HANDLING, STORAGE, AND PROTECTION OF ALUMINUM

The following precautions are recommended to protect the material against damage. Following these precautions will help ensure early acceptance of your products and workmanship.

A. HANDLE CAREFULLY.
   All aluminum materials at job site must be stored in a safe place, well removed from possible damage by other trades. Cardboard wrapped or paper interleaved materials must be kept dry.

B. CHECK ARRIVING MATERIALS.
   Check for quantities and keep records of where various materials are stored.

C. KEEP MATERIALS AWAY FROM WATER, MUD, AND SPRAY.
   Prevent cement, plaster or other materials from damaging the finish.

D. PROTECT THE MATERIALS AFTER ERECTION.
   Protect erected frame with polyethylene or canvas splatter screen. Cement, plaster, terrazzo, other alkaline solutions, and acid based materials used to clean masonry are harmful to the finish. If any of these materials come in contact with the aluminum, immediately remove with water and mild soap.

ORDER OF ASSEMBLY AND INSTALLATION

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GENERAL INSTALLATION NOTES

Recommended Guidelines For All Installations:

1. **REVIEW CONTRACT DOCUMENTS.** Check shop drawings, installation instructions, architectural drawings, and shipping lists to become thoroughly familiar with the project. The shop drawings take precedence and include specific details for the project. Note any field verified notes on the shop drawings prior to installing. The installation instructions are of a general nature and cover most conditions.

2. **INSTALLATION.** All materials are to be installed plumb, level, and true. Install operable windows preglazed only.

3. **BENCH MARKS.** All work should start from bench marks and/or column lines as established by the architectural drawings and the general contractor with guaranteed accuracy. Working from these datum points and lines determine:
   a) The plane of the wall in reference to offset lines provided on each floor.
   b) The finish floor lines in reference to bench marks on the outer building columns.
   c) Mullion spacing from both ends of masonry opening to prevent dimensional build-up of daylight opening.

4. **FIELD WELDING.** All field welding must be adequately shielded to avoid any splatter on glass or aluminum. Results will be unsightly and/or structurally unsound. Advise general contractor and other trades accordingly. All field welds of steel anchors must receive touch-up paint (zinc chromate) to avoid rust.

5. **SURROUNDING CONDITIONS.** Make certain that construction which will receive your materials is in accordance with the contract documents. If not, notify the general contractor in writing and resolve differences before proceeding with work.

6. **ISOLATION OF ALUMINUM.** Aluminum to be placed in direct contact with uncured masonry or incompatible materials should be isolated with a heavy coat of zinc chromate or bituminous paint.

7. **SEALANTS.** Sealants must be compatible with all materials with which they have contact, including other sealant surfaces. Consult with sealant manufacturer for recommendations relative to joint size, shelf life, compatibility, cleaning, priming, tooling, adhesion, etc. It is the responsibility of the Glazing Contractor to submit a statement from the sealant manufacturer indicating that glass and glazing materials have been tested for compatibility and adhesion with glazing sealants, and interpreting test results relative to material performance, including recommendations for primers and substrate preparation required to obtain adhesion. The chemical compatibility of all glazing materials and framing sealants with each other and with like materials used in glass fabrication must be established. This is required on every project.

8. **FASTENING.** Within the body of these instructions “fastening” means any method of securing one part to another or to adjacent materials. Only those fasteners used within the system are specified in these instructions. Due to the varying perimeter conditions and performance requirements, perimeter and anchor fasteners are not specified in these instructions. For perimeter and anchor fasteners refer to the shop drawings or consult the fastener supplier.

9. **BUILDING CODES.** Due to the diversity in state/provincial local, and federal laws and codes that govern the design and application of architectural products, it is the responsibility of the individual architect, owner, and installer to assure that products selected for use on projects comply with all the applicable building codes and laws. U.S. Aluminum exercises no control over the use or application of its products, glazing materials, and operating hardware and assumes no responsibility thereof.

10. **EXPANSION JOINTS.** Expansion joints and perimeter seals shown in these instructions and in the shop drawings are shown at normal size. Actual dimensions may vary due to perimeter conditions and/or difference in metal temperature between the time of fabrication and the time of installation. Gaps between expansion members should be based on temperature at time of installation.

11. **COORDINATION WITH OTHER TRADES.** Coordinate with the general contractor any sequence with other trades which offset curtain wall installation (i.e. fire proofing, back-up walls, partitions, ceilings, mechanical ducts, converters, etc.)

12. **CARE AND MAINTENANCE.** Final cleaning of exposed aluminum surfaces should be done in accordance with AAMA 609.1 for anodized aluminum and 610.1 for painted aluminum.
SYSTEM REQUIREMENTS

Maximum wall thickness: 4-7/8" (124 mm).

