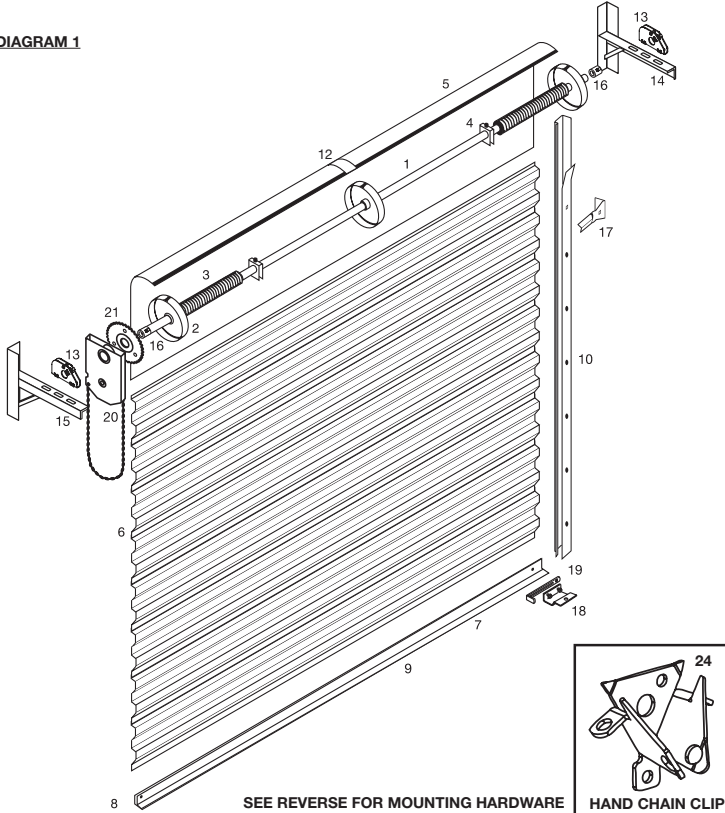


Installation Instructions Model 190 Economy Commercial Rolling Sheet Door

IMPORTANT REMARKS THIS PAMPHLET IS DESIGNED TO ASSIST IN THE INSTALLATION OF THE ASTA MODEL 190 ECONOMY COMMERCIAL DOOR. SAFETY IS FOREMOST. INSTALLATION SHOULD BE EXECUTED BY QUALIFIED DOOR PROFESSIONALS. INSPECT ALL OF THE SHIPPED PARTS AND ACCOUNT FOR EVERYTHING BEFORE COMMENCING ANY WORK. FOR QUESTIONS AND TECHNICAL ASSISTANCE, CONTACT ASTA CUSTOMER SUPPORT AT (770) 974-2600.

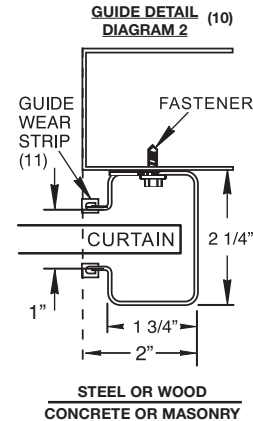
DIAGRAM 1



SEE REVERSE FOR MOUNTING HARDWARE

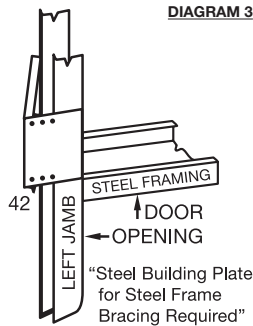
HAND CHAIN CLIP

GUIDE DETAIL
DIAGRAM 2



STEEL OR WOOD
CONCRETE OR MASONRY

DIAGRAM 3



"Steel Building Plate for Steel Frame Bracing Required"

WARNING

MOVING DOOR can cause serious injury or death. Keep clear of opening while door is moving.



SAFETY INSTRUCTIONS

1. Do Not stand or walk under moving door. Keep door in full view and free of obstructions while operating.
2. Do Not allow children to operate the door.
3. Repairs or adjustments should be made by a trained service person using proper tools and instructions.
4. To avoid injury, do not put fingers between door and guides.
5. Read owner's manual for your door and operator for more information.

