



HEDRICK ASSOCIATES OF GRAND RAPIDS

West Michigan's Factory Representative



2017 Heat Transfer Design Seminar and Product Show

Topics Include Design and Application of Cooling Towers for Cold Weather Operation, Closed Circuit Fluid Coolers, Solids Filtration, Benefits of Chemical-Free Water Treatment, Hybrid Boiler Systems, Steam Boiler Systems and Water Source VRF Design.

Hedrick Associates is happy to welcome SPX Cooling Technologies, Lakos, Flow-Tech, Weil-McLain and Mitsubishi to West Michigan for design seminars and product shows. At these seminars, you will learn the latest industry trends and best practices for designing heat transfer systems, including cooling towers, water filtration, chemical free water treatment, boiler systems and water source VRF systems. Each event will feature multiple, technical breakout sessions that will be presented by industry expert representatives from our manufacturers. Products will be on display for evaluation and demonstration. Please see the following pages for presentation overviews and company background profiles. See page 6 for additional seminar details and registration.

~ Seminar 1 ~

July 24, 2017
Gaylord, MI
Gaylord Country Club
4893 M-32
Gaylord, MI 49735
Seminar Registration @ 9:00am
Lunch & Product Demos at 12:00pm
Seminar Concludes @ 3:30pm

~ Seminar 2 ~

July 25, 2017
Traverse City, MI
Hagerty Center
715 E Front St
Traverse City, MI 49686
Seminar Registration @ 9:00am
Lunch & Product Demos at 12:00pm
Seminar Concludes @ 3:30pm

~ Seminar 3 ~

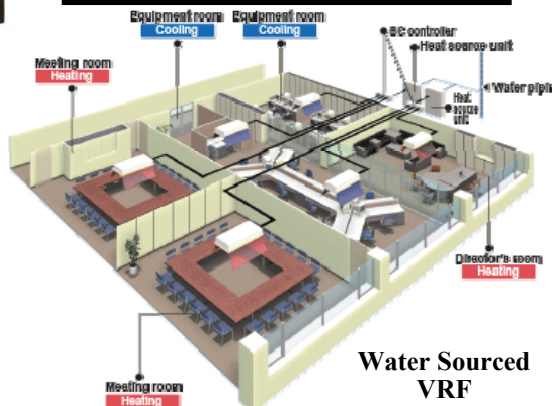
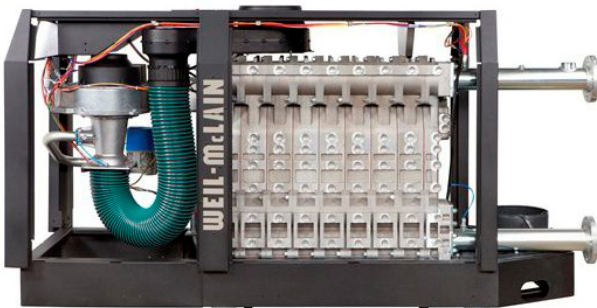
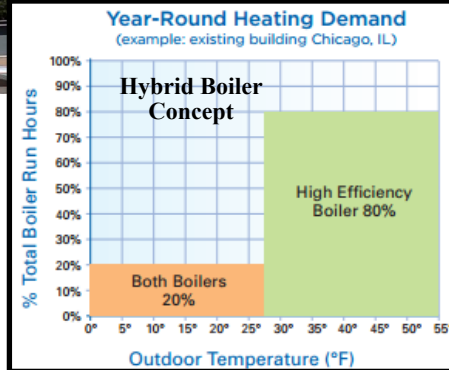
July 26, 2017
Grand Rapids, MI
Thousand Oaks
4100 Thousand Oaks Dr NE
Grand Rapids, MI 49525
Seminar Registration @ 9:00am
Lunch & Product Demos at 12:00pm
Seminar Concludes @ 3:30pm

~ Seminar 4 ~

July 27, 2017
Kalamazoo, MI
Holiday Inn West
2747 S 11th St
Kalamazoo, MI 49009
Seminar Registration @ 9:00am
Lunch & Product Demos at 12:00pm
Seminar Concludes @ 3:30pm

