MilliporeSigma

OXYCOM
natural air conditioning

CASE STUDY

Fresh air for employees of MilliporeSigma distribution center

99000 CFM (168000 m^3/h) of fresh air and low GHG emissions with the installation of 12 IntrCooll units

World leader in adiabatic cooling

Summary

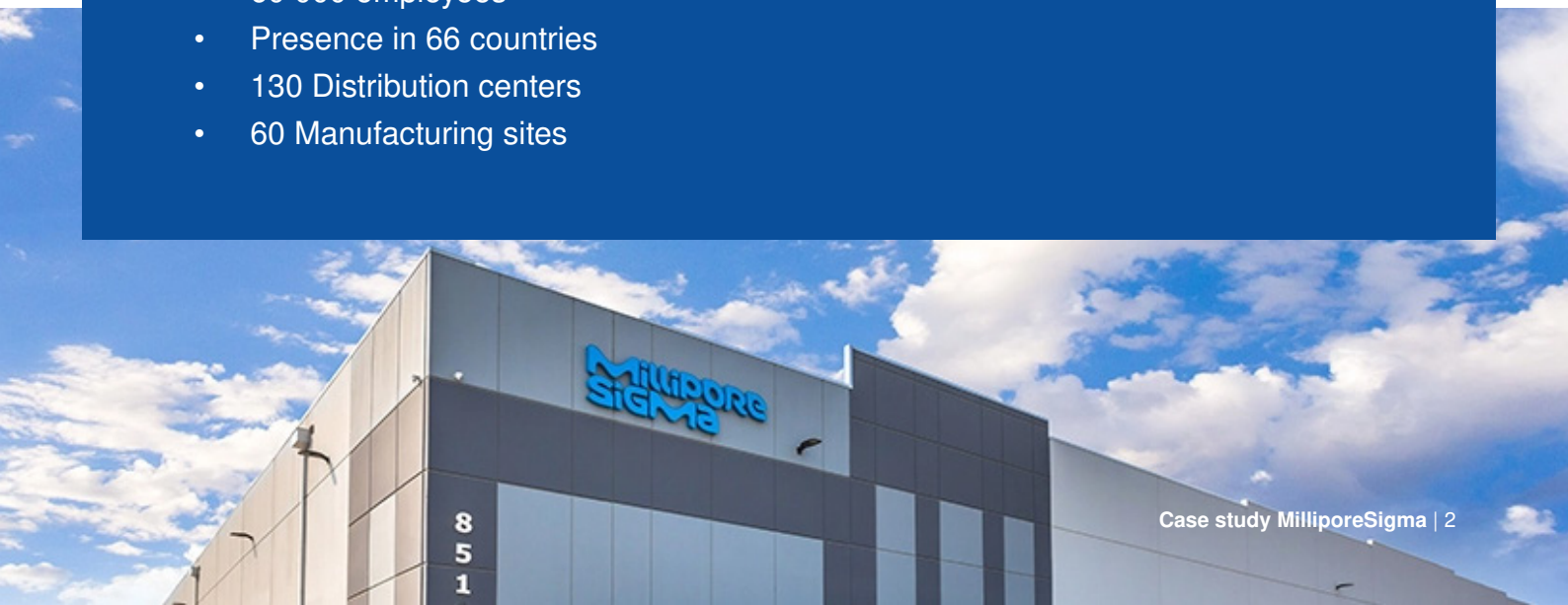
MilliporeSigma, a leading supplier to the global life science industry, struggled to find an energy-efficient cooling solution in their distribution center at Visalia, California. With our patented two-stage adiabatic climate control, it could achieve a fresh, healthy and comfortable indoor climate **even during the worst heatwave of California**. Our innovative climate control supports the vision of MilliporeSigma of creating a sustainable and innovative future for generations to come. Read more in this case study.

About MilliporeSigma:

Founded in 1668, MilliporeSigma has been inspiring the life and health science industry with its legacy and expertise in the field of science and innovation.
It offers a broad portfolio and integrated services for scientists to perform experiments and engineer world-class innovative products. Along with its commitment to providing innovative tools and expertise to inspire an infinite number of scientific solutions, MilliporeSigma is taking an active role in shaping the future by incorporating sustainability in its core mission.

