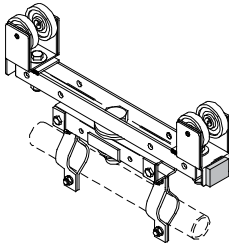
2 single carriers pivot on steel connecting plate with heavy-duty hook, swivel and trim chain.

No. 502W - Urethane-tired wheels.
No. 502WB - Black finish.
No. 517W - Nylon-tired wheels
No. 517WB - Black finish.



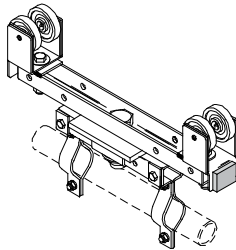
No. 537 BLACK LOCKING MASTER CARRIER

Heavy steel construction with nylon-tired ball bearing wheels and brake to keep master carrier in desired location. Equipped with swivels and trim chains for curtain attachment.



No. 50 PIVOT DEVICE

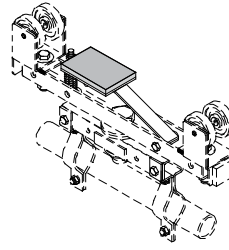
Heavy steel construction with nylon-tired ball bearing wheels. Supplied with brackets for 1-3/8" O.D. pipe or tubing (6' max. recommended length). Allows masking draperies to be rotated to any angle.
Working Load Limit: 60 pounds.



INDEXING PIVOT DEVICE

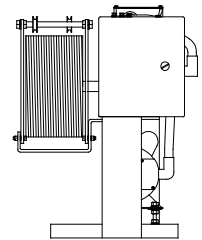
Pivot device with special plate to index rotation at 22-1/2 degree increments. Supplied with brackets for 1-3/8" O.D. pipe or tubing (6' max. recommended length).
Working Load Limit: 60 pounds.

No. 50X - Zinc plated.
No. 50XB - Black finish.



No. 50BK BRAKE KIT

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



No. 454 Curtain Machine

See pages 58-70 for curtain machines.

GENERAL SPECIFICATIONS:

HEAVY-DUTY CURVED TRACK

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

Track shall be 3-1/4" I-beam, with 1-5/8" top, intermediate, and bottom flanges, extruded from mill finish 6063-T5 aluminum. Track shall be factory curved and provided unspliced in lengths up to 24'.

Suspend track 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 urethane-tired sealed ball bearing wheels fastened parallel to formed steel carrier body with heavy-duty hook, swivel and 6" 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 connected urethane-tired sealed ball bearing wheel assemblies pivoting on a steel 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 braided over Dyneema core.

Install guide assemblies 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 COMPLETE TRACK COMPONENT GUIDE

PART No.	DESCRIPTION	501C	501S	501W	516C	516S	516W
501	Urethane B.B. Single Carrier	•	•	•			
502*	Urethane 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*	Black 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 from stock sizes.

*** For suspended applications, #506 clamp hanger are substituted for the ceiling hangers. When ordering, please specify whether track is ceiling mounted or suspended.

500 SERIES BLACK COMPLETE TRACK COMPONENT GUIDE

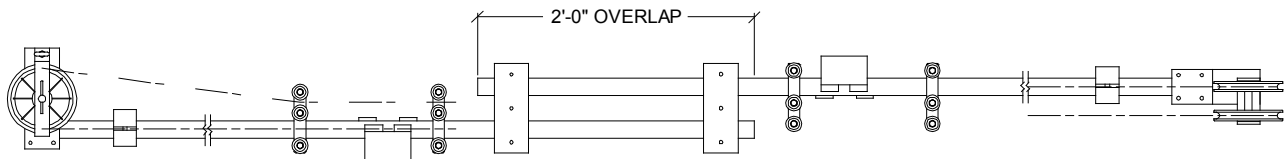
PART No.	DESCRIPTION	501CB	501SB	501WB	516CB	516SB	516WB
501B	Black Urethane B.B. Single Carrier	•	•	•			
502B*	Black Urethane B.B. Master Carrier	•	•				
502W	Black Walk-Along Master Carrier			•			
503B*	Black Double End Pulley	•	•		•	•	
504B*	Black Single End Pulley	•	•		•	•	
505B	Black Overlap Clamp	•	•		•	•	
506B	Black Clamp Hanger	***	***	***	***	***	***
507B**	Black Splice	•	•	•	•	•	•
508*	Black Adjustable Floor Block	•	•		•	•	
509B	Black End Stop	•	•	•	•	•	•
510B**	Black Track	•	•	•	•	•	•
511B	Black Ceiling Hanger	•	•		•	•	
514*	3/8" Operating Line	•	•		•	•	
516B	Black Nylon B.B. Single Carrier				•	•	•
517B*	Black Nylon B.B. Master Carrier				•	•	
517WB	Black Walk-Along Master Carrier						•
518B	Black Cable Guide	•	•		•	•	
531B	Black 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.

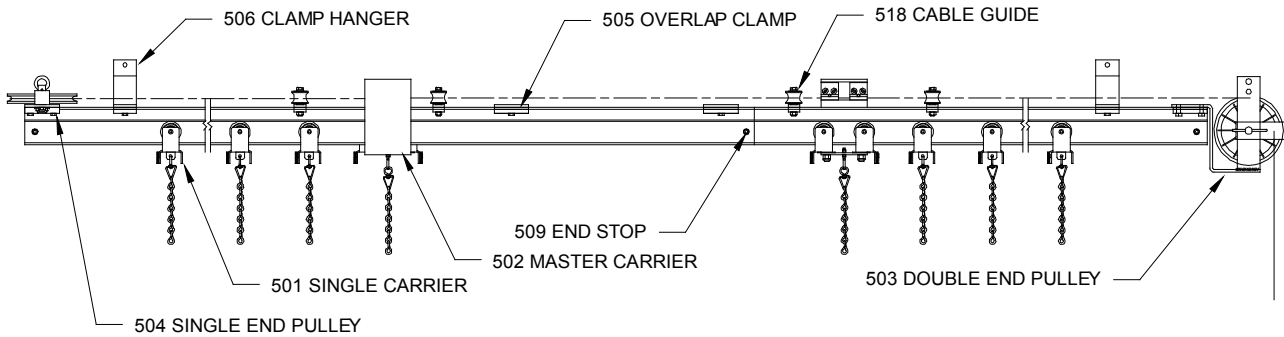
** Track lengths and splices supplied as required from stock sizes.

*** For suspended applications, #506B clamp hanger are substituted for the ceiling hangers. When ordering, please specify whether track is ceiling mounted or suspended.

501 TRACK

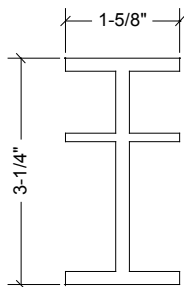


PLAN - MODEL 501 COMPLETE TRACK

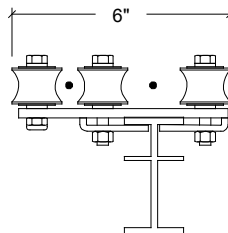


ELEVATION - MODEL 501 COMPLETE TRACK

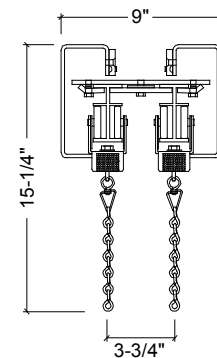
NOTE: 516 dimensions similar.



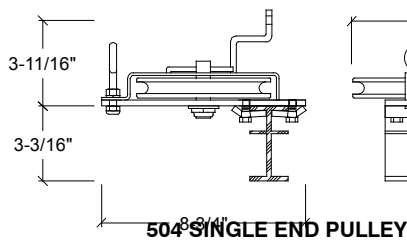
510 TRACK



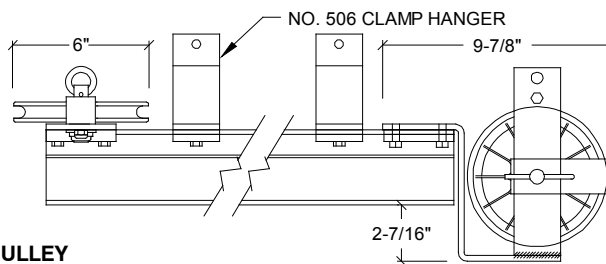
518 CABLE GUIDE



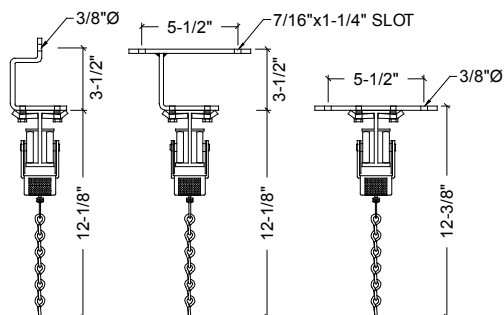
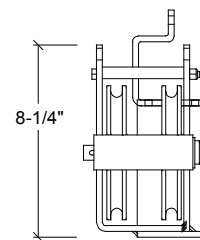
TRACKS AT CENTER OVERLAP



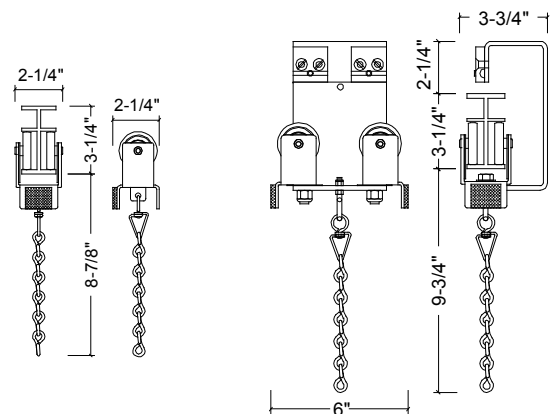
504 SINGLE END PULLEY



503 DOUBLE END PULLEY



506, 511 AND 531 TRACK HANGERS

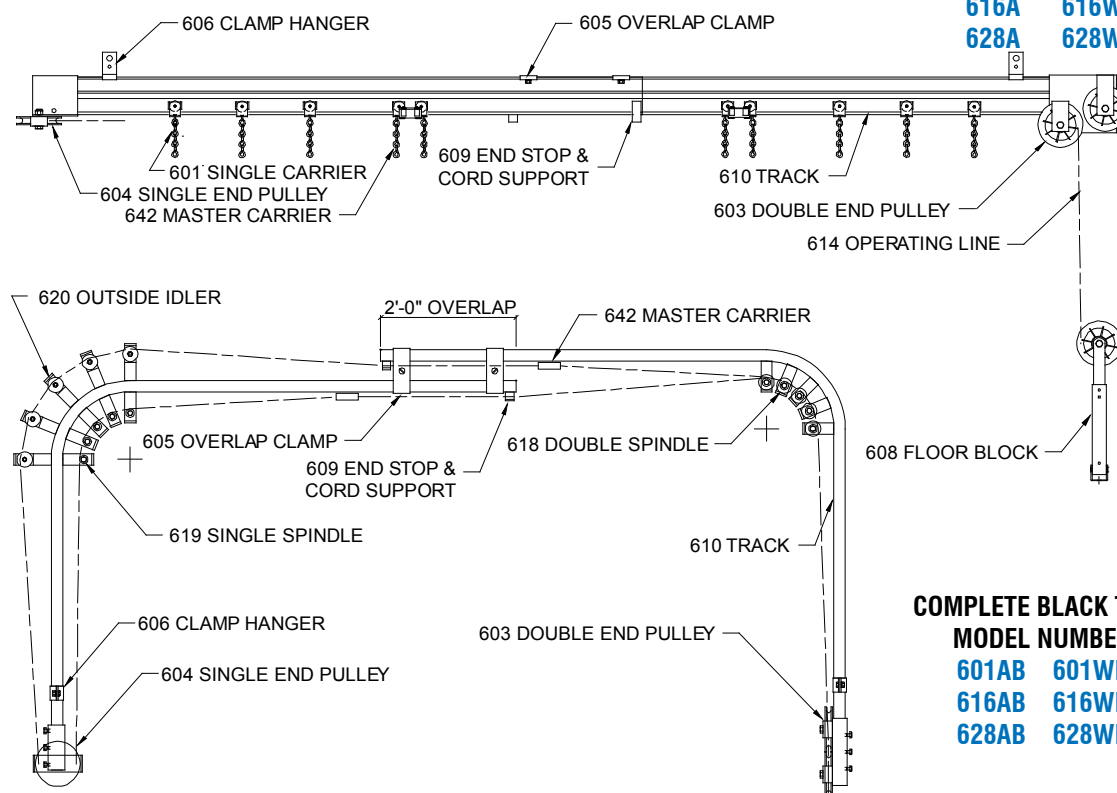


501 SINGLE CARRIER AND 502 MASTER CARRIER

600 SERIES MEDIUM-DUTY CURVED TRACK

COMPLETE TRACK MODEL NUMBERS

601A 601W
616A 616W
628A 628W

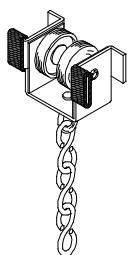


COMPLETE BLACK TRACK MODEL NUMBERS

601AB 601WB
616AB 616WB
628AB 628WB

The 600 Series is a versatile track that can be used for straight or curved applications in TV studios, theatres, and many other types of facilities. Curves are typically formed at the factory to suit your project requirements. Walk-along tracks can be curved to virtually any shape and length. However, cord operated tracks cannot be rigged with reverse curves and are recommended for lengths up to 60'. Serpentine layouts and long lengths require the use of the 500 Series track for cord operation (see page 34).

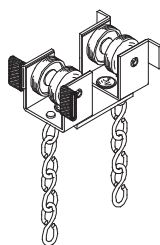
The ease of operation of a 600 Series track is dependent on several factors, including the radius of the curve. In general, the track operates best around gentle curves. Whenever possible, it is recommended that layouts be designed with radius of 4 feet or larger. Tighter curves will result in a system that requires additional effort to operate.



SINGLE CARRIER

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

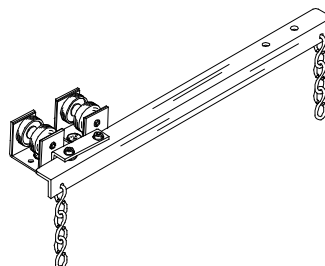
No. 601 - Zinc plated.
No. 601B - Black finish.



WALK-ALONG MASTER CARRIER

2 Delrin wheel assemblies with swivel hooks and trim chains pivot on steel connecting plate. Supplied with 2 rubber bumpers. 1 pair recommended for each walk-along curtain.

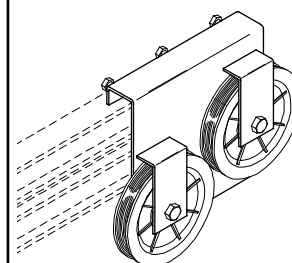
No. 602 - Zinc plated.
No. 602B - Black finish.



WALK-ALONG OVERLAP MASTER CARRIER

Overlap arm mounted to modified 642 master to provide curtain overlap on single track operation. 1 pair recommended for each walk-along curtain.

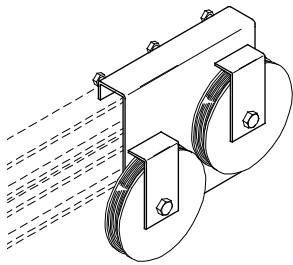
No. 602A - Zinc plated.
No. 602AB - Black finish.



DOUBLE END PULLEY

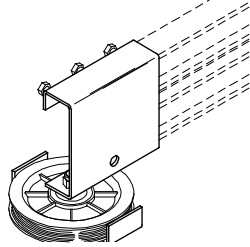
4" diameter Nylatron GS sheaves with shielded ball bearings. Steel housing clamps to track.

No. 603 - Zinc plated.
No. 603B - Black finish.



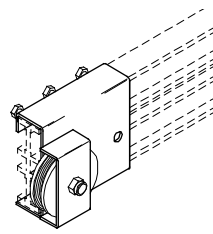
**No. 603M BLACK
DOUBLE END PULLEY**

4" diameter Nylatron GSM sheaves with sealed precision ball bearings. Steel housing clamps to track. For use with motorized tracks.



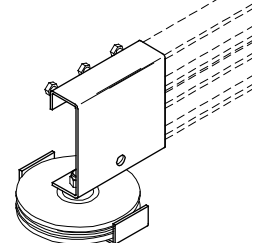
SINGLE END PULLEY

4" diameter Nylatron GS sheave with shielded ball bearings. Steel housing clamps to track. For use with bi-parting tracks.
No. 604 - Zinc plated.
No. 604B - Black finish.



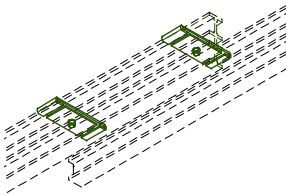
**No. 604A BLACK
SINGLE END PULLEY**

2-1/2" diameter steel sheave with precision ball bearings. Steel housing clamps to track. For one-way draw operation.



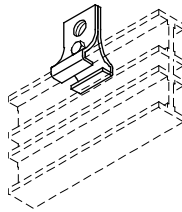
**No. 604M BLACK
SINGLE END PULLEY**

4" diameter Nylatron GSM sheave with sealed precision ball bearings. Steel housing clamps to track. For use with bi-parting motorized tracks.



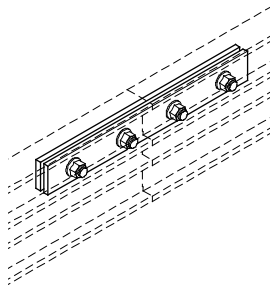
OVERLAP CLAMP

Formed steel clamps to align track at overlap. 1 pair pictured.
No. 605 - Zinc plated.
No. 605B - Black finish.



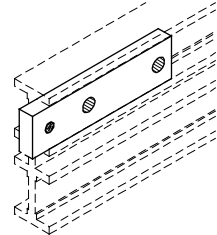
CLAMP HANGER

Formed steel brackets clamp to track. Adjusts to any position. Suspend track with welded chain or wire rope. 1 pair pictured.
No. 606 - Zinc plated.
No. 606B - Black finish.



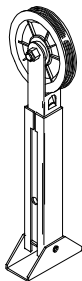
SPLICE

Aluminum plates align and lock track sections together. Track must be straight at joint. 1 pair pictured.
No. 607 - Zinc plated.
No. 607B - Black finish.



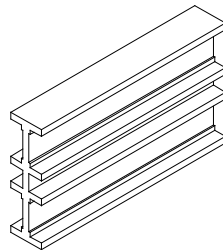
**No. 607FX SPLICE
DRILL FIXTURE**

Hardened tool steel drill fixture for field drilling of track for 607 splices.



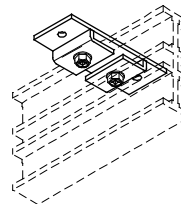
TENSION FLOOR BLOCK

4" diameter Nylatron GS sheave with shielded ball bearings. Spring in steel housing maintains line tension.
No. 608 - Zinc plated.
No. 608B - Black finish.



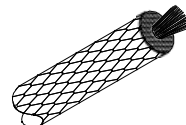
TRACK

6063-T5 extruded aluminum 1" wide x 3-3/8" high, .187" thick. 20' stock lengths.
No. 610 - Mill finish.
No. 610B - Class 1 black anodized.



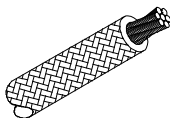
CEILING HANGER

Steel plate mounts flush to ceiling. Track clamps to bracket with offset clips.
No. 611 - Zinc plated.
No. 611B - Black finish.



