



# DRS RAIL SYSTEM

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Installation instructions:

2-1/2", 3-5/8", 4", 6" and 10" DRS rail systems

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## Specifications

Required parts for laminate glass with DRS Rail System (not included)	Color	Part Number	Quantity	Usage recommendation
3M™ Scotch-Weld™ Urethane Adhesive, DP 605 NS	off white	934.800	1 tube	1 tube per 52" [1320] of pre-assembled rail
3M™ Scotch-Weld™ EPX™ Plus II Applicator with 2:1 and 1:1 Plunger <sup>2</sup>		934.801	1 applicator	
3M™ Scotch-Weld™ EPX™ Plus II Mixing Square Nozzle, 5.3mm <sup>3</sup>	gold	934.805	1 pack (4 nozzles)	4 nozzles per 1 tube of adhesive

Handling time frame	Function	Time
	Working life ( <i>time between application and clamping of rail</i> )	5 minutes @ 75°F [24°C]
	Handling strength	20 minutes @ 73°F [23°C] or more
	Full cure time ( <i>time until glass may be completely installed into door</i> )	48 hours @ 73°F [23°C] or more

**NOTE: Glass should not be completely installed into door until the full cure time has been reached.**

<sup>2</sup> Scotch-Weld™ EPX™ Plus II Applicator with 2:1 and 1:1 Plunger is a trademark of 3M.

<sup>3</sup> Scotch-Weld™ EPX™ Plus II Mixing Square Nozzle is a trademark of 3M.

## Overview

Follow these instructions in addition to the amounting and operating instructions in order to avoid damage of product and damage to person or property.

These instructions are for installation of the DRS Rail System for the following mounting and style versions:

### 1. Glass mounting

#### General information

- DORMA requires use of tempered laminated glass.
- DORMA glass hardware is not suitable for application in rooms where chemicals (e.g. chlorine) are used as indoor swimming pools, saunas or salt-water pool.
- Never move sliding panels faster than walking speed and always stop the door manually before it reaches end position.
- Do not swing doors with excessive force. Install limiting stop to prevent door from opening too far.

#### Intended use

- For manual slow opening and closing
- For automatic slow opening and closing

#### Glass requirements/fittings/mounting

- The substructure/wall must be able to bear permanent loads, be level and perpendicular (max. tolerance: 1/16" (2 mm) per meter).
- Fixings must be sufficiently dimensioned for the substructure/wall and weight of the door.
- When adjusting glass elements, always stick to the required clearance for the respective hardware. Adjust clearance so glass does not come in contact with any hard surfaces such as glass, metal or concrete.
- Do not use excessive force when installing the glass (avoid over tightening screws.)

#### Requirements for glass panel

- Heat-soaked thermally tempered safety glass
- Clamping area must be level and uncoated (no self-cleaning coating!)
- Never use glass with conchoidal fractures and/or damaged edges.

#### Safety instructions

- Installation requires two people
- Always wear protective clothing
- One properly qualified and specially trained staff is authorized to mount DORMA glass hardware.
- Due to crushing hazards and possible injury caused by breakage of glass during mounting, corresponding protective clothing (especially gloves and protective goggles) is required.
- Never clamp metal glass fitting hardware directly to glass surface.
- Never use clamping roller carriers on self-cleaning coatings.

#### Symbols used – Safety/Installation



##### Caution!

Mounting components must meet the requirements of substructure/wall and door weight. Please read the technical information for fittings.



##### Risk of breaking glass

When installing the door, support the door panel with a block of wood or similar object.



##### Information note

#### Maintenance, care, repair

- immediately replace damaged parts
- always use original DORMA parts
- Clean clamping area with alcohol-based standard commercial cleaning agent before mounting the glass hardware.
- use a damp cloth for occasional cleaning, especially the track
- Always use silicone- and oil-free cleaners (e.g. acetone).
- Check glass hardware at regular intervals for proper positioning and smooth operation and correct adjustment.
- High traffic door systems require inspection by properly qualified staff (specialized companies or installation firms.)

#### Disposal

Dispose in accordance with local, state and national regulations.

# DRS RAIL SYSTEM

## System Setup

### Rail system

The rail system is comprised of the following core components.