MilliporeSigma: At glance

- More than 300 000 products
- 60 000 employees
- Presence in 66 countries
- 130 Distribution centers
- 60 Manufacturing sites



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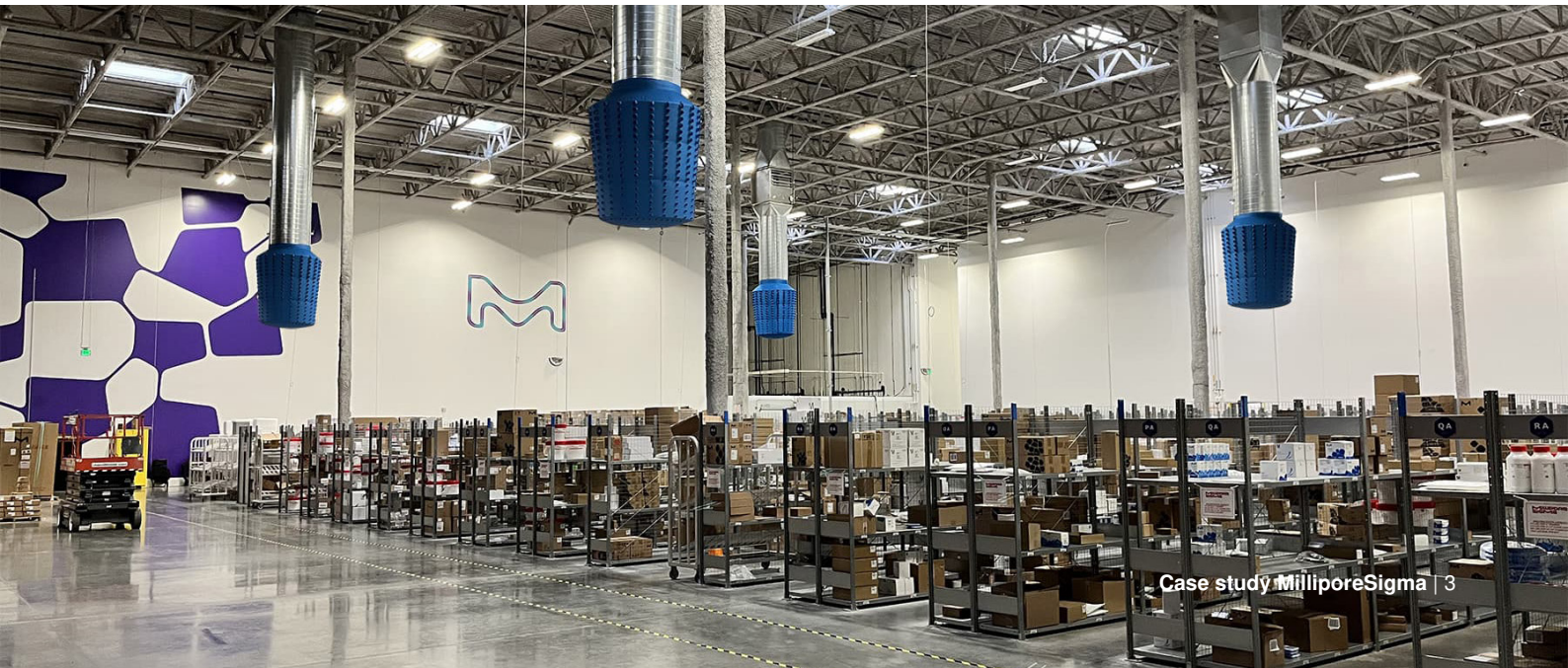
Finding an energy-efficient and cost-saving solution for creating comfortable climate all year round.

The distribution center in Visalia, California opened in November 2019. During the first year, the employees of MilliporeSigma had to face uncomfortable working climate conditions. It was realized that there is a huge necessity for cooling solution as the average summer temperature in California can reach up to 44 °C (112 °F). But MilliporeSigma had to struggle to find the right cooling solutions that could comply with the requirements of **Title 24** – energy efficiency regulatory standard for commercial HVAC appliances in California.

Challenges:

- Title 24 requirement for energy efficient solution.
- A sustainable solution that could support its mission of being carbon neutral by 2040.
- Cost/energy saving alternative to traditional air conditioners.
- Four-season solution for providing the comfortable climate all-year round.



Outstanding features of IntrCooll makes it the perfect solution for creating comfortable indoor climate.

After two years of intensive searching for the right solution, Brian Duarte, the regional manager of MilliporeSigma came across the adiabatic solutions. He found that Oxycom's technology already complies with Title 24 because adiabatic solutions use much less energy than AC.

