Heliostation™

Solar Canopies

VCT GROUP™

Introducing Heliostation™ Solar Carports

Solar for everywhere. *No roof required.*

Solar canopies are freestanding structures that generate power and create covered parking by converting underutilized spaces, such as parking lots, into solar power plants. By incorporating solar panels into a watertight cover plane, solar canopies create shade in summer and protect vehicles from snow and ice in winter, reducing heat island effects and reducing snow clearing costs.

Better experiences

Canopies are a complement to your operation, an architectural structure that transforms your under-utilized space. Our structures provide everyone – employees, staff, visitors, clients and everyone in between – an extraordinary experience.

VCT's Heliostation™ canopies create an engaging environment to experience solar power firsthand.

Designed for all climatic conditions, our carports provide shade, power and weather protection with integrated snow, ice and rain management. Optional EV charging stations provide added convenience that creates memorable and impactful destinations for your clientele.

Solar. Humanized.

Clean energy

Solar canopies are not a new concept. They are also commonly known as solar carports.

As a solar engineering firm, we set out to build the most accessible, highest performing canopy systems on the market. Incorporating bi-facial solar panel technology, our solar carports generate maximum energy for the space they shelter.

We believe responsible products are built for their full life-cycle. Our all-aluminum construction is designed for modular, no-weld construction and is highly recyclable. From design and installation, to operation and decommissioning, our canopies are here today and endure for tomorrow.

Designed with intention.

Power that easily adapts to your available space.

- Under-utilized spaces
- Parking lots & EV stations
- Condo & apartment towers
- Bus and fleet terminals
- Car dealerships
- Parks and recreation
- Storage yards
- Industrial parks
- Agricultural storage

VCT GROUP

Watertight by design–*no caulking, no gaskets*

Integrated water handling for all seasons.

The patent-pending Heliostation Solar Racking System is watertight by design. The profiles of the elements contain integrated water-handling channels. No caulking, no gaskets, and no ongoing maintenance required. Limit your liability by preventing the buildup of ice beneath the carport during colder months–all while generating significant power savings.

1. Capture

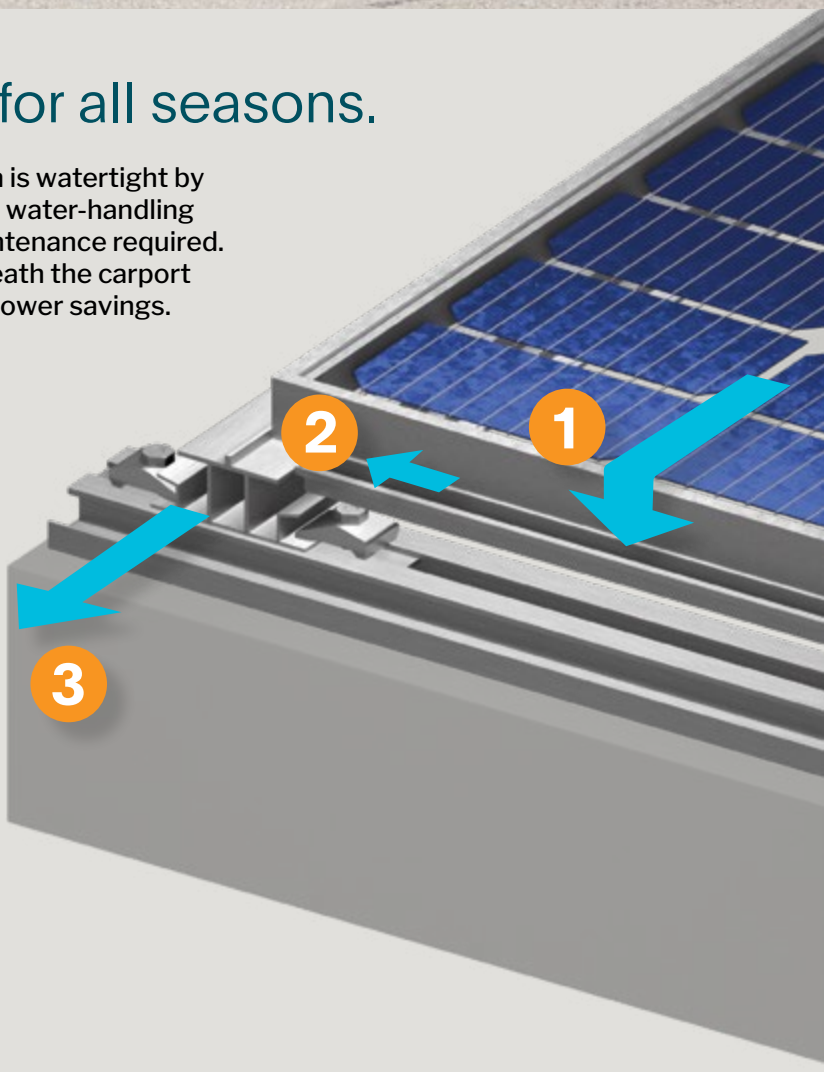
Water is collected by the panel trough as it runs off the panel's edge. During heavy flow, excess water simply flows across the panels until it is collected or reaches the edge of the array.

