

# INSTALLATION INSTRUCTIONS FOR PLASCORE S5050 STRUT WALL

The following information is provided by Plascore, Inc., as a general guideline for the installation of the S5050 Strut Wall System. This information should be reviewed prior to commencing installation. The information is intended to be a general guideline, and may not address specific, custom situations which may appear on any particular project. Please consult Plascore, Inc., for any specific details or design applications.

This guideline assumes that the jobsite is clear and ready for the construction of cleanroom walls. The ceiling grid and the access floor, if applicable, are to be in place prior to beginning work on the wall system.

Installation instructions for Plascore doors are not included in this document. Please reference "Installation Instructions for Plascore Wide Stile Door" or "Installation Instructions for Plascore Narrow Stile Door".

## 1. UNCRATING, INSPECTION, AND INVENTORY

- A. All components of the wall system are clean room packaged for protection during shipping. All parts have been cleaned in the factory.
- B. Panels are shipped with a protective plastic film, which should be left intact until the panels have been installed, and ready for final wipedown.
- C. Contractor should visually inspect crates as they unload off trucks. Crates may be unloaded with standard forklift equipment. Note any crate damage, and inspect crates with obvious damage. Compare label on crate with packing slip, which is attached to Bill of Lading. Notify Plascore of any discrepancies between part number and quantities on crate label and packing list.
- D. Crates should be stored where they are protected from moisture, humidity, and temperature extremes.
- E. Parts may be left in crates until required for installation. Note any damage on parts at this time, prior to installation.

## 2. INSTALLATION OF HEADTRACK

- A. Consult the project spreadsheet for the part number for the headtrack assembly. The headtrack has factory-installed gasket.
- B. Special attachment details are used at corners and wall ends. Please see Sections 2A and 2B for these details.
- C. The headtrack has pre-drilled holes for attachment into ceiling grid. Attachment hardware is to be furnished by contractor. Plascore does not provide the attachment hardware for the headtrack to the ceiling grid, due to installer preferences, local codes, and varying ceiling grid designs. When determining the hardware needs, know that the T-groove at the top of the head track has an opening of 0.40", which a

bolt head must pass through, or for which a washer must span.

- D. Attach the headtrack to the ceiling grid per the project wall system layout. Attachment of approximately 24" on center is generally sufficient for most projects. Consult the project architect or engineer for any specific design loads or attachment requirements.
- E. The headtrack is to butt against addition lengths of headtrack for long runs of Plascore walls. The headtrack is to butt against the existing wall at a wall start. The headtrack is to butt against existing headtrack for a 90° T-intersection.

## **2A. INSTALLATION OF HEADTRACK CORNERS**

- A. There are two different headtrack corners available from Plascore. Consult the project spreadsheet for part numbers
  - a) If the headtrack has a T-groove integrated into the design, then a miter connector (part no. 830720) and set screws (part no. 840820) will be supplied. Cut two pieces of headtrack (with a miter on one end) from a length of headtrack. Install the miter connector by sliding the connector into the T-grooves in the headtrack and tightening down the fasteners.
  - b) If the headtrack does not have a T-groove, Plascore provides welded corners.
- B. Attach the headtrack corners to the ceiling grid per the project wall system layout. The headtrack corner is installed in a similar fashion to a length of headtrack. See Section 2 for details.
- C. Butt the square end of headtrack welded corner to an additional length of headtrack to continue Plascore wall assembly. It may be necessary to trim the square ends of the corner if paint build-up on the ends prevents a tight joint with the adjacent length of headtrack.

## **2B. INSTALLATION OF HEADTRACK WALL ENDS**

- A. There are two different headtrack wall ends available from Plascore. Consult the project spreadsheet for part numbers
  - a) If the headtrack has a T-groove integrated into the design, then a Head Track Wall End Cover will be supplied that can be screwed into the length of headtrack at the appropriate location. The length of headtrack should extend past the post at the end of the wall by approximately 1/8".
  - b) If the headtrack does not have a T-groove, Plascore will provide a welded wall end assembly that is 12" long.
- B. Install a headtrack wall end to the ceiling grid in the typical fashion (if applicable).

