500 SERIES STANDARD DUTY CURVED TRACK INSTALLATION INSTRUCTIONS

PLEASE READ INSTRUCTIONS THOROUGHLY BEFORE BEGINNING.

A. BI-PARTING TRAVEL

- 1. Lay track section on the floor or on sawhorses in the configuration of the finished track. When laying out the track, make sure that the track is overlapped correctly.
- 2. Before raising track into position, place all cable guides and hangers. A cable guide must be placed adjacent to each hanger except at center overlap and ends. Care must be taken to allow a minimum of 1/4" clearance between cable guide and hanger. This is especially important at curved areas. **NOTE: Do not place end stops in the center of the track at this time.**
- 3. Install hangers (506 or 511) evenly along the entire run of the track starting adjacent to end pulleys. Refer to recommended spacing provided. Additional hangers should be installed on curves and others may be required due to site conditions.
- 4. Attach hangers to the track. **CAUTION! Open end of hanger must face the arm extension of the master carrier.** This is required as the 500 Series master carrier attaches to the operating line above the track. If the track is in multiple sections, it may be beneficial to raise the track in sections before installing the track splices. Holes have been punched at the factory to insure proper alignment, however, make sure that the track is free from burrs and deformation. Continue until the entire track is hung and level. Install two overlap clamps (505), approximately 4" from each end of the overlap.
- 5. If a batten is used to stiffen the track, attach the pipe clamp (435) to the batten. Before raising the track sections, place the clamp hangers loosely on the track. Raise the track and attach to the pipe clamps. The 500 Series may also be suspended from wire rope or welded link chain.
- 6. Attach double end (503) and single end (504) pulleys to their respective tracks. Make sure that they are solidly anchored. Attach all cable guides (518), if they are not already attached. CAUTION! Make sure that the number and placement of cable guides is such that the operating line does not rub against any of the hangers. Cable guides should be placed in reference to the master carrier. The inboard guide goes toward the master carrier extension arm.
- 7. From the center of the track, insert single carriers (501 or 516) into each side. Next, insert one master (502 or 517) into each track. Place one end stop (509) on each end of the track.
- 8. If the track is suspended from a counterweight system, balance the system now. 643 floor block is recommended for use with tracks suspended from counterweight systems. WARNING! After attaching track to a counterweighted batten, make sure to balance the line set and leave at a comfortable working level.

- 9. Start to reeve the operating line by attaching the end of the cord to the master carrier on the double end pulley track. The end of the operating line will attach to the cable clamp that is closest to the center of the track. The operating line reeves toward the single end pulley going down the center of the track. As the cable goes past the overlap, it passes through to the outboard cable guide. Next, the cable runs around the single end pulley and back towards the double end pulley. **Do not attach the operating line to the second master carrier at this time**
- 10. Reeve the operating line over the return sheave of the double end pulley and down to the floor block. Next, reeve the operating line through the floor block and back up to the double end pulley. The operating line terminates at the first master carrier.
- 11. Make sure that there is sufficient line remaining to reach the required finished height. At this time, make sure that all the end stops are firmly in place.
- 12. Slide each of the master carriers to the center stops and tighten all the rope clamps. Move the operating line to make sure that the track operates smoothly and the track does not flex at any time. If problems exist, correct now before hanging curtain.
- 13. Hang the curtain on to the carriers. When the track is working properly, the carriers should move around the track smoothly and the track should not deflect at any point of travel.
- 14. For ease of operation, the 500 Series track should be factory curved to a radius of not less than 4'-0". Consult factory for a radius less than 4'-0".
- 15. If track is installed on a counterweight system, make sure to balance the line set before operating track. WARNING! After attaching the curtain to tracks mounted on a counterweighted batten, the line set must be balanced. Always use caution when working with an out-of-balance line set.

B. CEILING MOUNT INSTALLATION

Ceiling mounting the 500 Series track is very similar to the batten mounting procedures. The following considerations should be followed when ceiling mounting:

1. After laying out the track, use a plumb bob to locate positions of the ceiling hangers relative to the track. Use appropriate attachment methods for the individual job conditions. Before installing ceiling hangers (511), make sure that the ceiling is parallel to the floor. Shims may be needed to compensate for irregularities.

- 2. After the hangers are installed, raise the track in sections and attach to ceiling hangers. In many cases, ceiling hangers can be installed onto track, then track raised to ceiling for mounting of hanger.
- 3. Rig track for either bi-parting or one-way travel.

