



# BOX RAIL AND HANGER INSTRUCTIONS

## BOX RAIL CHECKLIST

### RAIL

Plain Rail (8'-24')	5116
Plain Rail Hi-tensile	5114
Top Mount Rail with Flashing Brackets (8'-20')	5100
Trolley Rail Hi-tensile with Mounting/Flashing Brackets	5103
Trolley Rail with White Cover (8'-20')	5104
Top Mount Rail (8'-20')	5105
Face Mount Rail (8'-20')	5110
Covered Trolley Rail (8'-20')	59

### RAIL/MOUNTING BRACKETS

Single Bracket	51F
Single Splice Bracket	51G
Single Bracket (Adj.)	51M
Single Splice Bracket (Adj.)	51MS
Rail End Cap	51ED
Double Bracket (Adj.)	51M-2
Double Splice Bracket (Adj.)	51MS-2
Rail Bracket Only	51HB
Splice Bracket Only	51MSB
Wall Mount Double Bracket	51H
Wall Mount Double Joint Splice Bracket (Adj.)	51HS
Wall Mount Triple Bracket (Adj.)	51K
Wall Mount Triple Joint Splice Bracket	51KS
Ceiling Mount Single Bracket	51J
Ceiling Mount Single Joint Splice Bracket	51JS

### HANGERS

#### Delrin Bearings

#### Rigid

With Straight Bolt	5001
Offset Bolt	5002
TAB-LOC	5003

#### Flexible

With Offset Bolts	
8-1/2"	5022
8-1/2" with Lags	5023
8-1/2" with Brackets	5024
TAB-LOC	5030
TAB-LOC with Brackets	5031

#### With Door Straps

Single	5005
Heavy Single	5006
Double Strap	5008
Ball-Bearing Swivel	5009

#### With Door Straps

Single	5040
Single	5041
Single	5042
Double	5047

#### Steel Roller Bearings

#### Rigid

With Straight Bolt	5051
Offset Bolt	5052
TAB-LOC	5053

#### Flexible

With Offset Bolts	
8-1/2"	5062
8-1/2" with Brackets	5064
TAB-LOC	5070
TAB-LOC with Brackets	5071

#### With Door Strap

Single	5055
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#### With Door Straps

Single	5080
Double	5087

### FLASHING AND FLASHING BRACKETS

Flashing for Easy Mount Trolley Rail		
5100, 5103 and 5105 rail	10'	5120
5110 and 59 rail	10'	5122
Flashing Bracket for 5120 Flashing		5151

### DOOR FRAMES

TAB-LOC (Steel) 6021, 6002, Easy Frame Verticals (steel and wood) 6060, 6059

### BOTTOM GUIDE

Continuous Bottom Guide 6061, 6062  
Guide Rail 6004

### ACCESSORY HARDWARE

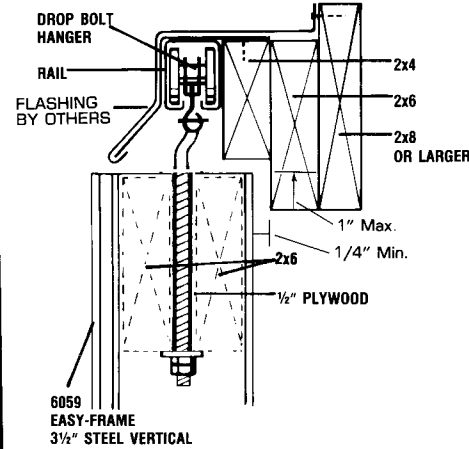
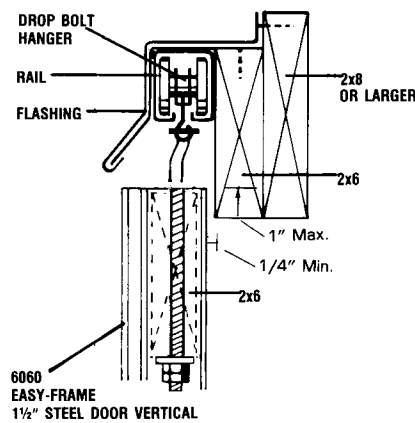
Pulls, Stops, Latches, etc.