## **3. INSTALLATION OF FLOORTRACK**

- A. Consult the project spreadsheet for the part number for the floortrack.
- B. Special attachment details are used at corners, door openings and wall ends. Please see Sections 3A, 3B, and 3C for these details.
- C. The floortrack has pre-drilled holes. Attachment hardware is to be furnished by

contractor. Plascore does not provide the attachment hardware for the ceiling grid, due to installer preferences, local codes, and varying ceiling grid designs. When determining the hardware needs, know that the T-groove in the floortrack has an opening of 0.40", which a bolt head must pass through, or for which a washer must span. Typical hardware is screws or j-hooks into access floor, or concrete anchors for concrete slab.

- D. Attachment of 24" or 36" on center spacing is usually adequate for attaching floortrack. Use a fastener within 3" of end of the floortrack if possible. Consult the project architect or engineer for specific fastening requirements.
- E. Install the floortrack after the headtrack is installed. The floortrack is usually installed everywhere below the headtrack except at corners and door openings. The centerline of floortrack should be directly below centerline of headtrack. A plumb bob is usually used for this alignment.
- F. Carefully align (2) lengths of floortrack before attaching to the floor.

### **3A. FLOORTRACK AT CORNERS**

- A. Unlike the headtrack corners, the floortrack is to stop short of the corner post assembly. The corner post extends to the floor, so the floortrack must be cut short of the outside corner by 2 1/2".
- B. Before mounting floortrack to the floor, install a threaded insert (part no. 831974) into the T-groove of the floortrack, using the Threaded Insert Installation Tool (part no. 831973). This is done by tightening the Installation Tool into the drill chuck and placing the threaded insert onto the end of the tool. Then, while applying pressure, use the drill to thread the insert into the T-groove of the floortrack, stopping when the tool has bottomed out against the floortrack.
- C. See Section 4 below, for detailed instructions for corner post installation.

### **3B. FLOORTRACK AT DOOR OPENINGS**

- A. An opening must be left in the floortrack layout for door openings. Please reference the appropriate Door Installation Instructions for either the Wide Stile Door or Narrow Stile Door.

### **3C. FLOOR TRACK AT WALL ENDS AND FRAMED OPENINGS**

- A. Wall ends and framed openings require openings in the floor track.
- B. Framed posts at wall ends extend to the floor. The wall end post includes a 2" Batten, so the floortrack should end 2" short of the wall end location.
- C. Clear openings for slider doors should be verified with the slider door manufacturer.
- D. For all wall ends and framed openings, install a threaded insert (part no. 831974) into the T-groove of the floortrack, using the Threaded Insert Installation Tool (part no. 831973) prior to mounting the floortrack to the floor. (See Section 3A for details.)

#### **4. CORNER POST INSTALLATION**

- A. Consult the project spreadsheet for the part number for the corner post assembly. Install the corner post assembly as floortrack is being installed. See Section 3A above.
- B. The corner post assembly is pre-cut for length in the factory, ready for installation. Slip one end of the corner post into the headtrack and push to the top of the headtrack.
- C. Position the lower end of the corner post so that the flanges of the post align with the surrounding floortracks. Pull the corner post down tight to the floor. The top of the corner post should still sit within the headtrack corner.
- D. Attach the floortrack to the corner post by fastening a self-tapping screw (Pan Head Torx #10 x 1-1/2) (part number 868011) and a flat washer (part number 840681) through the threaded insert in the floortrack and into the corner post.