2. Collection

Water collected by the panel trough is directed to the strapping channel where the patent-pending angled design prevents seepage.

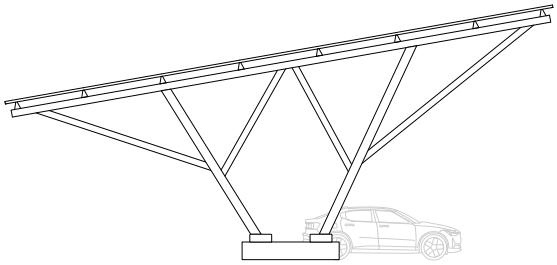
3. Redirection

The water collected by the strapping channels is directed to the edge of the array where it runs off (or is collected by the addition of an eavestrough).



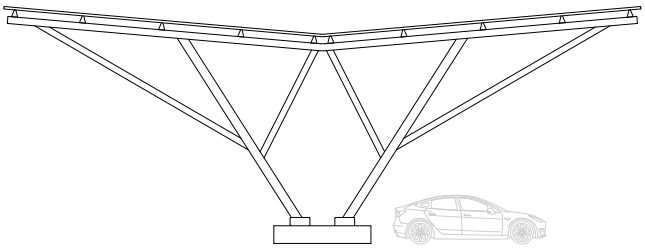
Versatile by design

Our unique patent pending designs take control of the elements. With **Mercury**, **Apollo**, **Pegasus**, **Titan**, and single-row **Hermes**, there is a canopy design that works for you in any weather. Our carports are engineered to perform, designed to inspire, and built to endure.



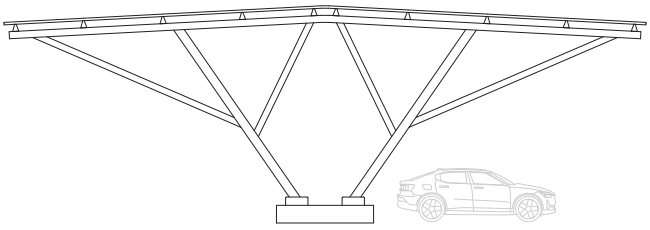
Mercury™

Our monoslope design is perfect for commercial and facility parking areas. It's cantilevered design provides extended shade and weather coverage for parked vehicles, and maximized solar panel area.



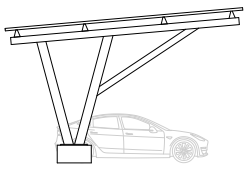
Pegasus™

Our vertex configuration is designed to provide maximum vertical clearance on both sides of the canopy. Ideal for transportation-heavy spaces such as bus depots and last-mile delivery terminals.



Apollo™

Our apex model provides superior weather handling for snow-heavy climates. The pitched canopy design manages snow load effectively to optimize power generation year-round.