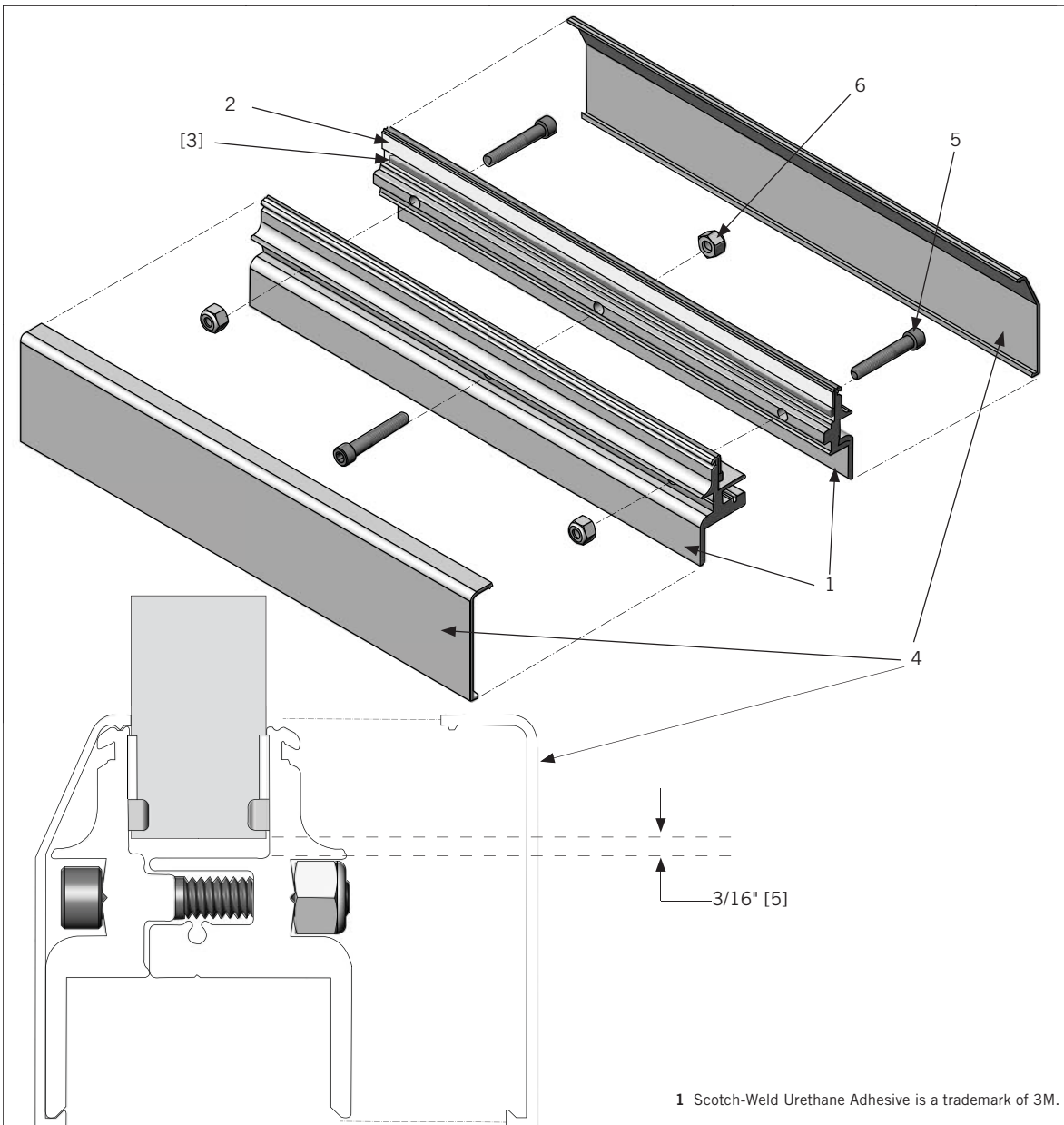
#### Included fixings

- 1/4-20 x 1-1/4" SHCS for 2-1/2" [64mm] DRS rails (5)
- 5/16-18 x 1-1/4" SHCS for 3-5/8" [92mm] DRS rails (5)
- lock nuts (6)

- Interior and exterior rails (1)
- Rail gasket(s) (2)
- **(This step for laminate glass ONLY)**  
3M™ Scotch-Weld™ Urethane Adhesive, DP 605 NS, off white [3]
- Cover assembly (4)

#### Tools recommended

- 1/4" x 3/8" drive hex socket and socket wrench
- 3/16" x 3/8" drive hex socket and socket wrench
- 3M™ Scotch-Weld™ Urethane Adhesive, DP 605 NS, off white **(required for laminate glass with 2-1/2" DRS rails ONLY)**<sup>1</sup>
- 3/8" drive torque wrench
- Rubber mallet
- #2 Phillips screwdriver



<sup>1</sup> Scotch-Weld Urethane Adhesive is a trademark of 3M.