C. ONE-WAY TRAVEL

- 1. Before raising the track, all the cable guides and other accessories should be placed and all necessary holes drilled. See "Special Instructions" for information on placement and number of cable guides required. **NOTE: Do not place end stops in the center of the track at this time.**
- 2. Lay the track sections on the floor or on sawhorses in the configuration of the finished track.
- 3. Install hangers (506 or 511) evenly along the entire run of the track starting adjacent to end pulleys. Refer to recommended spacing provided. Additional hangers should be installed on curves and others may be required due to site conditions.
- 4. If a batten is used to stiffen the track, attach the pipe clamp (435) to the batten. Before raising the track sections, place the clamp hangers loosely on the track. Raise the track and attach to the pipe clamps. The 500 Series may also be suspended form wire rope or welded link chain.
- 5. Attach the double end pulley (503) to one end of the track. From the other end insert single carriers (501 or 516) and the insert the master carrier (502 or 517) into the track. Finish by attaching the single end pulley (504).
- 6. If the track is suspended from a counterweight system, balance the system now. 643 floor block is recommended for use with tracks suspended from counterweight systems. WARNING! After attaching track to a counterweighted batten, make sure to balance the line set and leave at a comfortable working level.
- 7. Start to reeve the operating line by attaching the end of the cord to the master carrier. The end of the operating line will attach to the cord clamp that is closest to the single end pulley. The operating line reeves toward the single end pulley passing through the rollers of the cable guides.
- 8. Next, the operating line runs around the single end pulley and back towards the double end pulley passing through the outboard rollers of the cable guides. Reeve the operating line over the return sheave of the double end pulley and down to the floor block.
- 9. Reeve the operating line through the floor block and back up to the double end pulley. The operating line terminated at the other cord clamp of the master carrier. Make sure that all slack is taken out of operating line before securing both cord clamps on master carrier.
- 10. Make sure that there is sufficient operating line remaining to reach the required finished height. At this time, also verify that end stops are securely in place.
- 11. Move the operating line to make sure that the track operates

smoothly and that the track does not flex at any time. If problems exist, correct now before hanging curtain.

12. Hang curtain from the carriers. When the track is working properly, the carriers should move around the track smoothly and the track should not deflect at any point of travel.

D. SPECIAL INSTRUCTIONS

Cable Guides

- 1. For ease of operation, the 500 Series track should be factory curved to a radius of not less than 4'-0". Consult factory for a radius less than 4'-0".
- 2. In locating cable guides, place so that the cord is adequately supported as it turns the corner. Use the following chart for reference only. Due to site conditions, the numbers of cable guides required for ease of operation may vary.

RECOMMENDED CABLE GUIDE SPACING FOR CURVED 500 SERIES TRACKS (based upon 90 degree curves)					
Radius	Cable Guide Spacing	Suggested Quantity			
4'-0"	12"	7			
5'-0"	16"	7			
6'-0"	18"	7			
7'-0"	20"	8			

- 4. Cable guides are also required on straight track sections of 5'-0" and longer adjacent to each hanger.
- 5. Since cable guide number, spacing and placement are unique for each job, please consult the factory for further information.

Pivot Devices

1. Pivot devices allow for curtains to be positioned at different angles relative to the track. Both the 50 and 50X are free-wheeling devices. The 50BK brake kit is available as an optional accessory for holding the device in a fixed position.

The "X" suffix stands for a special indexing device that allows the curtain to be placed in preset positions at $22\frac{1}{2}$ ° increments.

- 2. The pivot device is designed for either 1-3/8"O.D. tubing or 1" Sch. 40 pipe. Maximum recommended batten length is 6'-0". Make sure that the batten is the proper length for the application.
- 3. Place the "C" clamps in each end of the curtain batten. They are provided so that a cord may be tied between the two to aid in turning the device. The cord should be long enough so that adjustment may be done with the curtain at its proper trim.
- 4. CAUTION! Do not attempt to adjust the curtain by means of pulling on the fabric. Damage to the curtain and associated hardware may result.

5. The recommended total load on the device must not exceed 75 pounds.

Miscellaneous

- 1. The 500 Series track may be manually operated for short, curved runs and light weight curtains. For long curved tracks with single or reverse curves, motorized operation is recommended. A variety of curtain machines are available for use with the 500 Series track. Please consult the factory for the one most suitable for your application.
- 2. Manually operated tracks with reverse curves will operate with difficulty. The amount of effort required to operate the drapery system is dependent on track length, configuration, and weight of drapery. Most 500 Series tracks with reverse bends require motorization to operate efficiently.

RECOMMENDED TRACK SUPPORT SPACING Using 506, 511, or 531 Hanger (in feet)				
Curtain Weight Per Carrier (pounds)	510			
2	10			
3	10			
4	10			
5	10			
6	10			
6	9			
10	8			
15	5.5			
20	4			
25	3.5			

For additional information, please refer to *Catalog Fourteen*, pages 62-63. For tracks 10 feet or less in length it is recommended that the track be supported at a minimum of three locations.

