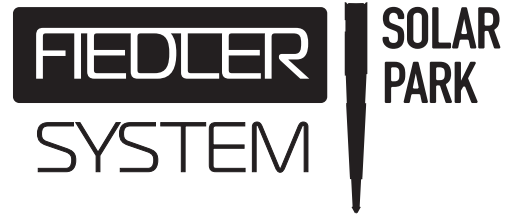


With a solid, environmentally friendly and quickly installed anchorage, you lay the foundation for the lowest life cycle cost perspective (LCC)



SOLAR MODULE MOUNTS AND GROUND FOUNDATIONS

For clear-cutting, arable land, mountains, asphalt, landfill, peat bogs and rolling meadows



LOWEST CO2

Fiedler System = lowest CO2 footprint on the market



FROM SVERIGE

Development
Materials
Manufacturing



RECOMMENDED

Based on chemical content, life cycle & sustainable supply chains

“Fastest installation on the market”

It all started with the challenge of anchoring a pavilion in the ground. Now we are helping to create the conditions for new sustainable energy production.

100% ENVIRONMENTALLY DRIVEN DEVELOPMENT WORK



CO2 minimization in all situations



Low material weight and space-saving design mean that stands and ground foundations for 4,000 panels can fit on a single trailer.



Fiedler Systems Ground Spears and their accessories are approved by the Swedish Construction Product Assessment. This means that our products have been assessed based on chemical content, life cycle and sustainable supply chains.

We challenge old solutions to find new, more environmentally friendly ways to optimize energy production.

"Our goal is for you to always feel confident that you are getting the lowest total installation cost and thus the most profitable installation over time."

Joakim Fiedler, CEO and founder

FIEDLER SYSTEM's solar module stand with the market's lowest climate footprint is developed and designed to withstand really tough weather and difficult ground conditions. Through our design, we have also created a much safer working environment for those who assemble both the stands and the panels, etc. Overall, these features ensure that you achieve the best possible overall economy for your facility.

FIEDLER SYSTEM's solar module stand offers the market's lowest life cycle cost perspective (LCC) and all manufacturing takes place in Sweden from our own factory in Hestra. We are the absolute most environmentally friendly alternative on the market with an unbeatable delivery capacity. With our product 1P2M, a smaller park with complete stands and ground anchoring for approximately 8,000 panels (approx. 5 MWp) can be ac-

commodated on two (2) Trailers and built by a team of 4 people in 8-10 weeks.

FIEDLER SYSTEM's solar module stand is unbeatable and quickly installed on rolling meadows, clear-cuts, arable land, mountains, asphalt, landfills and peat bogs. The solid design consists of a stable base stand with an extension part for mounting on the left or right side. Depending on the ground, you choose which of our solutions suits your project. You can also mix one or more if necessary.

With Magnelis C5, we offer superior corrosion protection, longer service life, lower runoff into soil and water and reduced use of natural resources. The system also has no impact on existing flora, which is in line with the County Administrative Board's environmental requirements.

ENVIRONMENTALLY FRIENDLY

FASTEST

CLOSEST

MOST PROFITABLE

03

No pre- or post-work. The FIEDLER Ground Spear ground foundation sets a completely new standard.

GROUND FOUNDATION IN 1-2 MINUTES



0.48 m³ = 100 ground foundations



The unique and patented design of FIEDLER Ground Spears means that as many as 100 ground foundations can fit on a standard pallet measuring 80x120x50 cm.

Only 2.5 kilos and strength that surpasses traditional foundations

"Works fantastically well even though it's rocky and it's so nice not to have to dig and restore"

Fredrik, DEWILLAB Kungälv

The Fiedler Ground Spear is the heart of our system. The construction is based on FIEDLER SYSTEM's patented design. When installed, the ground is compacted. This immediately creates a solid and durable grip on the Ground Spear.

We make it possible to build solar parks in areas with a use ban, very rocky or contaminated. You can also combine arable land with our unique vertical solar park stand. With the Ground Spear, we also have a solution for fencing your park with fencing or panel grilles. With a pile driver, jackhammer or an excavator with a hydraulic hammer, you can easily install a small, medium or large solar park quickly, safely and in the most environmentally friendly way.



