

Pergola™

Technical Details

This document is intended to help communicate the technical aspects of a freestanding architectural product. Pergola is considered a nonstructural architectural component and is governed by requirements of building, fire and electrical codes. It is the responsibility of the owner to confirm all code requirements, and to obtain appropriate permits for installation, if required.

Seismic Applications

Pergola is designed to be freestanding architecture that is 100% floor supported. However, we know many of our customers are in seismic areas and need a little extra support. During the engineering and design process of Pergola we used Haworth’s extensive architectural knowledge and designed a system that has seismic applications built into the DNA.

Depending on the severity of the seismic hazard, the installation may require anchorage to the floor via a “Seismic Leveler (Figure 1) and may also require a reinforcing bracket in some of the joint connections (Figure 2). In the most serious conditions, in addition to these components, the size of the Pergola units may need to be limited.

The requirement for each of these is determined by the Seismic Design Category of the building. Each building in the United States has a Seismic Design Category. As a general guide, the [hazard maps published by the Federal Emergency Management Agency \(FEMA\)](#) may serve as a general guide to determining the SDC. For buildings in regions designated Category C, D, E, or F on the maps, the Category of the building should be determined, either from the construction documents, or by consulting the Authority Having Jurisdiction.

Once the SDC is known, the seismic anchorage required is as follows:

Category A – Seismic application not required

Category B – Seismic application not required

Category C – Seismic levelers required

Category D – Seismic levelers and diving boards required

Category E – Seismic levelers and diving boards required

Category F – Seismic levelers and diving boards required; room limited to 8’x8’. Contact [Walls Solutions](#) before ordering.

Because buildings in Canada are not classified by “Seismic Design Category,” the following has been developed to guide users on the appropriate option to select.

For installations in the following metropolitan regions, Haworth suggests specifiers select Seismic Design Category for all Pergola orders according to the following table:

Province	Region	Suggested Seismic Design Category (for Specifying Pergola)
British Columbia	Vancouver	D
	Victoria	D
Ontario	Ottawa	C
Quebec	Montreal	D
	Quebec City	C

For regions not listed above, confirmation of the appropriate specification option can be determined by consulting the Seismic Design Data in Appendix C of the National Building Code of Canada and the corresponding provincial codes, according to the following table.

$S_a(0.2)$ Horizontal Spectral Acceleration for 0.2 s period	Suggested Seismic Design Category (for Specifying Pergola)
Less than 0.35	A or B
Greater than or equal to 0.35 and less than 0.50	C
Greater than or equal to 0.50 and less than 1.30	D or E
Greater than 1.30	F

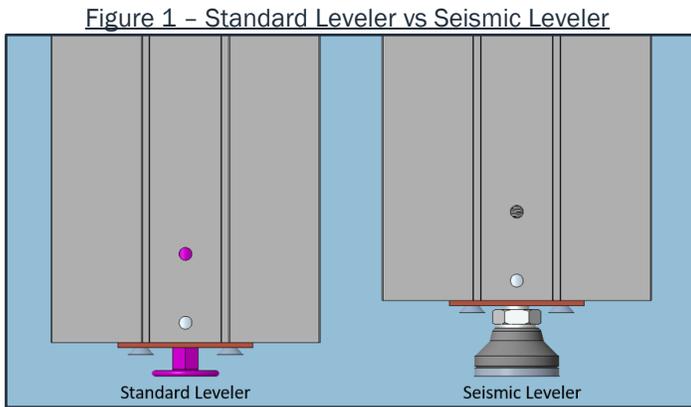
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As with all installations of Architectural Products, Haworth reminds specifiers and purchasers that the product should be installed in accordance with local laws and regulations, as dictated by the relevant Authorities Having Jurisdiction. Structural requirements should be reviewed and approved by an engineer licensed in the jurisdiction of construction.

When ordering through DY0 or Canvas you will be required to enter your SDC category, from this point forward all the required seismic components will be allocated to your order.