For more information, see Sliding Door Systems Brochure, Form No. 1746

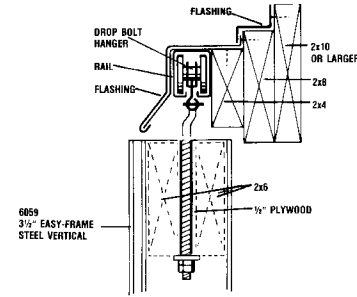
NATIONAL ALSO MANUFACTURES A FULL LINE OF ROUND RAIL  
AND HANGERS FOR SLIDING DOOR SYSTEMS.

# TYPICAL RAIL/HANGER INSTALLATIONS

## TOP MOUNT 1-1/2" THICK DOORS      3-1/2" THICK DOORS



### ALTERNATE TOP FOR 3-1/2" THICK DOORS



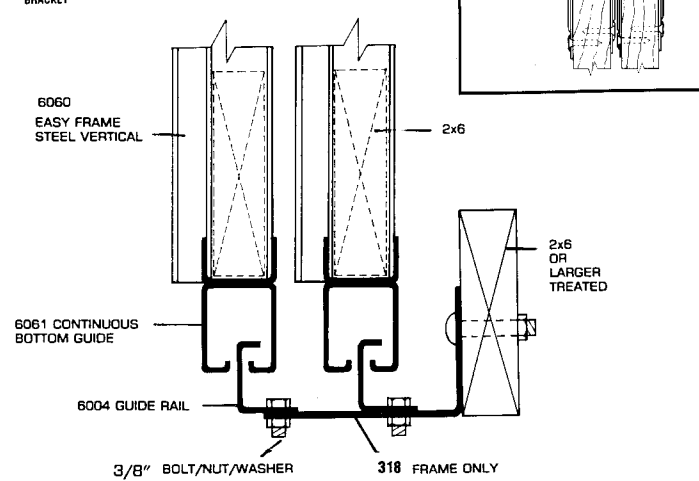
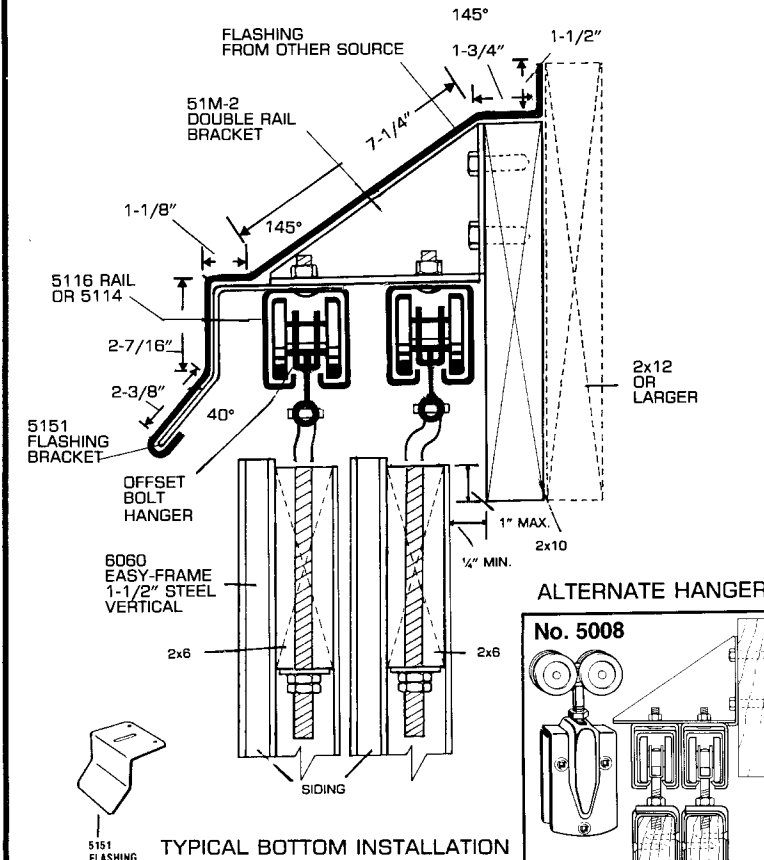
### OFFSET BOLT HANGERS