~ Seminar 5 ~

July 28, 2017
Lansing, MI
MSU University Club
3435 Forest Rd
Lansing, MI 48910
Seminar Registration @ 9:00am
Lunch & Product Demos at 12:00pm
Seminar Concludes @ 3:30pm





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This seminar and product show will consist of four morning breakout session choices in a two hour time slot. Attendees will have the option of choosing two of the four sessions. Following the second breakout slot, lunch will be served and there will be opportunity to see product demos. After lunch, there will be four more breakout session choices in another two hour time slot, which will conclude the seminar portion of the event. Demonstrations will continue for the next hour, at which time the event will end. See below for breakout session details!!

SESSION 1: COOLING TOWERS & COLD WEATHER OPERATION

TIME SLOTS: 9:30-10:30AM OR 1:00-2:00PM

- Crossflow vs Counterflow performance in winter
- Variable flow design & cold weather operation
 - Integral louvers & ice prevention
 - Waterside economizer
- Operational tips & best practices
- Fluid Coolers—risks of draining coil
 - Remote sumps

SESSION 2: CLOSED LOOP FLUID COOLERS FOR WSHP/WS VRF

TIME SLOT: 10:45AM-11:45AM

- Using Closed Circuit Coolers for WSHP and WS VRF Applications
 - Winter Operation of Closed Circuit Coolers
- Running Closed Circuit Coolers Dry and the Performance Effects

About SPX / Marley,...

Visit our web page at www.spxcooling.com

Evaporative cooling equipment is available in several types and sizes and understanding the various products, along with their advantages and limitations is important when determining the right application for your project. As the only full-line cooling product manufacturer, SPX Cooling Technologies is uniquely qualified to provide the best possible products and services for your application. From field erected cooling equipment for large power plants to factory-assembled products for light industrial or HVAC duty, this approach allows each customer the same dependability and quality regardless of size.



Field erected induced draft counterflow cooling tower



Field erected natural draft counterflow cooling tower



Field erected induced draft crossflow cooling tower



Packaged induced draft crossflow cooling tower



Packaged induced draft counterflow cooling tower



Packaged forced draft counterflow cooling tower



Packaged induced draft fluid cooler



Packaged forced draft fluid cooler



ClearSky - Proprietary Plume Abatement Solution





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SESSION 3: STEAM BOILER CONCEPTS

TIME SLOT: 9:30AM-10:30AM

- The Importance of Near-Boiler Piping in a Steam System
 - Steam System Accessories
- High Versus Low Pressure Steam Design
 - Steam Boiler Controls

SESSION 4: THE BENEFITS OF A HYBRID BOILER SYSTEM

TIME SLOT: 2:15PM-3:15PM

- Hybrid Boiler System Concept Overview
- Matching High Efficiency Performance With Cast Iron Longevity and Added Design Day Capacity
- Control Sequencing Between High Efficiency Boiler and Cast Iron Boiler

Cast iron durability meets condensing efficiency for long-term energy savings

About Weil-McLain,...

Visit our web page at <https://www.weil-mclain.com/>

Weil-McLain, a division of The Marley-Wylain Company, is a leading North American designer and manufacturer of hydronic comfort heating systems for residential, commercial and institutional buildings since 1881. Building on a reputation of quality and innovation, we are committed to creating Simplified Solutions for our Complex World™.

Architects, engineers, contractors, facility managers and homeowners alike rely on us for their comfort heating needs. Installed in homes, offices, schools, restaurants, hotels and other facilities throughout North America, the Weil-McLain brand is among the most respected and often used in the building industry. Our hydronic boilers and indirect-fired water heaters integrate the latest in advanced controls and materials including cast iron, stainless steel and aluminum heat exchanger technologies. The reliability and energy efficiency of our products has helped to make us industry leaders.

