

# Superior Ventilation for Fitness Environments

## *Our Yoga Place sets a higher standard for hot yoga studios.*

by Kim Perrone



When Tom and Nancy Palmer designed [Our Yoga Place](#) in Estero, Florida, they set out to build a beautiful facility without the issues they found in many fitness studios throughout the world. Seeking an odorless and germ-free environment, they installed PEM surface flooring and SpectraClean™ lighting for exceptional cleanliness. Air quality, however, was the element that concerned them most. After all, in yoga, breathing is key. Unfortunately, headaches, dizziness, exhaustion, and nausea are not unusual after indoor fitness workouts,

especially leaving Hot Yoga studios. Tom insists this should not be the case and takes issue with facilities that tell their less-than-refreshed clients they simply didn't hydrate enough. What is often the true culprit making students feel lousy post workout? Breathing in stale, germ-y air and excess carbon dioxide (CO<sup>2</sup>) during class.

### **Hot Yoga studios are challenging to ventilate properly.**

Hot Yoga classes run in studios heated at 105°F (40.5C) with at least 40% relative humidity to increase yoga's effects on muscles and various systems of the body. In addition to the resulting sweat produced under such conditions, people expel higher levels of carbon dioxide (CO<sup>2</sup>) thanks to elevated heart rates. As more CO<sup>2</sup> fills the room, less oxygen becomes available, making it harder to breathe.



Photos: Tom Palmer, Our Yoga Place

The Palmers offer a variety of yoga experiences, including Hot Yoga, so Tom knew wrangling heat and humidity while maintaining healthy oxygen and carbon dioxide levels would be a challenge. It's easy for ventilation and temperature control to fall out of whack if the HVAC is not

properly balanced to bring in enough fresh air while sending stale air out of the building. Having witnessed enough fitness studios and locker / shower areas prone to bad smells, mold, and disease—as well as drained, unhappy clients post practice—the Palmers promised to offer a better experience.

“Everyone can benefit from yoga,” insists Tom. “People shouldn’t feel they need to be in shape for an Iron Man competition to participate.” Beginners feeling poorly after practice often assume they just can’t cut it, then quit, and that’s a shame.

## Ventilation Solution for a fitness studio.

Tom educated himself on HVAC to plan a no-nonsense 4,200-sq.ft. haven for those looking to improve physical and mental health. The solution, he decided, should include high thermal efficiency energy recovery via balanced ventilation that controls humidity while delivering continuously pre-heated, fresh air. During his research, Tom realized he needed a high-performance Energy Recovery Ventilator or ERV that could deliver double ASHRAE Standard 62’s recommendation of 20 cfm per person. Such superior ventilation would keep CO<sup>2</sup> levels as low as possible by ushering out stale air and using the heat energy of that air to warm incoming fresh air.

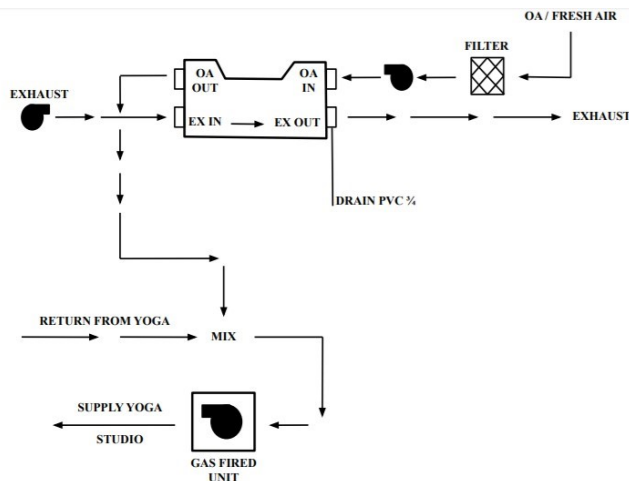


Diagram: BPE, Inc.



## Our Yoga Place offers a superior fitness environment.

Once Tom knew what he wanted, he searched for a company offering products he could trust. The innovative solutions at a Hot Yoga facility in Canada led him to seek out Building Performance Equipment, Inc.’s line of ERVs.

Professional Engineer Klas Haglid, CEO of BPE, recommended two [BPE-XE-MIR-2000 units](#)—one for each studio—with upgraded fans, CO<sup>2</sup> monitors, and controls to adjust the ERVs for even greater efficiency. The units provide enough air exchange per person to counteract the room’s elevated CO<sup>2</sup>, keeping levels below ASHRAE’s recommended 1,000 ppm. They also control humidity via BPE’s patented [Regenerative Condensate Return™](#) which provides up to 34% latent effectiveness.

Most noticeable, the studios smell fresh and they never lose heat with the ERVs turned on. In fact, it amazes Tom how many clients leave their workout saying, “I’ve never come out of a class feeling so good before!”



BPE-XE-MIR-2000 ERV



BPE-XE-MIR-200-i ERV

To prevent the locker / shower room stink and humidity folks wrinkle their noses over at other fitness facilities, a smaller ERV, the **BPE-XE-MIR-200-i**, was installed. The outcome? Our Yoga Place is truly a breath of fresh air.

“We are so pleased with the result!” says Tom. “This is huge, since we built our place inside a shell, with no access to the outside.”

The Palmers have found the ERV units work just like Mr. Haglid said they would when he claimed, “These ventilators feel like you have an open window to the outside world.”

## What makes BPE ERVs the superior choice?

The patented design of a BPE unit is longer than your average ERV, boasts an air-to-air, direct counter-flow heat exchanger with little to no mix in air streams, and can result in 80% to 98% thermal efficiency. Energy Efficiency Ratings (EER) are unsurpassed at between 36 and 160 EER. In fact, you can run a BPE ERV with less power than an incandescent lightbulb.

The energy recovery factor was important to the Palmers, too. After all, Florida is the fourth-largest energy-consuming state and uses almost eight times as much energy as it produces according to the U.S. Energy Information Association. Thanks to Tom’s research, Our Yoga Place is *not* part of the problem!

## Our Yoga Place sends an important message.



Certainly, Tom and Nancy Palmer are encouraging people to live healthier lives by stretching, strengthening, and caring for their bodies and minds through yoga, massage, and classes in better living.

Their space does more than that, though. Our Yoga Place sets an example for other fitness facilities by raising the bar in client care: Providing a super clean indoor environment where people can breathe freely should not be the exception, but the rule.

By using energy-efficient HVAC, the studio becomes one less facility spewing high levels of harmful emissions into the atmosphere. It sets an example for building managers in their community, demonstrating that sustainable building management is a worthwhile venture. And before long, it will be obvious that

stewardship of the Earth has its rewards; BPE ERVs pay for themselves quickly via reduced energy bills.

When it comes to indoor fitness facilities, working out in healthful environments doesn't have to be a stretch! Want to provide your clients, employees, and yourself with healthy indoor air quality while saving money? Give BPE, Inc. a call at 201.722.1414. Their expertise will have your simple or challenging ventilation project up and running quickly and very efficiently. And just like Tom and Nancy Palmer, the people at BPE are passionate about their work!