Hermes™

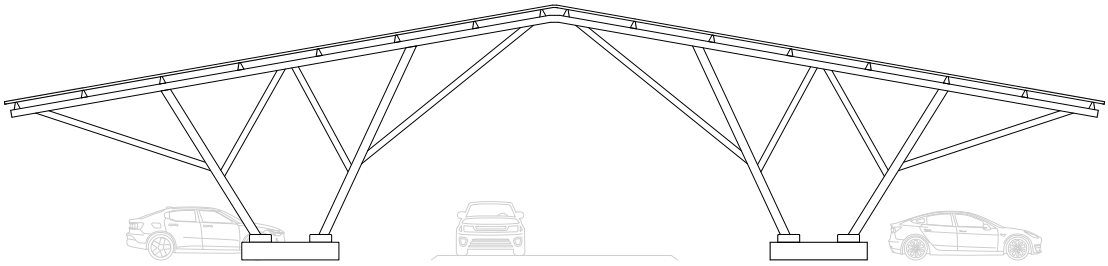
Our smaller design is perfect for covering single-row parking, EV charging stations, and pedestrian walkways. Designed for locations where space is at a premium, the cantilevered design maximizes cover and shade with a minimized footprint.

Designed to perform

We design for the elements. For places that have piles of snow, encounter heavy rains, that are battered by salt spray next to an ocean, or built over complex terrain. Solar is not just for the desert. Not all carports are installed in arid locations that have low precipitation. Our design is for those seeking a system that takes it on, everyday.

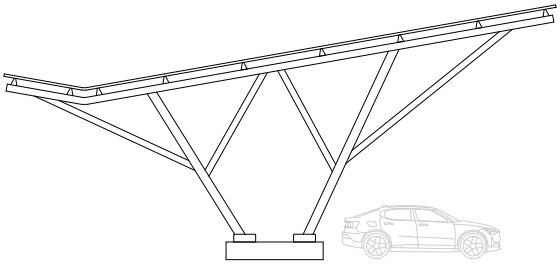
In areas that do have low precipitation – our canopies can be used to gather rainwater for grey water/irrigation uses

Set your sights to the sky and develop a new outlook for your location. With multiple canopy styles there is a solution to fit your needs. Build the most advanced carport system and deliver the most impactful structure for your underutilized space.



Titan™

Our largest solar canopy, Titan is designed to provide the most coverage. Perfect for outdoor storage in commercial or agricultural applications where protecting inventory and equipment is a priority.



Check Mark™

The Check Mark extension is designed for sites where shedding snow from the array onto drive lanes is not desirable. It catches the shedding snow and channels the melt water to the end of the canopy. Check Mark can be added to any design except Pegasus.

- Built for every season
- Integrated snow & water handling
- Premium sun shading
- All aluminum design
- High canopy clearance
- Low footprint foundations
- EV charger ready footings
- Low maintenance costs

Why Heliostation?

The steel-based designs of our competitor's carports simply do not address the four most common issues:

X Steel rusts

Steel rusts, impacting both the aesthetics and maintenance requirements of your canopy. Without expensive powder coating, or costly regular maintenance such as painting, steel simply does not last in the harsh conditions of North America's winter climate.

X Gaskets fail

Almost every carport on the market uses gaskets and caulking to control water penetration. UV exposure, freeze and thaw cycles, and animal activity mean the watertightness of canopies can be compromised in as little as two years, leading to water leaks and ice buildup.

X Exposed cables

Exposed cables can be impacted by ice buildup and water, leading to costly repairs and downtime for your system. Screw-in clamps and attached cable raceways increase construction time compared to channels that are integrated into structural members by design.

X Increased risk

Almost all canopies on the market require the solar panels to be installed from above. This can require workers to climb on the structure and walk on the panels, exposing them to unnecessary risk and resulting in additional costs for broken panels. Using a boom lift from above increases working distance to the canopy due to the railing.

Our designs are watertight. It's that simple.

✓ Aluminum lasts

Heliostation is constructed completely from aircraft grade aluminum. Aluminum's natural corrosion resistance will retain its structural integrity and beauty for the lifetime of your system without any maintenance; and it is 100% recyclable for end of life decommissioning.

✓ No gaskets, no caulking

Heliostation is integrally watertight by design. The extrusion profiles of our panel rails channel water away to the canopy edges, leaving the space underneath dry and free of ice buildup. It is a lifetime solution only available from VCT.

✓ Integrated cable management

By design, the structural members of Heliostation canopies incorporate cable channels directly into the beam profiles. They cover and protect the cables without additional hardware. As integrated features, they last the system's entire lifetime.

✓ Safe construction

Heliostation is designed to allow all panel installation to be done from below, from the safety of a movable work platform. Workers are not restricted by the platform's distance, and panel cinch clamps secure the panels simply and efficiently – without the need for drilling or screws.