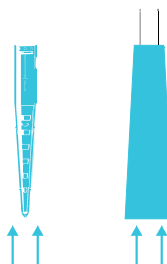
FIEDLER Groundspear



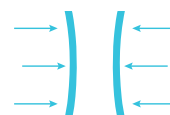
Anchors - for higher tensile strength



Fixing plate for higher compressive strength



Frost-proof design



Thanks to the patented compression technology, a solid and frost-proof anchoring is achieved immediately in all soils.



NORMAL LAND



SOFT SOIL



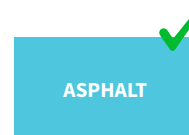
STONE/
MOUNTAIN



PEAT MOSH



CONCRETE

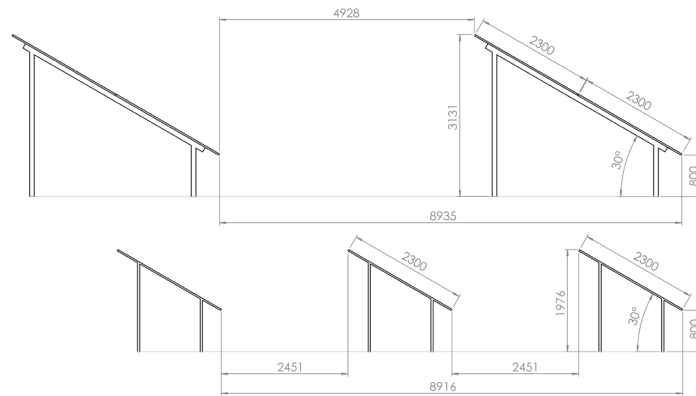


ASPHALT

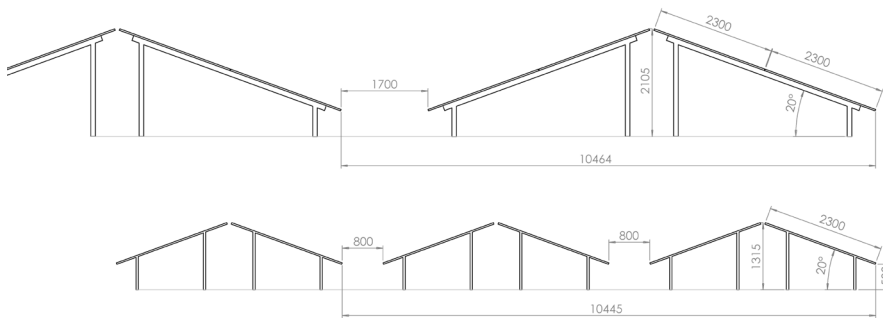
1P2M makes work fun, easy and safe for installers

100% WORK ENVIRONMENT FOCUS PROVIDES QUICK AND SAFE ASSEMBLY

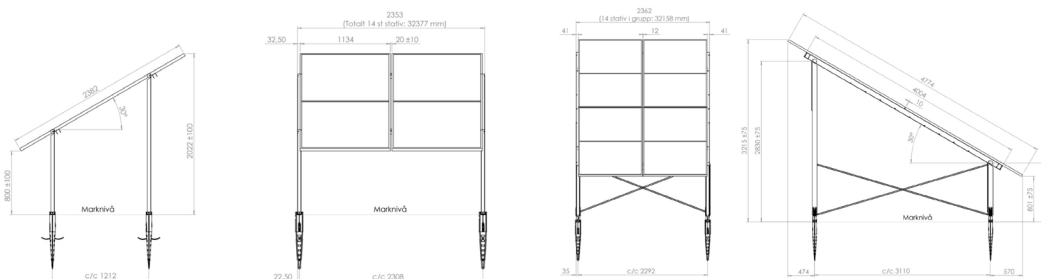
1P2M as SYD system is a space-efficient alternative



1P2M as an EAST-WEST system is a space-efficient alternative



1P compared to 2P



From clear-cuts to rolling meadows and rocky fields, no terrain stands in the way of FIEDLER SYSTEM's solar module stand.

