

Minco's Integrated Solutions

Save money and time by combining flex circuitry and heaters, sensors, and other components

Overview

During Minco's six decades of operation, we have come to master a diverse -- but related -- set of competencies. Our Temperature Sensing and Control Solutions team makes sensors and transmitters. Our Thermal Solutions group builds heaters, and Flex makes circuits. Minco's business units combine to create cost-effective, easier-to-install assemblies we call Integrated Solutions.

Many challenges brought to us require advanced expertise that spans all of Minco's engineering disciplines. Critical systems like avionics, satellites, and medical imaging devices—the purpose of which is too important to be allowed to fail—all benefit from Minco's broad array of specialties. Our application solutions are reliable, innovative, practical, and often include the integration of thermal, flexible printed circuit board (PCB), as well as sensor and instrument design, into a single package.

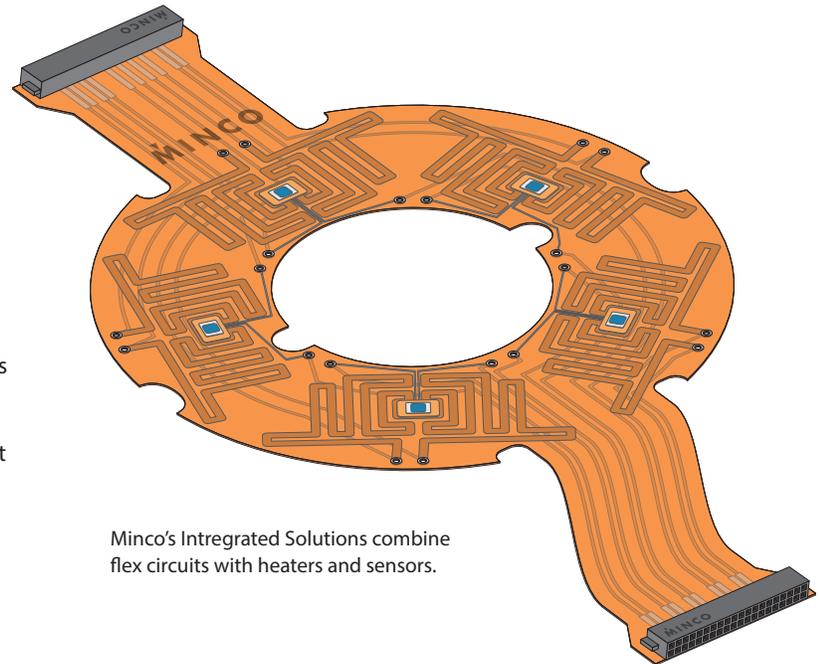
Starting Simple

In many cases, customers begin by asking Minco to design a single heater or sensor assembly and we are called upon to supply engineering expertise to help complete the project. For instance, an environment may need to remain thermally stable, so they call in Minco Thermal Solutions engineers to assist.

When Minco Engineers familiarize themselves with a project they can make cost-saving suggestions. One example might be the wires or flex leads connecting the heater to other components in the enclosure. Old-fashioned wiring bundles pose installation difficulties due to their bulk and the possibility of miswiring the rig. By combining the various wires into a flat package and adding connector plugs, wiring challenges are eliminated—it's impossible to connect the plugs the wrong way.

The next step after creating the circuit involves adding components and electronic packages. We have the capability to build in through-hole and surface-mount pads, stiffeners for component assembly, and heaters to maintain temperature in certain parts of the enclosure. We can even install induction coils for communication telemetry. Our unsurpassed capabilities allow us to integrate any combination of our high-quality flex circuits, heaters, sensors, and control electronics.

The most appealing feature of Minco's Integrated Solutions might be their ability to simplify assembly. Minco offers a wide array of built-in connectors -- including High Density Interconnects -- making miswiring nearly impossible. In addition to streamlining the assembly process, Minco's integrated components simplify the supply chain, enabling our customers to get to market faster and reduce their direct costs. Put simply, Minco's high reliability Integrated Solutions reduce time to market and assembly costs for our customers.



Minco's Integrated Solutions combine flex circuits with heaters and sensors.

Involve Minco Early

While we often arrive late in a project, it benefits our customers to involve Minco in the beginning of the design phase. Most of the cost savings from Integrated Solutions involve designing the circuit early in the process. If we've entered the picture long after all the design decisions have been made, it's harder for us to find synergies and efficiencies.

Case in point: A medical device manufacturer wanted Minco to create a thermal stabilization package for a rotating carousel of biomedical vials. The prototype consisted of a heater and tab sensor for each vial, an assembly that involved dozens of wires laid out in a confusing tangle. Minco's engineering team responded by suggesting a solution with surface mount temperature sensors embedded in the same piece of polyimide as the heaters themselves, with a high-density connector serving as a foolproof interface between the circuit and the main project electronics. The customer saved money on manufacturing costs and simplified installation, resulting in further savings.

If the customer hadn't involved us in the prototyping phase, our engineers would have a harder time finding an elegant solution that fulfilled project parameters while creating a thinner and more efficient package than the prototype.

Greater space efficiency and lower cost to market make Integrated Solutions a winner in most projects. Contact Minco to learn how our diverse capabilities can be put to work for you.



Contact Us

Work with Minco to save money and improve time to market



In today's competitive markets, manufacturers are always looking for ways to cut costs, slash time to market, and improve product performance. But while component buyers are price sensitive, they also look at measures like total cost of ownership, reliability, performance, and customization. This is particularly true of technical products in fields like medical diagnostics, aerospace, powergen and military and defense where failure is simply not an option. Designers

of those products, and others like them, recognize that the cost of a specialized component or an integrated assembly can be more than offset by reduced assembly cost. They know that speed to market can help maximize the profitability of a new or improved product. And they rely on Minco to help eliminate risk in demanding markets. Contact us today to learn how we can assist with your next project.

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Key: ● Customer Service ● Manufacturing
● Engineering ● Sales