



## DEFIBTECH'S OLYMPIC VICTORY



GIOVANNI MEIER, at left, vice president of engineering at Defibtech, and Brian Sawin, project manager, display an automated external defibrillator. At left is a CPR demonstration mannequin fitted with defibrillator electrode pads.

## JUMP START

By RITU KALRA  
COURANT STAFF WRITER

Sustained victory is proving elusive for top American athletes competing in Turin, but for an upstart medical devices firm in Guilford, triumph is at hand—even at the Olympics.

Defibtech, a company that makes automated external defibrillators (AEDs) — laptop-size devices that shock stopped hearts back to their normal rhythm—was featured recently in the Museum of Modern Art's three-month exhibit on safety and design.

In each of the past two years, Defibtech's AED has received the nation's most coveted honors for medical and industrial design.

Then there's Turin itself, where 148 of Defibtech's AEDs are deployed across Olympic venues.

Heady stuff for a company that was founded just seven years ago by two college friends in an office above a strip-mall pizza shop in Guilford. To top it off, Defibtech has turned a profit for three straight years.

"We're the little company that comes skimming in under the competitive landscape and pops up

and takes the competition away," said Gintaras Vaisnys, president and co-founder of Defibtech. "Unlike a lot of other start-ups that try to posture, we walk softly and carry a big stick."

Call that stick super-size, for a 30-person outfit with total revenue now approaching \$30 million since its first commercial sale in 2003. The company will not give annual figures.

Last summer, Defibtech won what is believed to be the largest AED contract in history when the state of New Jersey chose its devices to be deployed in every police car in the state — with 3,000 units delivered in the past six months alone.

Defibtech is still a small player in an estimated \$350 million market dominated by manufacturing giants, such as Philips Electronics. But sales have doubled each year since 2002, when its AED was approved by the Food and Drug Administration.

The timing couldn't be more fortuitous. Public agencies are increasingly recognizing the need to make life-saving AEDs as ubiquitous as smoke alarms. The American Heart Association

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### The Quote

"Unlike a lot of other start-ups that try to posture, we walk softly and carry a big stick."

Gintaras Vaisnys, president and co-founder of Defibtech, an upstart Guilford company whose external heart defibrillators are deployed across several venues in the winter Olympics in Italy.

## Defibtech

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estimates that 340,000 adults die in the United States of sudden cardiac arrest each year. Unlike a heart attack, in which blood flow to the heart is interrupted by closed arteries — a "plumbing" problem—sudden cardiac arrest short-circuits the heart's electrical system. Death can occur within minutes.

Enter the AED, a sort of fire extinguisher for the heart. It's a rugged device that weighs about four pounds. A built-in computer analyzes the heart's rhythm and, if needed, directs the user to deliver an electrical shock to the victim to restore its cadence.

As more AEDs are deployed in public places, Defibtech's low-cost, but feature-laden product is poised to leap ahead of competitors, analysts say.

The firm, which plans to hire several more engineers this year and supports about 200 manufacturing and sales jobs at outside contractors, represents exactly the sort of homegrown success Connecticut needs to nurture in a fast-growing industry.

"Defibtech is a very interesting company, and they've had a phenomenal amount of success," said Nathan Cohen, a research analyst at the consulting firm Frost & Sullivan. "They're not a dominant player yet, but I think that the big manufacturers can no longer ignore them when it comes to negotiating big deals. They've definitely caught notice of Defibtech."

From the inception of the company, Defibtech's founders set themselves up for a challenge: Create a rugged consumer product on the outside, equipped with a medical device that is subject to the highest level of FDA scrutiny on the inside. And they were driven to make it for less than \$1,500, about half the price that existing AEDs were selling for, without sacrificing on quality.

Vaisnys, 43, who graduated with an engineering degree from Yale University, had worked, for years at a consulting firm he likens to a "research and development SWAT team" for all sorts of technology products.

Co-founder Glenn Laub, 49, graduated with an engineering degree from Yale five years prior to Vaisnys, and went on to become a cardiac surgeon in New Jersey. One day, a sales representative introduced Laub to an AED. Although he was intimately familiar with implanted defibrillators, he had never before seen the external contraption.

Laub talked about the machine with Vaisnys, with whom he had already launched and sold a startup medical equipment firm.

"It was a very clunky-looking device," Vaisnys said. "And we looked at it and said, 'Why does this thing cost

\$4,000? It will never get adopted by the public that way.' And we realized it was a unique opportunity."

The partners' insight: They had the precise combination of medical knowledge and product development experience to seize the opportunity.

"There are very few people who can straddle both worlds. And here we were, we'd spent a life time straddling those worlds," Vaisnys said.

Vaisnys plucked the best engineers he had worked with during his consulting gig to help form the new company. His top recruit, in 1999, was Giovanni Meier, Defibtech's vice president of engineering, who was designing audio equipment in Middletown.

The only hitch was that Meier, along with Michael Hicks, another coveted former colleague, were firmly rooted in Connecticut.

Vaisnys, who lives in Chicago, and Laub, who still practices in Princeton, N. J., agreed to base the start-up in Connecticut.

The intelligence that went into the machine's design is apparent in its details. Defibtech's AEDs have no screws, for example, which reduces manufacturing time and makes it less expensive to produce, and eliminates the possibility that any screws could come loose internally and damage a chip.

The device is virtually foolproof by design: It won't allow a shock to be administered if it determines one isn't needed; it performs automatic self-checks daily to make sure everything is functioning properly (no dead battery surprises); and a voice-activated chip guides users in exactly what to do in nearly every situation.

"They're really making a difference. If AEDs were widely available, they could save about 50,000 lives a year," said Barbara Caracci, director of emergency care programs and training at the National Safety Council.

The company's business model is simple: Outsource production to a state-of-the-art facility with technology that a start-up could never afford, but make sure it's close enough to the engineers so they can hop into their cars and work with the manufacturer to refine the design, as needed.

The same philosophy applies to Defibtech's marketing strategy. The firm sells AEDs exclusively through outside distributors. And because it became profitable quickly, Defibtech's initial \$3 million funding from the founders' friends and family sufficed as seed capital — giving the company flexibility today.

Back in the R&D lab in Guilford, engineers scribble away at whiteboards, trying to drive down costs.

"When we first came out, we 'Defibteched' people. We cut the cost of the product in half without shortchanging them on any features," Vaisnys said. "I would hate to have another company pop up and 'Defibtech' us. ... I want to be the guy doing that to ourselves before someone else does."