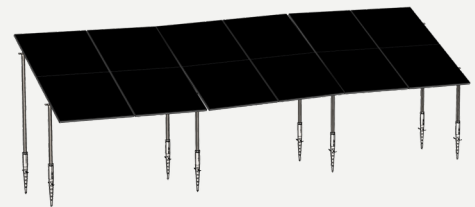
GROUND



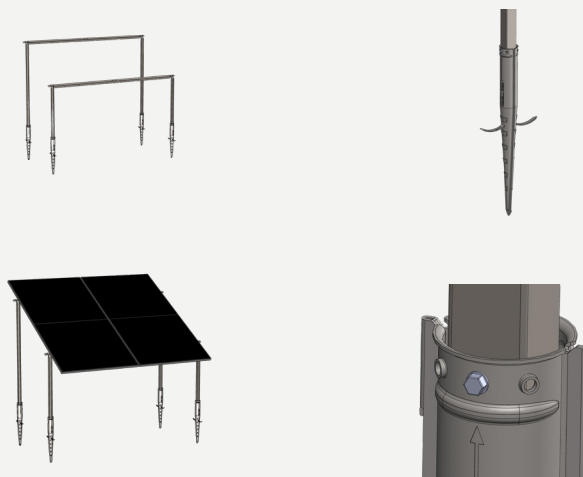
Quickly on site everywhere

For installation in all soils without heavy machinery

To optimize energy production, we supply different types of systems - standard south-facing systems, east-west systems and vertical systems. All systems are manufactured according to customer requirements and adapted to all sizes of panels with optional inclination and height at the leading edge. This makes our systems unique and they are optimally adapted to all our customers' environments and wishes. For softer ground, we have accessories such as a fixing plate and pressure plate to distribute the pressure against the ground. FIEDLER SYSTEM's Anchor that is mounted in the Ground Spear secures the anchoring of the stands in the ground.



Solar module stand with Ground Spear that follows the ground



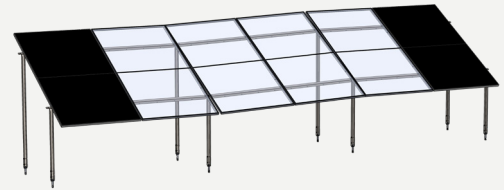
The FIEDLER SYSTEM requires minimal ground preparation. Almost none at all, in fact!

ROCKS



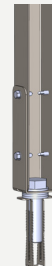
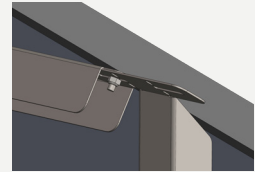
Mountains and rocks on the road no extra cost

Leave rocks and also use rock outcrops



Solar module stand with Rock Safe Expander that follows the ground

In the case of large rocks, rocks in the open or rocks underground, a hole is drilled for our U-bracket which is then locked in place with our Rock Safe Expander®, unhindered by weather. Should a rock boulder lie where a leg is to be mounted, you cut the leg, drill the hole and use the Rock Safe Expander. With the Fiedler System, you only need to do minimal ground preparation as we take care of all obstacles that arise through smart solutions and super-fast deliveries. We create the best working environment for the installers and it becomes easy to perform service on the solar park if necessary.



The green transition requires new thinking and new land areas. That's why we make use of all surfaces!

LANDFILL



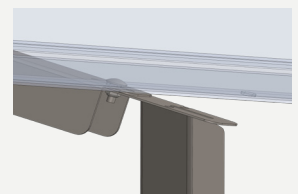
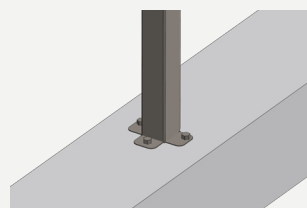
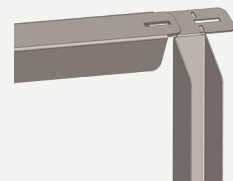
Unused land turns into a profitable energy factory

Use our concrete foundations or pour it yourself on site

Fiedler System offers specially adapted legs for our stands that you attach to the concrete with three (3) concrete screws that each withstand 1.4 tons of lifting force. Depending on the ground, we have foundations for two legs or one leg. For one leg, we have our own mold that you simply lay out in its position and fill with concrete. Our legs are adapted to also be able to stand on sloping ground. The size of the concrete foundation is determined according to the snow and wind load calculations for each specific location. Mounting frames for the placement of the legs can be ordered.