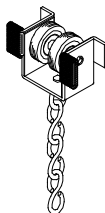
No. 614 OPERATING LINE

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



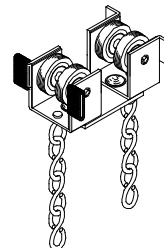
OPERATING CABLE

Black polyester jacket braided over 3/32" specialty cord wire rope. For use with motorized tracks.
No. 615 - 3/16" diameter
No. 625 - 1/4" diameter



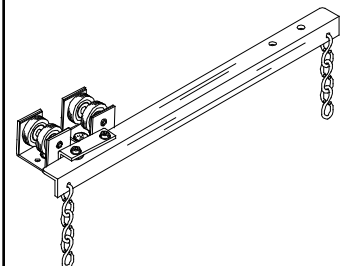
SINGLE CARRIER

Nylon-tired shielded 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. 616 - Zinc plated.
No. 616B - Black finish.



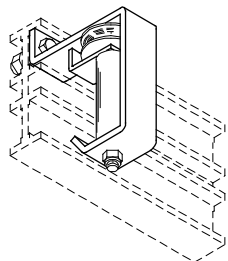
WALK-ALONG MASTER CARRIER

2 nylon-tired shielded ball bearing wheel assemblies with swivel hook and trim chain pivot on steel connecting plate. Supplied with 2 rubber bumpers. 1 pair recommended for each walk-along curtain.
No. 617 - Zinc plated.
No. 617B - Black finish.



**WALK-ALONG OVERLAP
MASTER CARRIER**

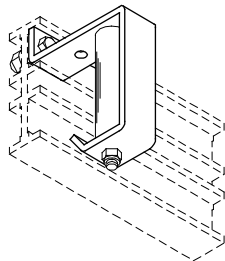
Overlap arm mounted to modified 602 master to provide curtain overlap on single track operation. 1 pair recommended for each walk-along curtain.
No. 617A - Zinc plated.
No. 617AB - Black finish.



DOUBLE SPINDLE

Formed steel housing contains two ball bearing guides for operating line to follow curve. Mount to inside of curve on double end pulley section of track. For bi-parting tracks.

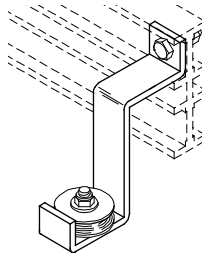
No. 618 - Zinc plated.
No. 618B - Black finish.



SINGLE SPINDLE

Formed steel housing contains one ball bearing guide for operating line to follow track curve. Mount to inside of curve on single end pulley section of track. For bi-parting tracks.

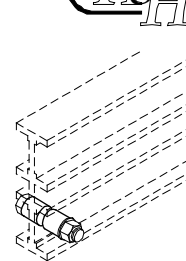
No. 619 - Zinc plated.
No. 619B - Black finish.



OUTSIDE IDLER

Formed steel housing contains one ball bearing guide for operating line to follow track curve. Mount to outside of curve on single end pulley section of track. For bi-parting tracks.

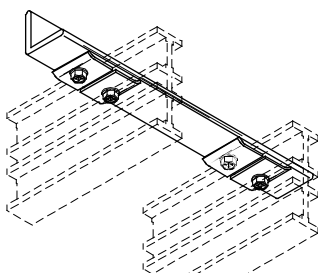
No. 620 - Zinc plated.
No. 620B - Black finish.



END STOP

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

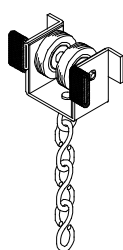
No. 621 - Zinc plated.
No. 621B - Black finish.



BLACK DOUBLE TRACK HANGER

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

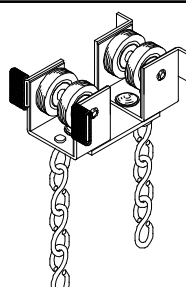
No. 626 - 6" track spacing.
No. 627 - 8" track spacing.



SINGLE CARRIER

Neoprene-tired shielded 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. 628 - Zinc plated.
No. 628B - Black finish.



WALK-ALONG MASTER CARRIER

2 neoprene-tired shielded ball bearing wheel assemblies with swivel and trim chain pivot on steel connecting plate. Supplied with 2 rubber bumpers. 1 pair recommended for each walk-along curtain.

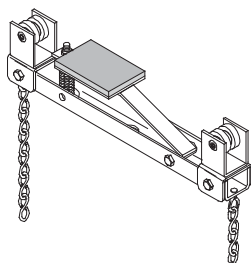
No. 629 - Zinc plated.
No. 629B - Black finish.



TRIM CHAIN

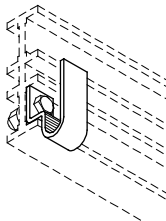
3 links No. 10 jack chain added to carriers to provide 3" of curtain height adjustment.

No. 635 - Zinc plated.
No. 635B - Black finish.



No. 637 BLACK LOCKING MASTER CARRIER

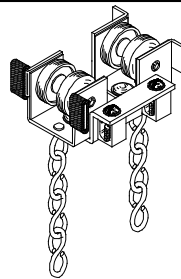
Heavy steel construction with nylon-tired shielded ball bearing wheels and brake to keep master carrier in desired location. Equipped with swivels and trim chains for curtain attachment.



END STOP & CORD SUPPORT

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

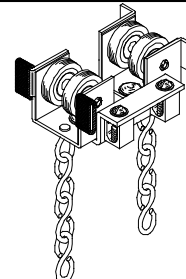
No. 639 - Zinc plated.
No. 639B - Black finish.



MASTER CARRIER

2 Delrin wheel assemblies with swivel hook and trim chain pivot on formed steel body. 2 clamps for anchoring line or cable. Supplied with and 2 rubber bumpers. 1 pair required for overlapping tracks.

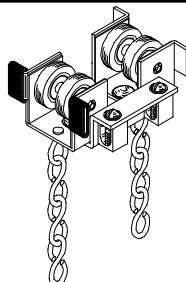
No. 642 - Zinc plated.
No. 642B - Black finish.



MASTER CARRIER

2 nylon-tired shielded ball bearing wheel assemblies with swivel and trim chain pivot on formed steel body. 2 clamps for anchoring line or cable. Supplied with 2 rubber bumpers. 1 pair required for overlapping tracks.

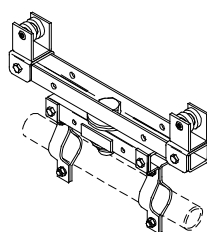
No. 647 - Zinc plated.
No. 647B - Black finish.



MASTER CARRIER

2 neoprene-tired shielded ball bearing wheel assemblies with swivel and trim chain pivot on formed steel body. 2 clamps for anchoring line or cable. Supplied with 2 rubber bumpers. 1 pair required for overlapping tracks.

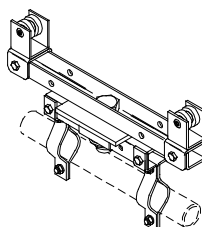
No. 649 - Zinc plated.
No. 649B - Black finish.



PIVOT DEVICE

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

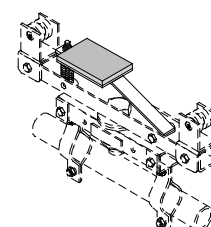
Working Load Limit: 60 pounds.
No. 60 - Zinc plated.
No. 60B - Black finish.



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 (6' max. recommended length).

Working Load Limit: 60 pounds.
No. 60X - Zinc plated.
No. 60XB - Black finish.



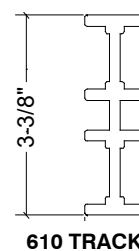
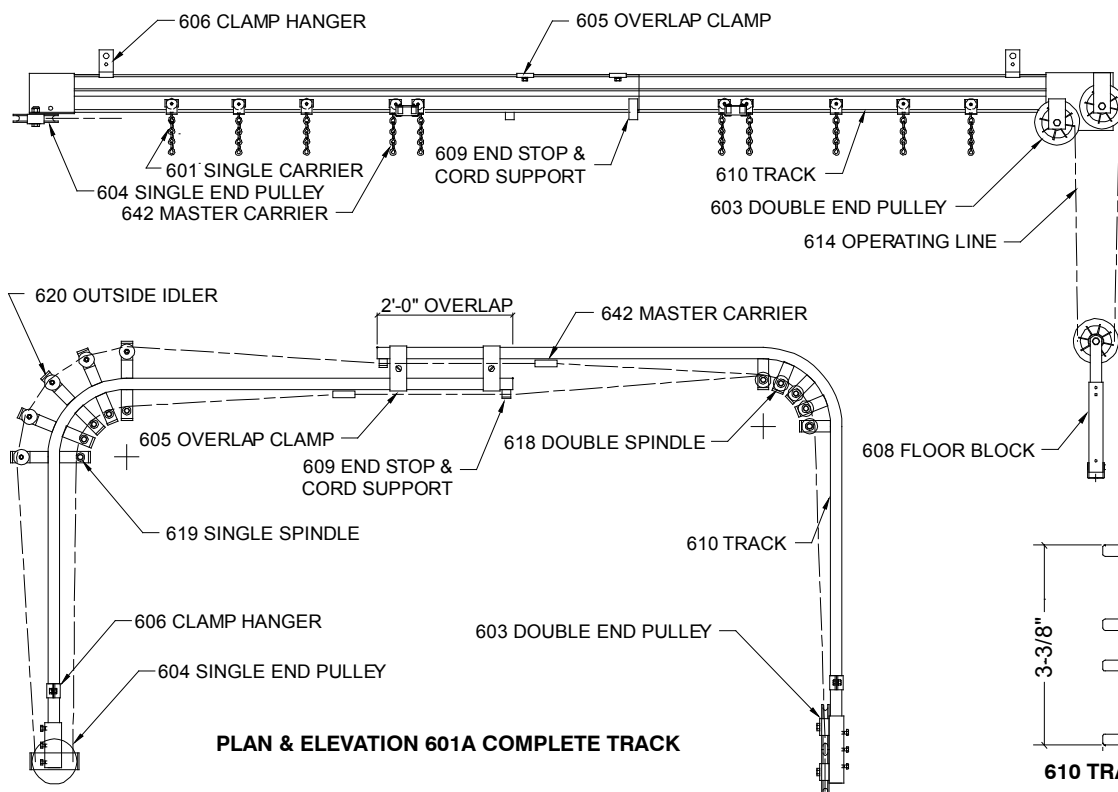
BRAKE KIT

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

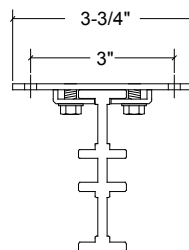
No. 60BK - Zinc plated.
No. 60BKB - Black finish.



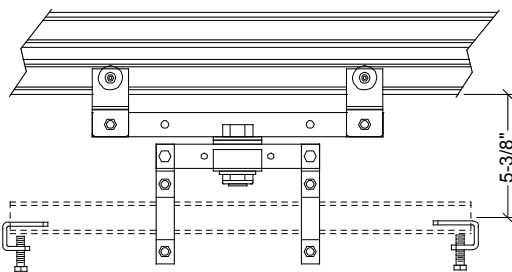
600 SERIES TRACK



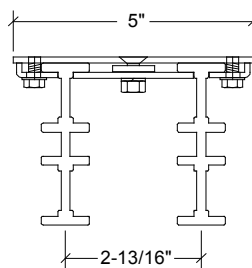
610 TRACK



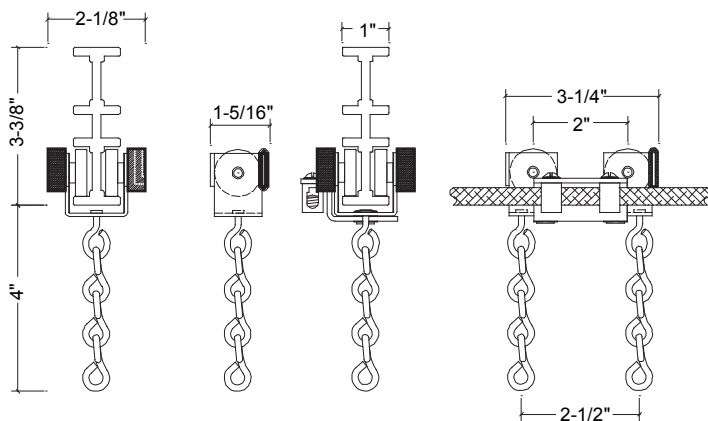
611 CEILING CLAMP



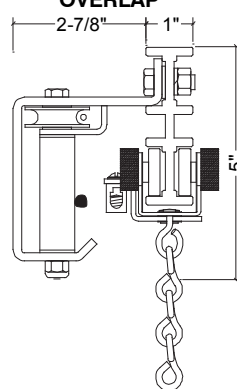
60 PIVOT DEVICE



TRACKS AT CENTER OVERLAP



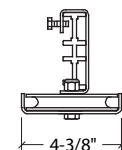
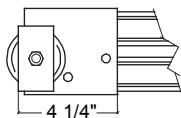
601 SINGLE CARRIER AND 602 MASTER CARRIER



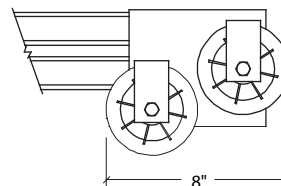
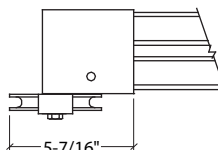
618 DOUBLE SPINDLE, 619 SINGLE SPINDLE AND 620 OUTSIDE IDLER



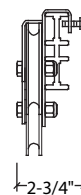
604A SINGLE END PULLEY



604 SINGLE END PULLEY



603 DOUBLE END PULLEY



600 SERIES COMPLETE TRACK COMPONENT GUIDE

PART No.	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. When ordering, please specify whether track is ceiling mounted or suspended.

** 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 curve.

For COMPLETE tracks with black finish, add suffix "B" to part number.

Examples: 601W changes to 601WB and 628A changes to 628B.

GENERAL SPECIFICATIONS:

MEDIUM-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 mill finish 6063-T5 aluminum. Provide unspliced in lengths up to 20'.

Suspend track 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.

Provide single carriers, spaced on 12" centers, constructed of two Delrin wheels fastened parallel to formed steel carrier body with swivel hook and 3" trim chain 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 connected Delrin wheel assemblies with swivel hooks and 3" trim chains. Wheel assemblies pivot on a steel 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 shielded ball bearing sheave.

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

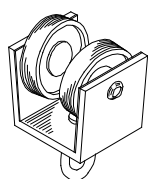
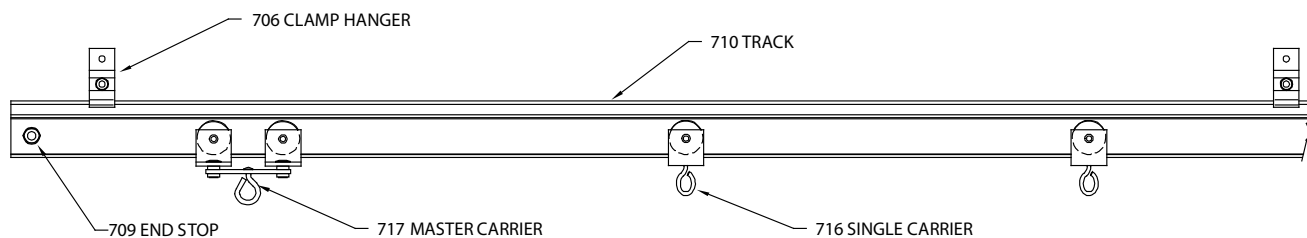
All steel components shall be zinc plated to resist corrosion.



700 SERIES LIGHT-DUTY CURVED TRACK

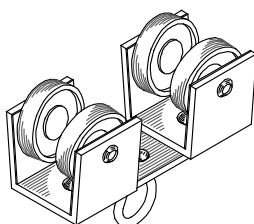
COMPLETE TRACK MODEL NUMBERS

701A
716A
728A



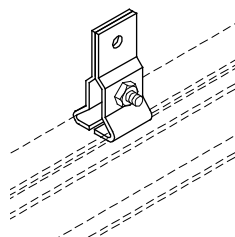
No. 701 SINGLE CARRIER

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



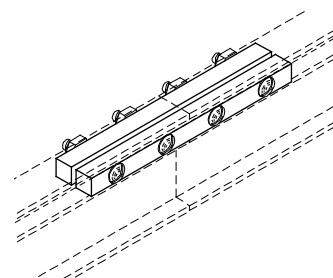
No. 702 MASTER CARRIER

2 Delrin wheel assemblies with swivel pivot on steel connecting plate. 1 pair recommended for each walk-along curtain.



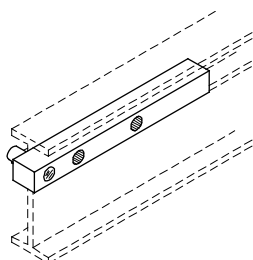
No. 706 CLAMP HANGER

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



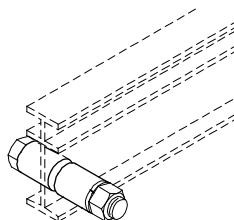
No. 707 SPLICE

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



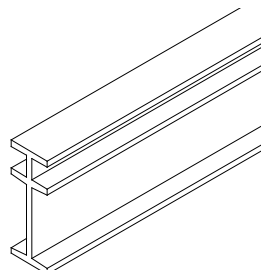
No. 707FX SPLICE DRILL FIXTURE

Hardened tool steel drill fixture for field drilling of track for 707 splices.



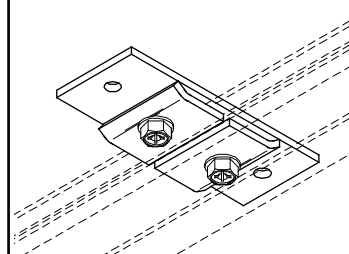
No. 709 END STOP

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



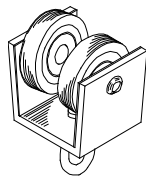
No. 710 TRACK

Mill finish 6063-T5 extruded aluminum 5/8" wide x 1-11/16" high, .094" thick. 20' stock length.



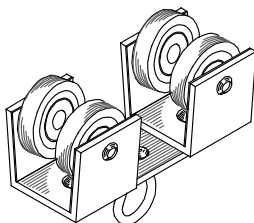
No. 711 CEILING HANGER

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



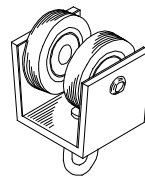
No. 716 SINGLE CARRIER

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



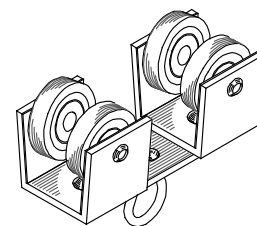
No. 717 MASTER CARRIER

2 nylon-tired shielded ball bearing wheel assemblies with swivel pivot on steel connecting plate. 1 pair recommended for each walk-along curtain.



No. 728 SINGLE CARRIER

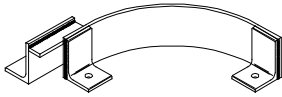
Neoprene-tired shielded ball bearing wheels riveted to extruded aluminum body with swivel hook. Nylatron glide strips reduce friction and noise.



No. 729 MASTER CARRIER

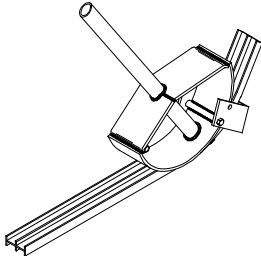
2 neoprene-tired shielded ball bearing wheel assemblies with swivel pivot on steel connecting plate. 1 pair recommended for each walk-along curtain.

TRACK BENDING TOOLS



No. 712 TRACK BENDER

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



No. 713 BENDING TOOL

Heavy steel tool designed for manual, on-the-job bending of aluminum tracks.

