

www.mechanicalproducts.net

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Atlanta - Birmingham - Chattanooga - Florida - Knoxville - Nashville

Boilers & Water Heaters - Boiler Plant Controllers - Boiler Room Equipment - Coil Hook-up Piping Packages - Closed Circuit Fluid Coolers - Cooling Towers - Control Valves
Custom Air Handling Units - Cyclone Solid Separators - Expansion Joints & Ball Joints - Filtration - Flow Control & Balancing Valves - Flow Meters - Heat Exchangers
Modular CEP & Data Centers - Non Chemical Water Treatment - Packaged Pumping Systems - Penthouses - Pumps & Hydronic Accessories - Pressure Independent Temperature Control
Valves - Pure Water Reverse Osmosis, Deionized, Point of Use Systems & Faucets - Rainwater / Water Harvesting Systems - Tanks - Venting , Grease Duct, Engine Exhaust & Draft Fans

## BOILERS / WATER HEATERS & BOILER PLANT CONTROLLERS







- > Cast iron shock resistant gas/oil fired hot water boilers 173 MBH to 6201MBH up to 89% efficiency suitable for 89 degree F Delta T
- Cast aluminum condensing gas fired hot water boilers 325 MBH to 2041 MBH up to 99% efficiency suitable for 80 degree F Delta T













- ➤ Condensing natural gas, propane, No. 2 oil & bio-fuel fired hot water condensing boilers 300 MBH to 6000 MBH with no minimum flow rate & no minimum return water temperature up to 99 % efficiency & up to 170 degree F Delta T
- > Copper finned tube boilers to 2000 MBH up to 88% efficiency; Invictus gas fired absorption heat pumps up to 149% efficiency
- > Pulse gas fired condensing domestic water heaters 1000 MBH up to 99% efficiency capable of 1065 GPH at 100 degree F rise
- ➤ Vertical tubeless & scotch marine hot water & steam boilers 4 BHP to 800 BHP up to 84% efficiency and 300 PSI
- ➤ Electric hot water & steam boilers 12 KW/1.2 BHP to 1000 KW/100 BHP
- > Clean steam systems, Fired & unfired steam generators, heat recovery systems
- ➤ Deaerators, boiler feed and condensate return units, surge tanks, blowdown separators, steam filters, steam separators, steam dryers, water softeners & chemical feed units
- > Packaged skid mounted engineered boiler systems & complete boiler room prefabricated skid systems in a house

## BOILERS / WATER HEATERS & BOILER PLANT CONTROLLERS (CONTINUED)









- > Stainless steel boilers and water heaters up to 97% efficient 80 MBH to 800 MBH, fiber mesh burners with full modulation 5:1 turndown
- > Touchscreen HMI interface controls, AHRI and Energy Star ratings, CSA, AGA and ASME rated
- Stainless or stone lined storage tanks for domestic water







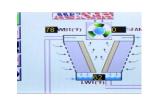
- By SYNEX CONTROLS
- > Intelligent lead/lag best efficiency sequence controller for steam & hot water boilers with field adjustable control variable(s)
- ModSync maximizes hydronic condensing HW & steam boiler systems by using parallel modulation of all boilers forcing boiler stages to simultaneously modulate at the best efficiency lowest firing rate before releasing boilers to a less efficient higher firing rate
- Enhances multiple steam boiler system efficiency eliminating odd setpoint of individual boilers allowing for steady header pressures
- Ease of use touchscreen HMI interface with question/answer set-up simplified configuration, outdoor or load reset capability, setback scheduling for occupied & unoccupied times of operation, alarms status/history log, DHW priority, optional BTU load calculation, data trending of supply, return & setpoint to measure system response & performance with capability to control 75 boilers
- Multiple setpoint modes allow choice of outdoor/load reset internal schedule, remote 4-20mA/0-10VDC signal, EMS or BMS communication via ModBus with BACNet, LonWorks or N2 protocol Options
- InSite web based wireless remote monitoring option for system status & access using standard web browser with no expensive software or licensing fees using static IP address so a building LAN connection is not required. LAN & WAN connections can be configured. Allows for up to five users with Admin/Client access rights with SMS & email alerts; SMS text can be received & sent to ModSync for system status query; boilers, ModSync & BMS can be wirelessly interfaced; optional subscription agreement provides direct factory support to quickly identify & resolve any equipment operational issues, provide maintenance scheduling notifications, monitor system performance & efficiency data with monthly reports to make recommendations & make any necessary modifications directly to the ModSync where system efficiency perhaps could be enhanced
- > Customizable to control system primary variable flow pumps or primary/secondary pumps based on Delta T across boiler plant supply and return headers using actual BTU actual load as well as DP signal from pumped index circuit
- Ability to control multiple zones & process control valves in addition to controlling independent loops with multiple setpoints or steam system components