WEIL-McLAIN BOILERS



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SESSION 5: PROCESS WATER SOLIDS FILTRATION

TIME SLOT: 10:45AM-11:45AM

- Benefits of Filtering Process Water
- Advantages of Centrifugal Separators
- Centrifugal Separators and Variable Flow
- Types of Filtration Equipment
- Filtration Application Options

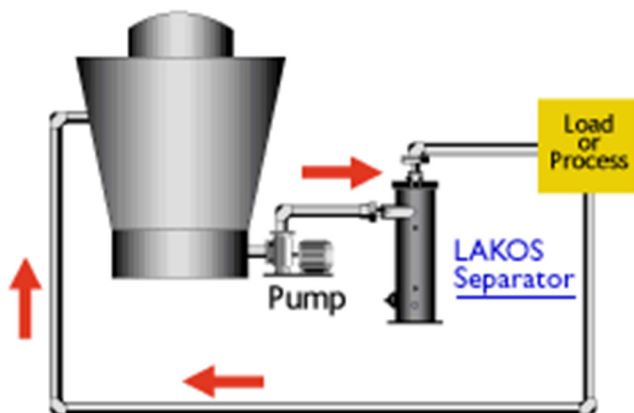
About Lakos,...

Visit our web page at www.lakos.com

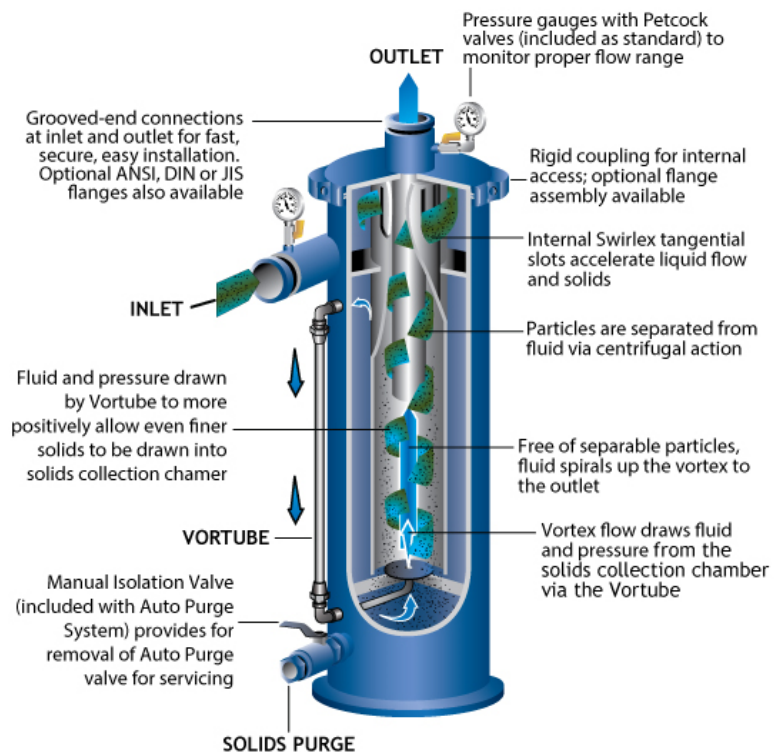
Featuring innovative and adaptable solutions for specific filtration problems for over 40 years, LAKOS Separators and Filtration Solutions has become a world leader. The company operates from a 100,000+ square foot manufacturing, sales, marketing and engineering headquarters in Fresno, California. A worldwide network of technically trained distributors extends the company's reach, with applications around the globe. Originally designed for groundwater and agricultural uses, LAKOS Separation and Filtration products are now targeted to key industrial markets as well, and our products for cleaning Cooling Tower basins and Heat Exchangers is our fastest-growing market.

Airborne debris and other suspended particles in cooling tower water negatively affect heat transfer efficiency through the creation of deposits, which result in scale, corrosion, fouling, and biological activity. This leads to reduction in heat transfer design efficiencies and an increase in system operating costs.

LAKOS Centrifugal Separators and Filtration Solutions help remove suspended particles from cooling water thus helping maintain design efficiencies and extending the life of cooling towers, heat exchangers, chillers, and evaporative condensers.



Full-Stream Protection





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SESSION 6: CHEMICAL-FREE WATER TREATMENT

TIME SLOT: 1:00PM-2:00PM

- About Flow-Tech
- Water Treatment Essential Concepts
 - Performance Studies
 - Third Party Case Studies
- Economic Evaluations
- Environmental Responsibility
- Flow-Tech Product Overview

About Flow-Tech HVAC...