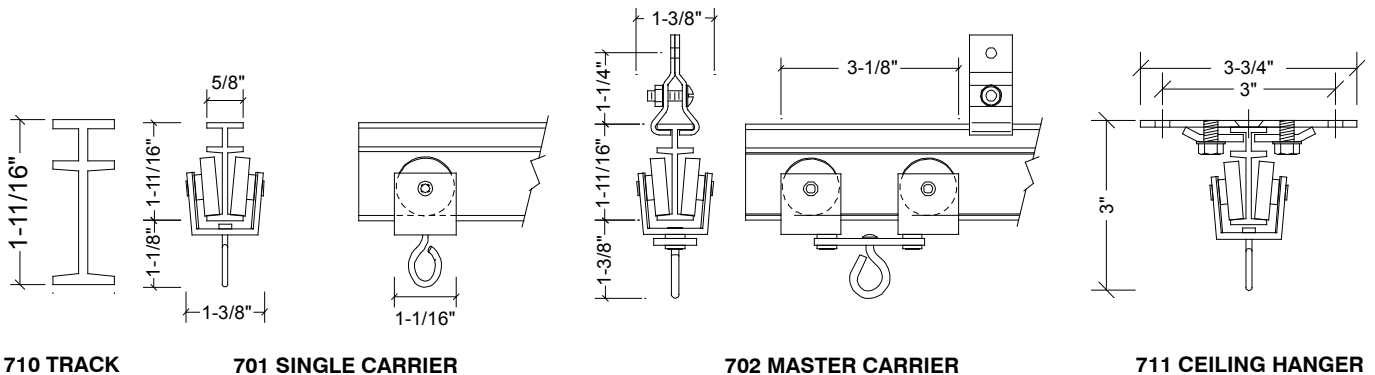
700 SERIES COMPLETE TRACK COMPONENT GUIDE

PART No.	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. Single Carrier			•
729	Neoprene B.B. Master Carrier			•

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

** For ceiling mounted applications, No. 711 provided in lieu of No. 706 Clamp hanger. When ordering, please specify whether track is ceiling mounted or suspended.

700 SERIES TRACK



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 mill finish 6063-T5 aluminum. Provide unspliced in lengths up to 20'.

Suspend track 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 connected assemblies pivoting on a steel connecting plate.

All steel components shall be zinc plated to resist corrosion.

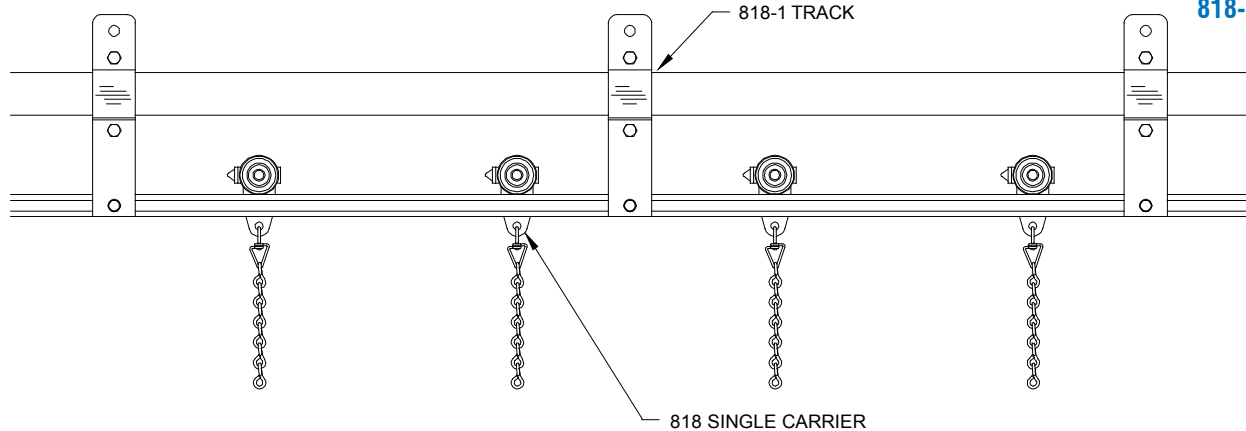


818 SERIES WALK-ALONG TRACK

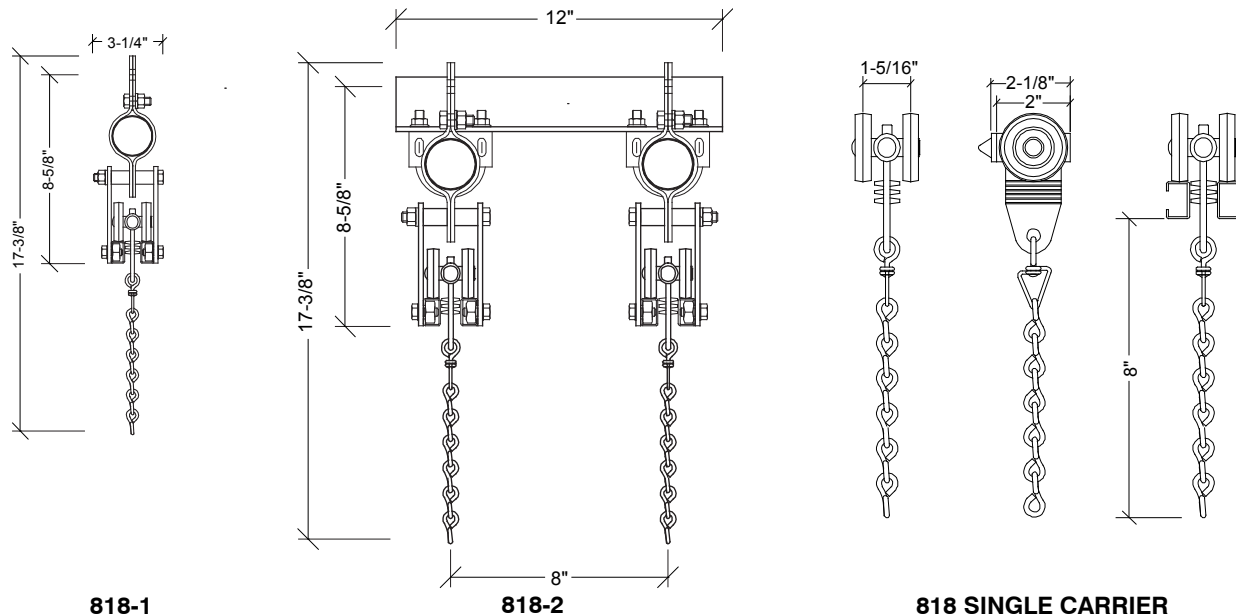
MODEL NUMBER

818-1

818-2



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



GENERAL SPECIFICATIONS: WALK-ALONG TRACK

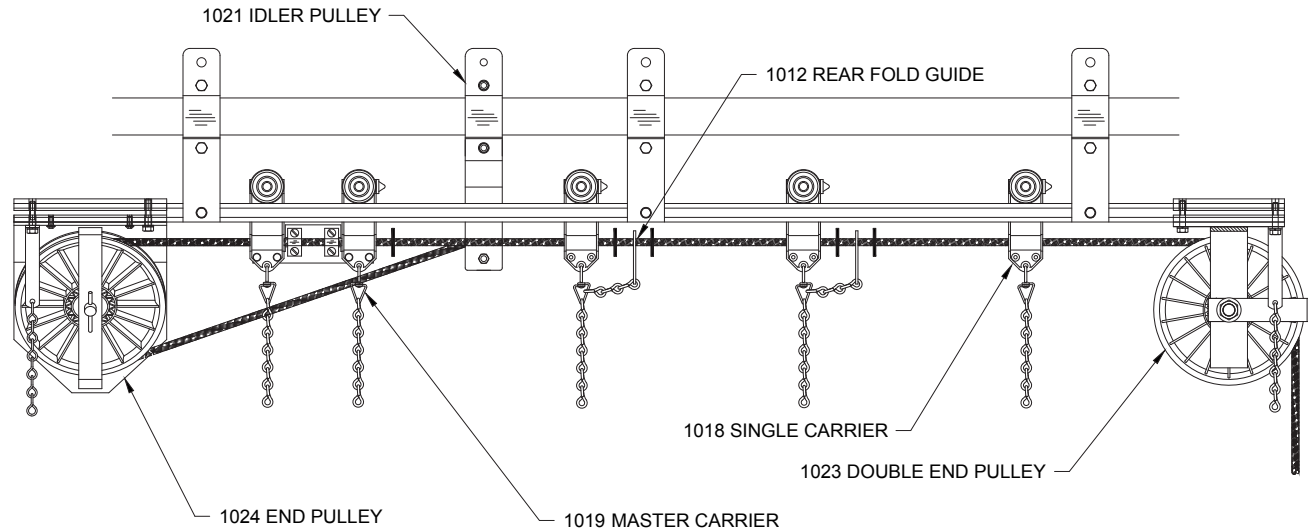
Provide **Model 818-1** as manufactured by H & H Specialties Inc., South El Monte, CA.

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 1-7/8" O.D. tubing 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 urethane-tired shielded ball bearing 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 818-2** with two sets of rails, spaced 8" on center.

MODEL NO. 1018S HEAVY-DUTY STRAIGHT STUDIO TRACK

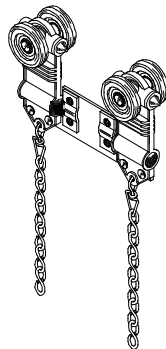


Model No. 1018S Heavy-Duty Straight Track was developed especially for use in television studios where an exceptionally quiet, heavy-duty open style track is desired. Equipped with urethane-tired shielded ball bearing wheels and neoprene bumpers to insure the quietest operation available in a stage track. Track 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.



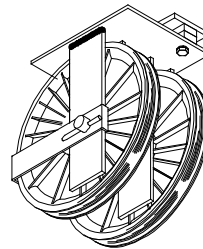
No. 1018 BLACK SINGLE CARRIER

2 urethane-tired shielded ball bearing wheels riveted to black Nylatron GS body with heavy-duty hook, swivel and 6" trim chain for curtain attachment. Supplied with 1 No. 1031 rubber bumper.



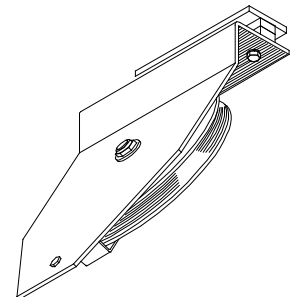
No. 1019 BLACK MASTER CARRIER

2 No. 1018 single carriers riveted to steel body. 2 clamps provided for anchoring line or cable. Supplied with 1 No. 1031 rubber bumper. 1 pair required for overlapping tracks.



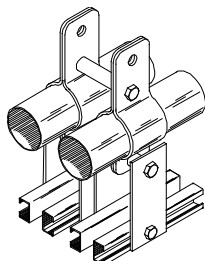
No. 1023 8" BLACK DOUBLE END PULLEY

8" diameter Nylatron GS sheaves with precision sealed ball bearings. Heavy-duty steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge. Grooved for 1/2" operating line.



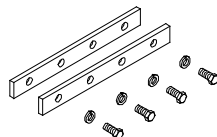
No. 1024 BLACK 8" SLANTED SINGLE END PULLEY

8" diameter Nylatron GS sheave with sealed precision ball bearings. Heavy-duty steel housing clamps to underside of track. Chain bracket for securing offstage curtain edge. Grooved for 1/2" operating line.



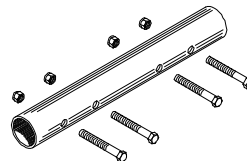
No. 1005 BLACK OVERLAP CLAMP

Tubing spacers mounted between batten clamps to rigidly hold tracks in position at overlap. 1 set required.



No. 1007 BLACK BAR SPLICE

Steel brackets for aligning "C" channels. With all necessary hardware.



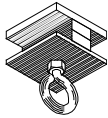
No. 1007P BLACK BATTEN SPLICE

Steel tube splice for backbone. With all necessary hardware.



No. 1043 SAND BAG TENSION PULLEY

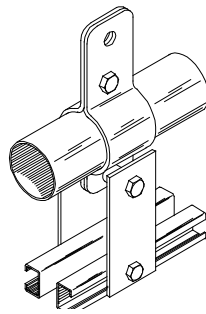
8" Nylatron GS sheave with precision ball bearings in specially designed housing with heavy-duty sand bag. For maintaining proper operating line tension on flying curtains. Supplied without sand. Grooved for 1/2" operating line.



No. 1009 BLACK

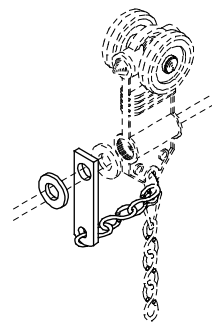
END STOP & CORD SUPPORT

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



No. 1010 BLACK TRACK

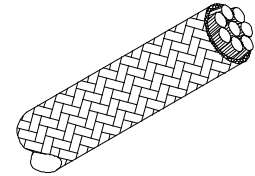
Track is assembled to customer's requirements. Cord operated use only. Track available in 10' and 20' standard lengths.



BLACK REAR FOLD GUIDE

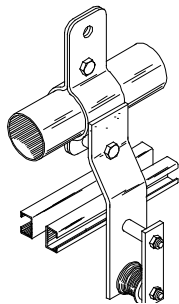
Allows curtain to fold at offstage edges. Supplied with 1 No. 1031 rubber bumper.

No. 1012 - for 1/2" hand line.



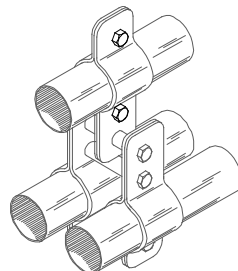
No. 1020 OPERATING LINE

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



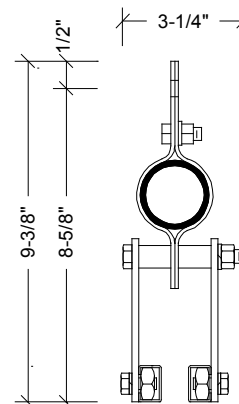
No. 1021 BLACK IDLER PULLEY

Nylatron GS roller with 5/16" shielded ball bearings mounted to steel bracket. Provides support for operating line.



No. 1026 BLACK CENTER PIPE SUPPORT

Formed steel assembly to align track at overlap.



No. 1010 BLACK TRACK

GENERAL SPECIFICATIONS: HEAVY-DUTY BLACK STRAIGHT STUDIO TRACK

Provide **Model 1018S** 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. Track rails shall be finished with a semi-gloss black powder coat. 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 urethane-tired shielded 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.

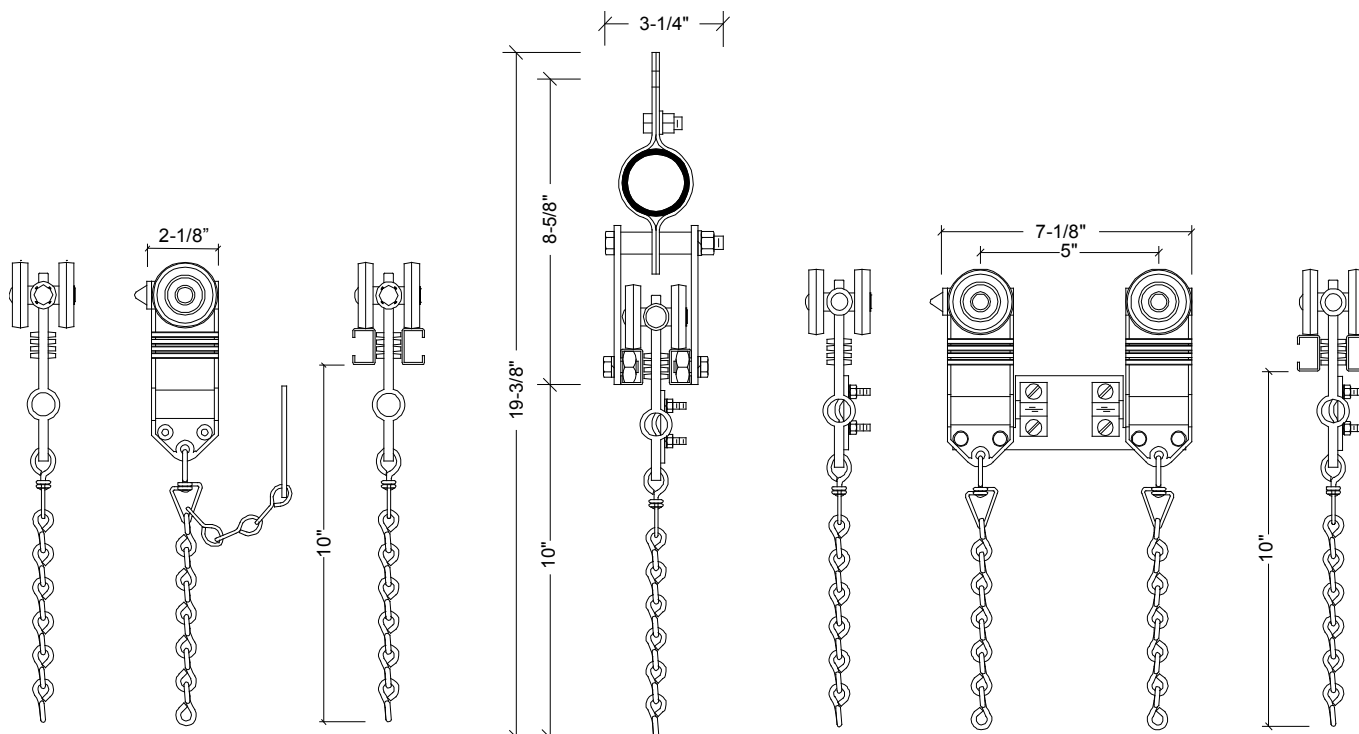
Master carriers shall consist of two single carriers riveted to formed steel master plate. Connect to operating line with two formed steel cord clamps.

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

Provide 8" Nylatron GS sheave with precision ball bearings in specially designed housing with heavy-duty sand bag to maintain proper operating line tension.

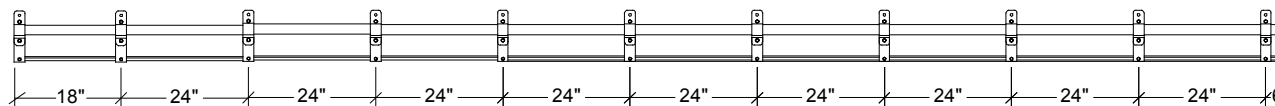
Black operating line shall be 1/2" diameter, stretch-resistant rope with spun polyester outer jacket braided over polyester core. Install idler pulleys on each side of track to support operating line.

1018S TRACK

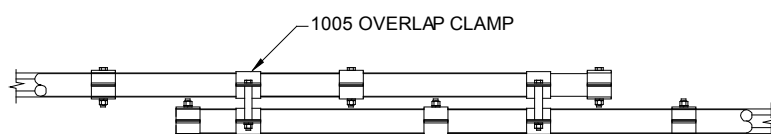


1018 SINGLE CARRIER

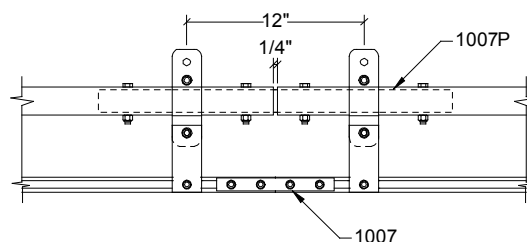
1019 MASTER CARRIER



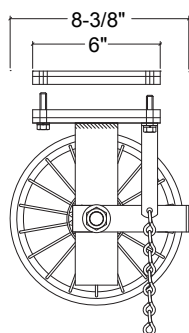
TRACK ASSEMBLY - TYP.