- CAUTION:** USE CORRECT LIFTING PROCEDURES AND EQUIPMENT DURING INSTALLATION OF THIS PRODUCT TO AVOID INJURY OR DAMAGE.
- CAUTION:** DO NOT REMOVE THE PLASTIC WHICH HOLDS THE DOOR IN A ROLL. YOU WILL BE TOLD AT A LATER TIME WHEN TO REMOVE IT. NO GUARANTEE WILL BE GIVEN OR RESPONSIBILITY ACCEPTED BY THE MANUFACTURER IF THE DOOR IS NOT INSTALLED AS INSTRUCTED. FOR PROPER OPERATION, FOLLOW THE INSTRUCTIONS AS GIVEN. PLEASE REVIEW ALL THE STEPS BEFORE BEGINNING.

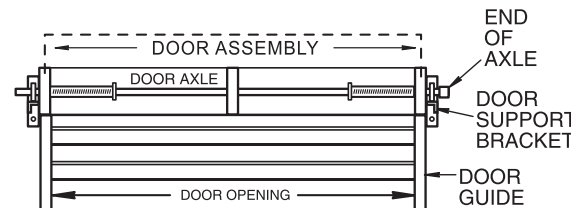
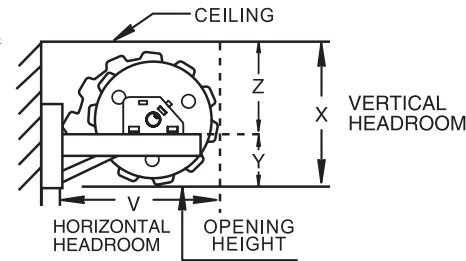
STEP #1 - VERIFY OPENING

- A. VERIFY OPENING WIDTH AND HEIGHT TO MATCH THE DOOR YOU ARE PREPARING TO INSTALL.
- B. VERIFY PROPER HEADROOM AND SIDEROOM CLEARANCE (SEE DIAGRAM #4).
- C. VERIFY JAMBS ARE PLUMB.
- D. VERIFY HEADER AND FLOOR ARE LEVEL.

STEP #2 - INSTALL BRACKETS

- A. VERIFY MINIMUM HEAD ROOM REQUIREMENT (DIMENSION "X") IF SUFFICIENT, LOWER BRACKET UNTIL "Z" DIMENSION IS OBTAINED. IF BRACKET IS LOWERED MORE THAN 2" THE OPENING HEIGHT WILL BE REDUCED. THE GUIDE HEIGHT SHOULD BE REDUCED ACCORDINGLY (SEE DIAGRAM 4).
- B. MARK HORIZONTAL AND VERTICAL LOCATION OF SUPPORT BRACKET. USE A WATER LEVEL OR TRANSIT TO MAKE SURE BRACKETS ARE LEVEL. THE DOOR MUST BE LEVEL.
- C. DRILL HOLES AND FASTEN BRACKETS WITH APPROPRIATE WALL FASTENERS REQUIRED TO OBTAIN SOLID MOUNTING. USE THROUGH BOLTS (NOT PROVIDED) ON SOFT BLOCK OR BRICK. TWO FASTENERS PER BRACKET ARE SUFFICIENT.