Maximum unsupported total load on each sill: 50 lbs. (23 kg) each.

Note: Additional shim support under the sill member is required for any loads over 50 lbs (23 kg).

Interior use only.

INTRODUCTION

Thank you for your purchase of the C.R. Laurence Co., Inc. 487 Office Partition System. It has been engineered to install easily and efficiently. Please take the time to review this manual before you begin.

The 487 Office Partition System is an interior product that allows you to add finished doorways, sidelites and windows (borrowed lite) to conventional drywall construction walls with maximum 4-7/8" (124 mm) thickness.

Each 487 System has been custom prepared in our factory to the job site specifications with minor to no field fabrication required. Be sure to have the Shop Drawings handy for reference. Technical support is available on-line at crlaurence.com and by phone at (800) 262-5151. Please have your Sales Order Number for easy reference.

EXTRUSION IDENTIFICATION

Your order has been carefully fabricated, inspected, and packaged to work order specifications. We have placed an Indicator Label on the inside or back side of each part before final packaging. Use the Identification Key (below) to organize and lay out each Series 487 Office Partition System before proceeding with the assembly process. The Key is viewed from the Push Side of the Door.

<table>
<thead>
<tr>
<th>Transom Single Swing Door</th>
<th>Transom Double Swing Door</th>
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<tbody>
<tr>
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<tr>
<th>Single Swing Door</th>
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</tbody>
</table>

A  Active Door
B  Inactive Door
C  Header
D  Sidelite Wall Jamb
E  Wall / Hinge Jamb
F  Sill
G  Intermediate Vertical
H  Sidelite Vertical / Strike Jamb
I  Transom Header
J  Intermediate Horizontal
## PARTS IDENTIFICATION

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>PART NUMBER</th>
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</thead>
<tbody>
<tr>
<td>487X 501</td>
<td>487X 512</td>
</tr>
<tr>
<td>Deep Pocket Cap</td>
<td>Door Frame Cap</td>
</tr>
<tr>
<td>487X 502</td>
<td>487X 513</td>
</tr>
<tr>
<td>Sill Cap</td>
<td>Door Frame Insert</td>
</tr>
<tr>
<td>487X 504</td>
<td>487X 525</td>
</tr>
<tr>
<td>Glazing Stop</td>
<td>Deep Pocket Insert</td>
</tr>
<tr>
<td>487X 505</td>
<td>487X 550</td>
</tr>
<tr>
<td>Floor Track</td>
<td>Shallow Pocket Insert</td>
</tr>
<tr>
<td>487X 509</td>
<td>487X 001</td>
</tr>
<tr>
<td>Casing Cap</td>
<td>Trim Strip</td>
</tr>
</tbody>
</table>

**SERIES 487 OFFICE PARTITIONS: CENTER GLAZED WITH ONE INCH TRIM**

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<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>PART NUMBER</th>
<th>PART NUMBER</th>
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</thead>
<tbody>
<tr>
<td>487RBP1</td>
<td>487RBP2</td>
<td>487RBP3</td>
</tr>
<tr>
<td>Frame Reinforcement Backing Plate</td>
<td>Strike Locking Plate for Locksets</td>
<td>Reinforcement Backing Plate for Surface Mounted Regular Arm Closer</td>
</tr>
<tr>
<td>487RBP4</td>
<td>DJ487</td>
<td>WB452</td>
</tr>
<tr>
<td>Reinforcement Backing Plate for Parallel Arm Closers</td>
<td>Drill Jig</td>
<td>Edge Block</td>
</tr>
<tr>
<td>NP600C</td>
<td>NP225</td>
<td>NP238</td>
</tr>
<tr>
<td>Door Frame Gasket</td>
<td>For 1/4&quot; Sidelite and Door Glass</td>
<td>For 3/8&quot; Sidelite and Door Glass</td>
</tr>
<tr>
<td>NP563</td>
<td>SB513</td>
<td>SB514</td>
</tr>
<tr>
<td>For 9/16&quot; Sidelite and Door Glass</td>
<td>For 1/4&quot;, 3/8&quot; Sidelite and all Door Glass</td>
<td>For 1/2&quot;, 9/16&quot; Sidelite Glass</td>
</tr>
<tr>
<td>8X58HWSMS</td>
<td>20061601</td>
<td>6X158DWSM</td>
</tr>
<tr>
<td>#8 X 5/8&quot; Hex Washer Head Sheet Metal Screws</td>
<td>#6-20 X 1/2&quot; Self Drilling Pan Head Screw</td>
<td>#6 X 1-5/8&quot; Self Drilling Flat Head Drywall Screws</td>
</tr>
<tr>
<td>487C1</td>
<td>487C2</td>
<td>487C3</td>
</tr>
<tr>
<td>Corner Clip</td>
<td>T-Clip</td>
<td>Hook Clip</td>
</tr>
<tr>
<td>487C4</td>
<td>487C5</td>
<td></td>
</tr>
<tr>
<td>Wide Offset Clip</td>
<td>Narrow Offset Clip</td>
<td></td>
</tr>
</tbody>
</table>
# ROUGH OPENING FORMula SHEET