#### **5. INSTALLATION OF WALL STARTS AND T-INTERSECTIONS**

- A. Wall starts are defined as an abutment of the Plascore wall to another surface, such as an existing wall by others. T-intersections are defined as an abutment of the Plascore wall to another Plascore wall.
- B. Measure the distance between the top of the floortrack already installed onto the floor system, to the bottom edge of the headtrack above.
- C. Cut a floortrack to be utilized as a wall start 2" greater than the distance measured above. The wall start will extend into the headtrack by 2" and sit on top of the floortrack at the floor.
- D. A threaded insert (part no. 831974) may be installed into the bottom end of the floortrack/wallstart using the Threaded Insert Installation Tool (part no. 831973). (See Section 3A for details.) Insert a T-bolt (part no. 868012) through the threaded insert and attach a T-nut (part no. 840803) to it.
- E. Insert the top end of floortrack/wallstart into headtrack, then position bottom end over the existing floortrack.
- F. If a threaded insert was used to aid in this alignment, insert the T-nut into the T-groove of the floortrack mounted to the floor surface. Use a 3/16" allen head T-handle (yellow-handled, part 840323) to tighten the t-bolt.
- G. Attach the floortrack/wallstart to the vertical surface. Use appropriate fasteners for this attachment. Plascore does not supply these fasteners, because of the varied requirements for this attachment.

#### **6. INSTALLATION OF WALL ENDS**

- A. A wall end is the termination of a Plascore wall in an open area, such as a wing wall.
- B. Cut the floortrack back 2" from termination point. Install a threaded insert (part no. 831974) into the T-groove of the floortrack, using the Threaded Insert Installation Tool (part no. 831973) prior to mounting the floortrack to the floor. (See Section 3A for details.)

- C. NOTE: Plascore has provided a post assembly that is 1" longer than the typical post assemblies for this application. Consult the project spreadsheet for part number. This post assembly is pre-cut at the factory, to fit within the headtrack and rest on the finished floor surface. First, pull back the enclosure cap slightly from the bottom end of the assembly for easy removal later. Push the top of the post into the headtrack, against the headtrack wall end cover. Pull the post down and align the post with the floortrack. Attach the floortrack to the vertical post by fastening a self-tapping screw (Pan Head Torx #10 x 1-1/2) (part number 868011) and a flat washer (part number 840681) through the threaded insert in the floortrack and into the vertical wall end post.
- D. (NOTE: This step can be done at the time of the panel installation if desired.) To finish the exposed edge of the post assembly, remove the enclosure cap and batten. To install the supplied spacer bar (part no. 1216), apply double-faced tape to the backside of spacer bar, peel off the paper, and press into place. Be careful to align the spacer bar so that the edge of the bar is flush with the edge of the vertical post. The batten and enclosure cap can be reinstalled after the panel installation.

## **7. INSTALLATION OF VERTICAL POSTS**

- A. Vertical post assemblies are typically installed 48" or 1200mm on center. See the project wall system layout for clarity. These posts are factory cut to length to fit into the headtrack, and rest on the continuous floortrack. The bottom of the post assembly has a fastening plate (part no. 831923) installed at the factory, which serves as the attachment into the floortrack. (Posts are also available in long lengths to be cut in the field. Fastening plates are also available separately to be installed in the field.) Posts are typically installed on the same gridline as the cleanroom ceiling system overhead, which can act as a guideline during installation.
- B. Pull back the enclosure caps slightly from the bottom of the post assembly for easy removal later (Enclosure caps must be removed for panel installation, and proper spacing of batten screws).
- C. Push the top of the post into the headtrack, and then pull the post down onto the floortrack at the proper location.
- D. Insert a T-nut (part no. 840807) and the accompanying T-bolt (part no. 840806) through the slot in the fastening plate. Align the T-nut so that it drops into the T-groove in the floortrack and tighten with the 3/16" allen head T-handle (yellow-handled, part no. 840323).
- E. The spacing of posts may be interrupted at door modules or other openings. The floortrack should be previously cut for these openings (refer to Section 3B & 3C). The post spacing should continue on with the same center-to-center dimension through and past all openings.
- F. To install the fastening plate (part no. 831923) in the field, use the Crimping Tool for Fastening Plate (part no. 831959). Slide the plate into the slot in the Crimping Tool, taking care to have the divot in the plate facing down (to align with the plunger) and to the back. Slide the plate in until the plunger engages the divot. Then, align the tool above the end of the post and slide it down so that the slots in the side of the

Fastening Plate slide over the webs in the S5050 post. When the Crimping Tool bottoms out against the post, twist the Crimping Tool downward, causing the plate to bend the webs in the post, affixing the plate to the post. Remove the Crimping Tool by sliding it off of the plate.