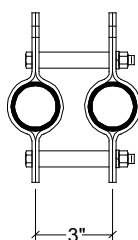
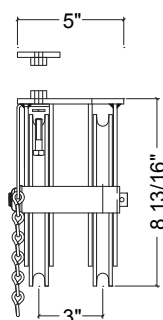
OVERLAP



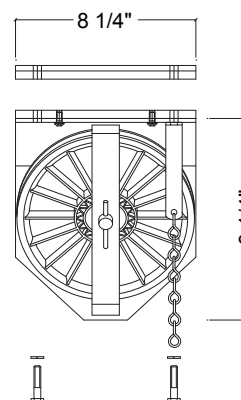
SPLICE



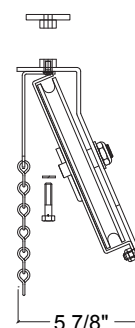
1023 DOUBLE END PULLEY

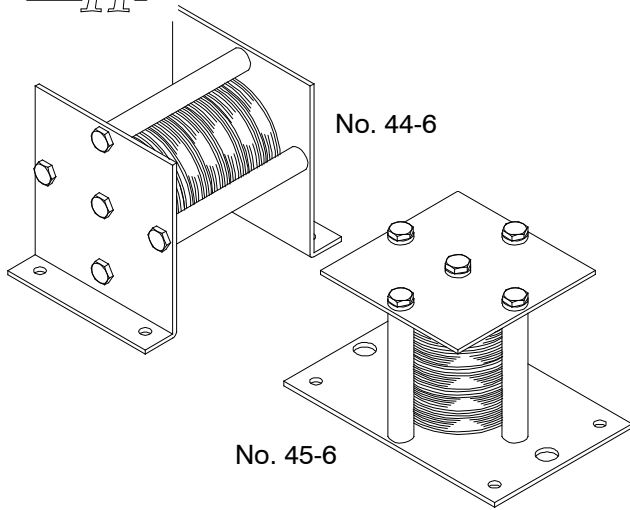


SECTION AT OVERLAP



1024 SINGLE END PULLEY





LIGHT-DUTY RIGGING

Light-duty stand-up pulleys and mule pulleys are designed for rigging lift curtains, gym dividers, and other lightweight 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 applications. Contact the factory for further information.

Working Load Limits* (At 150 ft/min)

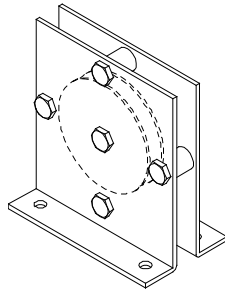
Model No.	WLL	Model No.	WLL
44-1	25#	44-6	110#
44-2	45#	44-7	120#
44-3	65#	44-8	125#
44-4	80#	44-9	125#
44-5	95#	44-10	125#

* 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)

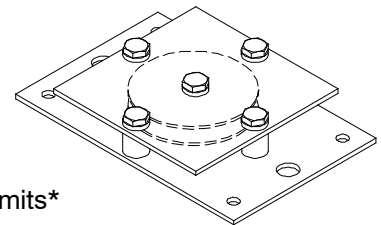
Model No.	WLL	Model No.	WLL
45-1	25#	45-5	90#
45-2	45#	45-6	100#
45-3	65#	45-7	125#
45-4	80#	45-8	125#

* 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 8 sheaves.



Working Load Limits* (At 200 ft/min)

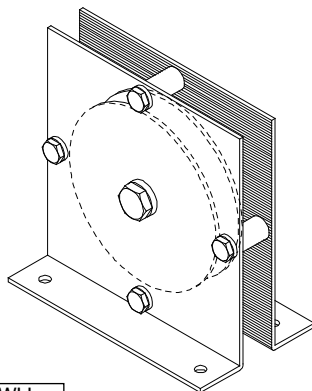
Model No.	WLL	Model No.	WLL
46-1	40#	46-4	125#
46-2	70#	46-5	150#
46-3	100#	46-6	175#

* 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)

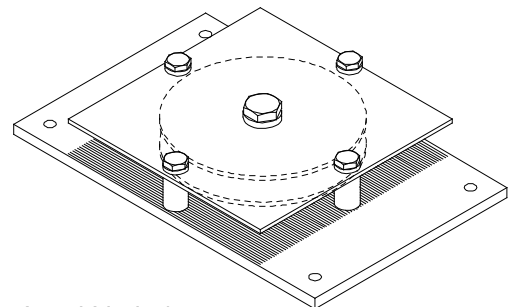
Model No.	WLL	Model No.	WLL
47-1	40#	47-4	110#
47-2	70#	47-5	120#
47-3	100#	47-6	125#

* Max. load on any individual sheave: 40#

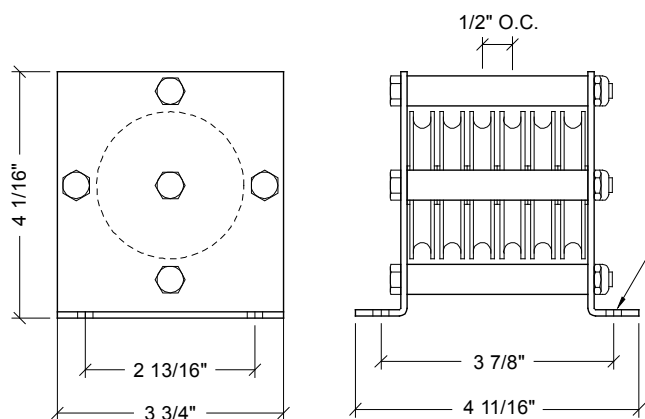
47 SERIES MULE PULLEY

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

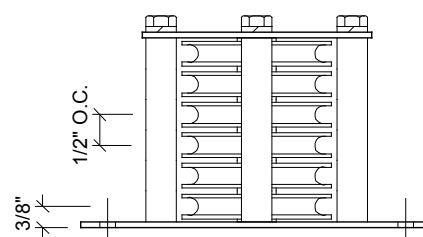
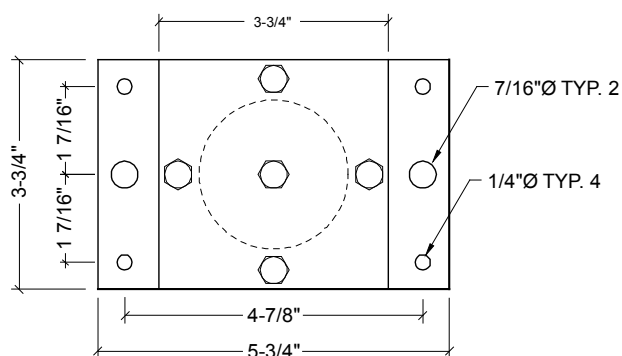
Available up to 6 sheaves.



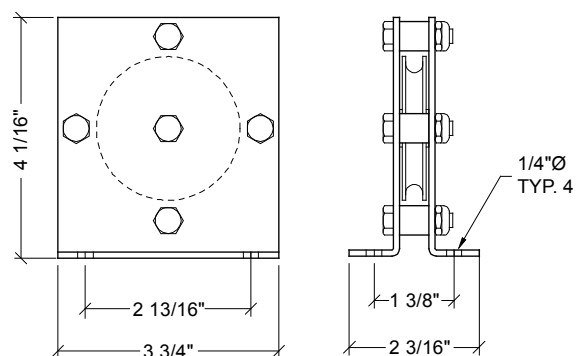
DIMENSION DRAWINGS



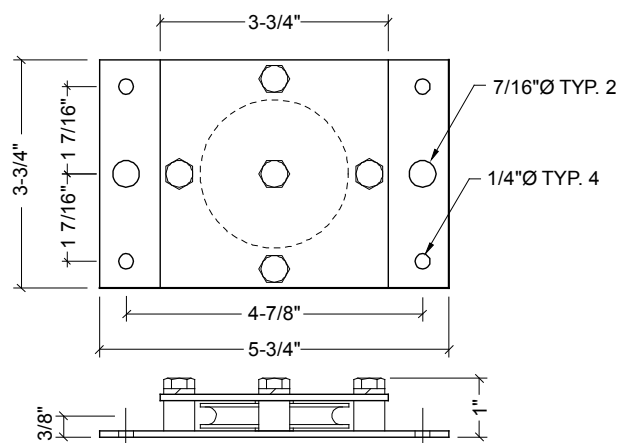
No. 44-6 Stand-up Pulley



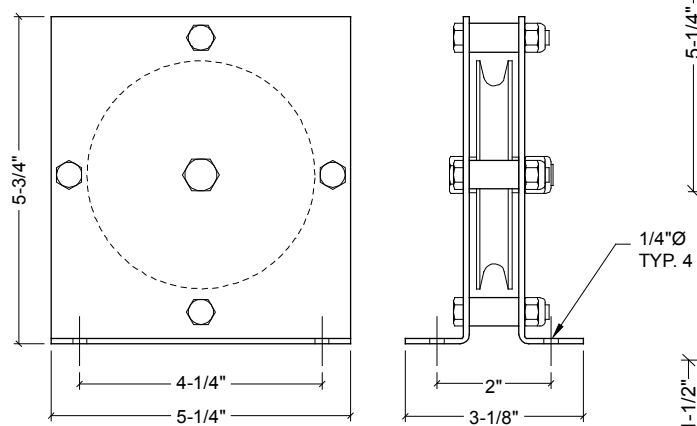
No. 45-6 Mule Pulley



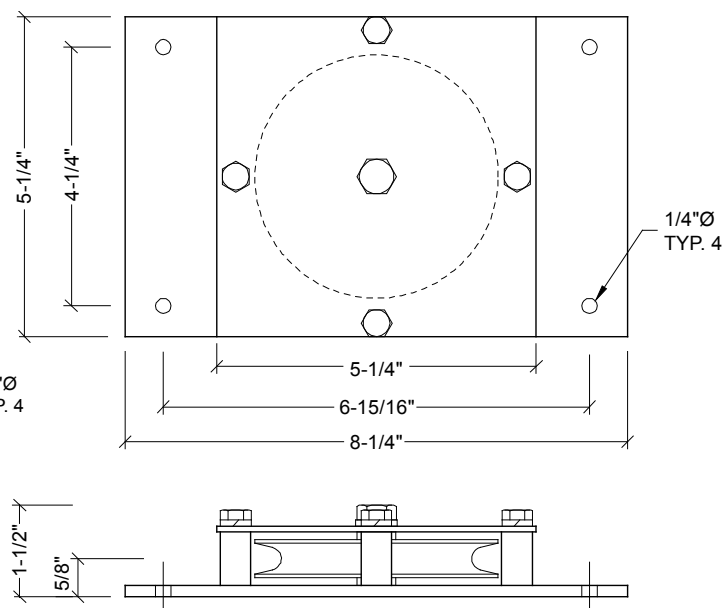
No. 44-1 Stand-up Pulley



No. 45-1 Mule Pulley



No. 46-1 Stand-up Pulley

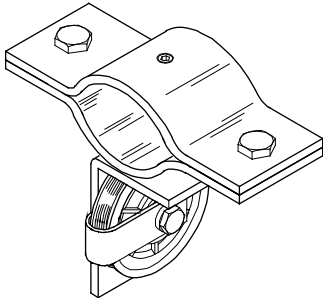


No. 47-1 Mule Pulley



LIFT CURTAIN RIGGING

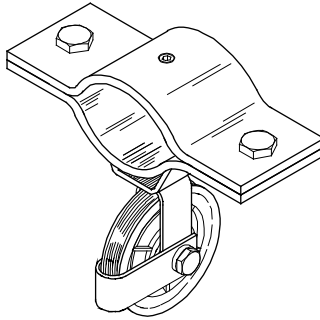
Special light-duty pulleys are housed in assemblies designed to mount to 1-1/2" pipe batten, providing a method of rigging lift curtains whether they are straight, curved, or serpentine in layout. Idler sheaves may be added to guide cables around curves.



No. 48 LIFT CURTAIN PULLEY

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

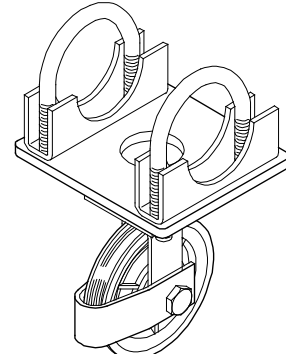
Working Load Limit: 25#



No. 48S LIFT CURTAIN SWIVEL

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

Working Load Limit: 25#



LIFT CURTAIN SWIVEL

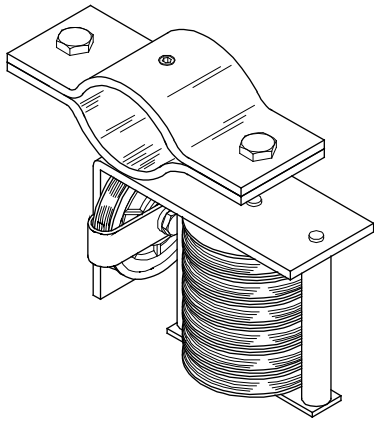
2-1/2" Nylatron GS sheave with shielded ball bearing in steel housing.

Working Load Limit: 25#

58S - Mounts to Strut.

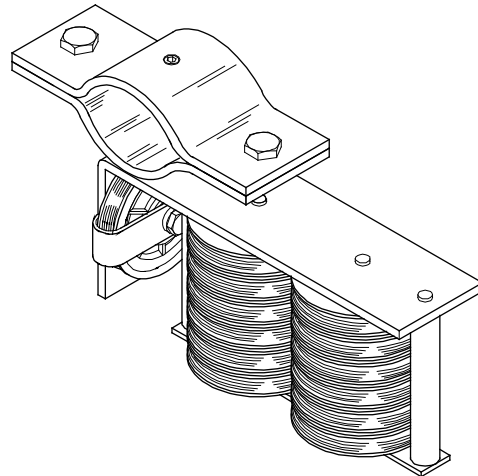
58S-1 - Mounts to 1" pipe.

58S-1.5 - Mounts to 1-1/2" pipe.



No. 48-6 LIFT PULLEY WITH 6 IDLERS

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

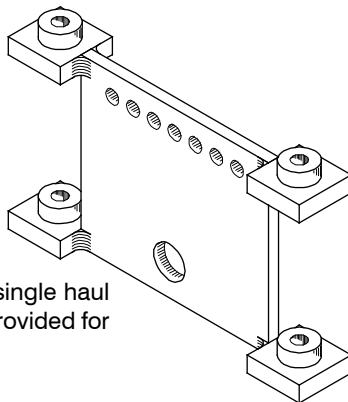


No. 48-12 LIFT PULLEY WITH 12 IDLERS

No. 48 lift 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

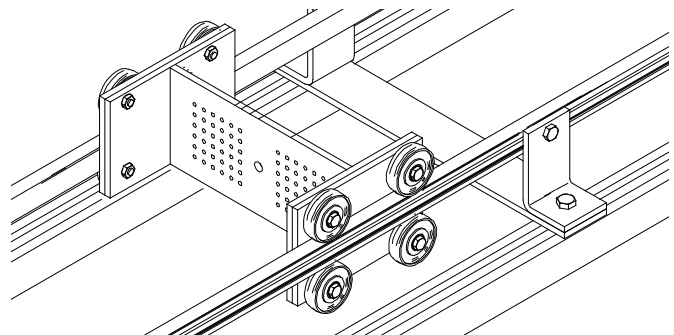
Clews combine lift lines into single haul line. Nylatron GS bushings provided for smooth, quiet operation.



42-6 - 6 lift lines. Working Load Limit: 150#

42-12 - 12 lift lines. Working Load Limit: 300#

For clews with higher working loads, please consult factory.



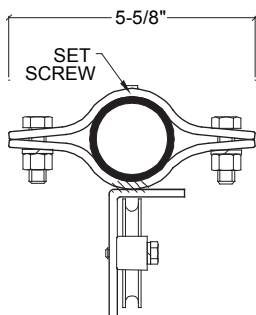
No. 43 ROLLER GUIDE CLEW

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

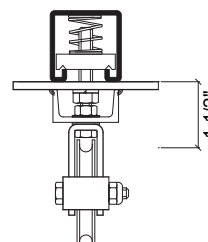
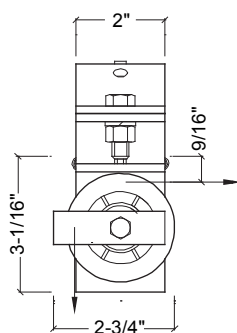
No. 43x15 - 15 foot clew travel. **No. 43x25** - 25 foot clew travel.

No. 43x20 - 20 foot clew travel. **No. 43x30** - 30 foot clew travel.

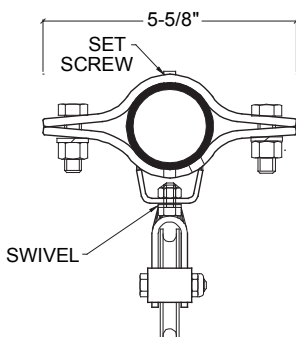
DIMENSION DRAWINGS



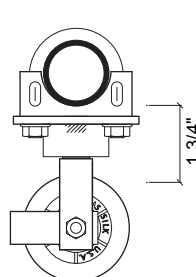
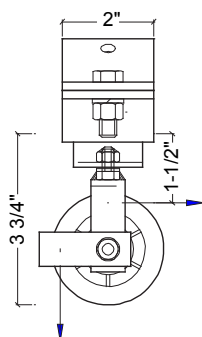
No. 48 Lift Curtain Pulley



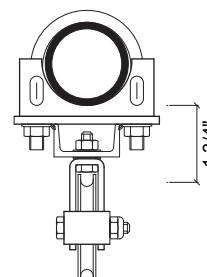
No. 58S Lift Curtain Swivel



No. 48S Lift Curtain Swivel

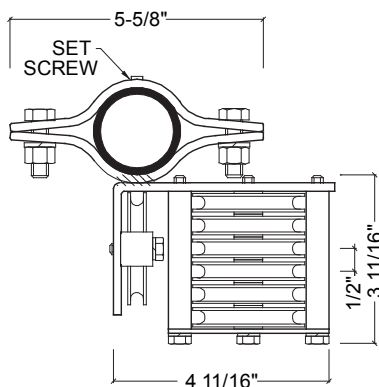


No. 58S-1
Lift Curtain Swivel

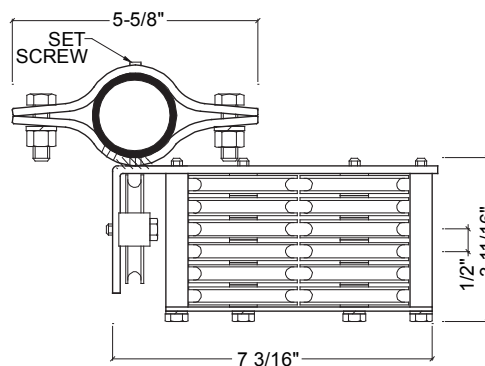
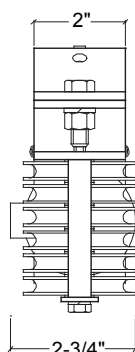


No. 58S-1.5
Lift Curtain Swivel

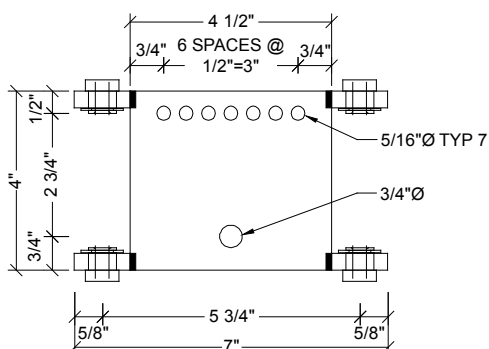
No. 58S Series Lift Curtain Swivel



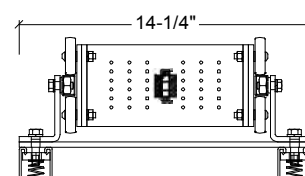
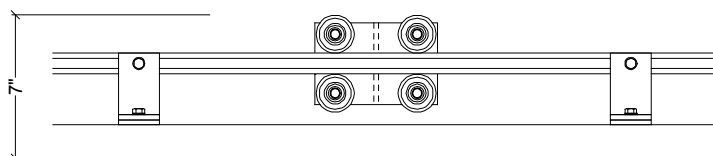
No. 48-6 Lift Pulley



No. 48-12 Lift Pulley



No. 42-6 Wire Guide Clew

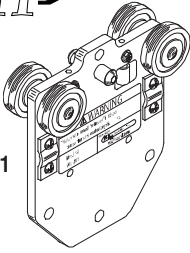


No. 43 Roller Guide Clew



MISCELLANEOUS TRACK HARDWARE

No. 451



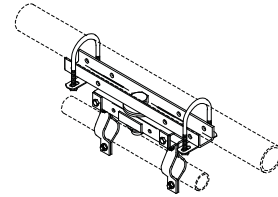
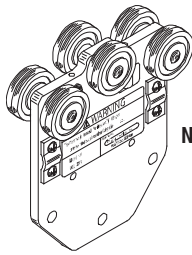
NO. 451 REALLY USEFUL CARRIER

4 urethane-tired sealed ball bearing wheels are riveted to machined black aluminum body for use with No. 410S or 410A Track. Carrier is provided with two Nylatron bearings integral to body to keep unit centered in the track assembly. Carrier body is provided with a complement of mounting holes to enable attachment of scenery and various devices.