DIAGRAM 4



| PARTS LIST - USE ASTA DOOR PARTS ONLY - ALL OTHERS SHALL VOID WARRANTY | | | |
|--|-----------|---------------------------------------|--|
| 1 | VARIABLES | DOOR AXLE - 1" GALVANIZED | 22 420106-1 ROLLER CHAIN PACK (#41) |
| 2 | 220325-1 | 9-1/2" DRUM W/ BEARING | 23 730805-1 3/8"-16 X 2-3/4" HEX HEAD BOLT |
| 3 | VARIABLES | SPRING(S) | 24 420300-1 HAND CHAIN CLIP |
| 4 | 230002-1 | SPRING CLAMP ASSEMBLY - 1" | 25 750103-1 3/8" FLAT WASHER |
| 5 | VARIABLES | TOPSHEET - GALVANIZED | 26 750203-1 3/8" LOCK WASHER |
| 6 | VARIABLES | CORRUGATED SHEET | 27 730804-1 3/8"-16 X 3/4" HEX HEAD BOLT |
| 7 | VARIABLES | BOTTOM ANGLE 16 GA (12 GA) GALVANIZED | 28 420210-1 1/4"-20 LOCK NUT |
| 8 | VARIABLES | BOTTOM ANGLE RETAINER - ALUMINUM | 29 420212-1 1/4"-20 X 1/2" CARRIAGE BOLT |
| 9 | 270201-1 | BOTTOM BULB ASTRAGAL | 30 420213-1 1/4"-20 X 1" CARRIAGE BOLT |
| 10 | VARIABLES | DOOR GUIDE 18 GA (14 GA) GALVANIZED | 31 750101-1 1/4" FLAT WASHER |
| 11 | 259998-1 | DOOR GUIDE WEARSTRIP | 32 740102-1 5/16"-18 HEX NUT |
| 12 | 260012-1 | FELT STRIP - 1" | 33 730399-1 #14-1/4" X 3/4" HEX HEAD TEK SCREW |
| 13 | 420110-1 | AXLE SUPPORT - 1" | 34 740103-1 3/8"-16" HEX NUT |
| 14 | 310200-1 | COMMERCIAL SUPPORT BRACKET (RH) | 35 730102-1 3/8"-16 X 1-1/4" HEX HEAD BOLT |
| 15 | 310300-1 | COMMERCIAL SUPPORT BRACKET (LH) | 36 760204-1 1/4" X 1-1/4" HEX HEAD TAPCON SCREW |
| 16 | 420209-1 | SET COLLAR - 1" W/ 5/8" SET SCREW | 37 760102-1 1/2" X 2-1/4" SLEEVE ANCHOR |
| 17 | 420204-1 | REMOVABLE HEADSTOP | 38 730400-1 1/4" X 1" LAG SCREW |
| 18 | 280301-1 | LIFT CLIP - DOOR STOP | 39 730401-1 3/8" X 3" LAG SCREW |
| 19 | 280104-1 | SLIDE BOLT LOCK | 40 760206-1 #14-1/4" X 1" PANCAKE HEAD TEK SCREW |
| 20 | 420109-1 | 4:1 CHAIN HOIST ASSEMBLY- 1" AXLE | 41 760207-1 1/4" X 1-1/4" FLAT HEAD TAPCON SCREW |
| 21 | 460632-1 | DRIVE SPROCKET 1-41B36 EXTENDED | 42 310400-1 STD. STEEL MOUNTING BRACKETS (PAIR) |

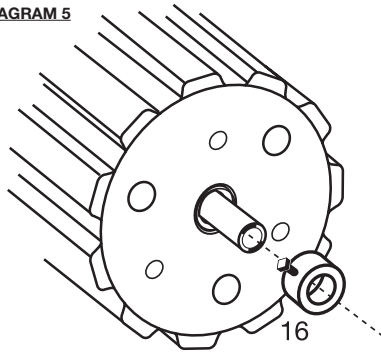
| OPENING HEIGHT | X | Y | Z | V |
|----------------|-----|--------|--------|-----|
| UP TO 8' | 16" | 7-1/2" | 8-1/2" | 17" |
| UP TO 10' | 18" | 8-1/2" | 9-1/2" | 18" |
| UP TO 12' | 20" | 10" | 10" | 19" |

| SIDE ROOM | DRIVE SIDE | NON-DRIVE SIDE |
|--------------------|------------|----------------|
| NON-WINDLOAD | | |
| BACK OF GUIDE | 2" | 2" |
| OUTSIDE OF BRACKET | 6-3/4" | 4-1/8" |
| END OF AXLE | 7-1/2" | 7-1/2" |
| WINDLOAD | | |
| BACK OF GUIDE | 2-3/8" | 2-3/8" |
| OUTSIDE OF BRACKET | 6-3/4" | 4-1/2" |
| END OF AXLE | 7-1/2" | 7-1/2" |

