

HARNESSEFLEX CUSTOMER CASE STUDY

# Harnessflex® Specialist Conduit Systems case study

## Advanced Mini Piling Systems



Established in 1984, ABB's Harnessflex® Specialist Conduit Systems protect critical electrical and electronic wiring assemblies in the heavy automotive industry.

**Harnessflex® offers complete system solutions for the routing and protection of electrical wiring against damage by mechanical abrasion, liquid ingress and corrosion salts.** Using a **Harnessflex®** conduit system helps ensure that vulnerable connectors are not exposed to the elements, impact of foreign bodies or jet washing, all of which can cause vehicle malfunction and failure.

Based in the South of England, **Advanced Mini Piling Systems Ltd.** has over 30 years of experience in the Piling and Mini Piling industry, offering an impressive array of Piling techniques and a tailor-made foundation system to all sectors of the construction industry. To find out more about how Advanced Mini Piling Systems worked with the **ABB Harnessflex®** team to create a bespoke solution for their needs, we spoke to their engineer, **Oliver Noakes**.

“As a small business, being able to work on an electrical harness schematic and have it produced with Harnessflex® products via a recommended harness manufacturer in the UK saved us a week's worth of work per machine.”







## Contact & meet

In February 2022, the ABB Harnessflex® team and the team at Advanced Mini Piling Systems held initial discussions to see how a Harnessflex solution could assist with the protection of the critical cables and connectors on their piling vehicles.

With Harnessflex® systems already installed on other agricultural and construction vehicles, it seemed like it would be a natural fit. After a brief telephone introduction, a meeting was organised for first-hand assessment of the application required.

**Oliver explained** regarding this first meeting: “When I was visited by a Technical Sales Specialist from the ABB Harnessflex team, they were extremely helpful, providing us some free Harnessflex® samples and a catalogue. We spent time working together going through my electrical system and finding solutions for each junction and connector.”

Following this visit, Oliver and the Harnessflex® team decided to set up a further consultation to work through some bespoke harness solutions.



Equipped with  
**VFP**  
Vibration Friendly Profile (VFP)  
Harnessflex® conduit systems.







## Consultation & Solution

During this additional consultation, the ABB Harnessflex® team went on a technical deep dive in order to develop some understanding of the typical operating environment and conditions of the Advanced Mini Piling Systems machinery. From discovering more about the vehicle's exposure to extreme temperatures, risk of impact and heavy vibration, as well as any technical standards the vehicle must adhere to, the ABB Harnessflex® team was then able to determine which product to recommend.

Another part of this consultation was a detailed analysis of the customer's own wiring harness designs. ABB Harnessflex® offers bespoke design that utilises an extensive range of interfaces, in order to tailor innovative solutions for a range of applications. Therefore the ABB Harnessflex team worked with Advanced Mini Piling Systems to advise on which Harnessflex solutions would fit into their harness designs to advise on which ABB Harnessflex® solutions would fit into their harness designs.



"One challenge was trying to find a way to terminate Harnessflex® conduit into a DIN/Hirschman plug, which are used widely across the electrohydraulic components installed on our machines. A component from the Harnessflex® sealed system was recommended and used to solve this challenge," stated Oliver Noakes at Advanced Mini Piling Systems.

**UV**   
 protection & vibration  
 friendly profile (VFP)  
 featured in all Harnessflex® conduit.



Harnessflex® specialist conduit systems offer complete solutions for the routing and protection of electrical wiring in heavy duty vehicles. Harnessflex® technology is designed and tested to protect against damage by mechanical abrasion, liquid ingress and corrosion salts. Using a Harnessflex® conduit system helps ensure that vulnerable connectors are not exposed to the elements, impact of foreign bodies or jet washing, all of which can cause vehicle malfunction and failure.



\* As all Harnessflex® products are intensively tested under the most extreme conditions, we stand behind the durability of the systems we provide. That's why as standard, we offer a **5 year extended warranty** on all Harnessflex® products that are installed as part of a complete, fully integrated Harnessflex® system.



Harnessflex® specialist conduit systems offers a wide range of solutions - from our standard general purpose range (black) to our specialist solutions for extreme temperatures (Harnessflex® X-Temp™) and electric vehicles (Harnessflex® Electric Vehicle Orange (EVO™)).

## Ongoing support

Even after the solution was provided, the ABB Harnessflex® team still keeps in regular contact with the Advanced Mini-Piling Systems, assisting with any design changes, providing technical assistance for any issues encountered when needed and keeping them in the loop regarding any new innovations being launched.

When discussing his experience of working and using Harnessflex® Conduit Systems, Oliver couldn't be happier with the results:

"I am extremely impressed with the ABB Harnessflex® solutions - they are well-made, secure together firmly and allow us to route conduit to every different connector on the machine we build. This has helped us gain conformance to the various technical standards required to produce a machine in the UK & Europe."

"ABB Harnessflex has saved us time and money whilst increasing value by enabling us to build a machine that is more durable and helps us maintain consistent quality from engine through to control panel."

**Oliver Noakes** - Electrical Engineer,  
Advanced Mini Piling Systems Ltd.

For more information on **ABB Harnessflex®** Specialist Conduit Systems visit or contact:  
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