Rigid	Nos.	Nos.	Flexible
	5002	5022 5023 5024	
	5052	5062 5064	

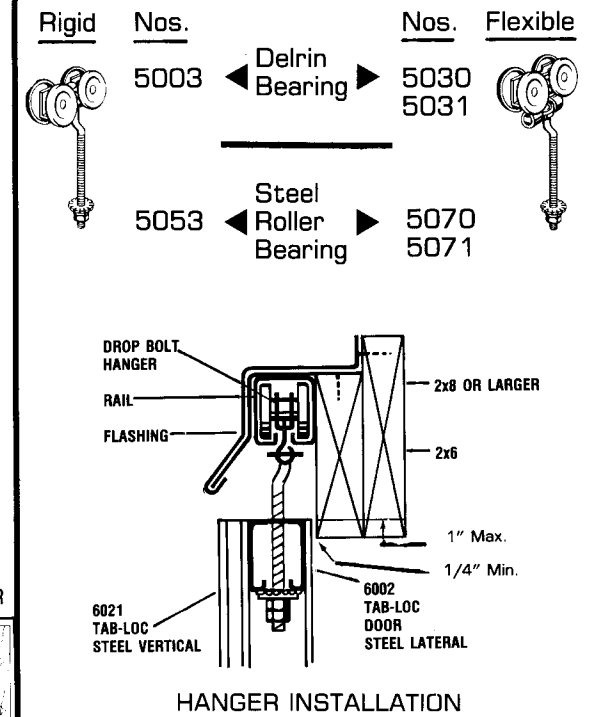
### HANGER INSTALLATION

1. Locate hangers to distribute load evenly, minimum 3" from edge of door. (Important - use only two hangers per door; however, if door panels are 16' or wider, three hangers can be used).
2. Drill 9/16" hole through 2" x 6" top frame to accommodate bolt.
3. Drop bolt through hole and assemble washer and one nut. Thread nut up on bolt until top of door is approximately 3/4" from bottom of the offset in the bolt.
4. Install door and make final vertical adjustment by raising and lowering nut. Assemble and tighten lock nut.
5. To make lateral adjustment, grip the flat sides of trolley drop bolt with a wrench and turn to obtain desired clearance. Then drive nails (not furnished) through holes provided in flat washers. This locks hanger securely in position.
6. Drive end caps inside end of rail for normal application. End caps may also be used as center stops with 3/8" x 2" carriage bolts (not furnished). See illustration.

## BY-PASS INSTALLATION



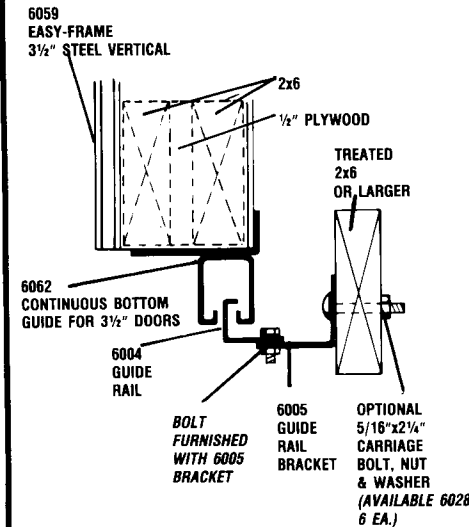
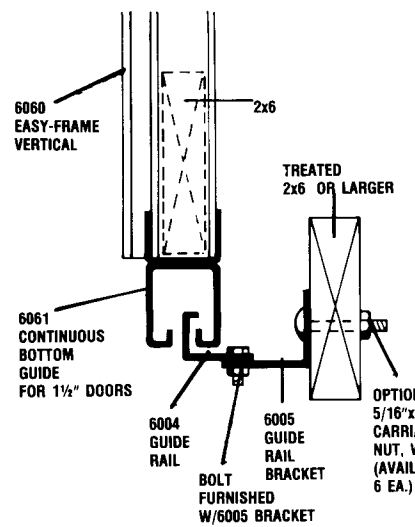
## TYPICAL TAB-LOC STEEL DOOR FRAME INSTALLATION



