

LIVABILITY

No building is sustainable unless it promotes a healthy, functional, livable environment for its occupants. At Quartzdyne we have taken multiple steps to provide a healthy working environment for each of our employees. The building's office space has increased ventilation which helps combat Sick Building Syndrome. To relieve the amount of chemical off-gassing in the building, low-emitting materials were used throughout the space including: adhesive and sealants, paintings and coatings, carpet systems, composite wood and agrifiber. Chemical and pollutant sources are managed via product cabinets and entrance mats which collect and stop particulate filtration through the building.

All employees enjoy the naturally lit communal, corner work spaces, as well as the naturally lit manufacturing area. The task lighting and thermal systems are user controlled allowing for optimal individual comfort. The system's functionality will be verified by an employee survey after one year.



1. Native Wetlands
2. Water Efficient Landsc
3. Carpool/High Efficiency Parking
4. Bicycle Storage
5. Ciralight skylights
6. Low Volume/Dual Flush Toilets
7. Ventilated Office Space

- Office
- Manufacturing
- Machine Shop
- Calibration Labs
- Hybrid Clean Rooms
- Quartz Sensor Clean Rooms

QUARTZDYNE

Quartzdyne is committed to sustainability. From our green Headquarters, to our product which enhances the efficiency and productivity of oil and gas companies, Quartzdyne seeks to foster a healthy environment for our employees, our customers, and our world.

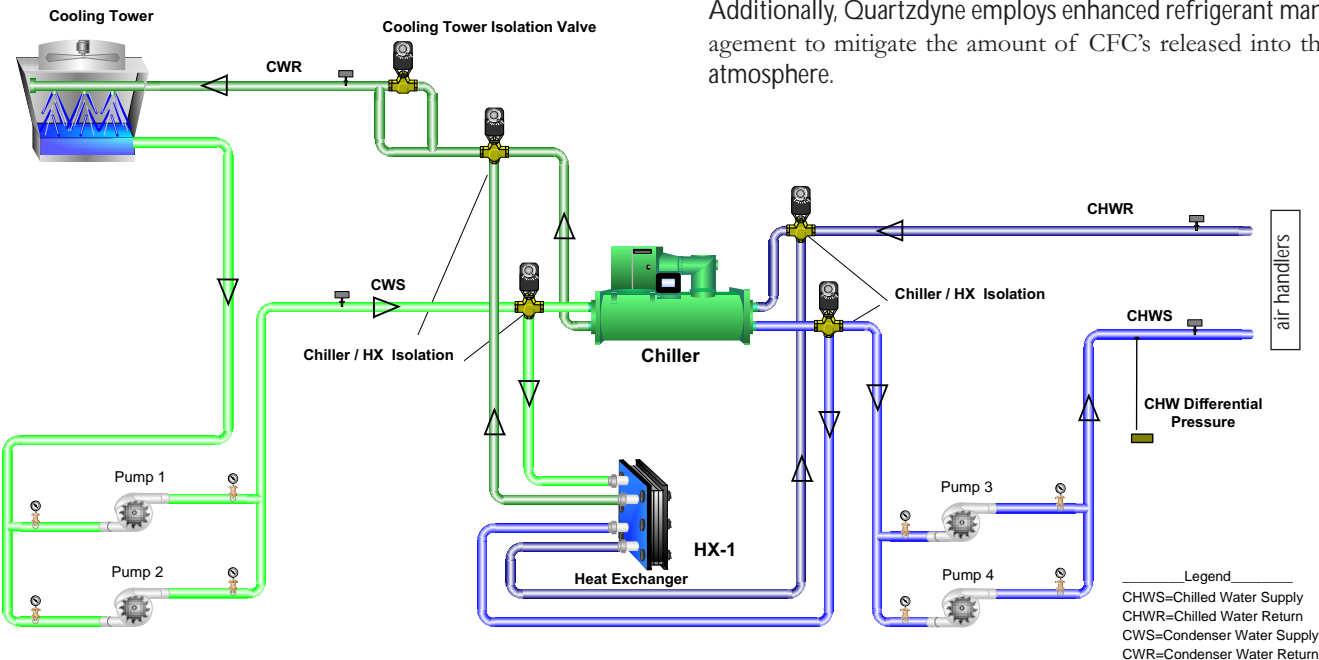
Quartzdyne's new headquarters achieved Silver Certification with the U. S. Green Building Council's LEED (Leadership in Energy and Environmental Design) program; LEED is the nationally accepted benchmark for the design, construction and operation of high-performance, sustainable buildings. The following five categories represent a few of the steps we've taken towards sustainability.