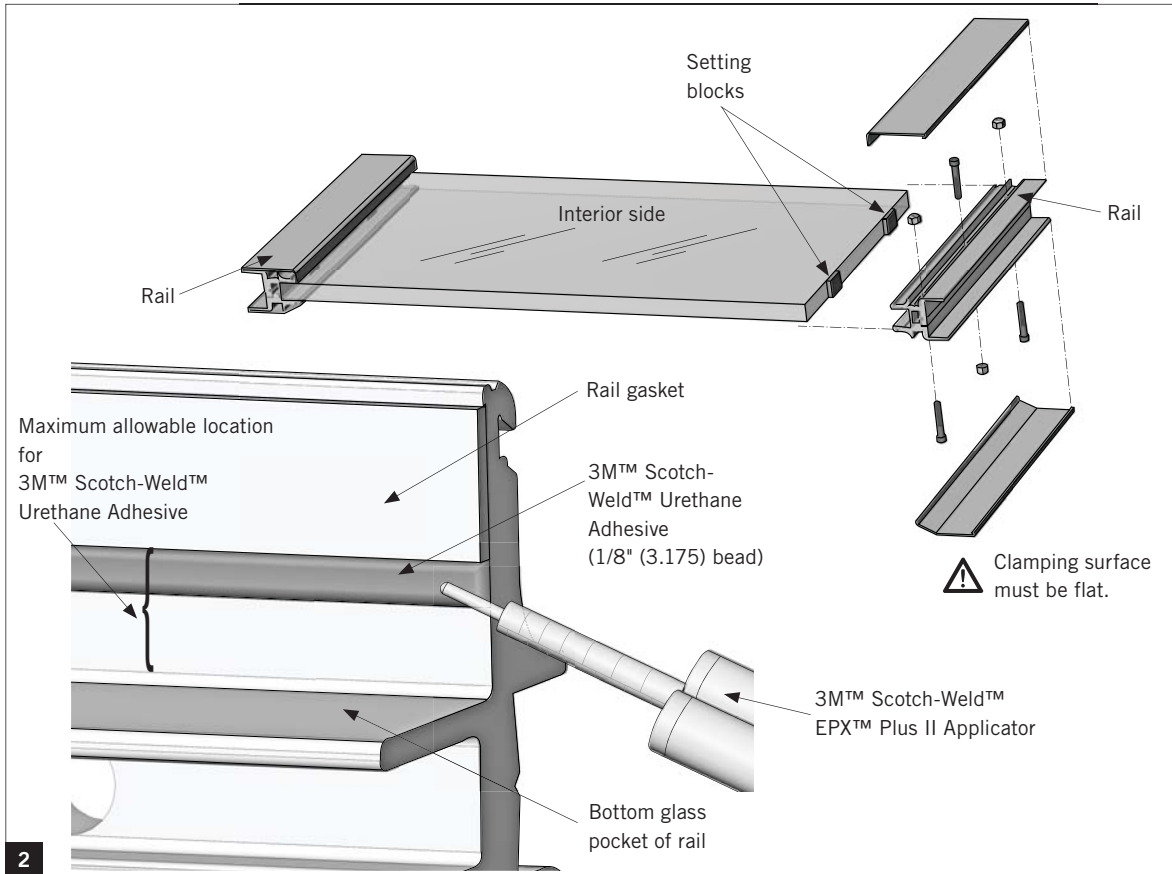
# DRS RAIL SYSTEM

## Preparing the glass and rails

- 1.1 Fully clean surface of glass with an alcohol-based mild glass and surface cleaner. Ensure no debris is on gasket.
- 1.2 Be sure that all surfaces are completely dry before proceeding.
- 1.3 Check glass width, height and for any visible defects.
- 1.4 Check glass thickness and type.
- 1.5 Reference to step 2.1. **Always** use setting blocks, at **minimum**, on bottom rails of system.
- 1.6 Check that clamping surface is flat and without surface treatment of any kind. Example: self-cleaning coatings.

