

# Green Advantages with Apex Foundations



- Five percent of the world's carbon footprint comes from the manufacture of cement, the key ingredient in concrete. Our proprietary concrete mix actually uses twice the cement required for typical 25 MPa concrete, however, the resulting increase in strength to 80 MPa allows us to use 65% less concrete than a traditional poured foundation.

A traditional foundation of 160 linear feet would require approximately 36 m<sup>3</sup> of concrete, whereas the same size foundation utilizing the Apex system would require only 12.8 m<sup>3</sup>, resulting in a 25% reduction in cement.

- **Apex Foundation's** concrete uses only 1/5 of the water required for traditional concrete, a significant reduction in the use of a precious resource.



In our production process, the insulation forms the mould we pour the concrete into, so the interior wall is completely covered with insulation. In a traditional foundation, after the wall is poured, a 2x4 stud wall is built and then insulation is placed into the cavities between the studs. The un-insulated stud provides a bridge that cold can cross into the basement environment.

Our system eliminates these cold bridges. The cavities between our EPS foam-covered concrete studs can also be filled with a batt of insulation, providing an increase in R-value to 36.

- Our insulation, which is adhered directly to the wall as part of the production process, is Insulfoam R-Tech. This product is manufactured using 25 % recycled material, and is itself fully recyclable. It doesn't degrade if it gets wet, is vermin proof, low in VOCs and doesn't affect indoor air quality.

Our system also provides a superior true continuous R-14 insulation value, which mean warmer basements with less energy expenditure.

- Utilizing an Apex foundation creates a reduction in carbon output and energy consumption of vehicles in a few different ways as well. To start with, the overdig required (the extra space outside the foundation's actual footprint, needed so workers can move around and build the forms, place concrete etc) for Apex walls is 2 feet as opposed to 4 feet for traditional.



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This means the excavator is running for a shorter period of time, and less dirt is required to be moved by truck from the site to a landfill, saving on operating and transportation costs and the resulting fuel expenditure and carbon output. On a typical 160 linear foot foundation, this would amount to 3-4 hours less running time for an excavator and 7-8 fewer trips to the landfill. Also, a 160 linear foot traditional foundation would require one pump truck and four concrete trucks for the day of the pour, and numerous trips to and from the site by workers in their individual vehicles to form, place and strip the foundation for as many days as it took to complete the job.

Some contractors form and pour the footings separately from the walls, so the pump truck and concrete trucks would be driving to and from the site an additional day. This many vehicles driving so frequently to and from a dirty job site creates a lot of extra dirt and silt on the roadways, which is subsequently washed in to storm drains. This dirt can get into the gills of fish living where the drains empty, and kill them.



For more information, please contact us at our Toll-free number 1-877-546-APEX (2739) or by email at: [info@apexfoundations.ca](mailto:info@apexfoundations.ca)

- Concrete spillage is also eliminated, as is the mess created by the truck and placing crews hosing out their chutes and hoppers and cleaning their tools when finished. This effluent can also get into storm drains, creating yet another disaster for the fish on the other end of the drain system. Leaching of petroleum based releasing agents (the chemicals applied to forms to facilitate easy stripping) into groundwater is also eliminated.
- In addition, not all forms can be stripped cleanly and have to be broken or torn off, resulting in wood waste. Apex walls eliminate this waste.



- Bitumen based dampproofing, which can be required by some local gov'ts, can be applied at the factory, eliminating spillage and spraying on site.
- Finally, our walls are waterproofed with Kryton's KIM admixture, which extends the service life of our concrete, meaning our foundations last longer. The greenest foundation there is is the one that's already there. And since the system is an assembly of component walls, the foundation can be disassembled and the components re-utilized in another foundation or project.



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