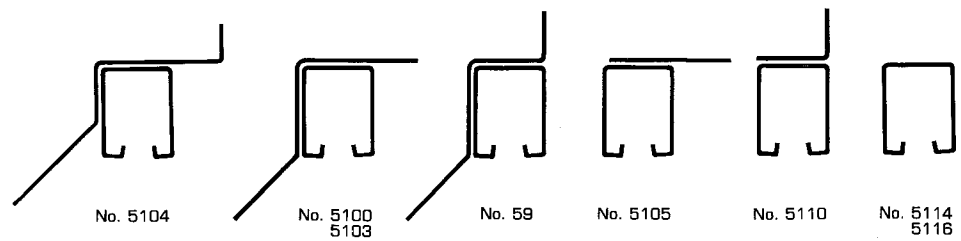
- ### HANGER INSTALLATION
1. Insert trolley drop bolt through outer prepunched 9/16" hole in top lateral member. IMPORTANT - use only two hangers per door; however, if door panels are 16' or wider, three hangers can be used.
  2. Assemble star washer, flange nut and locknut.
  3. Hang door - make vertical adjustment with flange nut and tighten locknut.
  4. To adjust door in and out, use wrench to turn flat-sided drop bolt to obtain desired clearance.
  5. To secure system, bend opposite tabs of star washer into slot opening of top lateral. See Fig. 1.
  6. Drive end caps inside end of rail for normal application. End caps may also be used as center stops with a 3/8" x 2" carriage bolt (not furnished). See Fig. 2.



### TYPICAL BOTTOM INSTALLATIONS

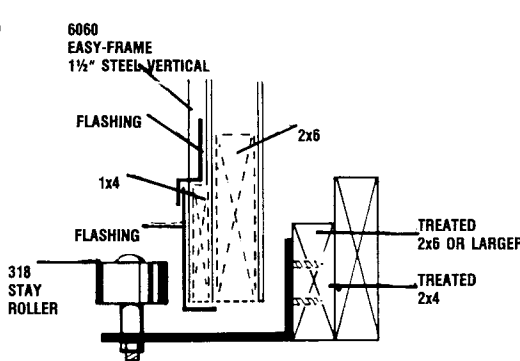
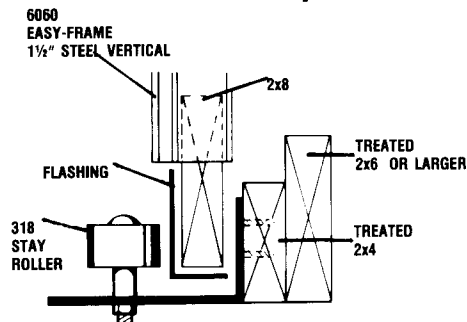