## Installation Instructions

### Install rails onto glass panel



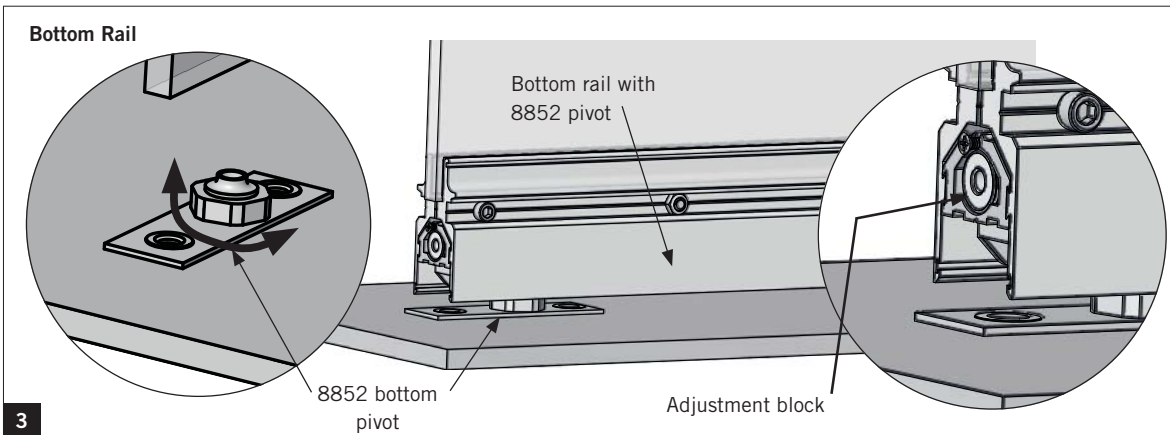
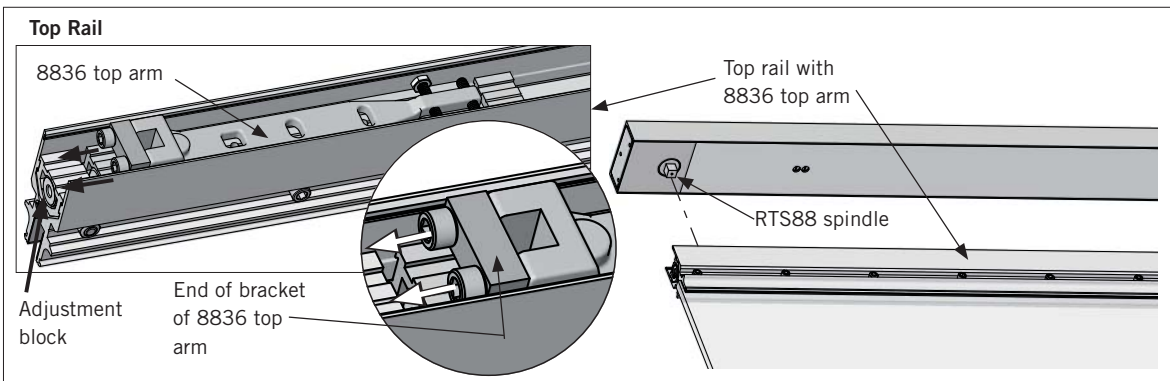
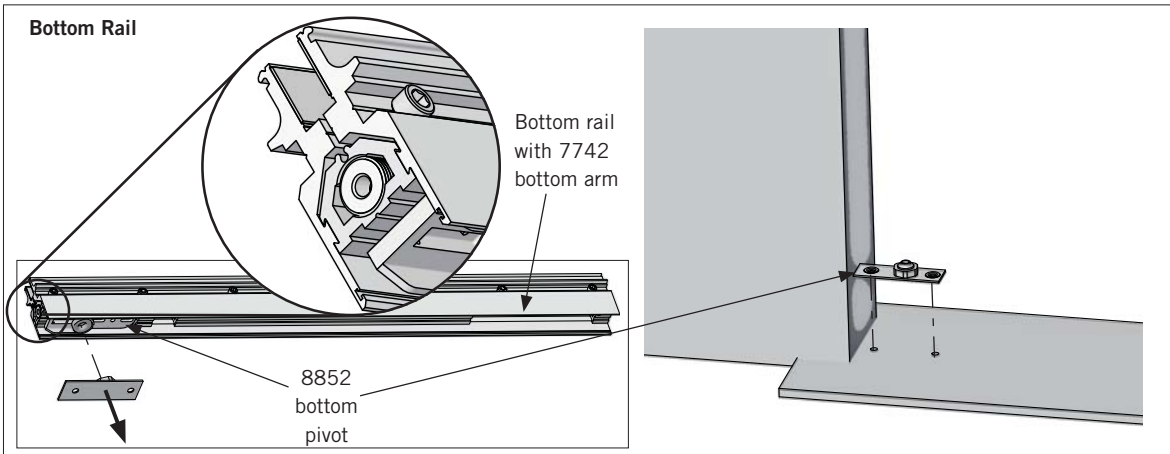
**NOTE: THE RECOMMENDED ADHESIVE'S SET-UP TIME IS 15 MINUTES FOR THE DUO-PAK CARTRIDGES.**