Solar module stand with concrete foundation that follows the ground



Wetlands are a huge resource that requires special management. Our solution takes careful care of this.

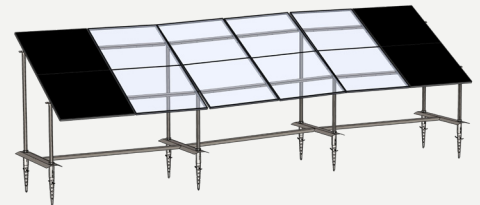
PEAT BOG



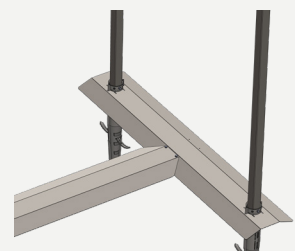
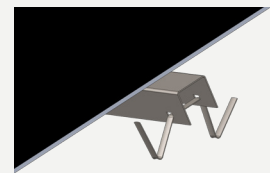
Recycling in the absolute right sense

Our printing frame and printing plate also solves super soft surfaces

Med Fiedler Systems unika konstruktion av en tryckram som läggs ut på marken likt ett pussel så bygger man även upp solparker på de mest känsliga miljöerna så som en torvmosse är. Vår materialval tillsammans med vår unika infästning i en torvmosse gör att det blir en minimal åverkan och ingrepp på naturen vid både uppbyggnad och en eventuell återställning av solparken. I sura miljöer som torvmossor använder vi syrefast stål för förankring i mark. Med våra tillval, kabelkrokar, kabelskenor och fristående växelriktarfäste gör man strängdragningen snabbt, säkert och snyggt.



Solar module stand with pressure frames that follow the ground



Can we imagine a unique vertical collaboration with animals and crops?

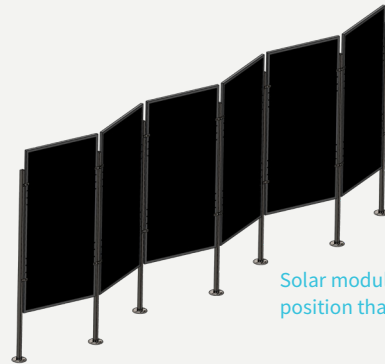
AGRIVOL-TAIC



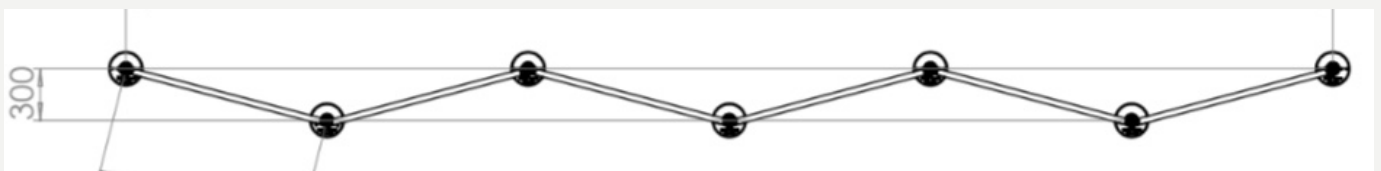
Co-utilize areas and create unexpected added value

Co-utilize areas and create unexpected added value

With Fiedler Systems' unique vertical system design, we can fit 3% more panels than traditional panels. The design fits all panels on the market and allows long rows without thermal breaks. With the front of the panel facing east and a design similar to the viper's back pattern, a stable construction is created from only 9.8 kg of metal. In return, you get a better and more even production of solar electricity.



