AN ENLIGHTENING DREAM

After spending 30 years working in the industrial and institutional side of steam optimization, I needed a new challenge and a higher purpose. So when my wife Jacqueline suggested in 1998 to start our own business, I didn’t hesitate and decided to take a leap of faith. I secured a bank loan and began setting up a world-class research and development laboratory. We put together a team of experts who believed in my ambition and we tested, re-tested and enhanced European methods until we finally came up with a truly unique and innovative concept in 2004.

We reached our first significant milestone when we were granted US and Canadian patent rights in 2004. The following year, my visionary instincts were recognized by ASHRAE, as I received a coveted Technology Award.

In 2005, we founded Maxi-Therm Inc., and today I am proud to say that our dedicated team works with highly qualified staff resources from 21 exclusive US partners to continuously innovate in the steam solutions market.

WE BELIEVE IN A WORLD THAT CAN UNITE AND STRIVE for an unprecedented level of self-sustainability.

Raymond Lach
CEO & Founder

Jacqueline Labrosse Lach
Co-Founder
The goal at Maxi-Therm was to put together a team of passionate, visionary people dedicated to finding innovative ways of using steam for building heat and domestic hot water. What started as a small business has grown into a large company with exclusive representation in most major US cities. Our people are human, engaged and committed to the vision of contributing to a more sustainable world.

“We are all Maxi-Therm.”

- Walter Kuzia
5 PATENT DESIGN CONCEPTS
Maxi-Therm is an innovative package solution manufacturer with four patent design concepts, as well as an international patent pending zero-lag feature.

STRUCTURAL & SEISMIC DESIGN FEATURES
Maxi-Therm package solutions are engineered with structural and seismic design features. Our service capacity includes local certified tech and engineering in New Jersey, Massachusetts and Chicago.

BRAINSTORMING TEAM
Our engineering group employs a brainstorming team consisting of specialized senior professionals who continuously update and modernize our concepts, both mechanically and electronically.

15,000 SQ FT
Maxi-Therm has four manufacturing and engineering facilities totaling 15,000 sq ft to assist customers in purchasing the highest quality products and services. One of our facilities meets ISO 9001 quality management and quality assurance standards.
STEAM HAS ALL THE answers
THE ANSWERS

Primary control panel with remote access connected to building management system – BMS
IoT ready

Secondary control panel with remote access connected to building management system – BMS
IoT ready

The Ultimate Package using high or low pressure steam, fully redundant zero lag system with only one steam inlet connection, one condensate outlet that can react positively to a back pressure, one liquid inlet and one liquid outlet connection, no steam pressure reducing station, and no steam vents to roof.

- Circulating pumps 60 HP
- VFD variable frequency drives
- Main disconnect power
- 2200 US gpm heat exchangers (2)
- 20°F rise
- 85 PSIG steam pressure
- 50 HP VFD variable frequency drives
- Main disconnect power

maxi-therm.net
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Any innovative system is only as effective as it is simple to use. That’s why we’ve designed a control panel that makes every step easy to manage. A NEMA 4 and UL certified control panel with an advanced programmable controller that allows the user to set-up all the options. An intuitive, easy-to-use GRAPHIC HMI display including BACnet, LonWorks, and Modbus compatibility. Remote access capability allows advanced and real-time technical support. An Uninterruptible Power Supply (UPS) switches to battery mode to prevent any downtime in the event of an electricity outage.

An intuitive easy-to-use HMI display

We are Internet of Things (IoT) ready with a OPC-UA embedded server
Since 2002, our ground-breaking technology allows us to flood the steam heat exchanger and stabilize the liquid outlet temperature. We proudly manufacture high-efficiency steam-to-liquid vertical flooded units for building heat and domestic use, transferring both steam’s latent and sensible heat in a 0% flash return system, even at very high steam pressure, and taking into account super-heated steam.
LESS ON TOTAL INSTALLED COSTS

40% SPACE SAVING

5 TO 16% LESS ENERGY CONSUMPTION AND CARBON FOOTPRINT REDUCTION

STABILITY OF LIQUID SET POINT TEMPERATURE

LESS MAINTENANCE
No steam pressure reducing station, no steam relief valve, no condensate pumping station.

A CLOSED LOOP
No steam vents to roof, no flash tanks.

±2°F
Over the last several years, as customers chose the natural gas line available to install condensing boilers, they have become aware of the short life cycle of some major components, as well as the high maintenance costs to maintain the operation of these condensing boilers.

Maxi-Therm has simplified the steam-to-liquid solution to a point where there is only one moving part, a very small condensate control valve, meaning that steam is in fact far more efficient than people think.