# OPEN COOLING TOWERS, CLOSED CIRCUIT EVAPORATIVE FLUID COOLERS FILTRATION, STRAINERS AND NON-CHEMICAL WATER TREATMENT SYSTEMS









Mesan USA ISO 9001 CTI certified cooling towers, closed circuit fluid coolers and TowerMizer controls













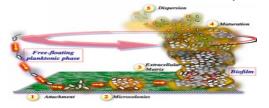


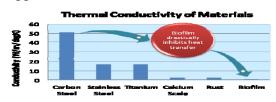




hydro cyclone centrifugal separators and low backwash rate filtration solutions including automatic, self-cleaning, maintenance free side-stream or full flow high efficiency screen filters and skid systems for any industrial, municipal and commercial application; filter- strainer fabrication, stocked in Atlanta area, ISO 9000 And TQM Brands, laboratory and technical support hydro cyclone centrifugal separators and filtration solutions including automatic, self-cleaning, maintenance free side-stream or full flow high efficiency screen filters and skid systems for any industrial, municipal and commercial application; filter- strainer fabrication, stocked in Atlanta area, ISO 9000 And TQM Brands, laboratory and technical support





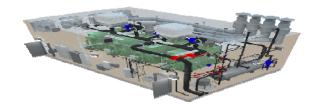


Non-chemical / chemical free water treatment systems reduces energy consumption and conserves water by increasing cycles of concentration and preventing formation of scale and biofilm; independently certified to pass ASHRAE protocol test of non-chemical water treatment

## **CUSTOM AHU'S / MODULAR CEP & PENTHOUSES**







- manufacturer of custom AHU's and Airwashers with custom piping capabilities including ability to incorporate ERU's, VAV's, piping, duct plenums etc.
- > all aluminum construction with foam core panel construction with interior all welded aluminum floors featuring no thru metal design
- ETL Listed pre-piped, pre-wired, pre-engineered Central Utility Plants and Off Site Construction to manage any mechanical / electrical intense portion of a building that is built off site in a controlled environment facility; custom packaged chiller plants, boiler plants, air compressor plants and data center cooling plants

#### FLOW MEASUREMENT & CONTROL VALVES



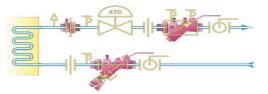






> Pressure independent temperature control valves, differential pressure controllers, combination ATC valve / automatic flow control valves, piping packages & hose kits











Autoflow automatic flow control & venturi based balance valves, pressure independent flow control valves, pressure compensating flow control valves, venturi flow meters, coil hook-up piping packages, hose kits & flexible hose connectors















Electric & pneumatic actuated control valves 2-way & 3-way on-off, spring return or modulating temperature & process control valves, custom linkages

# R.A. Sweet Company



Flow Metering Systems - batch controllers, meters for BTU, compressed air, flow rate, gas, liquids, mag meters, oil, steam, orifice plates, paddlewheels, pitot tubes, recorders, target meters, totalizers, transmitters, turbine meters, venturi meters, vortex meters, rate meters & totalizers