ENERGY

Producing Quartzdyne's precision pressure transducers requires an energy-intensive manufacturing process; scaling that back to a LEED sustainable level was a difficult endeavor. Even now, after moving to our new headquarters and improving our process energy consumption (compared to our original plant), 60% of our total energy use must be utilized for production. Thus, the remaining 40% of our energy consumption, used for our building and business needs, had to be drastically cut to 22.5% in order to achieve the total 17.5% over code efficiency to be LEED Certified.

The main energy saving component is an ultra high-efficiency HVAC system which captures and manages process energy that would otherwise be lost. The recaptured energy is directed to the HVAC system, lessening the building's heating and cooling load.

The following diagram shows the symbiotic relationships within the system and how it works:



Chilled water is circulated to air handlers throughout the building. The air handlers absorb heat from the different spaces. During the hot summer months, the heat absorbed from the building is circulated through a water cooled chiller. The chiller rejects the heat absorbed by utilizing the cold condenser water from the cooling tower. During the cooler months of the year, the air handlers utilize outside air to cool the different areas instead of using the chiller. To prevent dust and contaminants from entering the clean rooms, outside air supply is limited. For this situation, the condenser water from the cooling tower bypasses the chiller to a heat exchanger which is used to cool the clean rooms without the use of the chiller.

Additional energy saving measures have been implemented. Highly insulated concrete tilt up construction, combined with high-efficiency windows, allow the building to conserve internal temperatures and further reduce HVAC loads. High-efficiency lighting systems with automatic controls are utilized in conjunction with sun-tracking Ciralight skylights in the manufacturing area. The solar powered Ciralight skylights use a GPS tracking device to track the sun and direct the light into the space with a mirror array. When natural daylight in the manufacturing area is adequate, the controls reduce the amount of artificial light, thus reducing electric power consumption.

Additionally, Quartzdyne employs enhanced refrigerant management to mitigate the amount of CFC's released into the atmosphere.

SITE

Quartzdyne is fortunate to be located on a site that enjoys sweeping views of the Wasatch Front, and is adjacent to native wetlands that numerous species of plants and wildlife call home. Extensive measures were taken to carefully preserve these wetlands by maximizing open space on site, using native water-saving landscaping and leaving the wetlands themselves untouched during construction and building occupation. Pollution prevention measures were employed during construction. High reflective roofing material (white membrane) was used to reduce the thermal impact, or "Heat Island Effect", on the surrounding city.

By providing preferred parking for carpools and high-efficiency or alternative fuel vehicles, Quartzdyne supports environmental action and accountability by each of our employees. Additionally, indoor bicycle storage racks and showers are provided for those who choose to pedal to work.

WATER

Water is a precious resource and one that is becoming scarcer in our growing western cities. We at Quartzdyne have taken measures to mitigate our water usage by planting landscaping that consumes 50% less water than a typical landscape. Furthermore, the building water consumption was cut by 40%, by implementing low volume/dual flush toilets among other measures.

RESOURCES

During construction 75% of construction waste was successfully diverted to recycling plants. An extensive, full building recycling program has since been implemented, which further reduces the continued impact on the local landfill. The building materials used for the headquarters include 20% recycled content. Another 20% of building materials were extracted, processed and manufactured regionally, which cuts down on the impact of shipping and harvesting from distant locations. Rapidly renewable materials and certified wood were used in the building, which helps stop deforestation and the problems associated therewith.