No. 451A same as No. 451 plus third set of wheels to help prevent tipping of an unbalanced load.

Working Load Limit: 200#

No. 451A



NO. 6 PIVOT DEVICE

Heavy steel body U-bolts to pipe batten. Allows masking draperies to be rotated to any angle.

NO. 6B - black finish.

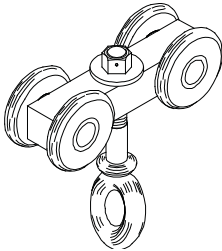
NO. 6X INDEXING PIVOT DEVICE

Pivot device with special plate to index rotation at 22-1/2 degree increments.

NO. 6XB - black finish.

All supplied with brackets for 1-3/8" O.D. pipe or tubing (6' max. recommended length).

Working Load Limit: 60 pounds.



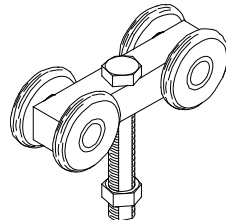
SCENERY CARRIER WITH EYE

4 steel ball bearing wheels riveted to machined steel body. 3/8" forged eyebolt swivels in body and provides attachment point for scenery.

Working Load Limit: 150#

No. 139BS - for 110S track.

No. 439BS - for 410S track.



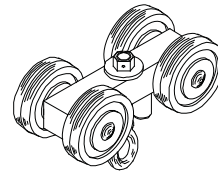
SCENERY CARRIER

4 steel ball bearing wheels riveted to machined steel body. 1/2" milled tap bolt provided for scenery attachment.

Working Load Limit: 150#

No. 140BS - for 110S track.

No. 440BS - for 410S track.

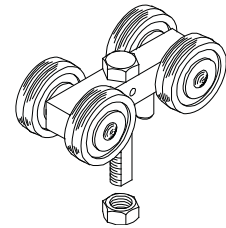


No. 449 URETHANE

SCENERY CARRIER WITH EYE

4 urethane-tired sealed ball bearing wheels riveted to machined steel body for use with No. 410S or 410A track. Carrier provided with 2 Nylatron bearings to keep unit centered in the track assembly. 5/16" forged eyebolt swivels in body and provides attachment point for scenery.

Working Load Limit: 200#

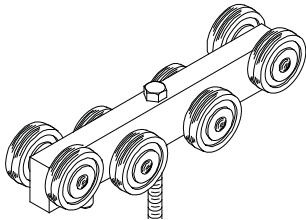


No. 450 URETHANE

SCENERY CARRIER

4 urethane-tired sealed ball bearing wheels riveted to machined steel body for use with No. 410S or 410A track. Carrier provided with 2 Nylatron bearings to keep unit centered in the track assembly. 1/2" milled pinned tap bolt is provided for scenery attachment.

Working Load Limit: 200#

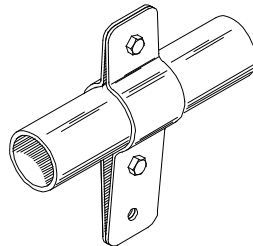


No. 450A URETHANE

SCENERY CARRIER

8 urethane-tired sealed ball bearing wheels riveted to machined steel body for use with No. 410S or 410A track. Carrier provided with 2 Nylatron bearings to keep unit centered in the track assembly. 3/8" bolt provided with 2 hex nuts and lock washer for scenery attachment.

Working Load Limit: 200#



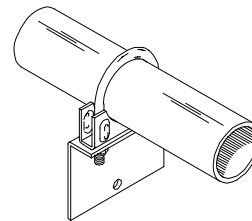
PIPE CLAMP

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 finish.

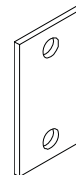


RIGHT ANGLE PIPE CLAMP

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

No. 435R - Zinc plated.

No. 435RB - Black finish.

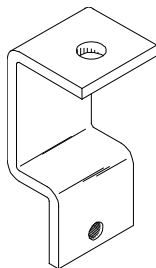


EXTENSION STRAP

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

No. 435X - Zinc plated.

No. 435XB - Black finish.



ROD SUSPENSION BRACKET

Formed 1/4" steel bracket with offset tab for suspending curtain track from 1/2" rod.

Working Load Limit: 150 pounds.

No. 448 - Zinc plated.

No. 448B - Black finish.



No. 442-2

CAST IRON SASH WEIGHT

2 pound smooth cast iron weight with eye.

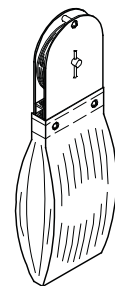


No. 447 SPLICE

1-9/16" X .120" steel tubing, 24" long, for use as internal sleeve for 1-1/2" Sch. 40 pipe batten. With 4 drilled holes and (4) 3/8-16 x 2-1/2" bolts and Nylock hex nuts.

No. 447A SPLICE

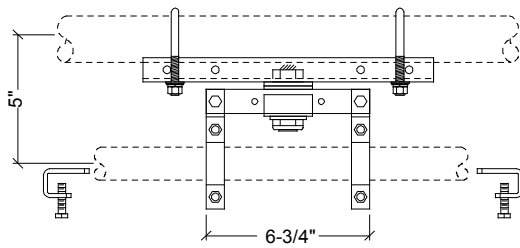
Same as 447 Splice except no attachment holes. (4) 3/8-16 x 2-1/2" bolts and Nylock hex nuts provided.



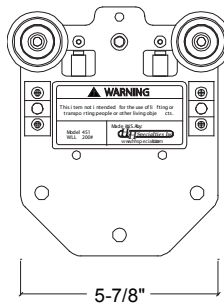
No. 643 SAND BAG TENSION PULLEY

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. Grooved for up to 1/2" operating line.

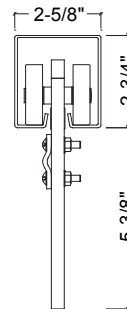
MISCELLANEOUS TRACK HARDWARE DIMENSIONS



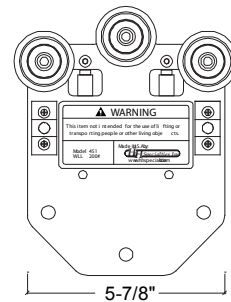
No. 6 Pivot Device



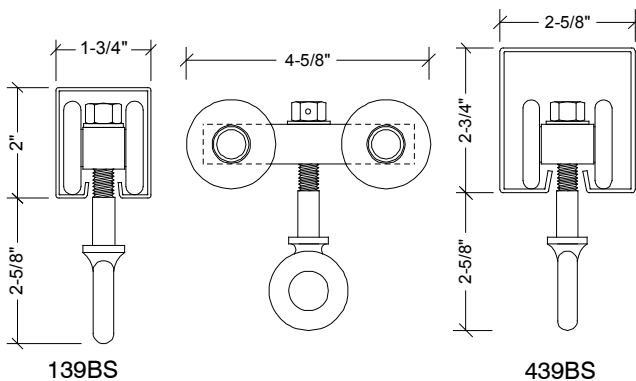
No. 451



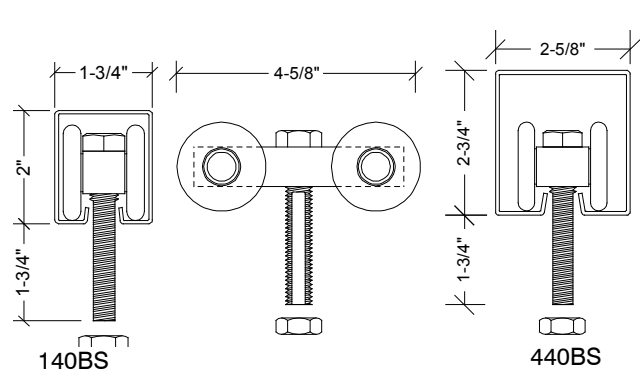
No. 451A



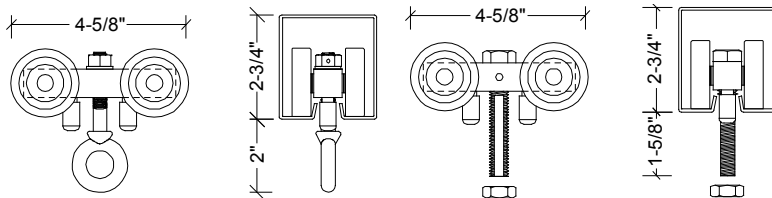
REALLY USEFUL CARRIERS



No. 139BS & 439BS Scenery Carrier

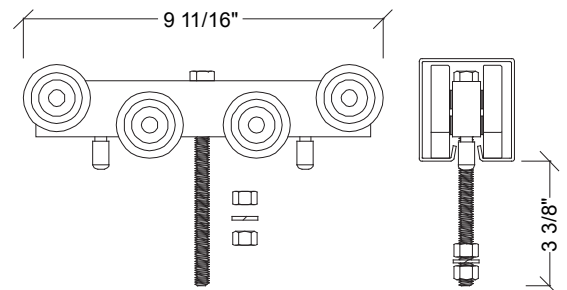


No. 140BS & 440BS Scenery Carrier

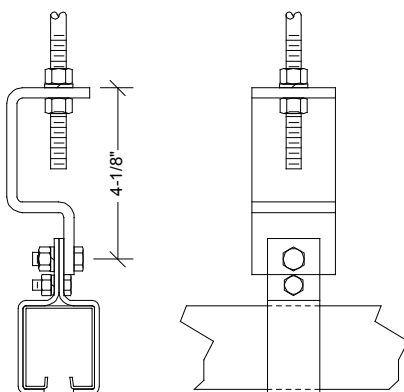


No. 449
Urethane Scenery Carrier

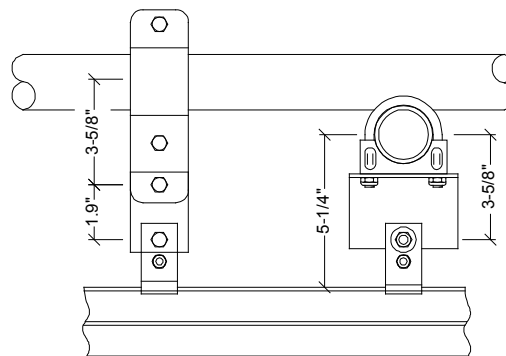
No. 450
Urethane Scenery Carrier



No. 450A
Urethane Scenery Carrier

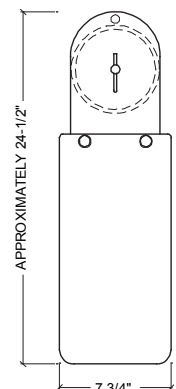


No. 448 Rod Suspension Hanger



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

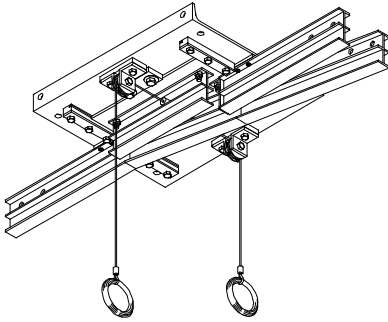
No. 435R
Pipe Clamp



No. 643
Sand Bag
Tension Pulley



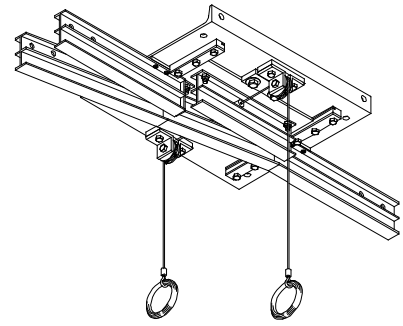
300 SERIES TRACK SWITCHING DEVICES



No. 343L - Switches between a straight track and a second track extending to the left.

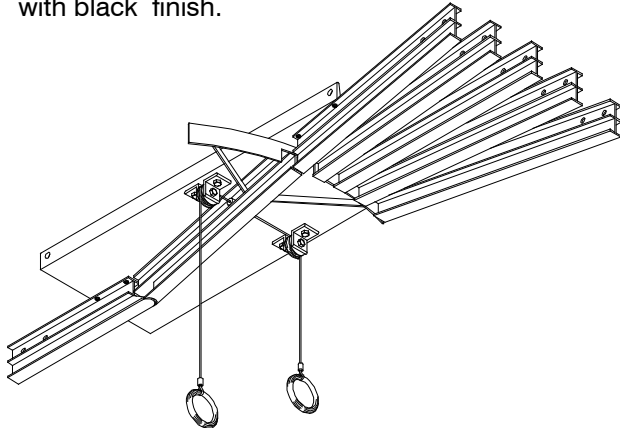
No. 343LB - Same as above with black finish.

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 precision machined steel base.

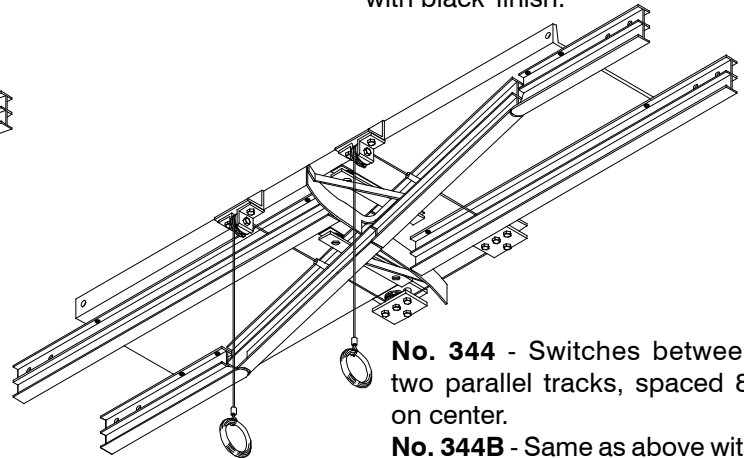


No. 343R - Switches between a straight track and a second track extending to the right.

No. 343RB - Same as above with black finish.



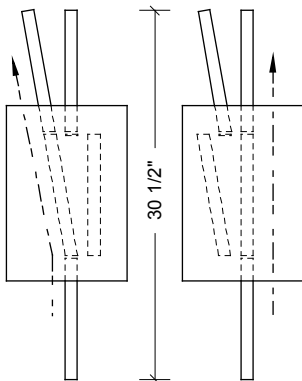
No. 343-5 - Switches from one to as many as five tracks. Not available in black finish.



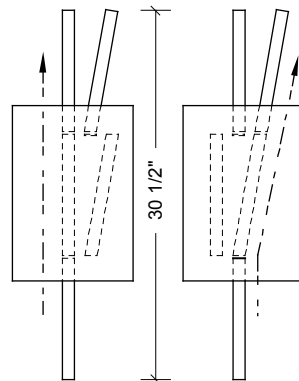
No. 344 - Switches between two parallel tracks, spaced 8" on center.

No. 344B - Same as above with black finish.

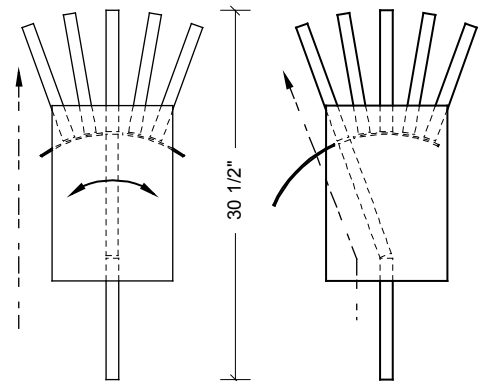
TRACK SWITCHING DEVICE OPERATING SCHEMATICS



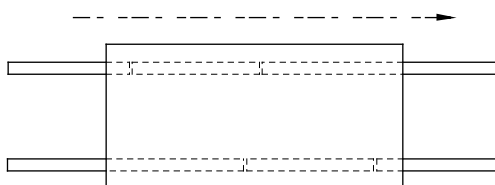
NO. 343L, 343LB LEFT SWITCHING DEVICE



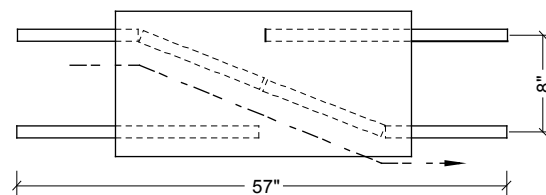
NO. 343R, 343RB RIGHT SWITCHING DEVICE



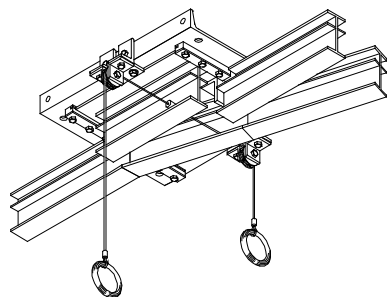
NO. 343-5 FAN SWITCHING DEVICE



NO. 344, 344B PARALLEL SWITCHING DEVICE



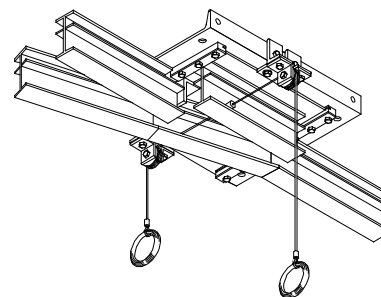
500 SERIES TRACK SWITCHING DEVICES



No. 543L

Switches between a straight track and a second track extending to the left.

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. 510 track sections mounted to a precision machined steel base.

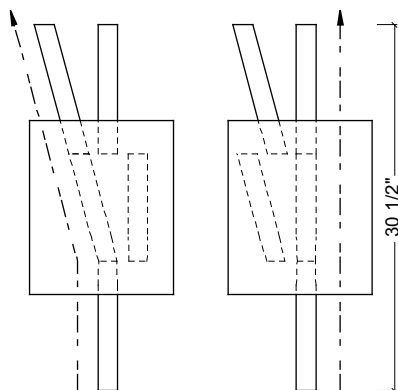


No. 543R

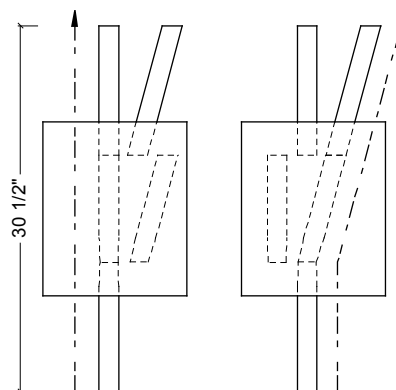
Switches between a straight track and a second track extending to the right.

Note: 500 Series Switches are NOT offered in BLACK.

TRACK SWITCHING DEVICE OPERATING SCHEMATICS



No. 543L LEFT SWITCHING DEVICE

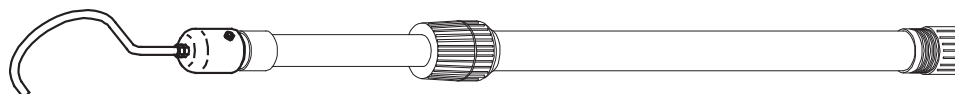


No. 543R RIGHT SWITCHING DEVICE



No. 343PH POSITIONING POLE HOOK

Positioning Pole Hook attaches to standard telescoping extension handle equipped with male thread. Manufactured from cold finish steel and painted High Visibility Yellow. Extension handles available from your local hardware store.