Solar module stand in vertical position that follows the ground



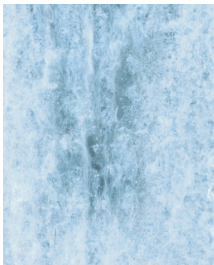
3% more panels can fit. No thermal break required.

Den C5 klassade plåten Magnelis® har ett betydligt bättre korrosionsmotstånd än andra metallbelagda material.

Det visar en studie där Magnelis® jämförts med bland annat Galfan, Aluzink och vanlig galvaniserad plåt.

MAGNELIS®

Resultat från rostskydds-test med saltspray på plan yta enligt ISO 9227.



Magnelis® after 34 weeks



Aluzink® after 34 weeks



Galfan 28 weeks



Hot-dip galvanized 6 weeks

Best corrosion protection for best LCC

Unbeatable steel quality with HX 420 LAD+ZM-310MAC and with a 30-year strength guarantee

The study, commissioned by ArcelorMittal, compares Magnelis® with regular galvanized sheet metal and Galfan. It was found that Magnelis® – in all tests – has a significantly better resistance to corrosion than other metal-coated materials. The tests that were conducted included, among other things:

- salt spray test
- cyclic corrosion tests where the materials are exposed to both salt spray and high humidity environments
- tests in extremely alkaline and aggressive environments (cast concrete)
- tests in real outdoor environments, for example near the sea

NO SURPRISE

That Magnelis is a sheet with unique corrosion-protective properties comes as no surprise. For several years now, it has been the only C5-classified metal-coated sheet available, which says a lot about its properties. In recent years, interest in Magnelis® has increased sharply, notes Richard Ralsgård, CEO of AMBE, ArcelorMittal BE Group. – I have never experienced anything like it before. ArcelorMittal has produced Galfan as a second-generation galvanized sheet for over 30 years, but it never really took off. Since we launched Magnelis®, which is a modern third-generation coating, just over ten years ago, demand has completely exploded. It is without a doubt the product that has increased the most in recent years.

C5 CLASS Magnelis® is thus the only existing metal-coated sheet that has received the so-called C5 certificate – the highest corrosivity class on the market. The secret behind the material's unique rust-proof properties is the inclusion of three percent magnesium in the metal coating. In addition to providing superior protection against corrosion, it also makes the sheet self-healing, Richard Ralsgård continues. – When the sheet is processed, for example cut or punched, or if the surface happens to get a scratch, oxide forms on the surface that makes it heal itself. This works up to a thickness of six millimeters, which is completely unique. The unique properties make Magnelis® a good choice in most corrosive environments. The price is currently fully comparable to other metal-coated sheets. Combined with the superior service life, this makes Magnelis® an economically viable alternative.

BETTER FOR THE ENVIRONMENT

Another big plus with Magnelis® is that zinc runoff is significantly lower than for other metal-coated sheets (for example, regular galvanized sheet, Alu-zinc or Galfan), which means major environmental benefits, notes Richard Ralsgård.

– The more aggressive the environment, the greater the benefit for Magnelis®. Magnelis® is manufactured by ArcelorMittal at four locations in Europe with a total capacity of 1.5 million tons per year. The sheet is manufactured in thicknesses of up to six millimeters and in several different steel grades and coating thicknesses. As demand for Magnelis® has increased, ArcelorMittal has constantly increased its production capacity. Despite a few turbulent years with the pandemic and increased concern in the world, the availability of the material is good, notes Max Fjaestad, Product Manager for Flat and Thin Products at BE Group. The fact that the production takes place at its own steelworks increases control and contributes to a high level of delivery reliability.

IN ALL CONTEXT

The unique properties of Magnelis® make the sheet a great choice in most contexts. The addition of magnesium provides unbeatable protection even in tough, highly alkaline environments, in marine contexts and in environments containing chloride or ammonia. Are there any occasions when you should not choose Magnelis®? Richard Ralsgård thinks for a moment before answering. – In that case, it would be in contexts where the quality and lifespan of the sheet are of no importance. Then it is always important to look at the environments in which the sheet will be used. In acidic environments, Magnelis is not always the best choice.