STEP #3 - CHAIN HOIST INSTALLATION

- SLIDE 1" SET COLLARS (16) OVER AXLE ON EACH END OF DOOR. MAKE SURE DOOR IS CENTERED ON AXLE AND TIGHTEN SET SCREWS TO POSITION COLLAR SECURELY AGAINST BEARING ON EACH END DRUM (SEE DIAGRAM 5).
- INSTALL DRIVE SPROCKET (21) ON PREFERRED SIDE USING 3/8" X 2-3/4" HEX HEAD BOLTS (SEE DIAGRAM 6).
- SLIDE POCKET WHEEL ASSEMBLY ONTO DOOR AXLE AND ALIGN SPROCKETS PARALLEL TO EACH OTHER.
- CONNECT DRIVE CHAIN (22) AROUND BOTH SPROCKETS USING MASTER LINK PROVIDED.
- AFTER DOOR TENSION HAS BEEN ADJUSTED (STEP 9) TIGHTEN SET SCREWS ON POCKET WHEEL ASSEMBLY. IF FURTHER ADJUSTMENT IS NEEDED, SET SCREWS MUST BE LOOSENED FOR ADJUSTMENT AND RETIGHTENED.

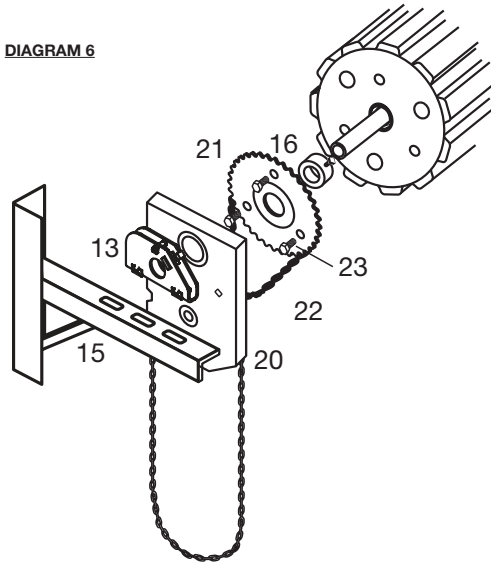
DIAGRAM 5



STEP #4 - POSITION DOOR ASSEMBLY ON SUPPORT BRACKETS

- SLIDE AXLE SUPPORTS OVER AXLE ON EACH END OF DOOR. POSITION DOOR ASSEMBLY ONTO SUPPORT BRACKETS. CENTER DOOR IN OPENING AND ALIGN AXLE SUPPORTS WITH BRACKETS AS SHOWN (SEE DIAGRAM 7).
- FASTEN AXLE SUPPORTS TO SUPPORT BRACKETS USING TWO - 3/8" X 3/4" HEX HEAD BOLTS (27), TWO - 3/8" LOCK WASHERS (26) AND TWO - 3/8" FLAT WASHER (25) PER SIDE (SEE DIAGRAM 8).
- TIGHTEN THE SET SCREWS ON EACH AXLE SUPPORT
NOTE: MINIMUM 40 LBS. TORQUE TO PROPERLY SECURE HARDWARE.

DIAGRAM 6



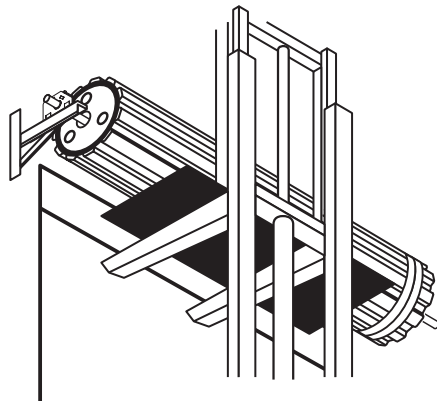
STEP #5 - INSTALL HEADSTOPS

- ONCE YOU HAVE DOOR SECURELY FASTENED TO THE SUPPORT BRACKETS, INSTALL THE HEADSTOPS TO THE GUIDES USING THE 1/4" - 20 X 1/2" CARRIAGE BOLTS (29) AND 1/4"-20 LOCK NUTS (28) PROVIDED (SEE DIAGRAM 8).