After reaching the consensus on installing the adiabatic solutions, MilliporeSigma checked the products of different competitors and various visits have been made to experience the difference. But the simplicity and adaptability of Oxycom's two-stage patented climate control system was found to be the perfect solution. In comparison to the sophistication of the giant chillers that produce a lot of sound and use enormous amount of energy, Oxycom's IntrCooll provides soundless energy-efficient targeted cooling on the receiving deck and on the shipping deck where most of the employees' work.

"With its simplicity, Oxycom's system is a clean and thoughtfully engineered solution"

Brian Duarte

Regional Manager, MilliporeSigma

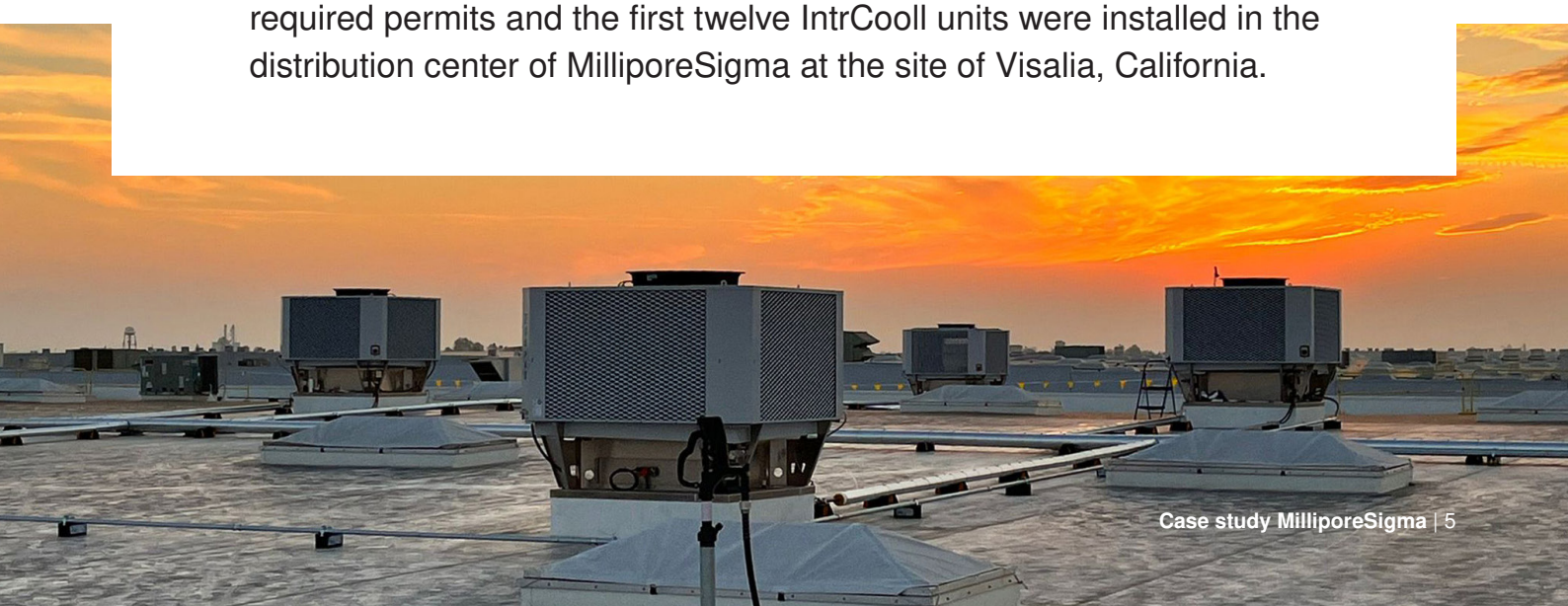
IntrCooll vs traditional air conditioners

- Up to 90% reduction in CO2 emissions
- Up to 90% energy savings
- Up to 80% reduction in cooling cost
- Title 24 compliant
- Easy to install and less expensive to maintain
- Always 100% fresh, filtered outside air

IntrCooll vs direct adiabatic solutions

- Up to 114% wet-bulb efficiency
- Up to 7 °C lower temperatures
- Up to 70% less humidity
- Up to 30% less water consumption
- Oxyvap hydrochill fin technology

After signing the contract, the decision was made about where to place the units and how many units are required with the help of engineers and contractors. But it was Oxycom's first project in the USA. Hence, various legalities and certifications were needed to comply before execution of the project. One of the requirements was getting UL certification (Underwriter Laboratories) – safety, sustainability and longevity certification for IntrCooll. With its outstanding results, IntrCooll became UL certified, received all the required permits and the first twelve IntrCooll units were installed in the distribution center of MilliporeSigma at the site of Visalia, California.