### BOX RAIL CONFIGURATIONS

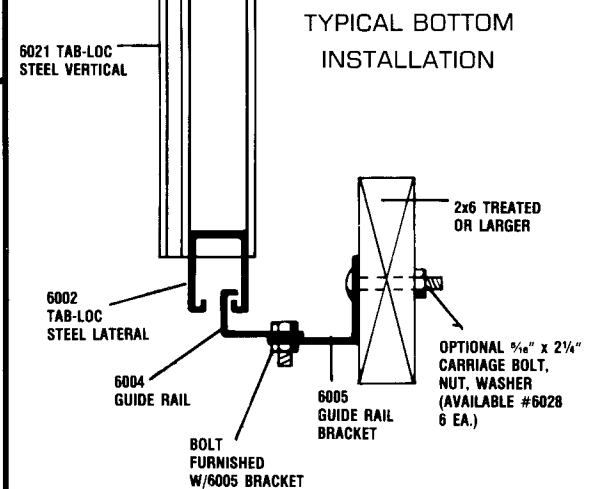
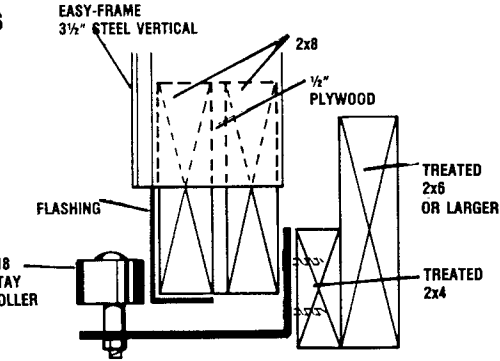
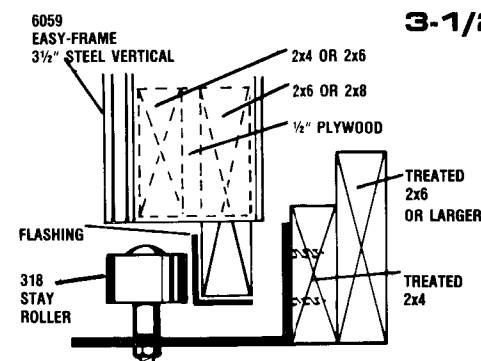


### ALTERNATE BOTTOM INSTALLATIONS

#### 1-1/2" THICK DOORS

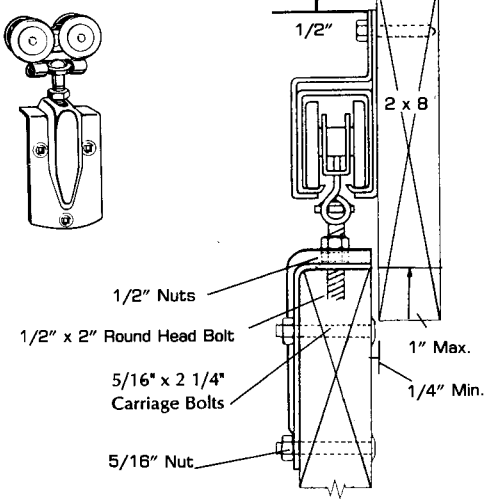


#### 3-1/2" THICK DOORS

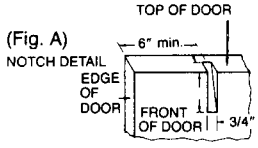
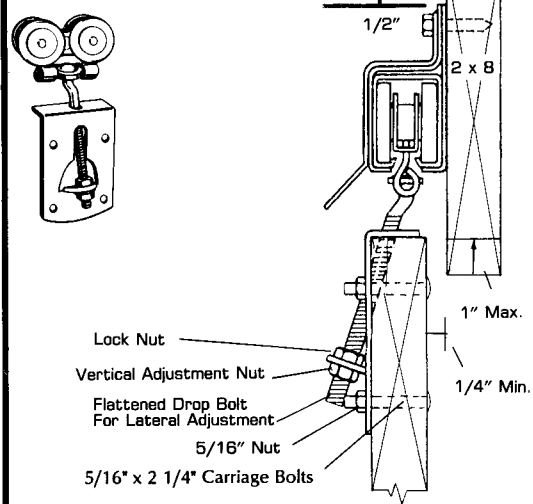