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.

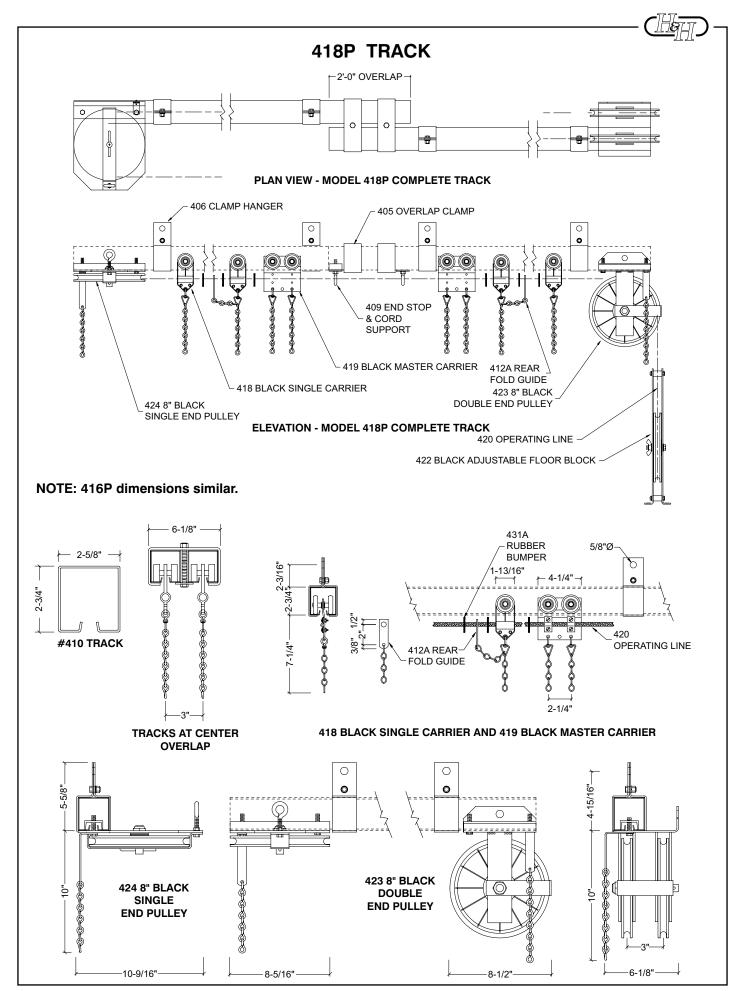
Direct ceiling attachment of tracks has not been evaluated as the support structure, method of attachment, and attachment requirements may vary widely from project to project. A qualified person should be consulted for this application.

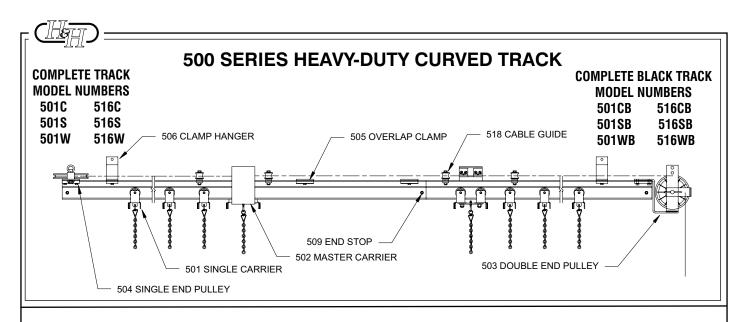
DISCLAIMER

This product is designed for moving curtains or, in some cases, scenery.

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

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





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.

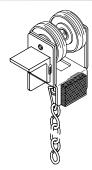
The ease of operation of a 500 Series track is dependent on several factors, including the radii of the curves and whether reverse bends are part of the track layout. In general, the tracks operates best around gentle curves. Whenever possible, it is recommended that layouts be designed with radii of 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.

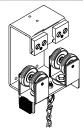
No. 501 - Zinc plated. No. 501B - Black finish.



TRAILING CARRIER w/ ARM

Urethane-tired sealed ball bearing carrier with arm for use with 526 carrier stop.

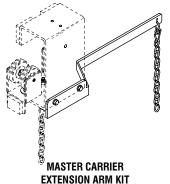
No. 501X - Zinc Plated. No. 501XB - Black finish.



MASTER CARRIER

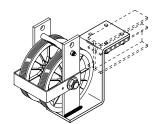
2 urethane-tired sealed ball bearing wheel assemblies pivot on formed steel body with 2 clamps for anchoring line or cable. 1 pair required for overlapping tracks.