Heliostation for EPCs

Designed by an EPC for EPCs

We originally designed our Heliostation solar canopy for our own North American clients, but now we are offering the patent pending Heliostation as a prefab option for other Engineer, Procure and Construct (EPC) companies. As an EPC you can take advantage of our industry-leading design benefits for your own projects:

- Prefab construction package with complete assembly manual
- Efficient bolt-based construction requires no on-site welding
- Watertight canopy with a no-caulk, gasket-free design
- Industry leading spans up to 20m
- EV-charger ready foundations
- Bi-facial panel support
- Flexible modular layouts
- UL 2703 certified

All-aluminum – built tough in North America. Built to last.

Bold designs require bold choices. Our canopy is completely constructed from aircraft aluminum alloy, rather than rust-prone steel. Lightweight and strong, it allows us to build with infinitely recyclable materials that create elegant architectural spaces.

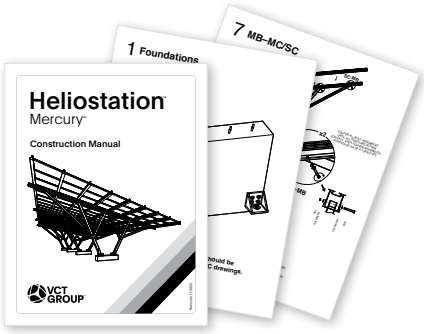
Aluminum's natural corrosion resistance means our canopies are built to endure Canada's harsh climate without rusting. With no-weld, modular construction our canopies soar over their foundations, as graceful as they are powerful.

The cantilevered design of our canopies has a very small foundation footprint relative to the span of the canopy and also provides protected space for service equipment, such as EV chargers. Heliostation creates covered spaces that are sheltered from the worst our climate has to offer year round.

VCT GROUP

Simple, efficient installation.

As a Solar EPC we know efficient and safe construction is the keystone of your business. Heliostation Solar Racking is quick to install – all from below the array using a boom or scissor lift. Build quicker, build safer, build smarter.

