



nortWALL

**50** Years Material  
**20** Years Finishes  
Warranty

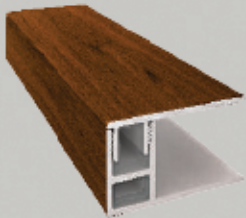
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<i>Material</i> 95% Recycled UPVC		<i>Panel Dimension</i> 6"x 19'	
<i>Weight (each Panel)</i> 7.6 Kg		<i>Pallet</i> 30 Box	
<i>Each Box</i> 4 PC		<i>Coverage /Box</i> 38 Sq.Ft	

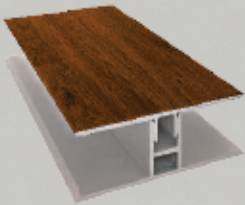


### Trims and Accessories



**F Trim**

12' Aluminum | 2-Piece System (Base & Top)  
For ends, inside corners | Exposure Width: 1 ½"



**H Trim**

12' Aluminum | 2-Piece System (Base & Top)  
For transitions | Exposure Width: 2 ½"



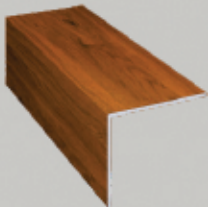
**Corner Trim**

12' Aluminum | 2-Piece System (Base & Top)  
For outside corners | Exposure Width: 1 ½"



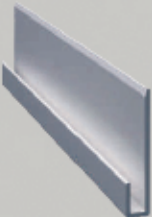
**Extended L Trim**

1 ½" x 3 ½"



**L Trim**

1 ½" x 2"



**Starter**

10' & 12' Aluminum



This guide has been prepared and intended for individuals with moderate to extensive knowledge of basic building practices. Appropriate protective eyewear should always be used when cutting. The warranty may be voided if proper application and installation practices are not followed. Although relatively simple to install, nortWALL requires compliance with some fundamental building practices for standard exterior cladding installations, described in this guide.





# Temperature Changes & Expansion/Contraction

## Temperature Changes & Expansion/Contraction

It is important to remember that nortWALL® materials will expand and contract with regular temperature changes. nortWALL® trims allow for any variance in panel lengths due to expansion/contraction.

When placing fasteners in the center of the designated nail slots, always leave a 1/32" gap between the fastener head and nail flange to allow nortWALL® panels expand/contract as needed.

The below guide provides expansion/contraction examples based on different panel lengths and

### Expansion Guide (by temperature shift)

Temperature Change in °Celsius and Fahrenheit		Length of Panel (feet)			
		12'	20'	30'	35'
10	50	0.10	0.17	0.25	0.29
20	68	0.20	0.34	0.50	0.59
30	86	0.30	0.50	0.75	0.88
40	104	0.40	0.67	1.01	1.17
50	122	0.50	0.84	1.26	1.47
60	Optimal Gap 140	0.60	1.01	1.51	1.76
70	158	0.70	1.17	1.76	2.05
80	176	0.80	1.34	2.01	2.35
90	194	0.90	1.51	2.26	2.64
100	212	1.01	1.68	2.51	2.93
nortWALL's Coefficient of Linear Expansion (CLE): 0.0000698		Total Expansion/Contraction Per Panel (inches)			

The change in length of any material because of expansion and contraction is dependent on 3 factors:

1. The Coefficient of Linear Expansion (CLE) of the material. For nortWALL® Panels, the CLE is 0.0000698 in/in/°C
2. The original length of the material at the time of cut

### 3. The net change in temperature

Change in units) = (Original Length in inches) x (Temperature Change in °C) x ( If there is a 12' (144") nortWALL® length that goes from 20°C (68°F) to 0°C (32°F), it will contract, theoretically, by this amount  $144 \times 20 \times 0.0000698 = 0.20"$  or  $7/32"$

For example, if installed in 20°C (68°F), the final length of a 144" long nortWALL ® panel at 0°C (32°F) would become 143.80"

When temperatures return to 20°C (68°F), it is expected that the PVC material will expand and return to 144" in length.

