ADP-1 LINER PANEL
ERECITION GUIDE

BEHLEN MFG. CO.
COLUMBUS, NE 68601

TECHNICAL INFORMATION 55062
Rev. 4/22/2020

NOTE: See back side of cover for latest changes to this manual.
NOTE: If pink sheets are included in this manual, refer to them for latest revisions.

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</tr>
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<td>PAGE NUMBER</td>
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The erection information presented herein is provided as a supplement to the erection drawings prepared for your specific job. The information, illustrations and procedures in this guide are typical for most Behlen buildings. Variations may occur because of special building requirements. Always refer to the erection drawings supplied with each job which will govern specific part and assembly arrangements and applicable illustration details. Because Behlen products are constantly being improved, the information contained herein is subject to change without notice.

The following fastener schedule is to be used with this erection guide and will correspond to the fastener schedule in the erection drawings supplied with each job.

### FASTENER SCHEDULE

<table>
<thead>
<tr>
<th>Loc.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3228100</td>
<td>Screw ¼ x 3/4 FL-TP SD WW</td>
</tr>
<tr>
<td>2</td>
<td>3228084</td>
<td>Screw 12 x 1 HWH SD NW</td>
</tr>
<tr>
<td>3</td>
<td>3228101</td>
<td>Screw 12 x 1-1/4 FL-TP SD WW</td>
</tr>
<tr>
<td>4</td>
<td>3228105</td>
<td>Screw ¼ x 1-1/4 LG-LF SD WW</td>
</tr>
<tr>
<td>5</td>
<td>3228099</td>
<td>Screw 8 x ½ HWH SD NW</td>
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<tr>
<td>6</td>
<td>3188333</td>
<td>Bolt ½ x 2 HVHX A325 GALV and Nut (1328191)</td>
</tr>
<tr>
<td>7</td>
<td>1328199</td>
<td>Bolt 5/8 x 2-1/4 HVHX A325T GALV and Nut (1328195)</td>
</tr>
<tr>
<td>8</td>
<td>1328187</td>
<td>Bolt ¾ x 1-1/2 HVHX A325T GALV and Nut (1328192)</td>
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<tr>
<td>9</td>
<td>1328190</td>
<td>Bolt ¾ x 2-1/2 HVHX A325T GALV and Nut (1328192)</td>
</tr>
<tr>
<td>10</td>
<td>3228100</td>
<td>Screw ¼ x 3/4 FL-TP SD WW for ADP-1 Roof</td>
</tr>
<tr>
<td>11</td>
<td>3228103</td>
<td>Screw ¼ x 3/4 LG-LF SD WW for SSR</td>
</tr>
<tr>
<td>12</td>
<td>3228101</td>
<td>Screw 12 x 1-1/4 FL-TP SD WW for ADP-1 Roof</td>
</tr>
<tr>
<td>13</td>
<td>3228105</td>
<td>Screw ¼ x 1-1/4 LG-LF SD WW for SSR</td>
</tr>
<tr>
<td>14</td>
<td>3228087</td>
<td>Screw 12 x 1-1/4 HWH SD #5PT NW</td>
</tr>
<tr>
<td>15</td>
<td>1328193</td>
<td>Bolt ½ x 1-1/2 HVHX A325T GALV and Nut (1328191)</td>
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<tr>
<td>16</td>
<td>3208170</td>
<td>Bolt ½ x 1 FLT RD HD A307 PLTD and Nut (2688007)</td>
</tr>
<tr>
<td>17</td>
<td>3228102</td>
<td>Screw 12 x 2 FL-TP SD WW</td>
</tr>
</tbody>
</table>

### Abbreviations
- **HD** = Head
- **SD** = Self-Drilling
- **ST** = Self-Tapping
- **SS** = Stainless Steel
- **PT** = Point
- **RD** = Round
- **WW** = With Washer
- **NW** = No Washer
- **FLT** = Flat
- **HVHX** = Heavy Hex
- **GALV** = Galvanized
- **PLTD** = Plated
- **HWH** = Hex Washer Head
- **FL-TP** = Flat Top
- **LG-LF** = Long Life

### ERECTION INFORMATION

Liner panel sidelaps shall be stitched together with a ② fastener at 24" centers.
RECOMMENDED INSTALLATION FOR SELF-DRILLING TAPPING FASTENERS TO INSURE FASTENER PERFORMANCE.