Moreover, since 2012 the US Department of Energy recommends installing a saturated steam turbogenerator to not only control the reduced steam pressure required, but also to generate electrical power.
have you ever noticed how quickly we fix water leaks from a heating loop compared to a leak in a steam line? if you don’t fix your water leak, you will likely end up with a major mess in your mechanical room. if a natural gas leak occurs, the repair will be considered an emergency, no matter the cost. however, the same steam leak can be present for years before it requires special attention.

safety

by avoiding pressure-reducing stations, condensate pump stations, big control valve stations on the steam side and the need for steam safety valves to the roof, we can cut the typical maintenance budget of a conventional steam system by more than 75%.

the maxi-therm advantage

by avoiding pressure-reducing stations, condensate pump stations, big control valve stations on the steam side and the need for steam safety valves to the roof, we can cut the typical maintenance budget of a conventional steam system by more than 75%.

fuel back-up

dual fuel burners are typically used in case of a natural gas shortage. however, assuming you don’t need dual fuel, is it a good idea to rely on natural gas for the next 15 years? if one day it makes more sense to use another fuel by having a central plant, you will be able to change the burner or boiler and keep the same steam network system for building heat, domestic hot water and steam to steam.

district central steam heating system

if you’re considering buying steam energy for building heat from a district central steam heating plant or other source, you should take a look at our systems that integrate a steam turbogenerator or a steam motor to generate electrical power and add a steam absorption chiller to produce more electrical power in the summer.
THEY’VE PUT THEIR TRUST IN MAXI-THERM
Our engineering group employs a brainstorming team consisting of specialized senior professionals who continuously update and modernize our concepts, both mechanically and electronically.

Our regular two-day brainstorming sessions take place in inspiring locations, far away from the office, which allows us to come up with fresh ideas about our common passion: steam.

"I AM SURROUNDED BY WONDERFUL PEOPLE"
– Raymond Lach
Our success depends in large part on having exclusive local partners representing our products in every US state. Our reps are dedicated people working on steam projects led by owners who've been in the business for generations. Together we strive to go beyond Steam.

Our service centers are located in Boston, Chicago and New Jersey. Our service capacity includes certified technicians who support local staff for the initial start-up and warranty period.
Headquartered in Montreal, Canada, Maxi-Therm is the proud owner of a leading-edge laboratory that is unique in the industry. Equipped with a 1,000,000 BTU/h capacity 100 psig steam boiler, this is where we test and demonstrate the performance and stability of temperature setpoint of our latest innovations.

We also invite our customers to a 1½ day technical seminar on steam applications, including our innovative products like the vertical flooded concept and the steam-to-steam generator for humidification or sterilization, and to learn about our steam turbogenerator that generates electrical power.

“Thanks so much for inviting me up to the Maxi-Therm seminar! The learning content, the hand-out materials and the hands-on lab were all outstanding. I felt at ease in the more intimate setting to learn and ask questions. I appreciated your open and honest approach to what the products are about, the inventive spirit that constantly seeks to improve or customize products to perfectly fit an application, and personal investment and sacrifice that stand behind the Maxi-Therm products.”

- Testimonial from attendee

“I would like to thank everyone at Maxi-Therm for the opportunity to attend your Montreal seminar. I found the information covered by you and your team in the subject of steam management extremely educational and insightful. The expertise and professionalism conducted during the class is among the very best, and dialog between colleagues was extremely informative. In my opinion, systems created at Maxi-Therm are innovative and cutting edge. As for the hospitality, it is world class and has left me knowing that the people at Maxi-Therm are not only at the top of their profession, but they are also the top among hosts. Thank you once again.”

- Testimonial from attendee
At Maxi-Therm, we're committed to innovation in heat transfer, and the coveted ASHRAE Technology Award we've received shows it's paying off.

Our innovative, efficient steam-to-water heat exchanger technology optimizes the net output energy produced by steam, as opposed to conventional shell-and-tube heat exchangers. By modulating the condensate, the flooded vertical heat exchanger varies the exchange surface. The energy input of the flooded vertical heat exchanger is 85% of the conventional horizontal heat exchanger for the same net energy produced. The exchanger has a stable temperature set-point by modulating the condensate, not the steam.

To us, the ASHRAE award is an inspiration to continue innovating, to continue searching for low-cost, energy-efficient solutions that leave the smallest possible footprint.

The backpressure turbogenerator is an option recommended by the U.S. Department of Energy.
A SOLUTION

more energy-efficient than ever, integrating a control panel with remote access connected to building management system – BMS – IoT ready, at a low installation cost, and one that leaves the smallest possible footprint.
Others have imagined what it might be like. We've made it happen.

Welcome to maxi•therm™

We are IoT ready