### General Rules

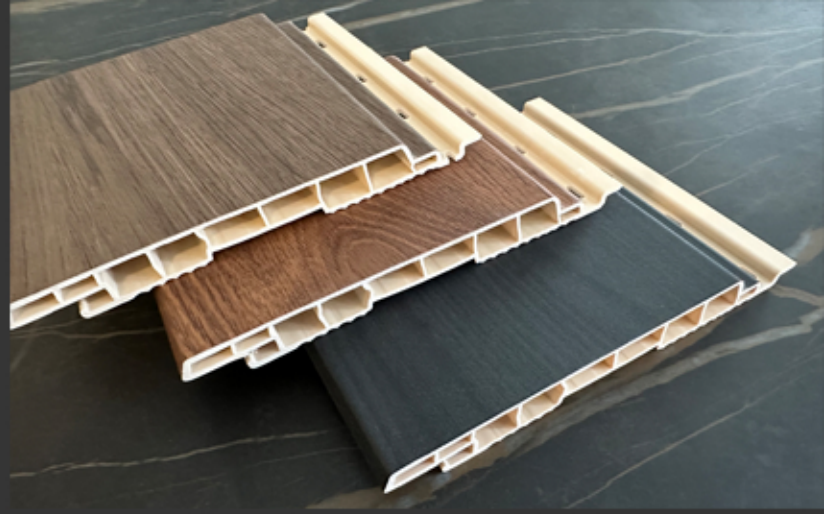
Based on a temperature change of 60°C (140°F), for example: 0°C (32°F) in cooler months and reaching 60°C (140°F) in warmer months: For panel lengths up to 20' leave a 1/2" gap per side; 20' or longer leave a 3/4" gap per side, and use larger faced trims (3.5" 2pc Finish Trim, 2.5" 2pc Outside Corner, larger faced H-Trim).

Please refer to Expansion and Contraction Guide on page 10 and allow for gaps accordingly.

It is important to remember:

It is imperative that nortWALL ® panels are cut to fit the coverage of trim pieces. The temperature the day of installation factors into the expansion and contraction gap you leave. If installing on a cooler day allow for more expansion and a larger gap; if installing on a warmer day allow for less expansion and a smaller gap.

Installing PVC wall panels is a great way to enhance the appearance of your outdoor living space. PVC panels are a durable and low-maintenance alternative to traditional wall materials, making them an ideal choice for outdoor applications. Here is a step-by-step guide to help you with the installation process:



- 1. Preparation** Before starting, ensure that you have all the necessary tools and materials. You will need protective eyeglasses, measuring tape, a level, a saw, screws, and the PVC panels themselves. Make sure you have enough panels to cover the desired area and that they are the correct size. PVC panels for outdoor use typically come in larger sizes than indoor panels.
- 2. Measure and Mark the Wall** Measure the height and width of the wall to determine how many panels you will need. If the length of the wall is bigger than the panels length, in order to have symmetrical design, mark the center of the wall (Because you will have more than one piece panel). This will be your starting point for installing the first panel. Use a level to ensure the panels are leveled.
- 3. Cut the Panels** Using a saw, to the appropriate length and width according to the measurements you took earlier. Make sure to cut the panels base on the provided data on the temperature and expansion table.
- 4. Install starter J trim** then the first panel against the wall and secure it with screws in the top side of the panel. Use a drill to create pilot holes for the screws, as this will prevent the PVC panel from cracking.
- 5. Install the Remaining Panels** Place the next panel against the first panel and secure it with screws. Make sure the second panel is level and aligned with the centerline. Repeat this process until all the panels are installed.
- 6. Cut Around Outlets and Fixtures** If there are any outlets or fixtures on the wall, use a saw to cut holes in the PVC panels to fit around them. Make sure to measure carefully and cut accurately, leaving a small gap between the panel and the outlet or fixture.

7. **Finish the Installation** Once all the panels are installed, remove any excess sawdust and wipe down the panels with a damp cloth to remove any debris. By following these steps, you can easily install outdoor PVC wall panels and create a beautiful and durable outdoor living space. Remember to take your time and measure carefully, and you will be sure to achieve great results.

We recommend that nortWALL® exterior wall panels be fastened every 16"-24" (16" in high heat areas) and trims every 8"-12".

## Storage of nortWALL®

Products must be on a flat surface that supports the boards' entire length and should be kept dry & out of direct sunlight (when possible). Do not store or place on asphalt or in areas prone to excessive heat buildup. Cover with a tarp leaving ends open to allow for airflow. Store away from areas where there may be falling objects or construction debris that could cause damage. If stacking the product, please ensure it is stable.

nortWALL® packaging is vented to limit the greenhouse effect. Do NOT store uninstalled panels in areas of excessive heat prior to installation; doing so may lead to product distortion.

**Note:** It is important that product is not stored for long periods where temperatures could exceed 30 degrees Celsius (86 degrees Fahrenheit).