## 8. INSTALLATION OF PANELS

*“Plascore materials must be protected from exposure to water or other contaminants. Plascore materials must not be stored where they are exposed to the elements. A panel with protective film must not get wet at any time.*

*Plascore materials should be stored at a temperature between 20° and 110° F. Storage at temperatures outside these limits may cause the protective film to be difficult to remove and/or it may leave residue on the panel. Plascore recommends that the protective film be removed within 6 months of purchase.*

*It is Plascore’s recommendation that the protective film be removed only 36 hours after the panel and film have reached 68-78 °F with relative humidity not to exceed 50%. Not following these guidelines may cause the protective film to be difficult to remove and/or it may leave residue on the panel.*

***If the protective film leaves residue behind, notify Plascore immediately before proceeding.*** - taken from the “Plascore Cleaning/Maintenance Guidelines”. Please refer to the complete document for more information.

- A. Before installing a panel, peel back the protective film on both surfaces of the panel around all four edges approximately 1". Leave protective film intact on face of panel for protection until final wipedown occurs.
- B. Remove the enclosure caps and battens from adjacent posts. Note that there are only one or two batten screws installed at the factory to hold the batten to the vertical post. Batten screws (shipped loose) are to be installed approximately 12" on center after the panels have been installed.
- C. To install a panel, push one end into headtrack until it clears the floortrack. Position the panel over the floortrack and pull panel down until it sits all the way in the floortrack. The panels have been sized in the factory to overlap the post on each side by 3/8" for the typical wall system layout. The batten will cover the panels by 3/8" per side.
- D. The recommended option for cutting panels in the field is to use a circular saw with a fine-toothed carbide blade.
- E. Panels will typically need to be field cut for width at the end of a straight run. To determine the cut width of the last panel, measure between the batten and the vertical surface where the panel will end (typically a wall start or corner post assembly). The panel should be cut 3/4" more than this opening measurement, which will allow the panel to be grabbed by the vertical batten wing by 3/8", which is sufficient for holding the panel rigid.

- F. After panels are installed, re-install the battens to the vertical post. Fasten the battens to the posts with the supplied batten screws (part no. 868006). Typical spacing for the screws is 12" on center. (Consult the project architect or engineer for screw spacing for specific requirements.) Reinstall the enclosure caps.

## **9. FINAL INSPECTION AND WIPE-DOWN**

- A. Remove protective film from panels only after all installation steps have been completed.
- B. Wipe down panels and extrusions and door leafs with an approved alcohol wipe. If any chemicals are to be utilized in the cleaning process, spot check with extra materials prior to use to insure that the finish of the wall system is not affected.
- C. Consult Plascore's Maintenance and Cleaning Guide or a Plascore representative for specific cleaning issues.

## **10. RECOMMENDED TOOLS**

Following is a list of tools recommended by Plascore to install its S5050 Strut Wall System. This may not be a comprehensive list. Experience with the system and general construction techniques may help to personalize the tool choice for each contracting crew.

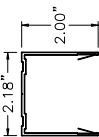
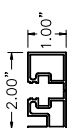
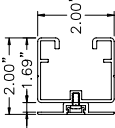
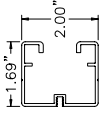

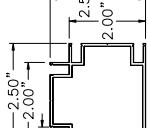

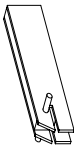


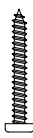









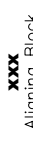
- a) Allen Head Wrenches: M8", 1/8", 5/32", 3/16" (yellow T-handle, available through Plascore.)
- b) #12 Phillips Screwdriver
- c) 5/16" Socket Drive and Ratchet
- d) 5/8" Open-Ended Wrench
- e) Soft Rubber Mallet
- f) Claw Hammer (to open Plascore crates)
- g) Circular Saw with Fine Toothed Carbide Blade
- h) Chop Saw or Miter Saw with Fine Tooth Carbide Blade
- i) Plunge Router with Double Fluted Carbide Tip Bit (Optional)
- j) Suction Cup Panel Holders
- k) Torx Screwdriver