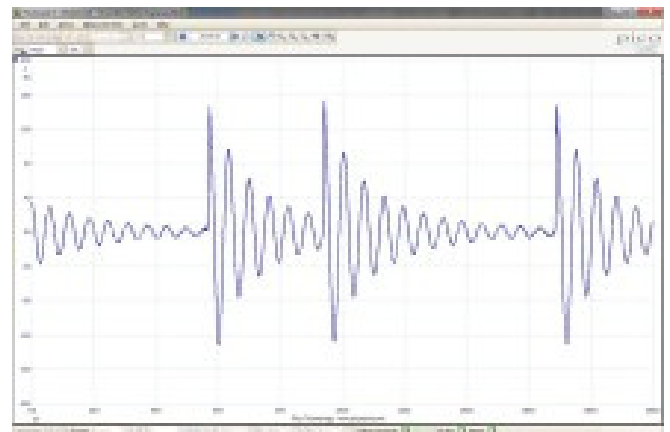
Visit our web page at www.flowtechsystems.com

Using technology derived from years of research and development by a team of petrochemical engineers and scientists, Flow-Tech Systems has created the most technologically advanced chemical free water treatment system available on the market today.

The team of physical water treatment specialists at Flow-Tech Systems, with over 50 years combined experience, has designed a system which increases operational efficiencies by reducing microbial contamination, potential health and safety problems, corrosion and scale deposition. Flow-Tech is the ultimate green choice.

The Flow-Tech water conditioning system uses state-of-the-art technology. It couples time tested proven science with an innovative proprietary induction method that allows facilities to eliminate the need for ion exchange water softeners and other chemical treatment programs. The Flow-Tech system conditions (it does not soften) or temporarily alters the ionic makeup of the water which disallows the formation of encrusted lime scale, when super-saturation occurs.

Unlike other chemical and physical water treatment systems on the market, Flow-Tech Systems has invented a proprietary method of treating all of the water throughout your plumbing system—whether the water is moving or not. generates a pulsed AC current. This electric field is induced into the water loop header and throughout the piping network to form homogeneous calcium seed crystals that simply remain in suspension. These suspended seed crystals will eventually settle out or pass through the system without adhering to the heated surfaces. Flow-Tech is the only system on the market that maintains measurable signal strength throughout your entire plumbing system, regardless of flow.





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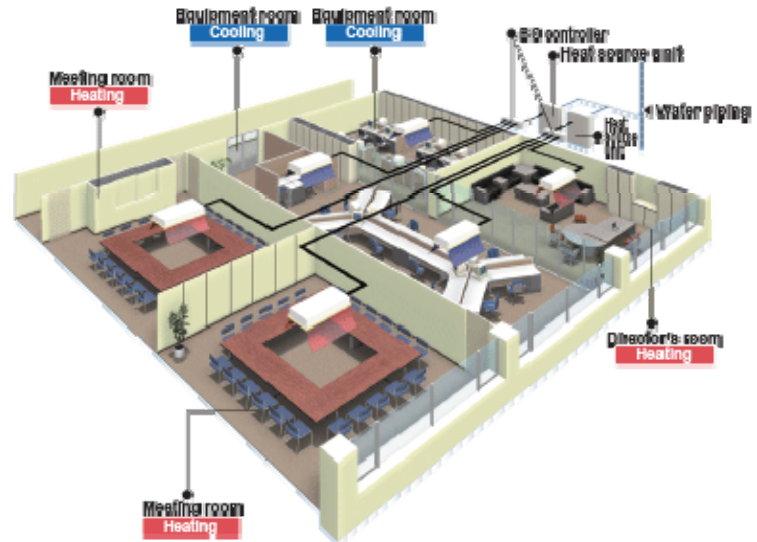
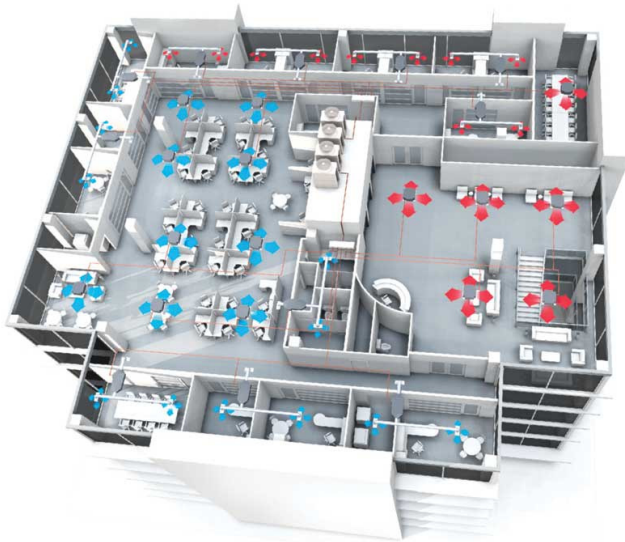