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



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

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

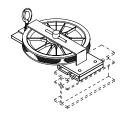


DOUBLE END PULLEY

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.

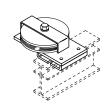


SINGLE END PULLEY

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

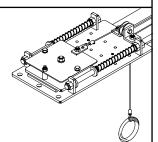
No. 504 - grooved for 3/8" operating line.
No. 504B - Black finish.

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



No. 504A SINGLE END PULLEY

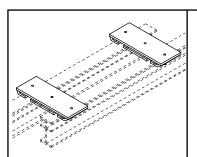
4" diameter Nylatron GS sheave grooved for 3/16" cable with sealed precision ball bearings. Heavy-duty steel housing clamps to top flange of track. Black finish.



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.

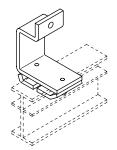
No. 504T - Zinc plated. No. 504TB - Black finish.



OVERLAP CLAMP

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

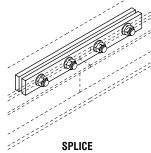
No. 505 - Zinc plated. No. 505B - Black finish.



CLAMP HANGER

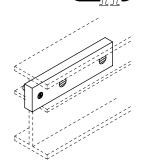
Formed steel bracket for suspending track. Track clamps to bracket with offset clips.

No. 506 - Zinc palted. No. 506B - Black finish.



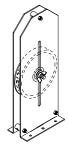
Steel plates align and lock track sections together. Track must be straight at joint. 1 pair pictured.

No. 507 - Zinc plated. No. 507B - Black finish.



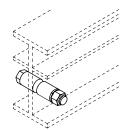
No. 507FX SPLICE **DRILL FIXTURE**

Hardened tool steel drill fixture for field drilling of track for 507 splices.



No. 508, BLACK 6" ADJUSTABLE FLOOR BLOCK

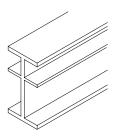
6" diameter Nylatron GS sheave with sealed precision ball bearings in heavy-duty steel housing with 9" vertical adjustment. Grooved to accept 3/8" operating line.



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.

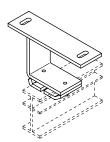


TRACK

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.



CEILING HANGER

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

No. 511 - Zinc Plated. No. 511B - Black finish.



No. 514 OPERATING LINE

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



No. 515 OPERATING CABLE

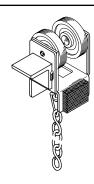
Black polyester jacket braided over 3/32" galvanized aircraft cable. For use with motorized tracks.



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.

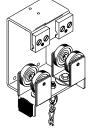
No. 516 - Zinc Plated. No. 516B - Black finish.



TRAILING CARRIER w/ ARM

Nylon-tired sealed ball bearing carrier with arm for use with 526 carrier stop.

No. 516X - Zinc Plated. No. 516XB - Black finish.



MASTER CARRIER

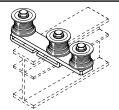
2 nylon-tired sealed ball bearing wheel assemblies pivot on formed steel body with 2 clamps for anchoring line or cable. 1 pair required for overlapping tracks.

No. 517 - for 3/8" operating line.

No. 517B - Black finish.

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

No. 517MB - Black finish.



CABLE GUIDE

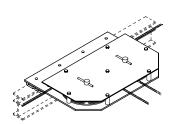
3 Nylatron GS rollers mounted to steel bracket. Bracket mounts to track with offset clips. Suggested spacing: 5'. Additional guides required at each curve.

No. 518 - 5/16" shielded ball bearings. No. 518B - Black finish.

No. 519 - 3/8" sealed precision ball

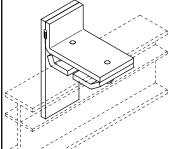
bearings.

No. 519B - Black finish.



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.



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.

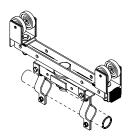


WALK-ALONG MASTER CARRIER

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

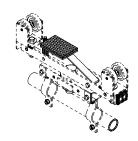
No. 502W - Urethane-tired wheels. No. 502WB - Black finish. No. 517W - Nylon-tired wheels

No. 517WB - Black finish.



No. 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: 75 pounds.



No. 50BK BRAKE KIT

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

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 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 solid aramid 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.

Provide **Model 516C** 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 nylon-tired sealed ball bearing wheels fastened parallel to formed steel carrier body with heavy-duty hook, swivel and trim chain for attachment of curtain. Attach Nylatron wear strips at contact points between carriers and track to minimize friction and noise. Install neoprene bumpers to carriers to further reduce noise.

Master carriers shall be two connected nylon-tired 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 solid aramid 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.

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

^{**} 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.