STEP #6 - INSTALL DOOR GUIDES

- VERIFY GUIDES ARE PLUMB, ATTACH TO WALL WITH APPROPRIATE FASTENERS PROVIDED.
- GUIDES SHOULD BE INSTALLED AT DOOR CURTAIN WIDTH + 1" FOR NON-WINDLOCK DOOR AND CURTAIN WIDTH + 1 3/4" FOR WINDLOCK DOOR MODELS. DIMENSION IS MEASURED FROM BACK TO BACK OF EACH GUIDE.
- ATTACH ONE FASTENER AT TOP & BOTTOM OF EACH GUIDE TO HOLD IN PLACE.

DIAGRAM 7



STEP #7 - PRETENSION DOOR

- ROTATE DOOR TOWARD THE OPENINGS 2 TURNS (SEE DIAGRAM 9).
- WARNING: HOLD ONTO DOOR TO PREVENT COUNTER-ROTATION.** CUT THE PLASTIC HOLDING THE DOOR IN A ROLL AND PULL DOOR DOWN INTO THE GUIDES WELL PAST THE HEADSTOPS.

DIAGRAM 8

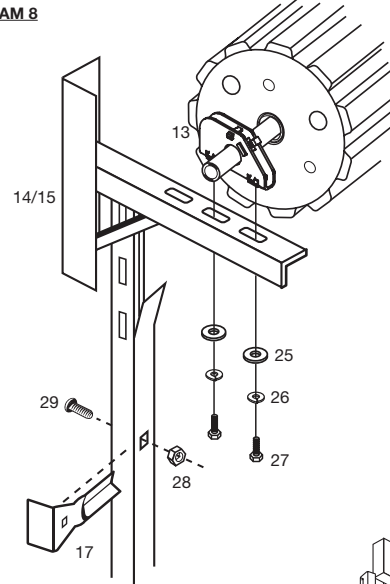


DIAGRAM 9

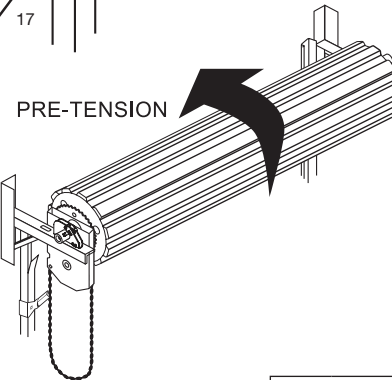


DIAGRAM 10

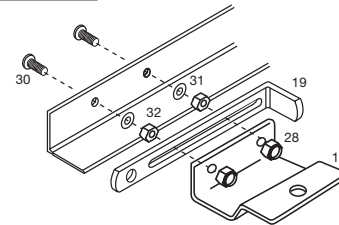
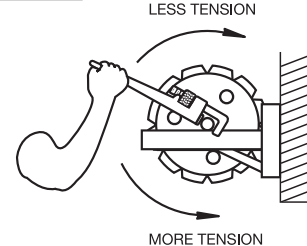


DIAGRAM 11



STEP #8 - INSTALL BOTTOM BAR HARDWARE

- INSTALL DOOR STOPS (18) AND THE SLIDE BOLT LOCKS (19) USING TWO - 1/4" - 20 X 1" CARRIAGE BOLTS (30), 1/4" FLAT WASHER (31), 5/16" HEX NUT (32) AND 1/4"-20 LOCK NUT (28) PER SIDE (SEE DIAGRAM 10).
- ELECTRICALLY OPERATED DOORS REQUIRE DOOR STOPS (18) ONLY TO BE INSTALLED UNLESS ELECTRICAL INTERLOCKS ARE USED IN CONJUNCTION WITH SLIDE BOLT LOCKS.