- 2.1 Lay glass flat on saw horses. Interior side facing upward.
- 2.2 Tape proper height setting blocks to top and bottom of glass panel.  
**Place setting blocks 2-1/2" [64mm] off each edge. (Two each for rails up to 48" [1219mm].)**
  - **Tempered monolithic glass:** loosen bolts (but do not disassemble the rail), allowing both halves of rail to move freely.
  - **Tempered laminate glass ONLY:** Apply 1/8" (3.175) bead of 3M™ Scotch-Weld™ Urethane Adhesive along inside of each section of top rail. **Be sure the adhesive does not touch bottom glass pocket of rail.**
- 2.3 Slide rail onto glass until setting blocks are snug against rail.
- 2.4 Gently hand-tighten the bolts.
- 2.5 Firmly tighten all bolts to appropriately specified torque. Start at center bolt and work outward. Repeat tightening sequence.
  - **Tempered monolithic:** start at 10 ft-lbs [914Nm]; work up to 15 ft-lbs [20Nm).
  - **Tempered laminate glass:** start at 4 ft-lbs [5.5Nm]; work up to 8 ft-lbs [11Nm] (clamping surface must be flat)
- 2.6 Follow step 2.2 through 2.5 for **bottom rail**.
- 2.7 Check total height and corner-to-corner for squareness, accounting for top and bottom cover thickness. Adjust rail accordingly.

# DRS RAIL SYSTEM

## Install glass door panels and rails into frame

For use with: RTS88 header and 8852 bottom pivot



**NOTE:** See RTS88 instructions for product install.

### Bottom Rail:

- 3.1 Disassemble bottom half of 8852 bottom pivot from rail.
- 3.2 Secure bottom half of 8852 pivot to floor mounting surface using proper fasteners.
- 3.3 Spin nut on 8852 pivot until it is as low as it will go.

### Top Rail:

- 3.4 Loosen end of bracket of 8836 top arm.
- 3.5 Install top rail (with 8836 top arm) onto RTS88 spindle.
- 3.6 Tighten end of bracket of 8836 top arm.