Shown installed on extension handle (handle not included with product)



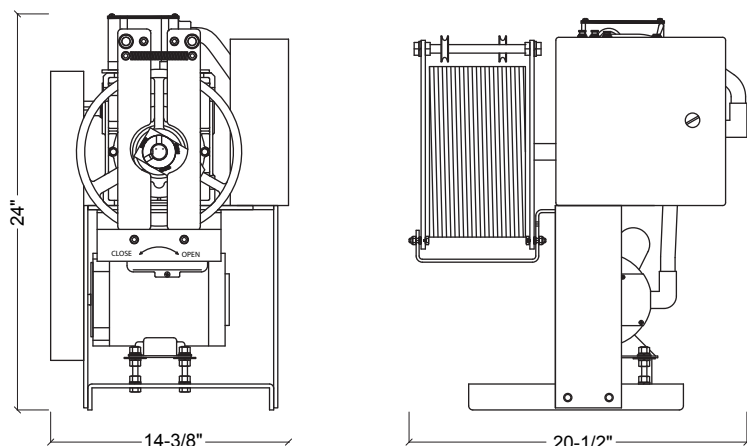
CURTAIN MACHINE SELECTION GUIDE

H & H Specialties manufactures a complete line of machines for motorizing stage and acoustic curtains. Draw machines for operating curtain tracks are available with grooved winding drums, traction drives, or sprocket drives. Lift Machines for masking and lift 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 single phase motor is instantly reversing, eliminating the need for safety time-delay relays. All curtain machines are equipped with low voltage control circuits.

Most curtain machines may be modified with optional features as indicated on the individual catalog pages. Contact the factory for further information.

MODEL NO.	DRIVE STYLE	MACHINE TYPE	HP	INPUT VOLTS	PHASE	AMPS	OUTPUT TORQUE (lb-in)	CABLE SPEED (ft/min)	LIFT CAPACITY (lbs)	MAX. TRAVEL (ft)
454	Drum	Draw	1/3	115	1	4.8	487	89	-	45
			1/2	115	1	6.4	731	89	-	45
			3/4	115	1	11.2	1035	94	-	45
			1	115	1	13.2	1054	128	-	45
454VS	Drum	Variable Speed Draw	1/2	115	1	12.0	527	26-130	-	45
			1	115	1	15.0	1054	26-130	-	45
455AV	Sprocket	Masking	1/3	115	1	4.8	442	36	125	12
455	Sprocket	Lift	3/4	115	1	11.5	707	64	220	32
			1	115	1	13.5	943	64	295	32
			1-1/2	208	3	6.0	1480	99	370	40
459	Traction	Draw	1/3	115	1	4.8	254	78	-	Unlimited
			1/2	115	1	6.4	381	78	-	Unlimited
			3/4	115	1	11.2	571	83	-	Unlimited
			1	115	1	13.2	695	99	-	Unlimited
462	Traction	Track-Mounted Draw	1/3	115	1	4.8	254	78	-	Unlimited
			1/2	115	1	6.4	381	78	-	Unlimited
			3/4	115	1	11.2	571	83	-	Unlimited
			1	115	1	13.2	695	99	-	Unlimited
462VS-1	Traction	Variable Speed Draw	1	115	1	15.0	574	26-130	-	Unlimited
462VS-2	Traction	Variable Speed Draw	2	208-240	3	8.6	634	52-260	-	Unlimited
463	Traction	Draw	1/2	115	1	6.4	381	78	-	Unlimited
			3/4	115	1	11.2	571	83	-	
466	Drum	Draw	1/2	115	1	6.4	471	85	-	80
			3/4	115	1	11.2	707	90	-	80
			1	115	1	13.2	943	90	-	80
466VS-1	Drum	Variable Speed Draw	1	115	1	15.0	761	25-126	-	80
468	Drum	Lift	3/4	115	1	11.5	834	73	185	36
			1	115	1	13.5	1112	73	250	36
			1-1/2	208	3	6.0	1480	111	330	45

MODEL 454 DRAW CURTAIN MACHINE

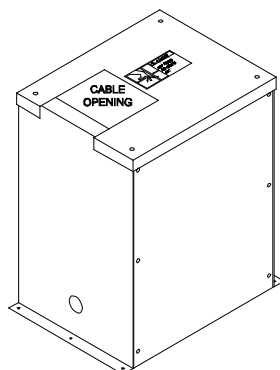


STANDARD FEATURES:

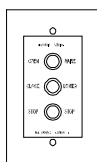
- Instantly reversing motor.
- Rotary limit switch.
- Cable tension device.
- Magnetic reversing starter.
- Low voltage control circuit.
- 10" x 5" drum grooved for 3/16" cable.
- Temporary power supply cord.
- Remote push button control station.

OPTIONAL FEATURES:

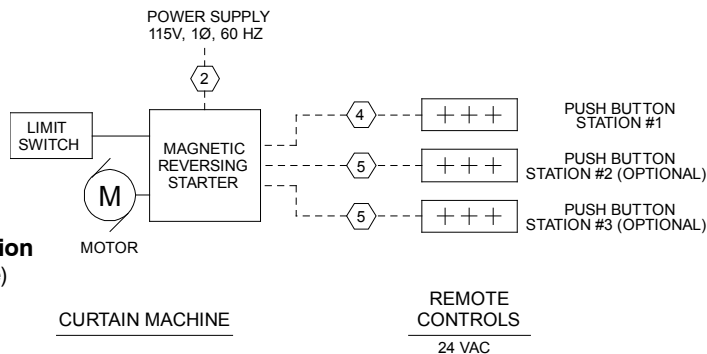
- Wireless remote control.
- Three phase motor and controls.
- Motor shaft encoder.
- 3 or 4-stop limits and controls.
- 491x454 Curtain Machine Enclosure.
- Other Cable Speeds.



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



RISER DIAGRAM



No. 491x454 Curtain Machine Enclosure

(optional) 24" wide x 27" high x 17-1/2" deep.

Contact factory for compatibility with optional features.

() DESIGNATES NUMBER OF FIELD CONDUCTORS REQUIRED

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 on extended output shaft of gear reducer and secured by keyed steel hub. Install spring equipped cable tension device to maintain proper tension and guide operating cable.

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 enclosed 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, transformer and fuses to provide for reversing operation. Low voltage 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 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.

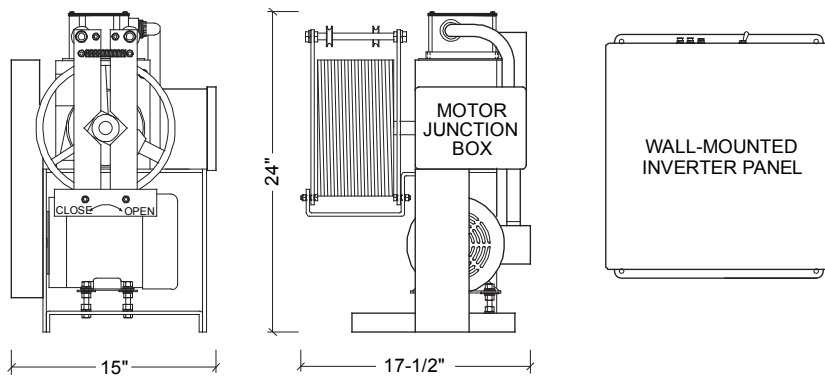
Supply remote control station consisting of three pushbuttons mounted to stainless steel plate to fit standard single-gang switch box. Remote controls shall operate at 24 VAC.

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

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



MODEL 454VS VARIABLE SPEED CURTAIN MACHINE



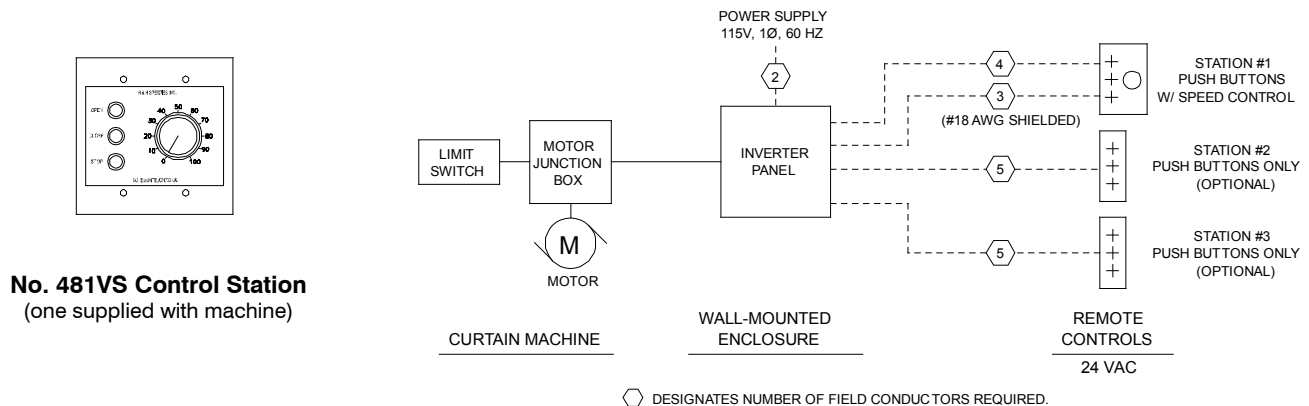
STANDARD FEATURES:

- Variable Frequency AC Drive.
- Low voltage control circuit.
- Rotary limit switch.
- Cable tension device.
- 10" x 5" drum grooved for 3/16" cable.
- Temporary power supply cord.
- Remote control station.

OPTIONAL FEATURES:

- 3 or 4-stop limits and controls.
- 491x454 Curtain Machine Enclosure.
- Motor shaft encoder.

RISER DIAGRAM



VARIABLE SPEED 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 26 to 130 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 on extended output shaft of gear reducer and secured by keyed steel hub. Install spring equipped cable tension device to maintain proper tension and guide operating cable.

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 HP, 230V three phase motor connected to reducer with enclosed V-belt drive.

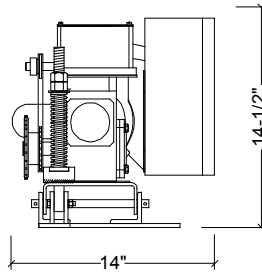
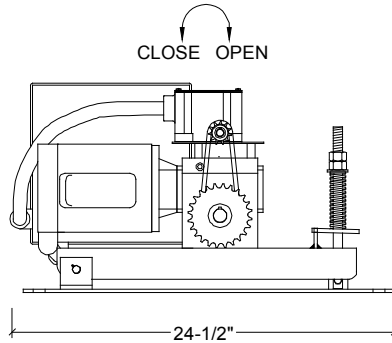
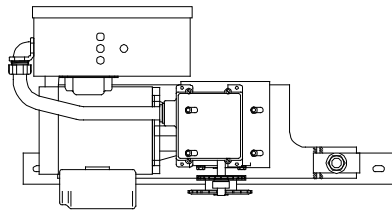
Inverter cabinet shall contain a microprocessor-based adjustable frequency AC drive, RFI filter, and control relays for automatic operation between limit switches. The drive output voltage/frequency curve characteristics shall be factory set to provide smooth operation, high efficiency and low noise. Drive parameters, including acceleration and deceleration times, shall be programmable using a digital keypad and LED display. Terminal inputs shall be provided for connection of remote pushbutton and frequency control. Control voltage to remote pushbuttons shall be 24 VAC. 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 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.

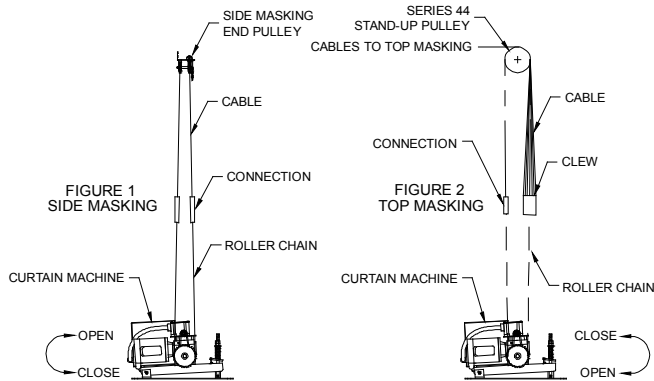
Model No. 454VS-1 *as manufactured by H & H Specialties Inc. *1/2 HP also available

MODEL 455AV-1/3 MASKING MACHINE



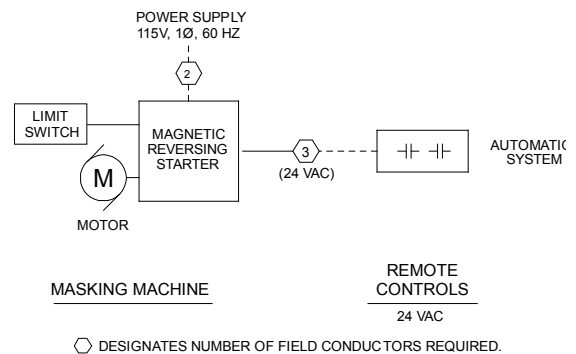
STANDARD FEATURES:

- Instantly reversing motor.
- Rotary limit switch.
- Magnetic reversing starter.
- Low voltage control circuit.
- #41 Roller chain sprocket.
- 10' #41 Roller chain.
- 5' Temporary power supply cord.



Typical Schematics

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 36 feet per minute. Secure machine to heavy steel base with spring equipped 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 shafts 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, permanent split 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.

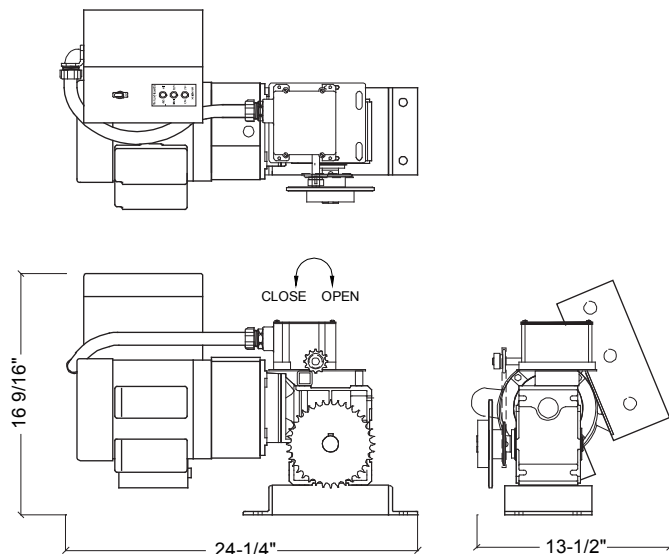
Starter cabinet shall be located at the machine, containing all the necessary contactors, transformers, circuit breakers, and fuses to provide for reversing operation. Controls shall operate at 24 VAC, incorporating an electrical latch to hold run circuit until limit switch is reached. Provide mechanical 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 enclosure. Switch shall employ 18:1 worm gear reduction and shall operate two independently adjustable cams. Each cam shall activate a separate contact block for open and close positions.

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



MODEL 455 LIFT CURTAIN MACHINE



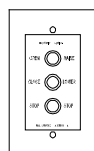
STANDARD FEATURES:

- Instantly reversing motor.
- Magnetic disc brake.
- Rotary limit switch.
- Magnetic reversing starter.
- Low voltage control circuit.
- #40 roller chain sprocket (3/4 HP, 1 HP).
- #50 roller chain sprocket (1-1/2 HP).
- Temporary power supply cord.
- Remote push button station.

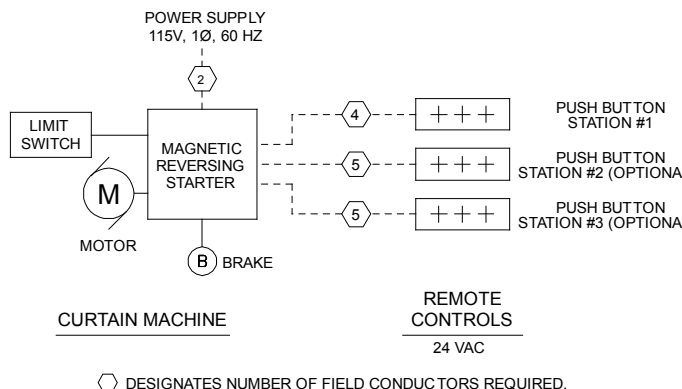
OPTIONAL FEATURES:

- Three phase motor and controls.
- 3 or 4-stop limits and controls.
- Other cable speeds.
- Roller chain ordered separately.

RISER DIAGRAM



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



LIFT CURTAIN MACHINE:

Sprocket drive automatic curtain machine shall be capable of operating curtain between preset open and close positions at a speed of 61 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 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. Provide ANSI #40 roller chain sprocket keyed to output shaft of gear reducer with standard travel of 30 feet..

Unit shall be driven by 3/4 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 lb-ft shall be integral to the gearmotor.

Starter cabinet shall be located at the machine, containing all the necessary contactors, circuit breakers, overloads, transformer and fuses to provide for reversing operation. Low voltage 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.

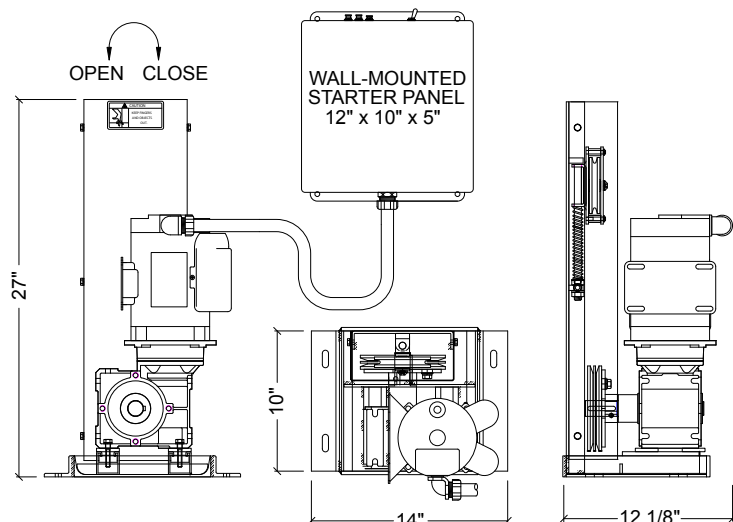
Provide two-stop mechanical, rotating shaft limit switch in separate enclosure. Switch shall employ 72:1 worm gear reduction and shall operate two independently adjustable cams. Each cam shall activate a separate contact block for open and close positions.

Supply remote control station consisting of three pushbuttons mounted to stainless steel plate to fit standard single-gang switch box. Remote controls shall operate at 24 VAC.

Model No. 455-3/4* as manufactured by H & H Specialties Inc.

*1 HP, and 1-1/2 HP motors also available. Consult factory for 1-1/2 HP, three phase machine specifications.

MODEL 459 DRAW CURTAIN MACHINE



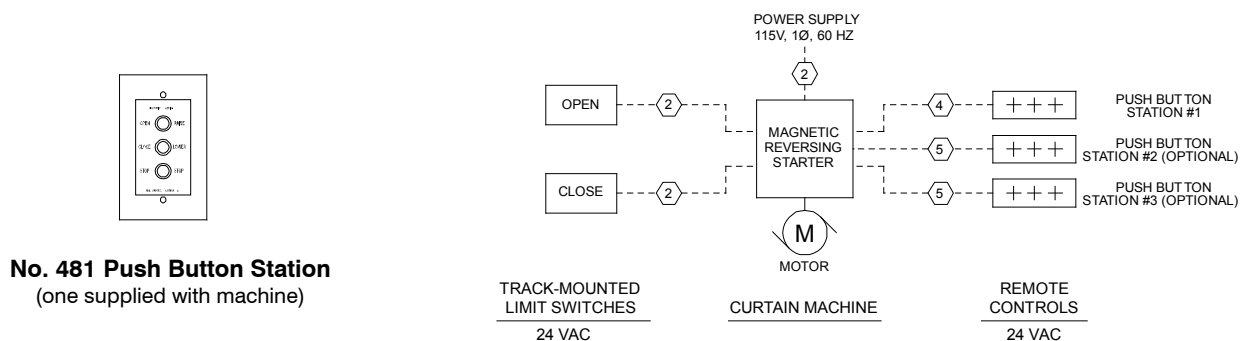
STANDARD FEATURES:

- Integral enclosure.
- Instantly reversing motor.
- Track mounted limit switches.
- Magnetic reversing starter.
- Low voltage control circuit.
- Double V-groove drive pulley.
- Spring equipped idler.
- Temporary power supply cord.
- Remote push button station.