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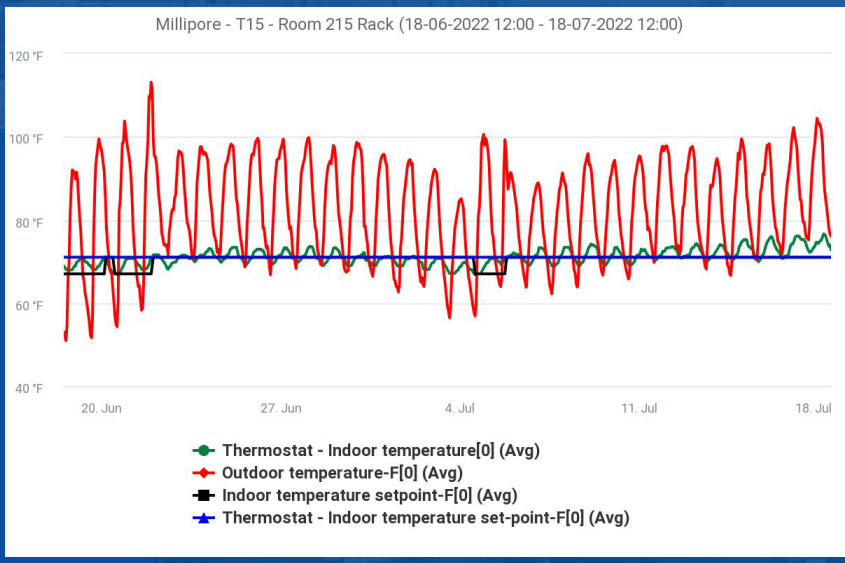
Spreading smiles with sustainable indoor climate solution, even during heatwaves.

Brian Duarte, MilliporeSigma: “During the heatwaves of August in USA, the temperature rose around 44 °C (112 °F). After the installation of sustainable and innovative two-stage adiabatic cooling solution, IntrCooll, the indoor temperature at the MilliporeSigma site remained around 23.3 °C (74 °F), due to average supply temperatures around 13 - 14 °C (55.4 - 57.2 °F) and all with 90% energy savings and no harmful cooling agents, but water. It just works, it cools as it should and is as environmentally friendly as it can be.”



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After the installation of Oxycom’s IntrCooll units, we just smile a lot. Our employees are super happy and our visitors are just totally impressed.

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How MilliporeSigma has benefitted from Oxycom's patented two-stage adiabatic cooling

People

- Happy and productive employees
- High indoor air quality with 99 000 CFM (168000 m^3/h) of fresh air
- Quiet and comfortable working environment

Planet

- Environment friendly solution
- Low energy consumption and low ecological footprint
- Support to achieve net zero goals

Profit

- Savings on energy costs
- Title 24 compliant
- "Impressive support system from Oxycom's technicians"

A collaboration for a carbon-neutral future

For its mission of becoming carbon neutral by 2040, MilliporeSigma found Oxycom as a reliable long-term partner. There are plans to replace ACs in other buildings and even in offices with Oxycom's patented two-stage adiabatic cooling systems. For a carbon-neutral future, IntrCooll stands out to be the perfect solution for MilliporeSigma's temperature-controlled manufacturing facilities.

Listen to the full interview →

"The support from Oxycom is fantastic, they pick up the phone in the first ring."

Brian Duarte
Regional Manager
MilliporeSigma (USA)

Are you looking to create a comfortable and healthy climate with massive energy savings?

Oxycom is here to help. Our specialists will give you free customized advice on sustainable adiabatic cooling, 100% natural ventilation and air distribution systems.

Get advice →

About Oxycom

At Oxycom, we are pioneers. We design our highly innovative natural cooling systems with one goal: to reduce the global carbon footprint required to cool, ventilate, and heat buildings. Since 2002, we have been developing innovative adiabatic climate solutions. Oxycom has years of experience with numerous applications worldwide. Our broad expertise enables us to complete any project with our partners/ installers successfully.

Discover more →