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SESSION 7: ADVANTAGES OF WATER-SOURCED VRF OVER UNITARY HEAT PUMPS

TIME SLOT: 2:15PM-3:15PM

- Intro to VRF Heat Recovery vs Heat Pump
- VRF Application and Operation Advantages
 - Water Source VRF Design Options
- Total Cost Of Ownership Advantages
 - Application Examples
 - Design Tools and Capabilities



About Mitsubishi...

Visit our web page at <http://www.mitsubishiro.com/>

For the past 30 years, Mitsubishi Electric Cooling & Heating (Mitsubishi Electric), a division of Mitsubishi Electric & Electronics USA, Inc., has enhanced people's lives by improving comfort, conserving energy, and promoting environmental sustainability.

Mitsubishi Electric is a leading marketer of variable refrigerant flow (VRF) zoning and split-zoning air-conditioning systems for both commercial and residential installations. VRF systems, which are highly efficient and can dramatically cut energy costs, are one of the fastest growing segments of the American air-conditioning and heating market.



WALL MOUNTED



1 & 2-WAY CEILING CASSETTE



4-WAY CEILING CASSETTE



CEILING SUSPENDED

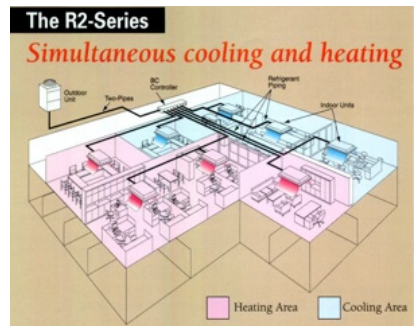


CEILING CONCEALED



FLOOR MOUNTED

Y-SERIES (HYPER HEATING)





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THIS SEMINAR IS FREE FOR ATTENDEES AND LUNCH IS PROVIDED

NAME _____

COMPANY _____

ADDRESS _____

PHONE NO. _____

EMAIL ADDRESS _____

SCHEDULE

9:00 AM:	REGISTRATION
9:30 AM - 10:30 AM:	BREAKOUT 1 (2 CHOICES)
10:45 AM - 11:45 AM:	BREAKOUT 2 (2 CHOICES)
12:00 PM - 1:00 PM:	LUNCH & PRODUCT DEMOS
1:00 PM - 2:00 PM:	BREAKOUT 3 (2 CHOICES)
2:15 PM - 3:15 PM:	BREAKOUT 4 (2 CHOICES)
3:15 PM - 3:45 PM:	PRODUCTS / RAFFLES

CHOOSE A DATE

- JULY 24TH IN GAYLORD**
(MITSUBISHI & WEIL-McLAIN ONLY)
Gaylord Country Club
- JULY 25TH IN TRAVERSE CITY**
Hagerty Center
- JULY 26TH IN GRAND RAPIDS**
Thousand Oaks
- JULY 27TH IN KALAMAZOO**
Holiday Inn West
- JULY 28TH IN LANSING**
MSU University Club



Registration Begins at 9:00AM for All Seminars

PLEASE REGISTER BY JULY 17TH

**FAX OR E-MAIL THIS CONFIRMATION SHEET TO
JEANINE ELLIOTT AT HEDRICK ASSOCIATES**

FAX: 616.454.5336
 EMAIL: ELLIOTTJ@HEDRICKASSOC.COM



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