OPTIONAL FEATURES:

- Three phase motor and controls.
- 3 or 4-stop limits and controls.
- Variable speed drive and controls.
- Slower speeds for use with acoustic curtains.
- Magnetic disc brake.
- Motor shaft encoder.

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 equipped, Nylatron ball bearing idler to maintain cable tension. Drive pulley and tension device shall be protected by a removable steel enclosure.

Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined gearing shall operate in a synthetic oil bath within a factory-sealed cast aluminum housing requiring no maintenance. 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 a separate, wall-mounted enclosure, containing all the necessary contactors, circuit breakers, overloads, transformer, and fuses to provide for reversing operation. Low voltage 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. Limit switch circuits shall operate at 24 VAC.

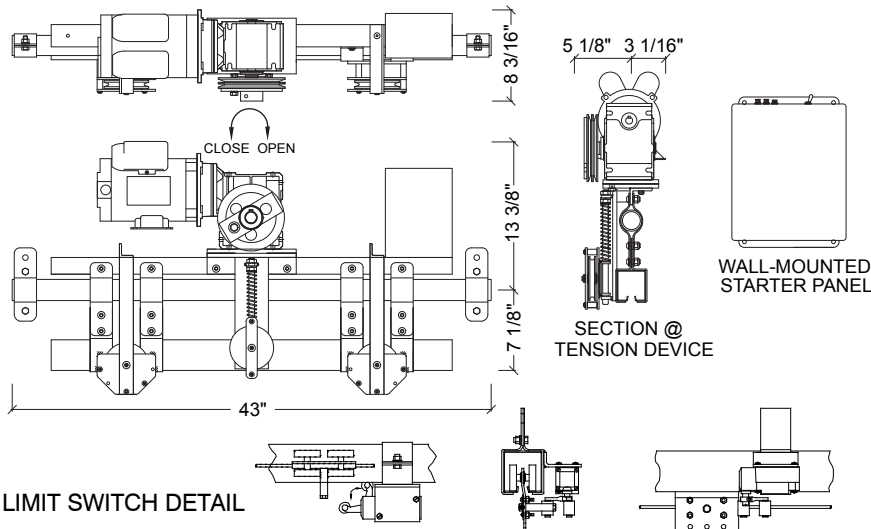
Supply remote control station consisting of three pushbuttons mounted to stainless steel plate to fit standard single-gang switch box. Remote controls shall operate at 24 VAC.

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

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



MODEL 462 TRACK MOUNTED CURTAIN MACHINE



STANDARD FEATURES:

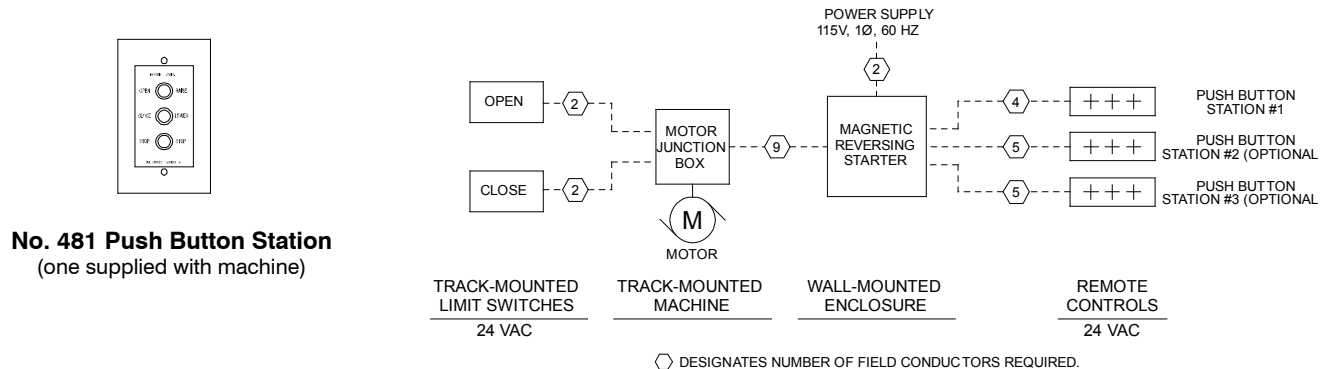
- Instantly reversing motor.
- Track mounted limit switches.
- Magnetic reversing starter.
- Low voltage control circuit.
- Double V-groove drive pulley.
- Spring equipped idler.
- Temporary power supply cord.
- Remote push button station.

OPTIONAL FEATURES:

- Three phase motor and controls.
- Wireless remote control.
- Motor shaft encoder.
- 3 or 4-stop limits and controls.
- Other cable speeds.

Shown mounted to 400 Series Track. May be mounted to other series tracks.
Specify track model when ordering.

RISER DIAGRAM



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

TRACK MOUNTED 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" Nylatron 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 equipped, Nylatron ball bearing idler to maintain cable tension.

Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined gearing shall operate in a synthetic oil bath within a factory-sealed cast aluminum housing requiring no maintenance. 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, wall-mounted enclosure containing all the necessary contactors, circuit breakers, overloads, transformer, and fuses to provide for reversing operation. Low voltage 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.

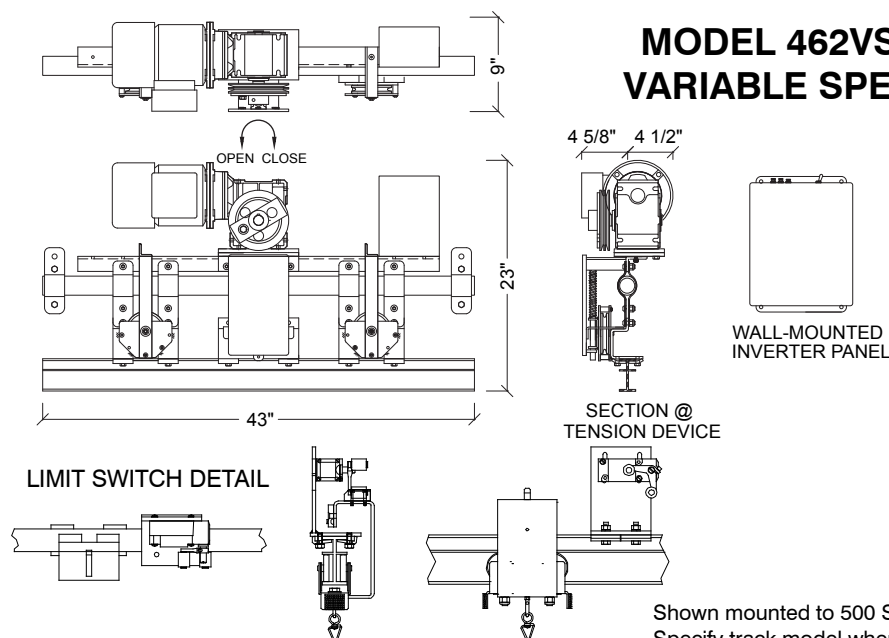
Provide two track mounted limit switch assemblies to automatically preset desired travel of curtain between open and close positions. Limit switch circuits shall operate at 24 VAC.

Supply remote control station consisting of three pushbuttons mounted to stainless steel plate to fit standard single-gang switch box. Remote controls shall operate at 24 VAC.

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

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

MODEL 462VS-1 TRACK MOUNTED, VARIABLE SPEED CURTAIN MACHINE



STANDARD FEATURES:

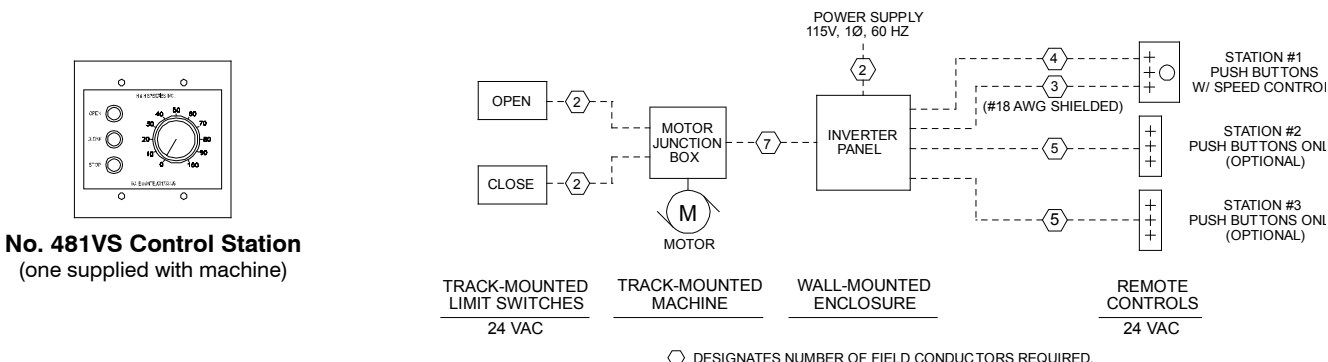
- Variable frequency AC drive.
- Low voltage control circuit.
- Track mounted base assembly.
- Double V-groove drive pulley.
- Spring equipped idler.
- Track mounted limit switches.
- Temporary power supply cord.
- Remote control station.

OPTIONAL FEATURES:

- 3 or 4-stop limits and controls.
- Motor shaft encoder.

Shown mounted to 500 Series Track. May be mounted to other series tracks. Specify track model when ordering.

RISER DIAGRAM



TRACK MOUNTED, VARIABLE SPEED DRAW CURTAIN MACHINE:

Traction drive automatic curtain machine shall be capable of operating curtain between preset open and close positions at a variable cable speed from 26 to 130 feet per minute at full motor torque. Machine shall be secured to fabricated steel base designed to attach onto 1-1/2" pipe batten above curtain track. Incorporate two 4" Nylatron 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 equipped, Nylatron ball bearing idler to maintain cable tension.

Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined gearing shall operate in a synthetic oil bath within a factory-sealed cast aluminum housing requiring no maintenance. The gear reducer shall have a AGMA service factor of at least 1.0 for continuous operation.

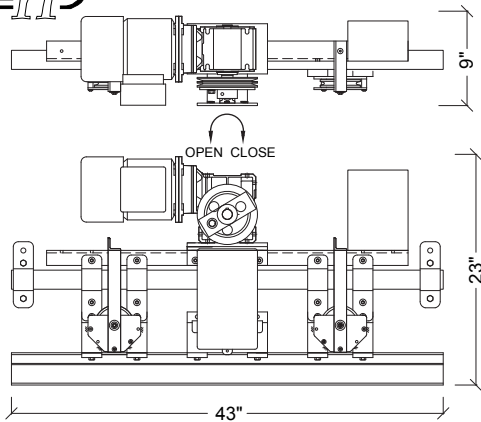
Unit shall be driven by 1 HP, 230V three phase motor directly coupled to the input shaft of the reducer. Install junction box on motor with terminal blocks for connecting motor leads and limit switches.

Inverter cabinet shall contain a microprocessor-based adjustable frequency AC drive, RFI filter, and control relays for automatic operation between limit switches. The drive output voltage/frequency curve characteristics shall be factory set to provide smooth operation, high efficiency and low noise. Drive parameters, including acceleration and deceleration times, shall be programmable using a digital keypad and LED display. Terminal inputs shall be provided for connection of remote pushbutton and frequency control. Control voltage to remote pushbuttons shall be 24 VAC. 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 track mounted limit switch assemblies to automatically preset desired travel of curtain between open and close positions. Control voltage to limit switches shall be 24 VAC.

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. Remote controls shall operate at 24 VAC.

Model No. 462VS-1 as manufactured by H & H Specialties Inc.



MODEL 462VS-2 TRACK MOUNTED, VARIABLE SPEED CURTAIN MACHINE

4 5/8" 4 1/2"



WALL-MOUNTED
INVERTER PANEL

SECTION @
TENSION DEVICE

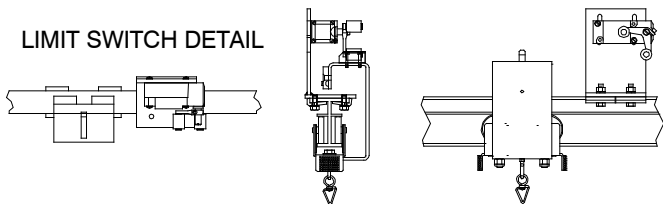
STANDARD FEATURES:

- Variable frequency AC drive.
- Low voltage control circuit.
- Track mounted base assembly.
- Double V-groove drive pulley.
- Spring equipped idler.
- Track mounted limit switches.
- Remote control station.

OPTIONAL FEATURES:

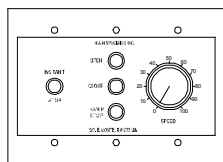
- Motor shaft encoder.

LIMIT SWITCH DETAIL

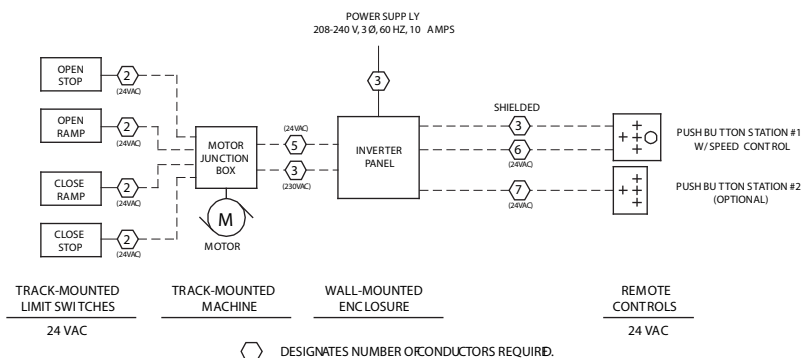


Shown mounted to 500 Series Track. May be mounted to 400 Series Tracks. Specify track model when ordering.

RISER DIAGRAM



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



TRACK MOUNTED, VARIABLE SPEED DRAW CURTAIN MACHINE:

Traction drive automatic curtain machine shall be capable of operating curtain between preset open and close positions at a variable cable speed from 52 to 260 feet per minute at full motor torque. Machine shall be secured to fabricated steel base designed to attach onto 1-1/2" pipe batten above curtain track. Incorporate two 4" Nylatron 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 equipped, Nylatron ball bearing idler to maintain cable tension.

Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined gearing shall operate in a synthetic oil bath within a factory-sealed cast aluminum housing requiring no maintenance. The gear reducer shall have a AGMA service factor of at least 1.0 for continuous operation.

Unit shall be driven by 2 HP, 230V three phase motor directly coupled to the input shaft of the reducer. Install junction box on motor with terminal blocks for connecting motor leads and limit switches.

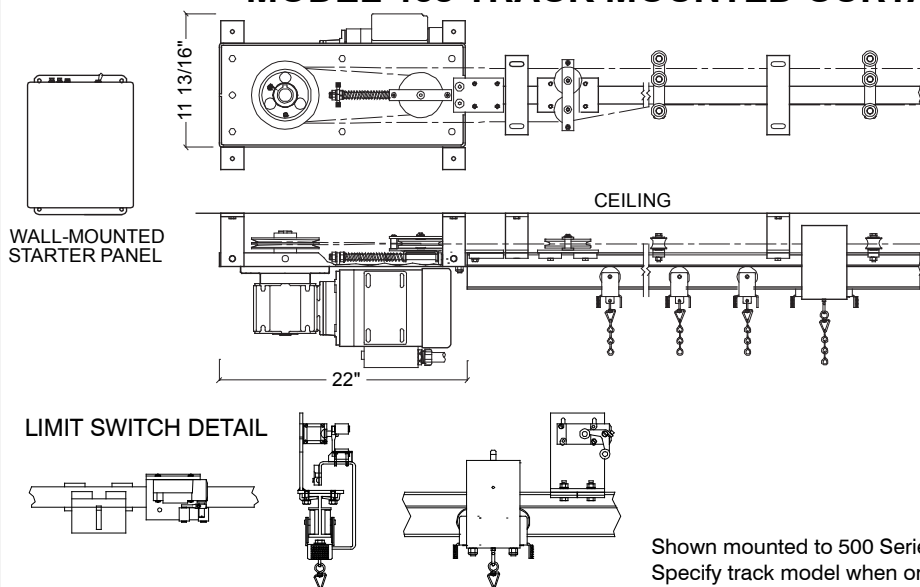
Inverter cabinet shall contain a microprocessor-based adjustable frequency AC drive and programmable control relays for automatic operation between limit switches. The drive output voltage/frequency curve characteristics shall be factory set to provide smooth operation, high efficiency and low noise. Drive parameters, including acceleration and deceleration times, shall be programmable using a digital keypad and LED display. Mount four pushbuttons on cabinet for local open, close, ramped stop and instant stop control. Inverter cabinet shall be wall mounted, requiring 208-240 VAC, three phase input, and field wired to junction box on machine and remote control station. Numbered terminals shall be provided for all field wire connections. Inverter cabinet shall include properly sized external braking resistors to allow the curtain machine to stop instantly without overloading the drive or requiring a mechanical brake.

Provide four track mounted limit switch assemblies. Deceleration at each end of travel shall be initiated by a "ramp" limit switch that causes the machine to slow to a preset speed and continue to operate until the "stop" limit switch is actuated. The machine shall stop at the same location, regardless of the speed of operation.

Supply remote control station consisting of four pushbuttons and one rotary speed control pot mounted to stainless steel plate to fit standard three-gang switch box. Remote controls and limit switches shall operate at 24 VAC.

Model No. 462VS-2 as manufactured by H & H Specialties Inc.

MODEL 463 TRACK MOUNTED CURTAIN MACHINE



STANDARD FEATURES:

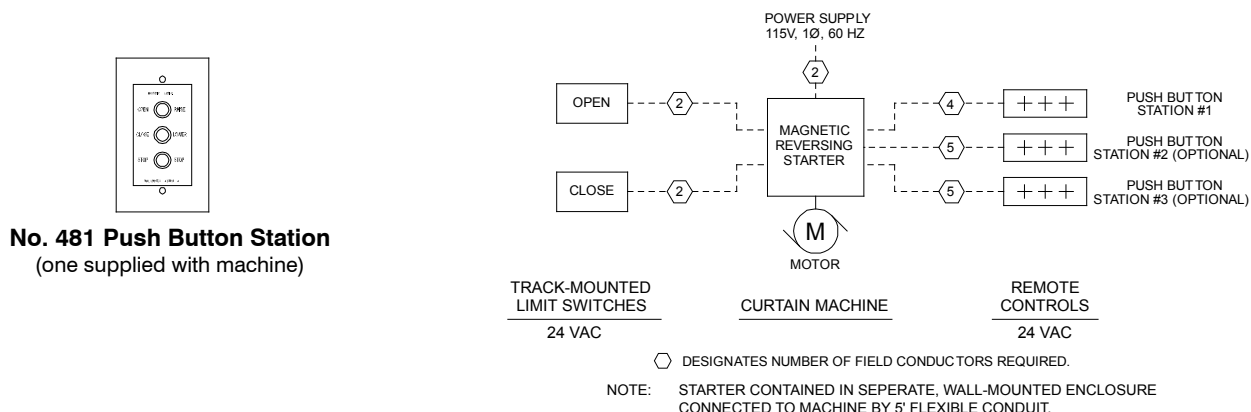
- Instantly reversing motor.
- Track mounted limit switches.
- Magnetic reversing starter.
- Low voltage control circuit.
- Double V-groove drive pulley.
- Spring equipped idler.
- Temporary power supply cord.
- Remote push button station.

