

# FLAVOR POWER



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## CUSTOMER

Kalsec

## CONTRACT VALUE

\$370,000

## LOCATION

Kalamazoo, Michigan

## START DATE

March 2020

## COMPLETION DATE

December 2020

## PARTNERS/SUBCONTRACTORS

EPS (fire alarm and security)



## SUMMARY

Windemuller worked with Kalsec, a Michigan-based company touted as “the leading global producer of natural spice and herb flavor extracts, colors, antioxidants, and advanced hop products for the food and beverage industry,” to design and build out a new pilot plant manufacturing system at its headquarters in Kalamazoo.

## OVERVIEW

Kalsec (short for “Kalamazoo Spice Extraction Company”) is a Michigan-based company that synthesizes and manufactures a variety of spice and herb flavor extracts, natural food color hues, antioxidants, and other products for food and beverage producers around the globe. For example, Kalsec was a key player in developing the light-stable hop extracts that have allowed some beer companies to bottle their beer in clear (rather than brown) bottles.

In 2020, Kalsec built a new “pilot plant” manufacturing system, which will allow the company’s R&D team to mix, manufacture, test, and sample small product batches more easily than ever before. Windemuller worked alongside Kalsec and their construction manager to provide an electrical buildout and a design assist on the new facility. Our job was to deliver power to different locations throughout the building, including to several “classified” areas that required the

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use of explosion-proof materials and protocols. With a “white box” electrical buildout provided by our team, the space was then ready to receive all the equipment necessary for the new plant.

## CHALLENGES

Even before Windemuller’s crews got started on construction, there were a few significant challenges with this project to address. First, due to budget, the project went through a number of preliminary cutbacks. Crucially, the project was slimmed down from a larger building to a smaller one, which meant we had to pack quite a bit of circuitry into a smaller-than-anticipated space.

Rather than having us install EMT conduit behind the masonry of the building’s block walls – a time-consuming, work-intensive process that adds cost to a project such as this one – the client also opted for less expensive surface-mount conduit design. That shift saved time and labor in one area, but also meant we were largely working with rigid conduit, which is more difficult to run than EMT conduit and added its own challenges. Running rigid conduit in and out of explosion-proof areas – with the necessary seal-offs to prevent any openings for dust, harsh vapors or other combustible materials – proved particularly complex and difficult.

The design cutbacks – combined with some less-than-ideal layouts in the initial plans for static grounding, lighting, and lighting controls – also meant we had to help the client go back to the drawing board to revamp the architecture of the space, all before construction could begin.

## SOLUTIONS

The way the timeline for this project had been sketched out meant that the COVID-19 shutdown struck right as our crews were preparing to start construction. On the one hand, the disruption set us back months, delaying our project completion date from August to December. On the other hand, the closure gave us time to work with the client – over Zoom and email, of course – to redesign the project into something that had all the necessary pieces and could still meet Kalsec’s budgetary needs. The extra time proved, on this job at least, to be a blessing in disguise.

Otherwise, the big “solution” on this project was simply having an unflappable crew. Our team worked hard, kept their noses to the grindstone, and stayed adaptable and resilient throughout the job, even as design shifts and pandemic interruptions completely reshaped the scope and timeline of the work we were supposed to do. Kudos to them.



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