



Custom Umbilical Cover for Robotic Inspection System

PROBLEM:

A company that specializes in automatic scanners and inspection systems was having issues with their equipment cabling getting damaged. The umbilical cables from their robotic scanners are very long and exposed to harsh environments. During use, these cables were getting damaged, failing, and needing to be repaired & replaced often.

REQUIREMENTS:

The umbilical cables that connect the robotic scanner to the base power station are just as critical as the other parts of the inspection system. These scanners are used heavily in the field where a failure to any part of the machine can cause large delays and missed deadlines. This customer was looking for a wrap-around protective jacket for the umbilical cables that would be extremely durable but also lightweight and flexible enough to not restrict the movement of the robot during a scan.



SOLUTION:

Custom Zip-Wrap (VNH)

Zippertubing provided a customized version of their zipper-closed VNH-23 jacketing. The tough, coated-fabric, material was the perfect combination of flexibility and strength to provide rugged outdoor protection for their sensitive cables. For the closure, a strong, double-sided zipper was used to allow a quick and easy installation. Zippertubing design engineers were also able to customize the solution by including extensions at both ends of the sleeve to interface with the custom mounting brackets of the robot and power system.

CONCLUSION:

The design engineers with this company, satisfied with the custom solution, have since added similar sleeving to nine other inspection systems they produce. This adaptable jacketing design is now used on their scanning systems with umbilical cables as short as 10 feet, to one that is over 200 feet long.