OPTIONAL FEATURES:

- Three phase motor and controls.
- Wireless remote control.
- Motor shaft encoder.
- 3 or 4-stop limits and controls.
- Other cable speeds.

Shown mounted to 500 Series Track. May be mounted to 400 Series Track. Specify track model when ordering.

RISER DIAGRAM



TRACK MOUNTED 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" Nylatron 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 equipped, Nylatron ball bearing idler to maintain cable tension.

Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined gearing shall operate in a synthetic oil bath within a factory-sealed cast aluminum housing requiring no maintenance. 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.

Starter cabinet shall be a seperate, wall-mounted enclosure, containing all the necessary contactors, circuit breakers, overloads, transformer, and fuses to provide for reversing operation. Low voltage 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. Limit switch circuits shall operate at 24 VAC.

Supply remote control station consisting of three pushbuttons mounted to stainless steel plate to fit standard single-gang switch box. Remote controls shall operate at 24 VAC.

Model No. 462-1/2* as manufactured by H & H Specialties Inc.

* 3/4 HP motor also available.



MODEL 466 DRAW CURTAIN MACHINE

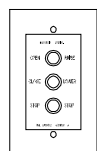
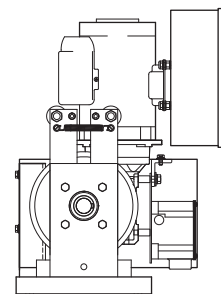
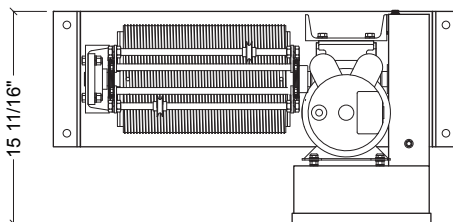
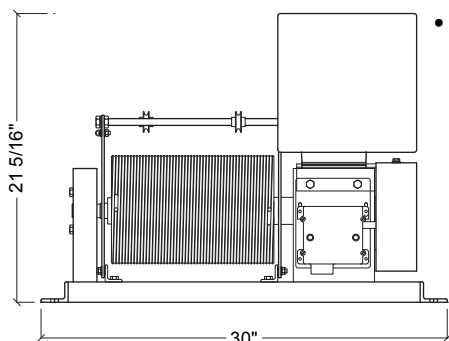
STANDARD FEATURES:

- Instantly reversing motor.
- Rotary limit switch.
- Magnetic reversing starter.

- Low voltage control circuit.
- 8" x 12" grooved cable drum.
- Cable tension device.
- Remote push button station.
- Temporary power supply cord.

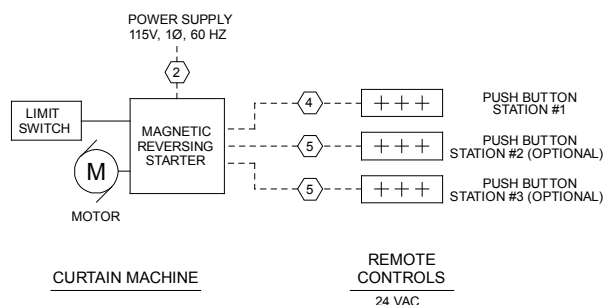
OPTIONAL FEATURES:

- 3 or 4 stop limits & controls.
- Three phase motor & controls.
- Motor shaft encoder.



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

RISER DIAGRAM



⬡ DESIGNATES NUMBER OF FIELD CONDUCTORS REQUIRED.

DRAW CURTAIN MACHINE:

Automatic draw curtain machine shall be capable of operating curtain between preset open and close positions at a speed of 85 feet per minute. Precision machined steel winding drum shall be directly coupled to gearmotor and mounted to heavy steel channel base.

Provide helically-grooved 8" diameter drum 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 equipped cable tension device onto drum base to maintain proper tension and guide operating cable.

Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined gearing shall operate in a synthetic oil bath within a factory-sealed cast aluminum housing requiring no maintenance. 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, transformer and fuses to provide for reversing operation. Low voltage 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.

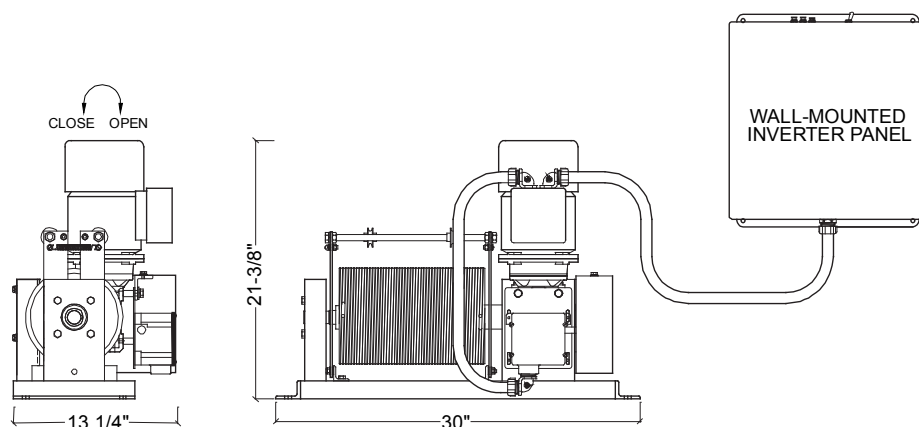
Provide two-stop mechanical, rotating shaft limit switch in separate enclosure. Switch shall employ 72:1 worm gear reduction and shall operate two independently adjustable cams. Each cam shall activate a separate contact block for open and close positions.

Supply remote control station consisting of three pushbuttons mounted to stainless steel plate to fit standard single-gang switch box. Remote controls shall operate at 24 VAC.

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

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

MODEL 466VS DRAW CURTAIN MACHINE



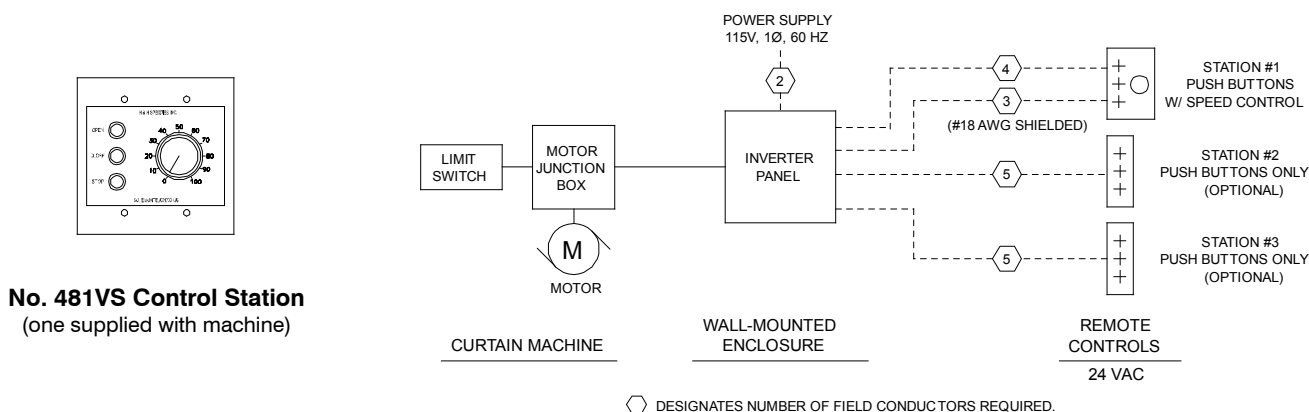
STANDARD FEATURES:

- Variable frequency AC drive.
- Low voltage control circuit.
- 8" x 12" grooved cable drum.
- Cable tension device.
- Remote control station.
- Temporary power supply cord.

OPTIONAL FEATURES:

- 3 or 4 stop limits & controls.
- Motor shaft encoder.

RISER DIAGRAM



DRAW CURTAIN MACHINE:

Automatic draw curtain machine shall be capable of operating curtain between preset open and close positions at a variable cable speed from 25 to 126 feet per minute at full motor torque. Precision machined steel winding drum shall be directly coupled to gearmotor and mounted to heavy steel channel base.

Provide helically-grooved 8" diameter drum 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 equipped cable tension device onto drum base to maintain proper tension and guide operating cable.

Gear reducer shall be single reduction worm gear type designed for continuous duty. Precision machined gearing shall operate in a synthetic oil bath within a factory-sealed cast aluminum housing requiring no maintenance. The gear reducer shall have a AGMA service factor of at least 1.0 for continuous operation.

Unit shall be driven by 1 HP, 230V three phase motor directly coupled to the input shaft of the reducer. Install junction box on motor with terminal blocks for connecting motor leads and limit switches.

Inverter cabinet shall contain a microprocessor-based adjustable frequency AC drive, RFI filter, and control relays for automatic operation between limit switches. The drive output voltage/frequency curve characteristics shall be factory set to provide smooth operation, high efficiency and low noise. Drive parameters, including acceleration and deceleration times, shall be programmable using a digital keypad and LED display. Terminal inputs shall be provided for connection of remote pushbutton and frequency control. Control voltage to remote pushbuttons shall be 24 VAC. 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 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 and one rotary speed control pot mounted to stainless steel plate to fit standard double-gang switch box.

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



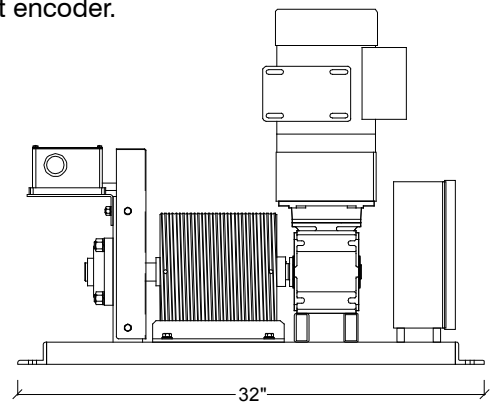
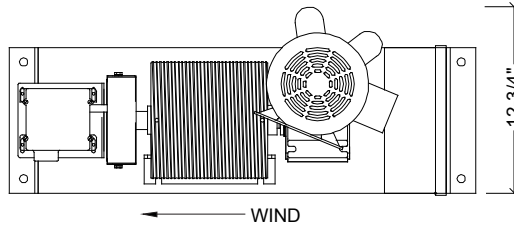
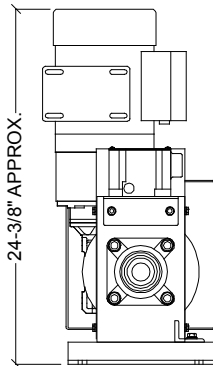
MODEL 468 LIFT CURTAIN MACHINE

STANDARD FEATURES:

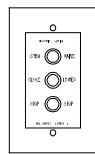
- Instantly reversing motor.
- Rotary limit switch.
- Magnetic reversing starter.
- Low voltage control circuit.
- Magnetic disc brake.
- 12" long grooved cable drum.
- Temporary power supply cord.
- Remote push button station.

OPTIONAL FEATURES:

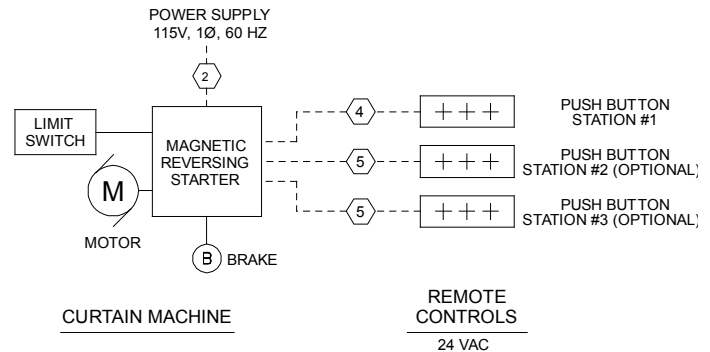
- Three phase motor & controls.
- Other cable speeds (lift capacity will vary).
- Motor shaft encoder.



RISER DIAGRAM



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



○ DESIGNATES NUMBER OF FIELD CONDUCTORS REQUIRED.

LIFT CURTAIN MACHINE:

Automatic lift curtain machine shall be capable of operating curtain between preset open and close positions at a speed of 73 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 36 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 gearing shall operate in a synthetic oil bath within a factory-sealed cast aluminum housing requiring no maintenance. The gear reducer shall have a AGMA service factor of at least 1.0 for continuous operation.

Unit shall be driven by 3/4 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, transformer and fuses to provide for reversing operation. Low voltage 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 enclosure. Switch shall employ 36:1 worm gear reduction and operate two independently adjustable cams. Each cam shall activate a separate contact block for open and close positions. Limit switch circuits shall operate at 24 VAC.

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

Model No. 468-3/4* as manufactured by H & H Specialties Inc.

* 1 HP, and 1-1/2 HP motors also available. Consult factory for 1-1/2 HP, three phase machine specifications.

CURVED TRACKS

Our catalog suggests that whenever possible, the layout of a curved track be designed with a radius of 4 feet or larger. While some tracks may operate at a radius of 2 feet, there are many trade-offs that must be considered when doing so. These include difficulty with operation, additional maintenance requirements in the future, and shorter life expectancy.

There are two words that must not be used interchangeably when discussing or designing curved track systems. They are *minimum* and *recommended*. These words are commonly defined as follows:

Minimum: The smallest value possible.

Recommended: To represent or urge as advisable.

Walk-along tracks may be used with a radius less than 4 feet, however, care must be taken when moving the curtain through the curved area as it may hang-up in the curve as the curtain is moved. Extra care should be used when operating tall curtains.

When tracks are used in performance situations, manual or motorized cord-operated tracks should use the largest possible radius. This allows the track to operate with less difficulty as there is less friction and life expectancy will be improved. Also, there will be less maintenance required in the future.

Motorized curved tracks that are used for acoustic tuning of a space are typically operated at slower speeds. In these applications, the slower speed allows the track system to operate easier and more efficiently due to the slower curtain speed. In these situations, a tighter radius may be used, but caution must still be observed during installation and with respect to future maintenance.

When designing to a minimum, the designer should consider that the system may operate, with considerable difficulty, the efficiency of the system will be diminished, and maintenance requirements will be increased in the future. Contact the factory for specific recommendations regarding your application.

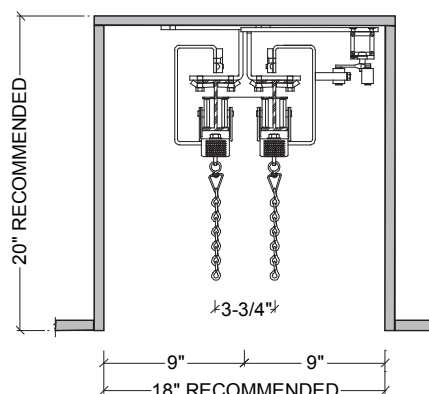
CURTAIN POCKETS

Various project conditions dictate that curtains must be stored and operated in pockets. When designing these pockets, various allowances must be made to accommodate the curtain and the curtain machine.

Typical carrier spacing is 12" on center along the top of the curtain. When the curtain is retracted in to the pocket, the curtain folds into a mass that is 12" wide across the track at the curtain heading. At the curtain bottom, the curtain requires much more space for stacking due to the construction of the curtain and lining,

if any. Consult page 3 for determining stacking space required for the track hardware.

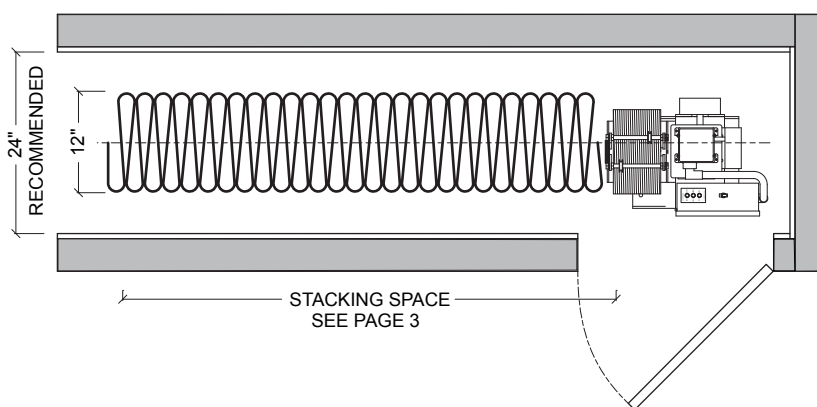
Pockets should be designed with enough clearance so that maintenance can be performed in the future and to keep the curtains from rubbing against the sides of the pocket. Pocket sides should be smooth to the touch to keep from abrading the curtain. Consult local codes for any requirements for curtain pockets and curtain machines.



RECESSED CEILING POCKET

500 series shown.

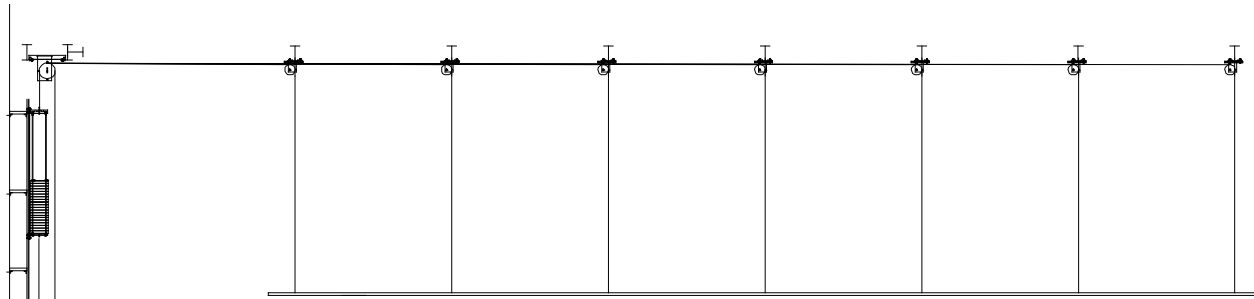
Consult factory for other track series.



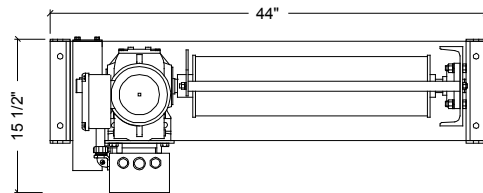
SIDE STORAGE POCKET



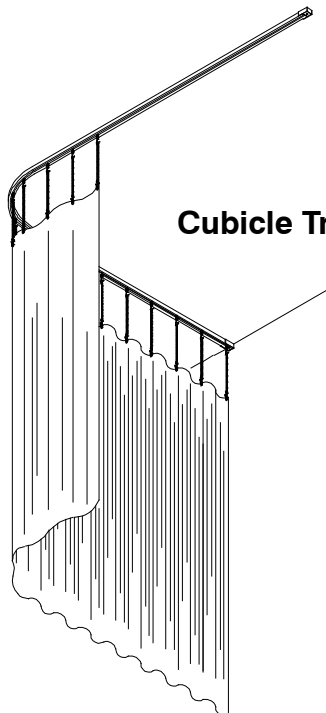
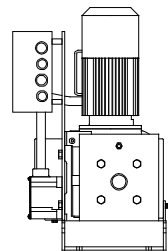
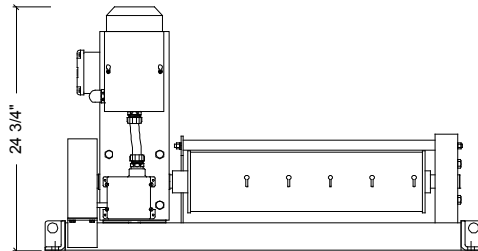
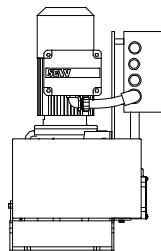
Other Products Manufactured by H & H Specialties Inc.



Counterweight Rigging Systems



Motorized Winches



Cubicle Tracks

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

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