### Bottom Rail:

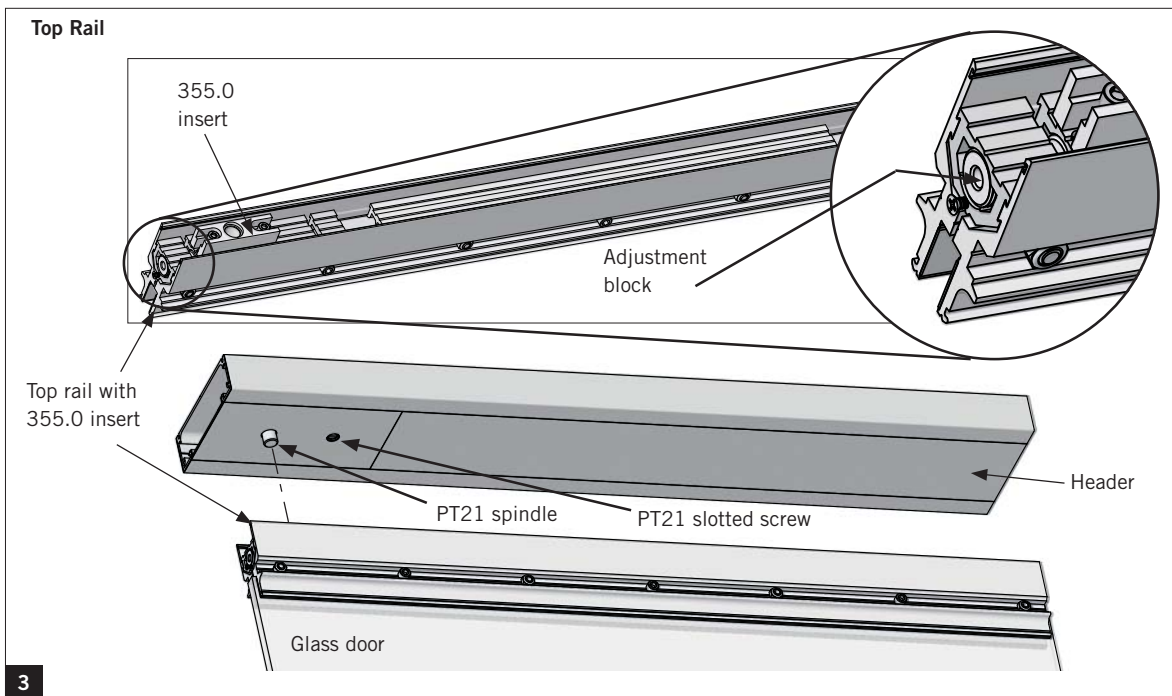
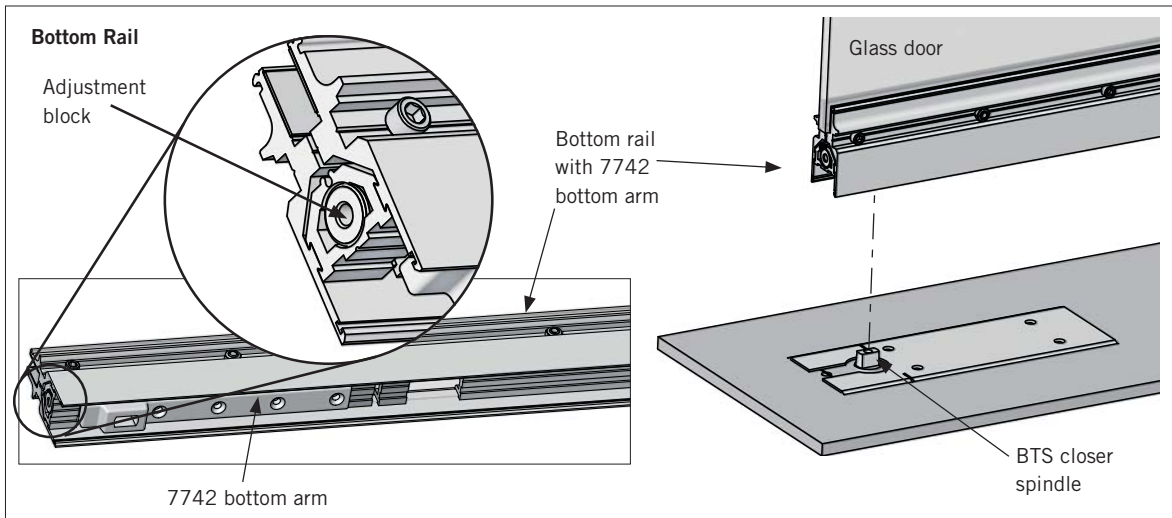
- 3.7 Slide bottom rail onto 8852 pivot in the floor.
- 3.8 Adjust door height if necessary.

### Adjustments:

- 3.9 Using a 3/16" hex key, adjust the pivot, arm, or insert vertically inside each rail via the adjustment block in rail.

# DRS RAIL SYSTEM

For use with: PT21 (walking beam pivot) and BTS80 with 7422 bottom arm



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**NOTE:** See PT21 instructions for product install.  
See BTS80 instructions for product install.