* Apply with 1800 RPM electric screw gun.

* Drive socket size must fit appropriately to fastener head.

**Socket Types:**

1. **Super Star Socket** - Used for long-life non-magnetic screw heads. Can be used with carbon screw to avoid drill chips collecting on magnetic sockets.
   
   Inland Part No. - 1/4” (3518045)  5/16” (3518046)  3/8” (3518047)

2. **Non-magnetic** - Used by erectors on roofing applications, mainly to avoid drill chips collecting in sockets.

   Special Order - 1/4”  5/16”  3/8”

Drilling/Driving fastener must be held perpendicular to the fastening surface.

Self-Drilling fasteners should not be forced in. Allow the drill point to do the work.

**- CAUTION -**

Over-torquing may result in fastener separation/failure (head popping off).

Care should be exercised during installation.

Torque of 30-60 in. lbs. Based on fastener size and application.

FOR APPLICATION SUPPORT, CONTACT:

ATLAS BOLT & SCREW TECHNICAL SERVICES (800) 321-6977

Inland Buildings (800) 438-1606

*1800 RPM screw guns and sockets are available at your local tool house or from:

Dynamic Fasteners 1-800-821-5448
HANDLING LONG TRIM COMPONENTS
When removing long trims from the shipping crate and during installation, care should be taken by construction workers to avoid damage caused by buckling.

PROTECTIVE FILM REMOVAL
The trim components received with this building have a protective film on the colored surface that must be removed prior to installation.

Prolonged exposure (more than 3 weeks) to rain and/or sunlight will adversely effect the protective film making removal difficult.

When film is being removed from trim having a hem along its edge, the film should be peeled off along the entire end. This includes the 3/8” hemmed area on the back side. Pull the entire film strip at a constant rate. Do NOT try to rip the film off as it will tend to tear at the hemmed edge and corners leaving a strip that will have to be removed separately.
RELATIONSHIP OF LINER PANEL AND EXTERIOR PANEL RIBS
Liner panels for a complete sidewall or endwall surface have been detailed with a process similar to the exterior wall panels. The location of the liner panels is based on the length of the exterior wall surface and whether there is a “Start Dimension” at each end of the wall surface. This detailing process will keep the liner panel ribs and the exterior panel ribs in line.

During the erection process, the sidewall liner panel locations may start or stop at J-trims as desired but on the endwall surface, the liner panel length may be insufficient if moved to some other location.
LINER AT BASE

BASE ANGLES

BASE CHANNEL

ONE-PIECE BASE ANGLE/SEAL
Linер at girt

At girt

Ending near a girt

Ending at a girt
### Liner at Eave Strut

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>ROOF SLOPE PER 12&quot;</th>
<th>MIN</th>
<th>MAX</th>
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<tbody>
<tr>
<td>AG21</td>
<td>--</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>AG65</td>
<td>3 9/16&quot;</td>
<td>1&quot;</td>
<td></td>
</tr>
<tr>
<td>AG66</td>
<td>4 1/16&quot;</td>
<td>2&quot;</td>
<td></td>
</tr>
<tr>
<td>AG67</td>
<td>5 2/16&quot;</td>
<td>3&quot;</td>
<td></td>
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<tr>
<td>AG68</td>
<td>6 3/16&quot;</td>
<td>4&quot;</td>
<td></td>
</tr>
<tr>
<td>SK6</td>
<td>7 4/16&quot;</td>
<td>--</td>
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#### Low Eave

- **Coped Flashing**
- **Liner Panel**
- **Roof Panel**
- **Gutter**
- **Wall Panel**

#### High Eave

- **Coped Flashing**
- **Liner Panel Extended for Ceiling Liner**
- **Roof Panel**
- **High Eave Trim**
- **Liner Panel**
- **WALL PANEL**