# DOOR STRAP INSTALLATIONS

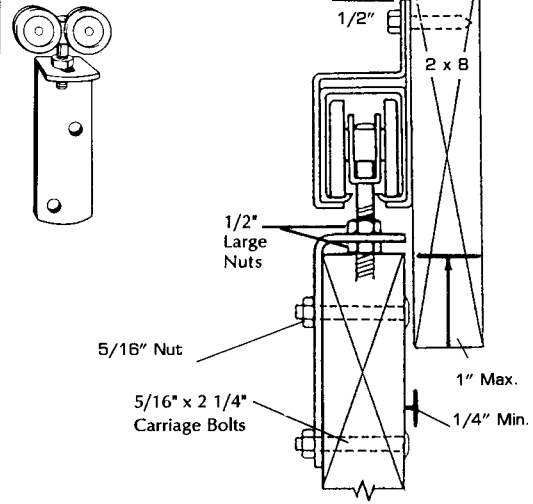
## Nos. 5040, 5080



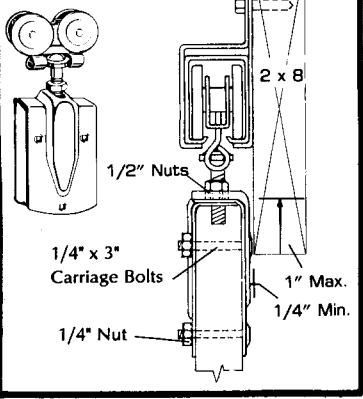
## Nos. 5041, 5042



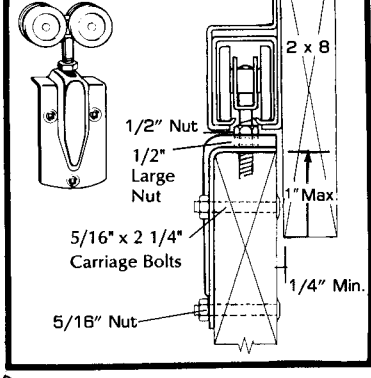
## No. 5006



## Nos. 5047, 5087

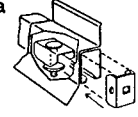


## Nos. 5005, 5005B, 5055



### HANGER INSTALLATION

1. **All Hangers.** Locate hangers to distribute load evenly, minimum 3" from edge of door. **IMPORTANT** - use only two hangers per door; however, if door panels are 16' or wider, three hangers can be used.
2. **Hangers Nos. 5041, 5042 Only.** Notch front of door for both hangers as shown in drawing (Fig. A).
3. **All Hangers (except No. 5008).** Assemble hangers as shown and place them on door with top of hangers flush against top of door. (Use hanger as a template and drill holes for carriage bolts).
4. **All Hangers (except Nos. 5041 and 5042).** Using door strap as a template, mark and drill a hole in the top of door for connector bolt to allow full adjustment of hanger.
5. **All Hangers (except No. 5008).** Mount hangers on door inserting as shown. Hanger door straps are mounted on outside of door and bolt heads must be inside of door.
6. **Hanger No. 5008 Only.** Use hanger for template to locate 1 1/2" x 14 flat head mounting screws. Mount hangers on door as shown on previous page.
7. **Adjustments.** Loosen lock nut. Vertical adjustments are made by raising or lowering vertical adjustment nut on 5041 or 5042. Lateral adjustments are made by turning the flattened drop bolt with a 5041 and 5042. When adjustments are complete, tighten lock nut securely against the door strap projection while holding the drop bolt with a wrench. On all others, lateral adjustments made with slot in door strap and vertical adjustments are made by turning flattened bolt with a wrench.
8. After door is hung, drive end caps into end of rail for normal applications. End caps may also be used as center stops with 3/8" x 2" carriage bolts (not furnished). See Figure at right.



## 16 Gauge Rail and Hangers

Load Carrying Table (In pounds per door panel)

### Delrin 500CL Bearing Hangers

### Steel Roller Bearing Hangers

patent No. 4,642,844

NEW #	5000	5001	5002	5003	5005	5006	5008	5009	5022	5023	5024	5030	5031	5040	5041	5042	5047	5050	5051	5052	5053	5055	5062	5064	5070	5071	5080	5087
OLD #		1050T			1050	5158	1054	853	5148	1052R	5149	6010	6011	1051	1052	1053		1060T				1060	1062	5162	6015		1061	
59										450				450	450							450					450	
5100			450	450						450	450	450	450									450	450	450	450	450	450	
5103																		600	600	600	600	600	600	600	600	600		
5104			450	450						450		450										450	450			450		
5105			450	450	450	450				450		450					450					450	450			450		
5110		450			450	450				450				450	450	450	450	450				450					450	
5114																		600	600			600					600	600
5116	450	450			450	450	450	450						450	450	450	450	450				450					450	

Many hangers are specially packaged for a particular rail; however, any hanger in this table can be used with any rail in this table for doors up to 450 lbs.