Seismic Leveler (Figure 1)

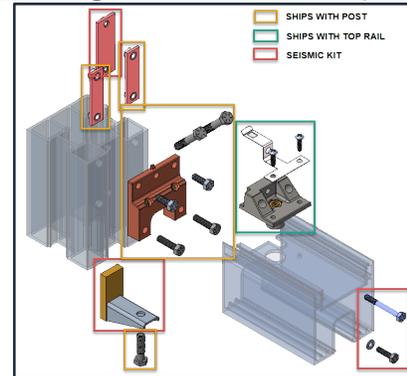
If your building falls under Category C, D, E, or F you will need the Seismic Leveler added to your Pergola workspace. Pergola units using the seismic leveler will have a ceiling height of 8'-1-1/8". The seismic leveler will ship from the factory attached to the bottom of your posts.



Seismic Diving Board (Figure 2)

If your building falls under Category D, E, or F you will also need the Seismic Diving Board added to your Pergola workspace. The seismic diving board kit will be its own shippable and your installers will need to install as they assemble the joint.

Figure 2 - Pergola Joint Connection Exploded View



Fire Codes

Although we have considered fire suppression into the design and material finish options of Pergola, we recommend you understand your local requirements before installing a Pergola workspace.

Sprinklers should either be at least 18 inches above the top of Pergola and the layout should ensure adequate coverage on all sides of any full height partition. The sprinkler layout may need to be revised to ensure adequate coverage. In some cases, the space "inside" Pergola may need to be sprinkled.

You may have noticed that Pergola offers ceiling slats and be wondering if this impacts sprinkler spray. The Pergola slatted ceiling is not considered a closed ceiling and is designed to have enough openness to allow adequate water coverage from a nearby sprinkler.

The available finishes for Pergola have been evaluated for fire performance and will be suitable for most applications. The fire performance of each finish is available separately and may be required by an architect to determine appropriate placement in a building.

HVAC

Because Pergola is not considered a closed space, existing building HVAC is considered adequate for proper ventilation and comfort

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Power

Pergola electrical will be listed to UL 1286 by Intertek-ETL. The details of this Listing are publicly available to Authorities Having Jurisdiction (AHJ) based on the Listing file number.

In order to meet the needs of our customers, Pergola has two power options, the Tech Totem (Totem) and In-Wall Electrical (In-Wall). To support these power options within the Pergola space, there will need to be a power infeed from the top or the bottom. Power routing occurs in the top horizontal, while a splitter (PDA) and jumpers route power within the interior cavity of the tile.

Some customers may wish to hide their electrical routing. The cable routed in the top horizontal is only visible from the top, but a cover is available as a separate shippable. There is also an infeed cover going from the Pergola space to the base building available as a separate shippable.

The Totem (Figure 3) is a proud-mounted electrical system that accommodates utility power device and/or low voltage/audio visual cables. The Totem provides receptacles in front of inserts or tiles and can also be used as a TV/Monitor mount (Figure 4). A splitter (PDA) is used to connect utility power devices and an infeed or jumper at the top of the Totem where it connects to the Pergola Top Rail.

In-Wall is a modular power system that is specified during the design process, receptacle assemblies are assembled in the factory, and installed in the field.

The In-Wall power options are as follow:

- Open box with electrical wiring by other, installed by a qualified trade
- Powered receptacle assemblies that include a 15AMP 120V duplex device, box, cable, and a 4 circuit (3+1) Power Base connector
- Data/Low Voltage receptacles have the option of a 4-port data device or a brush passthrough device.

When lighting is needed, there is a light trough that supports an octagonal box and prep locations for up to two pendent lights.

Figure 3 – Tech Totem

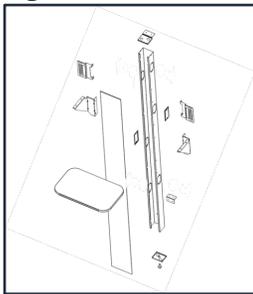
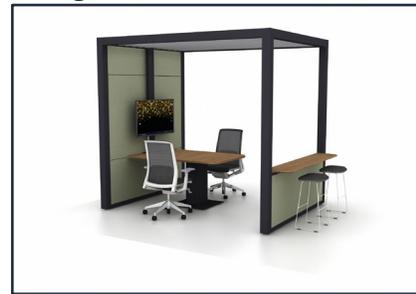


Figure 4 – Tech Totem In Use



Still have more questions or have an interested client?

For product specific questions please contact [Whitney Largent](#) or [Nathan Lowery](#). For project specific questions please reach out to [Kim Jager](#)