#### Bottom Rail:

- 3.1 Set bottom rail (with 7422 bottom arm) onto the BTS80 spindle.

#### Top Rail:

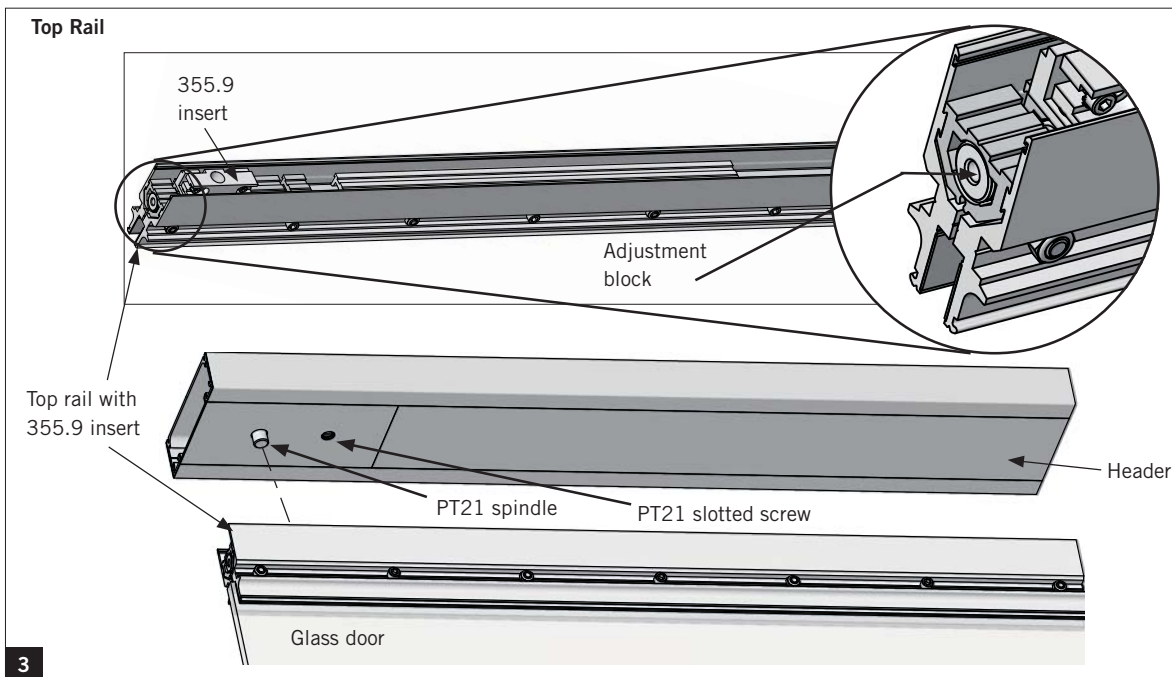
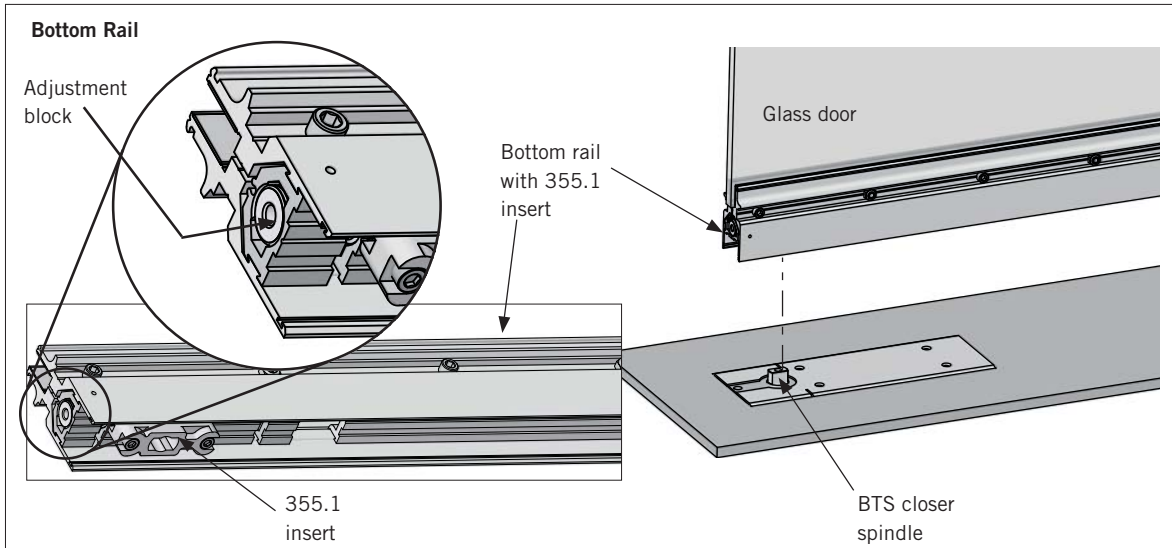
- 3.2 Retract PT21 spindle all the way up via slotted screw.
- 3.3 Align top rail (with 355.0 insert) with PT21 walking beam pivot spindle.
- 3.4 Extend PT21 spindle and align spindle with 355.0 insert hole.