Magnelis® tillverkas av den europeiska stålproducenten ArcelorMittal och marknadsförs i Sverige av BE Group och systerbolaget ArcelorMittal BE Group SSC (AMBE).

Did you know that your solar park can be framed with FIEDLER SYSTEM's Ground Spear and our fence post.

FENCE



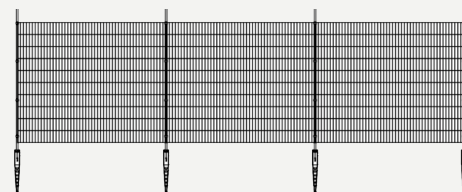
Your park is framed neatly, quickly and safely

Our Ground Spear solves many customer needs.

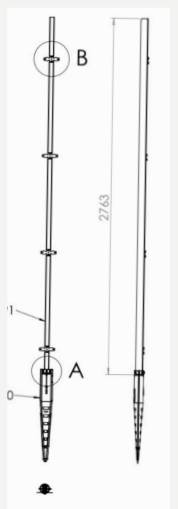
Together with our partners, we offer a complete installation of fences and gates in the vzf version around your solar park with the Markspjuet and our fence posts.

On normal ground, we install approximately 500 meters of complete fence in a single day. In corners or at sharp breaks, the fixing plate is used. Our range is wide with a focus on four different options:

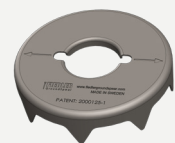
- Supernet game net 200cm/17/15, without barbed wire
- Intrusion protection, 120cm high mesh fence
- Industrial fence 200cm high with three rows of barbed wire above
- Panel fence 200cm high with three rows of barbed wire above



Fence with Ground Spear that follows the ground



Frost-proof design



Fixing plate for greater stability

OPTIONAL PRODUCTS

Item number: Assembly and anti-theft products:

40525	Anti-theft panel including special tools:
40585	Freestanding inverter bracket:
40590	Cable hooks (Supplied in 100-pack):

Item number: Cable rail for above-ground routing between panel rows:

40100	Ground Spear:
40108	Mounting plate, 56x200 mm, including two screws:
40530	Cable rail + cover, L=2000 mm, 60x60 mm, including four screws:

Item number: Optional products for soft ground:

40102	Fixing plate, $\varnothing=200$ mm (3.14 dm ²) Provides a ground pressure per leg of 111.5 kg/dm ² at 350 kg/leg.
40499	Pressure plate, 290x290 mm (8.41 dm ²) Provides a ground pressure per leg of 41.6 kg/dm ² at 350 kg/leg.
40495	Pressure frame, 290x1400 mm (40.60 dm ²) Provides a ground pressure per leg of 8.6 kg/dm ² at 350 kg/leg.

Item number: Optional products for hard ground such as rocks and stones:

40192	Rock Safe Expander, including M20 bolt and four(4) washers.
40505	Rock Safe U-bracket 45, 45 mm including four(4) self-drilling screws 6.3x22 mm.

Item number: Tools for post drivers and piling machines to purchase from Fiedler System:

40120	Adapter Ground Spear - post driver
40121	Spike with spirit level - post driver
40296	Adapter car machine (For using existing spike on the piling machine)
40319	Adapter for the Fixing Plate
40292	Tool anchor
40315	Pull-Up-Test with puller
40310	4-pack Marking spikes
40175	Breath level with O-ring

Tools to purchase or rent from an external company:

Post driver 2-stroke for post $\varnothing 100$ mm, at least 45 Joule

Pile driver, at least 45 Joule

Short skewer with tip for pile driver. (For adapter 40296) Long skewer for pile driver, L=700 mm.

Crane scale, 1000 kg.

Impact drill, Drill: $\varnothing 22$ mm drill L= 200 mm (when using rock expander

Torque wrench, at least 100 Nm. (when using rock expander).