STEP #9 - CHECK DOOR OPERATION FINISH GUIDE INSTALLATION

- RAISE AND LOWER DOOR TO TEST FOR PROPER BALANCE.
WARNING: MAKE SURE DOOR IS IN THE FULLY OPEN POSITION PRIOR TO MAKING ADJUSTMENTS.
- IF DOOR IS HARD TO OPEN BUT EASY TO CLOSE, INCREASE SPRING TENSION.
- IF DOOR IS EASY TO OPEN BUT HARD TO CLOSE, DECREASE SPRING TENSION.
- TO ADJUST TENSION - RAISE DOOR TO ENGAGE DOOR STOPS AND HEADSTOPS. FOR EXTRA SECURITY, TIE ROPE AROUND DOOR COIL. YOU WILL NEED TWO PEOPLE TO ADJUST DOOR TENSION PROPERLY.
- EACH PERSON SHOULD FIRMLY PLACE A PIPE WRENCH ON AXLE AS SHOWN (SEE DIAGRAM 11). LOOSEN AXLE SUPPORT SET SCREWS AND PULL DOWN FOR MORE TENSION OR RAISE UP FOR LESS TENSION. RETIGHTEN ALL SET SCREWS.
- TIGHTEN SET SCREWS ON POCKET WHEEL CHAIN HOIST ASSEMBLY.
- RAISE AND LOWER DOOR TO CHECK FOR PROPER BALANCE.
- IF BALANCE AND OPERATION WITHIN DOOR GUIDES IS ACCEPTABLE, RAISE DOOR TO FULLY OPEN POSITION AND COMPLETE INSTALLATION OF REMAINING GUIDE FASTENERS TO THE WALL (JAMB).
- FOR NON-WINDLOAD DOORS THE REQUIRED GUIDE FASTENER FREQUENCY IS ONE IN THE BOTTOM AND TOP HOLES AND 24" ON CENTER OTHERWISE. FOR WINDLOAD DOORS THE FREQUENCY IS 12" ON CENTER.

TRACK & BRACKET MOUNTING HARDWARE

| NON-WINDLOAD DOORS | | | | |
|--------------------|-----------------|-------------|---------------------------------------|------|
| REF. | STEEL | PART # | DESCRIPTION | QTY. |
| 33 | GUIDE | 730399-1 | #14 -1/4" X 3/4" HEX HEAD TEK SCREW | 12 |
| 35 | SUPPORT BRACKET | 730102-1 | 3/8-16 X 1-1/4" HEX HEAD BOLT | 4 |
| 25 | SUPPORT BRACKET | 750103-1 | 3/8" FLAT WASHER | 8 |
| 26 | SUPPORT BRACKET | 750203-1 | 3/8" LOCK WASHER | 4 |
| 34 | SUPPORT BRACKET | 740103-1 | 3/8"-16 HEX HEAD NUT | 4 |
| CONCRETE | | | DESCRIPTION | QTY. |
| 36 | GUIDE | 760204-1 | 1/4" X 1-1/4" HEX HEAD TAPCON SCREW | 12 |
| 37 | SUPPORT BRACKET | 760102-1 | 1/2" X 2-1/4" SLEEVE ANCHOR | 4 |
| WOOD | | | DESCRIPTION | QTY. |
| 38 | GUIDE | 730400-1 | 1/4" X 1" LAG SCREW | 12 |
| 39 | SUPPORT BRACKET | 730401-1 | 3/8" X 3" LAG SCREW | 4 |
| 25 | SUPPORT BRACKET | 750103-1 | 3/8" FLAT WASHER | 4 |
| WINDLOAD DOORS | | | DESCRIPTION | QTY. |
| STEEL | PART # | DESCRIPTION | | QTY. |
| 40 | GUIDE | 760206-1 | #14 -1/4" X 1" PANCAKE HEAD TEK SCREW | 20 |
| 35 | SUPPORT BRACKET | 730102-1 | 3/8-16 X 1-1/4" HEX HEAD BOLT | 4 |
| 25 | SUPPORT BRACKET | 750103-1 | 3/8" FLAT WASHER | 8 |
| 26 | SUPPORT BRACKET | 750203-1 | 3/8" LOCK WASHER | 4 |
| 34 | SUPPORT BRACKET | 740103-1 | 3/8"-16 HEX HEAD NUT | 4 |
| CONCRETE | | | DESCRIPTION | QTY. |
| 41 | GUIDE | 760207-1 | 1/4" X 1-1/4" FLAT HEAD TAPCON SCREW | 20 |
| 37 | SUPPORT BRACKET | 760102-1 | 1/2" X 2-1/4" SLEEVE ANCHOR | 4 |



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