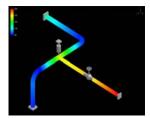
## PIPE EXPANSION & MOVEMENT COMPENSATION











- ➤ Ball joints ¾" to 30" for service conditions of up to 1000 PSIG at 750 deg. F, Slip type expansion joints for absorbing up to 48" of axial pipe expansion to 1000 deg. F & pressures up to 1000 PSI leak-free for 25,000 cycles at 400 PSIG, low friction pipe guides and supports, Pre -engineered anchors
- > Engineered pipe stress analysis verification services

## PUMPS - HEAT EXCHANGERS - TANKS — ACCESSORIES





















- Factory tested end suction, vertical in-line, vertical turbine, multi-stage and horizontal or vertical split case centrifugal pumps with flow to 110,000 GPM
- ➤ ASME Shell & tube heat exchangers, plate & frame heat exchangers
- > Submersible sump & sewage pumps, grinder pumps, basins & controls
- > Hydronic Accessories suction diffusers, triple duty valves, air separators, expansion tanks, storage tanks, pressure vessels, flex connectors, valves











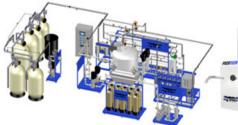


Industry Leader in Booster Pump Systems
And Custom VFD controlled packaged pumps

- > UL Listed variable speed packaged pumping systems for HVAC, domestic water & municipal booster stations
- Rainwater harvesting packages complete with transfer pumps, cistern storage tanks, transfer day tanks, media filtration, day tanks, UV lights, die injection systems & customizable controls with level display via touchscreen HMI
- > Touchscreen HMI interface, touch-safe controls & fail safe programming; stainless frames & piping, factory X-Y data acquisition flow tested & certified

# **PURE WATER SYSTEMS**







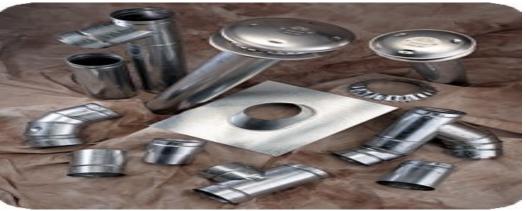




> Specializing in Turn-key High Purity Water System Packages for RO/ DI water, reclamation and grey water systems, rainwater harvesting systems, USP,WFI Pretreatment, ASTM, CAP/CLS, Electronic and Industrial Applications. Pre-Treatment Filtration Multi-Media Filters, Carbon Filters, Water Softeners, Bag and Cartridge Filtration, RO/DI, Storage and Distribution, Point of Use Systems, Custom Reverse Osmosis Unit, Electro deionization (EDI), Service Deionization (SDI), Stainless Steel, FRP and Plastic Storage Tanks, Distribution Pump Stations and Skids Post Treatment UV Sterilization, Cartridge Filtration, Heating and Cooling Exchangers, Automated Sanitization, PLC Control Panels (UL 508 Panel Shop), Ultrafiltration Skids, Validation Documentation and Support, Instrumentation and Controls, CIP Skids, Field Service and Engineering Support

## <u>VENTS, BREECHING, CHIMNEYS, FLUES & MECHANICAL DRAFT FANS / OVERDRAFT PROTECTION</u>





➤ Category I, II, III, IV, residential and non-categorized type B-vent, CPVC/PVC plastic, positive pressure, AL29-4c condensing, non-condensing & UL listed venting products, in stock - same day shipping available





➤ Pioneering technology for the chimney and venting industry bringing the solutions necessary for safe, code-compliant design while simultaneously supplying low maintenance, dependable products; revolutionary advances such as EC-Flow<sup>TM</sup> technology and Truline<sup>TM</sup> fan construction, US Draft Co. is solving the challenges presented by the next generation of appliances be it intake air or exhaust control. Variable or fixed speed mechanical draft fans, dampers and inducers, hearth exhaust systems, clothes dryer exhaust systems, supply air fans and related controllers. Extensive code knowledge and draft design assistance.



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