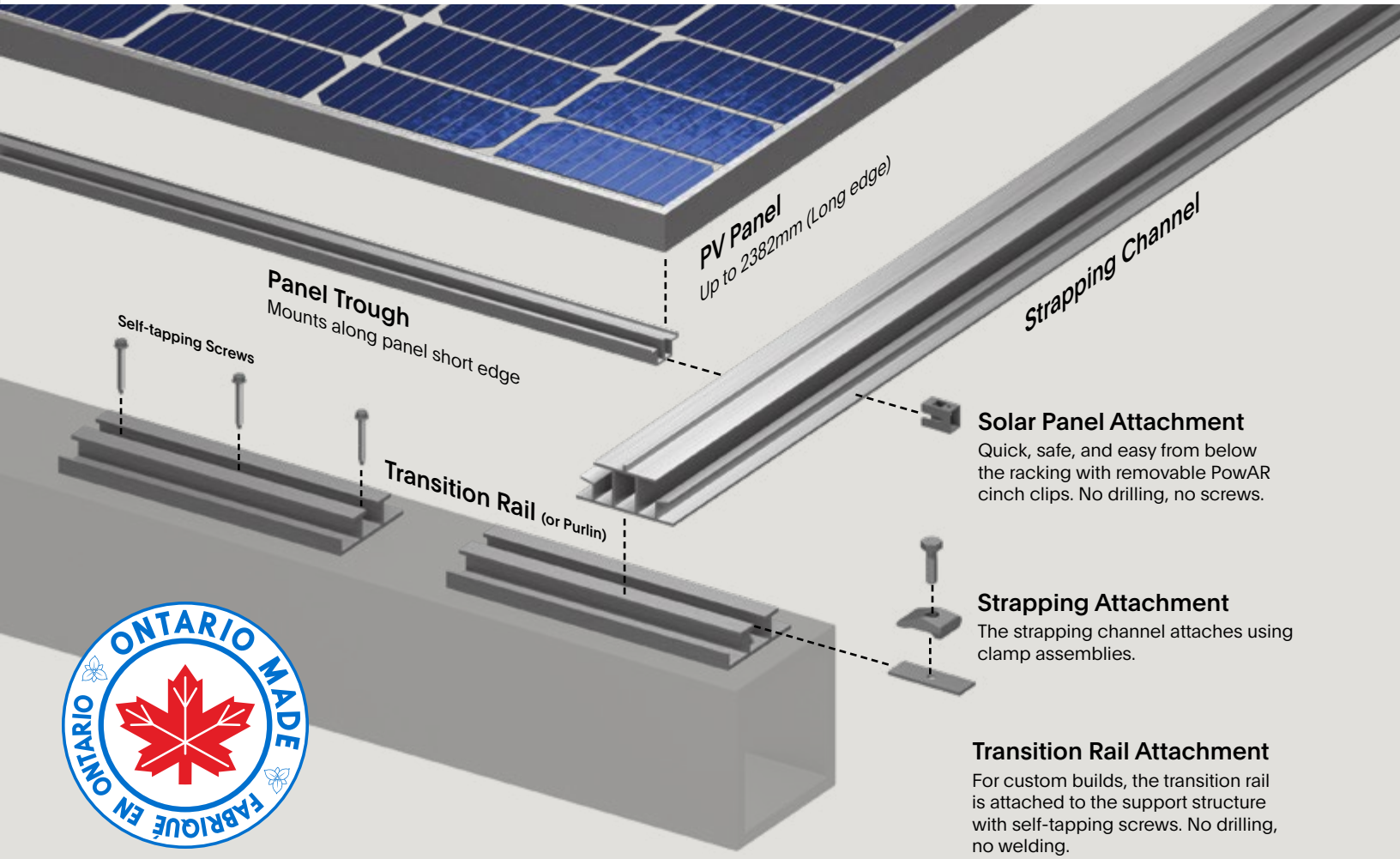


Efficient no-weld construction

Heliostation has a lightweight, strong, and maintenance-free modular aluminum design. All structural elements are rust proof, fully recyclable and assembled without welding. Heliostation comes with an assembly manual including bonding and grounding guidelines that are CSA / UL2703 certified.

Construction safety – by design

Our racking is designed to allow all panel installation to be completed from below the canopy. Workers can complete the panel installation using hammer-on cinch clamps – all from the safety of a scissor lift or boom.



Solar Panel Attachment

Quick, safe, and easy from below the racking with removable PowAR cinch clips. No drilling, no screws.

Strapping Attachment

The strapping channel attaches using clamp assemblies.

Transition Rail Attachment

For custom builds, the transition rail is attached to the support structure with self-tapping screws. No drilling, no welding.

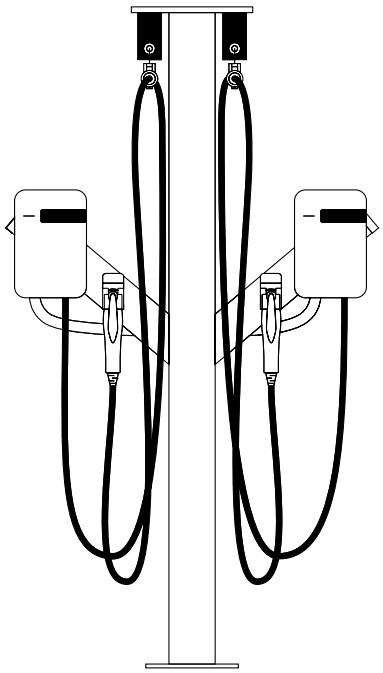
EV Integration

Our canopy design accommodates optional electric vehicle (EV) charging integrations. Each footing is cast with embedded electrical conduits so the system is charger-ready on day one. By providing EV charging to your customers, visitors, or fleet, you can keep moving forward responsibly.

Electric vehicles are the future of transportation. Consumers and commercial fleets are making the move to EVs. Our canopy designs are ready to support this transformation by integrating charging stations with on-site power generation. We can supply all the equipment needed to install EV charging stations under your canopy, with integrated cable management for a clean look.

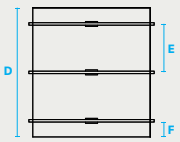
Businesses that are ahead of the curve get noticed. By making it convenient for EV owners to visit your location you create a clean energy destination and generate positive mind share with clientele who are committed to environmental responsibility.

Power and convenience. Designed with intention.