(End of Section)

# S5050

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PROJECT NAME: \_\_\_\_\_  
 SUBMITTAL REVISION: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 APPROVED BY: \_\_\_\_\_

 <p><b>55mmx2" Head Track Assy w/gasket</b>                  871001                  871011</p> <p><b>831932 Head Track</b>                  55mm x 2"                  33774 HT Gasket</p> <p>Other styles also available</p>	 <p><b>S5050 Floor Track Assy</b>                  831937 w/ 0 inserts                  871022 w/ 1 insert                  871021 w/ 2 inserts</p> <p><b>831937 F5050 Floor Track</b>                  831974 Threaded Insert</p>	 <p><b>S5050 Post w/Batten Assy</b>                  871024 w/ 0 plates                  871002 w/ 1 plate                  871003 w/ 2 plates</p> <p><b>831935 S5050 Post</b>                  831085 2" Shallow Batten                  830606 Enclosure Cap                  831923 Fastening Plate                  868006 Batten Screw</p>	 <p><b>S5050 Post Assy</b>                  831935 w/ 0 plates                  871018 w/ 1 plate                  871019 w/ 2 plates</p> <p><b>831935 S5050 Post</b>                  831923 Fastening Plate</p>	 <p><b>S5050 Corner Post</b>                  831737 Corner Post</p>	 <p><b>S5050 Corner Post</b>                  831737 Corner Post</p>								
 <p><b>831923 Fastening Plate</b></p>	 <p><b>831959 Crimping Tool for Fastening Plate</b> 831923</p>	 <p><b>831973 Installation Tool for Threaded Insert</b> 831974</p>	 <p><b>868012 SHCS 1/4"-20 x 2 Bolt @ FT threaded insert</b></p>	 <p><b>868011 PH Torx Tapping 10x1-1/2 Screw @ FT &amp; S5050 Corner</b></p>	 <p><b>840681 Flat Washer 1/4" Flat Washer @ FT &amp; S5050 Corner</b></p>								
 <p><b>868006 PPH 10-24 x 5/16 Batten Screw</b></p>	 <p><b>868008 PPH 10-24 x 7/16 Screw @ FT T-intersect</b></p>	 <p><b>840806 BSHCS 5/16-18 x 5/8 T-Bolt @ Fastening Plate</b></p>	 <p><b>1216 Aluminum Bar 1/4"x1/2" Used @ Wall End</b></p>	 <p><b>831974 Threaded Insert</b></p>	 <p><b>831974 Threaded Insert</b></p>								
 <p><b>840807 T-Nut 5/16-18 T-Nut @ Fastening Plate</b></p>	 <p><b>840803 T-Nut 1/4-20 T-Nut @ Threaded Insert</b></p>	 <p><b>xxx Aligned Block FT @ F5075 Corner</b></p>	<p><b>PLASCORE</b>                  615 N. FAIRVIEW STREET                  ZEELAND, MICHIGAN 49464                  (616) 772-1220</p> <p>DWG TITLE                  COMPONENTS FOR                  S5050 WALL SYSTEM</p> <table border="1"> <tr> <td>SIZE</td> <td>FSCM</td> <td>DWG NUMBER</td> <td>REV</td> </tr> <tr> <td>A</td> <td>39212</td> <td>MATRIX S5050</td> <td>-</td> </tr> </table> <p>DRAWN BY: A. SCHOUHAN DATE: 11/22/02                  ENGRG: _____ OC APP. _____                  SCALE: NTS SHEET: 1 OF 1</p>			SIZE	FSCM	DWG NUMBER	REV	A	39212	MATRIX S5050	-
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