<table>
<thead>
<tr>
<th>Diagram</th>
<th>ROUGH OPENING FORMULAS</th>
</tr>
</thead>
</table>
| A | Width = \( DW + 1\text{-1/2”} \)
| Width = \( DH + \frac{3}{4”} \)
| B | Width = \( DW + DW + 1\text{-1/2”} \)
| Width = \( DH + \frac{3}{4”} \)
| C | Width = \( DW + MW + SW + 1\text{-1/2”} \)
| Width = \( DH + \frac{3}{4”} \)
| D | Width = \( DW + MW + SW + MW + SW + 1\text{-1/2”} \)
| Height = \( DH + \frac{3}{4”} \)
| E | Width = \( BW + 1\text{-1/2”} \)
| Height = \( BH + 1\text{-1/2”} \)
| F | Width = \( DW + 1\text{-1/2”} \)
| Height = \( DH + MH + \frac{TH}{2} + \frac{3}{4”} \)
| G | Width = \( DW + MW + SW + 1\text{-1/2”} \)
| Height = \( DH + MH + \frac{TH}{2} + \frac{3}{4”} \)
| H | Width = \( DW + MW + SW + MW + SW + 1\text{-1/2”} \)
| Height = \( DH + MH + \frac{TH}{2} + \frac{3}{4”} \)
| I | Height = \( SH + 1\text{-1/2”} \)

**DW** Door Opening Width (D.L.O.)

**DH** Door Opening Height (D.L.O.)

**MW** Mullion Width (1-1/2”)

**MH** Mullion Height (1-1/2”)

**SW** Sidelite Opening Width (D.L.O.)

**SH** Sidelite Height (D.L.O.)

**BW** Borrowed Lite Width (D.L.O.)

**BH** Borrowed Lite Height (D.L.O.)
**DRYWALL PREPARATION**

When framing, position all metal studs so that the open side faces the rough opening. Use two sets of studs, back to back for horizontals. The icons in the illustrations below show the correct orientation.

Refer to the CRL shop drawings for overall layout and to confirm dimensions.

---

**Rough Opening Calculation**

- Door
- Cased Opening
- Borrowed Lite to Floor

**Metal Stud Orientation**

- Door
- Door with Sidelite
- Door with Sidelites
DRYWALL PREPARATION (CONTINUED)

Rough Opening Calculation

Metal Stud Orientation

Borrowed Lite (Above Floor)

Transom Door with Sidelites

DRYWALL INSTALLATION

Ensure drywall thickness finishes at a standard 4-7/8" (124 mm). Cut the wallboard flush with the metal stud. Ensure the drywall is square and plumb.

Note: The critical limitation for the finished wall is 4-7/8" (124 mm).
INSTALLATION NOTES

The 487 Office Partition System requires that all rough openings have a maximum 4-7/8" (124 mm) finished wall thickness. Maintaining a 3/4" (19 mm) nominal gap allows plus or minus adjustments for leveling and plumbing jamb members.

NOTE: For sill on not-to-floor sidelite or borrowed lite, allow 1" (25.4 mm) nominal gap.

When installing doors and doorways, look for the tabbed ends of the jambs. They fit into the slots on both ends of the header during installation.

Tabbed jambs fit into slotted header.

Unless requested otherwise, all vertical members are cut with an additional 1-5/8" (41 mm) scribe length to allow for varying unlevel floor conditions. Do not trim scribe from the tabbed end of door frame or mitered end of the trim strip.

The 487X504 glass stops should only be installed during the glazing process to avoid damage to the stops. The maximum unsupported load limit for each sill is 50 lbs (23 kg). Note: Additional shim support under the sill member is required for any loads over 50 lbs (23 kg).

Refer to the installation section for each component for detailed instructions.
CLIP ASSEMBLY CHART
(For Use with Pages 12-18)

The instructions in this manual pertain to installation using clips to secure the members. Refer to the numbers listed on each installation page and match them with the illustrations on this page to find the correct clip and orientation. All clips are installed on BOTH sides of the frame.
SINGLE DOOR FRAME

All vertical members are cut with an additional 1-5/8" (41.3 mm) scribe length for field cutting to allow for varying unlevel floor conditions. Fabricated frames can be ordered to exact dimensions for "cut-free" installation.

The tabbed ends of the jambs fit into the slots on both ends of the header during installation.