#### Adjustments:

- 3.5 Using a 3/16" hex key, adjust the pivot, arm, or insert vertically inside each rail via the adjustment block in rail.

# DRS RAIL SYSTEM

For use with: PT21 (walking beam pivot) and BTS80 with 355.1 insert



**NOTE:** See PT21 instructions for product install.  
See BTS80 instructions for product install.

## Bottom Rail:

**3.1** Set bottom rail (with 355.1 insert) onto the BTS80 spindle.

## Top Rail:

**3.2** Retract PT21 spindle all the way up via slotted screw.

**3.3** Align top rail (with 355.9 insert) with PT21 walking beam pivot spindle.

**3.4** Extend PT21 spindle and align spindle with 355.9 insert hole.

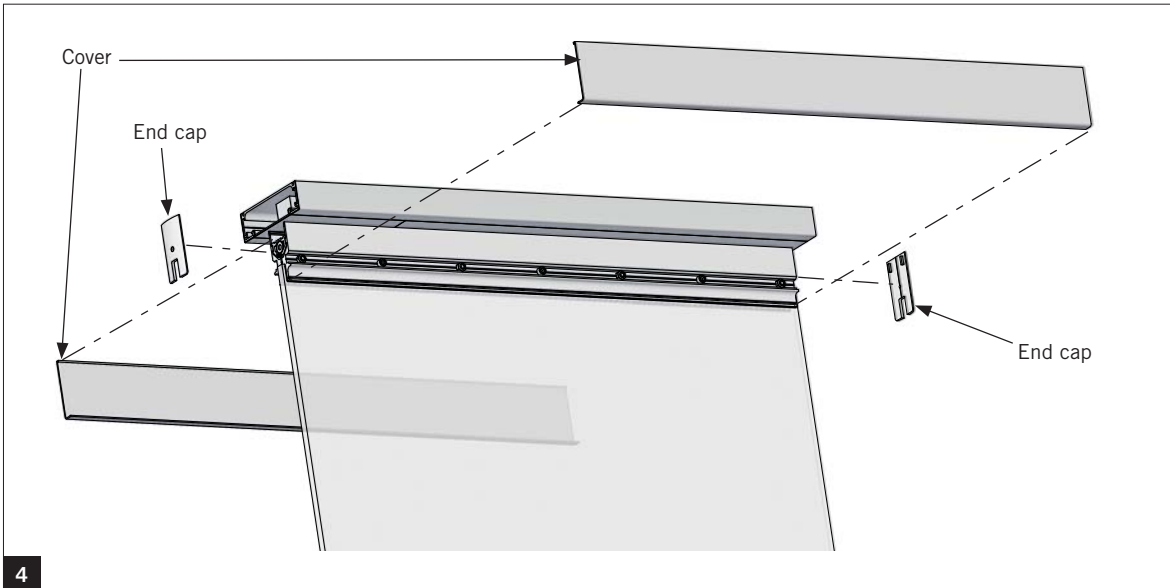
## Adjustments:

**3.5** Using a 3/16" hex key, adjust the pivot, arm, or insert vertically inside each rail via the adjustment block in rail.



# DRS RAIL SYSTEM

## Install rail covers and end caps



**4.1** Snap covers onto top and bottom rails using a rubber mallet.

**4.2** Install end caps using included 6-32x3/4" Type F screws.



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