

COMMERCIALISING HIGH-VALUE GREEN TECHNOLOGIES

FLEX-TEK

Flex-Tek's technology leadership and its vertically integrated engineering design and manufacturing model make the business highly agile and responsive to customer needs and market opportunities. Today, these strengths uniquely position Flex-Tek to enable the success of our customers and strategic partners who are leading the way in building efficiency, electrical heating and the transition to low- and zero-carbon fuel sources and industrial processes.



In FY2022, Flex-Tek entered a strategic partnership with Midrex Technologies, Inc (Midrex) to deliver a solution for production-scale decarbonisation of Midrex's market-leading Direct Reduction of Iron (DRI) process to create 'green steel'. The Midrex process replaces the fossil fuels used in traditional DRI steel production with hydrogen and creates water vapour as the effluent gas rather than CO₂.

Flex-Tek's Kraftblock thermal storage technology will enable intermittent energy from solar panels and wind turbines to be stored as heat before it is converted back to electricity.

Flex-Tek's business units are tightly connected with commercial reality and see the front-line impact of these sustainability-driven trends quickly emerging across the construction, industrial and aviation markets.

Efficient buildings

Building efficiency is a prime example of how sustainability trends create demand for high-value innovation and growth.

As efficient building design becomes the norm and building codes more stringent, architects and builders require new solutions for insulation, environmental quality and HVAC systems. For Flex-Tek, this translates to opportunity and increasing demand for products offering efficiency benefits, including:

- Tutco electrical heat kits that extend the working range of heat pumps;
- Gastite refrigerant line sets that replace copper piping in heat pump applications; and
- Flex-Tek HVAC flexible ducting designed for efficient conveyance through conditioned-space walls.

Electrification and renewables

Green electrification creates significant growth opportunities for Flex-Tek. Tutco SureHeat electric heating element technology can be applied across a wide range of consumer and industrial markets to replace fossil fuel heating. This helps open the door to exciting new opportunities to decarbonise large-scale industrial processes, including so-called hard-to-abate sectors such as steel production. In addition, Flex-Tek is innovating to support renewable power using technology developed for aviation testing to enable the storage of energy as heat until it is needed for use.

Alternative fuels

Flex-Tek is also well positioned to support the future scaling and safe use of hydrogen as an alternative energy source. STS Aerospace high-performance flexible tubing conveys fuel in challenging environments using technology that can be developed further to provide solutions that will support the higher temperature, pressure and lower permeability requirements of transporting and using hydrogen. As well as potentially being used for industrial heating, hydrogen may be used as a fuel source for heavy transportation, such as maritime, which cannot be easily electrified. While this transition is further out, Flex-Tek is already building relationships with key players that are actively pursuing applications of hydrogen and hydrogen-based alternative fuels.