1. Lift header into place. Adjust to proper height. **Do not secure.**
2. Measure and trim Scribe from **non-tabbed** end of each jamb.
3. Insert jambs into slotted header.
4. Level and secure header.
5. Plumb, square and secure hinge jamb.
6. Plumb, square and secure strike jamb.

HORIZONTAL SECTION

VERTICAL SECTION
DOOR WITH SIDELITE

Note: Install door per instructions for "Installing a Single Door". Then proceed with framing for sidelite.

Screw spacing on all metal-to-metal connections using 20061601 self drilling screws must be 2" (50.8 mm) from each end and 12" (305 mm) O.C. See * this page.

Install 487X 505 Floor Track

1. CENTER
2. Shim as needed
3. 487X 505
4. (25 mm)

VERTICAL SECTION AT SIDELITE

VERTICAL SECTION AT DOOR

HORIZONTAL SECTION AT DOOR AND SIDELITE

Finish: 487X 504

Metal Stud

Wood Door

Metal Stud

Wood Door

Metal Stud

Wood Door

Metal Stud

Wood Door

Metal Stud

Wood Door

Screw spacing on all metal-to-metal connections using 20061601 self drilling screws must be 2" (50.8 mm) from each end and 12" (305 mm) O.C. See * this page.
SERIES 487 OFFICE PARTITIONS: CENTER GLAZED WITH ONE INCH TRIM

DOOR WITH MULTIPLE SIDELITES AND HORIZONTAL MULLIONS

Note: Install door per instructions for "Installing a Single Door". Then proceed with framing for sidelite.

Screw spacing on all metal-to-metal connections using 20061601 self drilling screws must be 2" (50.8 mm) from each end and 12" (305 mm) O.C. See * this page.

Do NOT install before glazing.

50 lb. maximum load on sill without additional support.

VERTICAL SECTION AT DOOR AND SIDELITES

Repeat this section for each additional sidelite.

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1. Position transom profiles in opening. Use one screw in each to hold in place.
2. Lift door header into place. Adjust to proper height. **Do not secure.**
3. Measure and trim Scribe from **non-tabbed** end of each jamb.
4. Insert jambs into slotted header.
5. Level and secure header.
6. Plumb, square and secure hinge jamb.
7. Plumb, square and secure strike jamb.
8. Plumb, square and secure transom.

**Tabbed jambs fit into slotted head.**

Screw spacing on all metal-to-metal connections using 20061601 self drilling screws must be 2" (50.8 mm) from each end and 12" (305 mm) O.C. See * this page.
TRANSOM DOOR WITH SIDELITE

Note: Install door per instructions for "Installing a Transom Door". Then proceed with framing for transom sidelite.

Screw spacing on all metal-to-metal connections using 20061601 self drilling screws must be 2" (50.8 mm) from each end and 12" (305 mm) O.C. See this page.
Screw spacing on all metal-to-metal connections using 20061601 self drilling screws must be 2" (50.8 mm) from each end and 12" (305 mm) O.C. See * this page.
SERIES 487 OFFICE PARTITIONS: CENTER GLAZED WITH ONE INCH TRIM

CASED OPENINGS

VERTICAL SECTION AT CASED OPENING (TO FLOOR)

- Metal Stud
- Metal Stud
- Metal Stud
- Metal Stud

VERTICAL SECTION AT CASED OPENING (NOT TO FLOOR)

- Metal Stud
- Metal Stud
- Metal Stud
- Metal Stud

HORIZONTAL SECTION AT CASED OPENING

- Metal Stud
- Metal Stud
- Metal Stud
- Metal Stud

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GLASS SIZING AND GLAZING

GLASS SIZE = D.L.O. + 5/8” or 5/16” GLASS BITE EACH POCKET

1/4” Glass

NP225
SB513

3/8” Glass

NP238
SB513

1/2” Glass

NP238

9/16” Glass

NP563
SB514

Important: Maximum 50 lbs. (23 kg) each Sidelite. Note: Additional shim support under the sill member is required for any loads over 50 lbs (23 kg).

Glazing Sequence

1. Insert glass into deep pocket.
2. Swing into place.
3. Slide into shallow pocket.
4. Lift up into top pocket.
5. Position setting blocks.
7. Install 487x 504 glass stop(s).
8. Install WB452 edge block.
9. Center glass.
10. Cut and install glazing gaskets.
1" TRIM STRIP NOTCHING AND INSTALLATION (CLIPS ONLY)

CRL fabricated frames come standard with trim strips that are mitered at the corners and notched to fit over the clips. The vertical strips have an additional 1-5/8" (41.3 mm) scribe to allow for unlevel floor conditions. Trim the scribe from the straight end of vertical trim strips and notch for the clips at the sill. All other areas are notched at the factory.