---

8-23-12
LINER AT RAKE

RAFTER OFFSET OF 1'-0", 1'-2", 1'-4", 1'-5", 2'-0" OR 2'-2"

RAFTER OFFSET OF 1'-0" OR 1'-2"
(RAFTER FLANGE WIDTHS OF 1/2" OR 1")

RAFTER OFFSET OF 4" OR 5"

(Angle OR AGB1 RAKE ANGLE
(FIELD NOTCH AT PURLINS)

OFFSET

ROOF PANEL (NOT SHOWN)

PURLIN

WALL PANEL

LINER PANEL
ADP-1 (FIELD NOTCH AT PURLINS)

RAFTER (w/ FLANGES 1/2" OR 1/2"

WDO)

3" DEFLECTION ALLOWANCE

1".33 - 2" J - 30m

@ 12" CTRS

LINER PANEL
ADF

FLANGE BRACE (FIELD CUT
LINER AROUND FLANGE BRACE)

ENDWALL BEAM
RAFTER SIMILAR

LINER PANEL
ADP-1 (FIELD NOTCH AT PURLINS)

RAFTER OFFSET OF 6" OR 5"
DOUBLE CEE COLUMN (SINGLE CEE IS SIMILAR)
LINER AT CORNER – BY-PASS SIDEWALL/ENDWALL GIRTS

CORNER COLUMN (SINGLE-CEE OR DOUBLE-CEE)

- By-Pass Sidewall Girt
- By-Pass Endwall Girt

CORNER COLUMN (WELDED OR DOUBLE-CEE)

- By-Pass Sidewall Girt
- By-Pass Endwall Girt
Liner at Corner – By-Pass Sidewall/Endwall Girts

Rigid Frame at Endwall W/1'-4" or More Offset

- By-Pass Sidewall Girt
- By-Pass Endwall Girt

Rotated Corner Column W/1'-0" or 1'-2" Offset

- By-Pass Sidewall Girt
- By-Pass Endwall Girt
LINER AT COLUMN – 1” PROJECTION – FLUSH GIRTS

DOUBLE CEE COLUMN (SINGLE CEE IS SIMILAR)

WELDED COLUMN W/DEPTH EQUAL TO GIRT DEPTH

WELDED COLUMN W/DEPTH GREATER THAN GIRT DEPTH
LINER AT COLUMN – 0" PROJECTION – FLUSH GIRTS

SINGLE OR DOUBLE CEE COLUMNS

WELDED COLUMN W/DEPTH EQUAL TO GIRT DEPTH

WELDED COLUMN W/DEPTH GREATER THAN GIRT DEPTH
LINER AT CORNER – FLUSH SIDEWALL/ENDWALL GIRTS

1 INCH GIRT PROJECTION

CORNER COLUMN (SINGLE-CHE) (DOUBLE-CHE CORNER COLUMN SIMILAR)
- FLUSH SIDEWALL GIRT
- FLUSH ENDWALL GIRT

CORNER COLUMN (WELDED)
- FLUSH SIDEWALL GIRT
- FLUSH ENDWALL GIRT
LINER AT CORNER – FLUSH SIDEWALL/ENDWALL GIRTS

0 INCH GIRT PROJECTION

CORNER COLUMN (SINGLE-CEE)
(DOUBLE-CEE CORNER COLUMN SIMILAR)
• FLUSH SIDEWALL GIRT
• FLUSH ENDWALL GIRT

CORNER COLUMN (WELDED)
• FLUSH SIDEWALL GIRT
• FLUSH ENDWALL GIRT
LINER AT CORNER – FLUSH SIDEWALL/ENDWALL GIRTS

0 INCH GIRT PROJECTION (1 INCH GIRT PROJECTION IS SIMILAR)

- FLUSH SIDEWALL GIRT
- FLUSH ENDWALL GIRT

ROTATED CORNER COLUMN W/4” OR 5” OFFSET

RIGID FRAME AT ENDWALL W/1’-4” OR 1’-5” OFFSET

- FLUSH SIDEWALL GIRT
- FLUSH ENDWALL GIRT
LINER AT CEILING

AT EAVE

LINER TO PURLIN

LAP OF LINER AT PURLIN

LINER AT RAFTER

4-22-2020
LINER AT CEILING

LINER AT RAKE - RAFTER W/6” MAX. FLANGE WIDTH - OFFSET OF 1'-0" OR 1'-2"