Fixation plate



Pressure plate

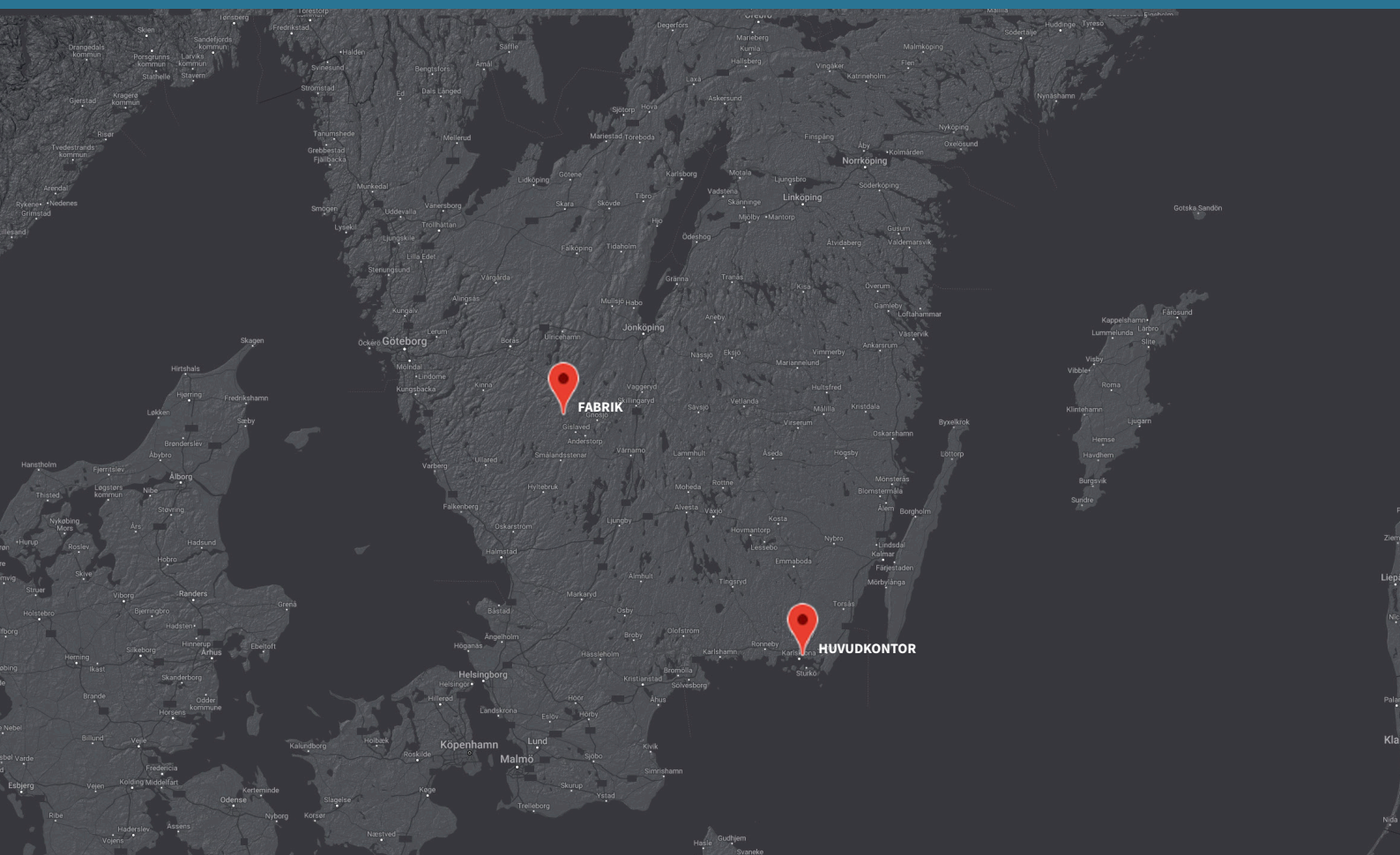


Cable hook



Cable rail

DELIVERY CAPACITY FOR 350 MW PER MONTH



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Patent: 84734 Patent: 2000180-6, 2000125-1, 2100061-7 PCT / SE2020 / 000031