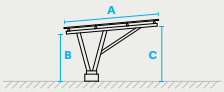


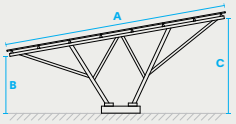
The universal VCT charging pedestal is the perfect complement to our solar canopies. Seamlessly integrated under the carports, it supports multiple available charger models.

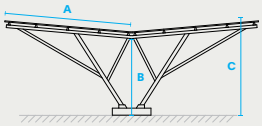
Heliostation Specifications

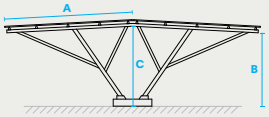


Legend
(Overhead View)









	Hermes™	Mercury™	Pegasus™	Apollo™
A – Span (Max)	**7m** (23′)	**17.0m** (55.8′)	**2× 10.0m** (2×32.8′)	**2× 10.0m** (2×32.8′)
D – Length (Max)	**Not limited by Racking**	**Not limited by Racking**	**Not limited by Racking**	**Not limited by Racking**
Max # of 620W Class Modules Along A (Optimized)	**3**	**7**	**8** (2×4)	**8** (2×4)
Max # of 450W Class Modules Along A	**3**	**7**	**8** (2×4)	**8** (2×4)
Max # of 680W Class Modules Along A	**2**	**7**	**8** (2×4)	**8** (2×4)
Panel Height Compatibility (Max)	**2.4m** (7.9′)	**2.4m** (7.9′)	**2.4m** (7.9′)	**2.4m** (7.9′)
Panel Width Compatibility	**Not limited by Racking**	**Not limited by Racking**	**Not limited by Racking**	**Not limited by Racking**
Array Tilt Angle (Min/Max)	**5°**	**5° / 10°**	**3° / 5°**	**3° / 5°**
Optimized Array Orientation	**S**	**S or E/W** (for alternating multiple arrays)	**E/W**	**E/W**
E – Foundation Spacing (Max)	**6.1m** (20′) (2 Parking Spaces)	**6.8m** (22.3′) (2 Parking Spaces)	**6.8m** (22.3′) (2 Parking Spaces)	**6.4m** (21′) (2 Parking Spaces)
B – Clearance (Max)*	**3.85m** (12.6′)	**4.85m** (15.9′)	**6.5m** (21.3′)	**6.03m** (19.8′)
C – Peak Height (Max)*	**4.5m** (14.8′)	**7.8m** (25.6′)	**7.1m** (23.3′)	**6.9m** (22.6′)
F – Overhang	**3.0m** (9.8′)	**3.0m** (9.8′)	**3.0m** (9.8′)	**3.0m** (9.8′)

* ***Note:*** *Foundation heights can vary to modify the overall height of the canopy, and/or adjust for grade variation. All numbers shown are the default standard, and may vary based on specific site requirements.*

VCT GROUP

Experience powering innovation.

At VCT our mission is a world where power is clean, abundant, affordable, and accessible to everyone. We design and build solar and EV charging infrastructure that brings that vision to life.

Everything begins with energy. By transforming under-utilized spaces with scalable clean energy infrastructure that is deployable in diverse climates, we are powering communities with solar. We build distributed energy generation projects that build resilience, and keep the economic benefits local.

When we began building solar carports we learned that most of the available solar racking products leave panel gaps which cause water to leak beneath the array. Winters in Canada are intense, and these leaks cause ice buildup. Drips, icicles, and ice buildup are not only unsightly – they are a liability. We knew we could do better.

We designed and engineered our patent-pending Heliostation™ Solar Carport and Racking products to lead the industry in watertightness. The extrusion profiles of our system's elements seamlessly integrate water channels that capture and direct runoff to the edge of the array, leaving it dry beneath. Year round. No matter the weather. *With no caulking, gaskets, or ongoing maintenance required.*

As an EPC, we realized that the enhanced safety, build efficiency and performance of our racking was too good not to share with the industry. As we work towards our shared vision of a world powered with renewable energy, we believe the energy transition will move faster if we utilize the best technology available. Talk to us today about how Heliostation Solar technology can elevate your projects.

Together, with other future-focused EPCs, we're *powering everyone*.

VCT GROUP | **Powering everyone.™**

5 Forwell Road, Unit 3, Kitchener, ON N2B 1W3 | 519.279.4630 | vctgroup.com | info@vctgroup.com