LINER AT RAKE - RAFTER W/8” FLANGE WIDTH - OFFSET OF 1'-0" OR 1'-2"

LINER AT RAKE - RAFTER OFFSET OF 4" OR 5"
LINER AT SELF-FRAMING WINDOW

SECTION THRU JAMB WITH ADP-2 WALL PANEL w/ADP-1 LINER PANEL

AT SILL

STOP J-TRIM ON HEADER & SILL HERE

ADP-1 LINER PANEL

ADP-1 WALL PANEL

STRAIGHT FIN

JAMB TRIM

WINDOW

ROUGH OPENING

ADP-2 WALL PANEL

STRAIGHT FIN

JAMB TRIM

WINDOW

ROUGH OPENING

SECTION THRU JAMB WITH ADP-2 WALL PANEL w/ADP-1 LINER PANEL
LINER AT PREASSEMBLED WINDOW

AT HEADER

16 GA. GALVANIZED SUBFRAME

FOAM CLOSURE

16 GA. GALVANIZED SUBFRAME

WALL PANEL

AT SILL

STOP J-TRIM ON HEADER & SILL HERE

TM33-12 J-TRIM OR TM33-20 J-TRIM

16 GA. GALVANIZED SUBFRAME

AT JAMB WITH ADP-1 PANEL

STOP J-TRIM ON HEADER & SILL HERE

TM33-12 J-TRIM OR TM33-20 J-TRIM

16 GA. GALVANIZED SUBFRAME

SECTION THRU JAMB WITH ADP-2 WALL PANEL
w/ADP-1 LINER PANEL
LINER AT FRAMED OPENING

HEADERS NEAR EAVE STRUTS

HEADERS BELOW SIDEWALL / ENDWALL GIRTS AT STANDARD ELEVATIONS

11/8/10
LINER AT FRAMED OPENING

AT STRUCTURAL LINES

ADP-1 LINER PANEL

STOP J-TRIM ON HEADER HERE

TM23-8, TM33-12, TM33-16 OR
TM33-20 J-TRIM

FIELD LOCATE TO PROVIDE NECESSARY CLEARANCE FOR DOOR TRACK & HARDWARE

ADP-1 WALL PANEL

JAMB

JAMB TRIM

JAMB TRIM STIFFENER

6" THRU 12"

AT JAMB WITH ADP-1 PANEL

@ STRUCTURAL LINES

ADP-1 LINER PANEL

STOP J-TRIM ON HEADER HERE

TM23-8, TM33-12, TM33-16 OR
TM33-20 J-TRIM

FIELD LOCATE TO PROVIDE NECESSARY CLEARANCE FOR DOOR TRACK & HARDWARE

ADP-2 WALL PANEL

JAMB

JAMB TRIM

JAMB TRIM STIFFENER

AT JAMB WITH ADP-2 WALL PANEL
LINER AT FRAMED OPENING WITH SILL

STOP J-TRIM ON HEADER & SILL HERE

J-TRIM TM23-8, TM33-12, TM33-16 OR
TM33-20

ADP-1 LINER PANEL

@ 24" CTRS

ADP-1 WALL PANEL

JAMB

JAMB TRIM

JAMB TRIM STIFFENER

6" THRU 12"

AT JAMB WITH ADP-1 WALL PANEL

STOP J-TRIM ON HEADER & SILL HERE

J-TRIM TM23-8, TM33-12, TM33-16 OR
TM33-20

ADP-1 LINER PANEL

@ 24" CTRS

ADP-2 WALL PANEL

JAMB

JAMB TRIM

JAMB TRIM STIFFENER

6" THRU 12"

AT JAMB WITH ADP-2 WALL PANEL