

AREA TIMES

A PUBLICATION FOR AREA CUSTOMERS WORLDWIDE

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WWW.AREAINC.COM

Greetings Valued Customers:

Happy New Year! This is the time to reflect on the year that has past us and also look forward to the coming year. During my reflection, I have so many things to be thankful for and one of the greatest things is the opportunities myself and everyone here at AREA have each and every day to support our customers worldwide. Besides our customers, our most valuable resource is our people. Our outstanding staff members have exceptional qualifications and I am particularly proud of their achievements – our record of client satisfaction is a testament to our staff and their accomplishments! They provide the superior customer service that is the hallmark of AREA.

Our focus is on our clients. We go to the greatest length to ensure the highest levels of customer satisfaction is maintained. We use proven quality practices that result in successful products and services. This is substantiated by the repeat and expanded business that we have received. As our business continues to grow and we provide our customers with the excellent products and service they have come to expect, our reputation for quality and excellence in customer service will continue.

For over 36 years, AREA has provided innovative products and technology integrating it all in our FREE systems design. This has provided solutions to our customers in many different industries worldwide. We know that our success has been built on our continuous commitment to flexibility and responsiveness in the way we interact with our customers. With an entrepreneurial spirit, hard work and the dedication of our staff, we are able to provide the best value to our customers each and every day.

We are enthusiastic about AREA's future and I want to take a moment and recognize the accomplishments of our dedicated employees and strategic partners located around the world. Our employees realize our mission and make AREA the company that it is today. With additional acquisitions and continued product development, this will enable us to continue our success in bringing innovative and cost effective products that truly benefit the end user.

“FOR OVER 36 YEARS, AREA HAS PROVIDED INNOVATIVE PRODUCTS AND TECHNOLOGY INTEGRATING IT ALL IN OUR FREE SYSTEMS DESIGN!”

We look forward to continuing to have the opportunity to set the standard for quality equipment and superior customer service, providing clients throughout the world with timely execution, excellent value, fair prices and the highest quality. We will always strive to be the best utilizing focused management teams, resources and facilities to ensure each project we are involved with is completed to our clients satisfaction.

This month, we are featuring our 'Modern Heat' De-Icer for use in ornamental ponds, koi ponds, water features and more where the client desires to keep it ice free during the winter months. If you order before April 1, you will receive a 20% *Discount* off of the recommended list price of \$150.00. See our Heating Corner in the newsletter for detailed information.

I want to thank you all for your business and trusting our abilities! As always, we appreciate any suggestions or comments you may have. If you would like to see anything specific published in our newsletter, please forward your comments to info@areainc.com.

Best Regards,

Jason E. Mulvihill

Jason E. Mulvihill
President, **AREA**

CHILLERS
HEATERS
PVC
FILTERS
PUMPS
NETTING
DIFFUSERS
AERATORS
BLOWERS/COMPRESSORS

**AREA IN ACTION 33 (SPA SYSTEMS SOLVE
SETTLING PIT ODOR/WATER QUALITY PROBLEMS)**

SETTLING PIT AERATION SYSTEMS



If you have a restaurant, laundromat, carwash, or any location using a settling pit - have you developed water that smells like rotten eggs? Typically, this occurs when you first open for business and on a very slow business day (snow, rain, etc.). The situation in settling pits is that due to inadequate water movement when the system is off or barely operating, it goes anaerobic (non-oxygen bearing). This is caused by decomposition of accumulated organics from your wastewater (soap, dirt, grease, leaves, etc.). When the system turns anaerobic, the aerobic bacteria can no longer survive, thus eliminating natural nutrient cycling. As the system goes anaerobic, the water near the bottom will be depleted of oxygen. This condition moves to the surface until eventually there is no oxygen and the anaerobic bacteria takes over decomposition. The bacteria is less efficient at decomposition and the respiratory by-product of these organisms is hydrogen sulfide. In many cases, this gas accumulates and makes it to the surface. When combined with oxygen, it forms sulfur dioxide (sometimes compared to the smell of rotten eggs). By establishing an oxygen bearing layer of water at the bottom, aerobic decomposition will re-establish thus avoiding the formation of these noxious (as well as poisonous) gases. Thus, the objective in the pits and septic tanks is to destratify both oxygen and temperature and to "put an oxygen bearing layer of water on the bottom without suspending the organic matter".

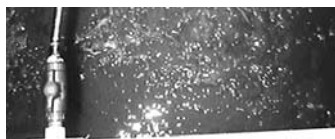
Most would say to treat the water with *Bacteria* or *Ozone*. What is not mentioned is that over time, *Bacteria* adds to the problem requiring additional treatment and *Ozone* has risks of its own, especially when the public or people are nearby. Both are actually costly over the long term which can also be prohibitive. For many years, **AREA** has been investigating various alternatives to achieve the aforementioned objective(s). The best method of treatment is aeration as it is the most effective when done properly and also the least cost method (especially over the long term). As work has progressed, it is evident that there is one thing that one does not want to do and this is - "not to put any aeration device on the bottom". Any unit installed on the bottom of a pit or septic tank will result in the suspension of bottom sediments and in turn increase the BOD (Biological Oxygen Demand). The result of these investigations is our **SPA Systems** which has been an adjustment to our **4 x 6 Suspended Quad Air Diffuser Grids**. Our grids have been utilized in many industries for over 31 years. These units consist of four (4) 6" **'Pro-Glass' II Fused Alumina Diffusers** manifolded in the shape of an 'H'. The manifold is suspended from an overhead supply line.

The standard three (3) chamber systems use individual **'Pro-Glass' II Fused Alumina Diffusers** in each chamber. The larger systems utilize our **4 x 6 Suspended Quad Air Diffuser Grids**. Current systems suggest that you operate our **SPA Systems** in the evening and on "slow" business days. There are two (2) reasons for this that include:

- **MOST OF YOUR HYDROGEN SULFIDE BUILD-UP OCCURS WHEN THERE IS LITTLE OR NO WATER MOVEMENT (Evenings, Slow Business Days, etc.),**
- **THE SYSTEM WILL MINIMIZE THE SUSPENSION OF SOLIDS WHEN YOU HAVE A LOT OF WATER MOVEMENT WHICH CAN CLOG YOUR NOZZLES**



However, many clients run our **SPA Systems** continuous duty as they are pleased with the results and do not want a chance of any build-up or odor! Our **SPA Systems** are extremely efficient in oxygen transfer and will ensure destratification of your pit in terms of both oxygen and temperature. When cleaning becomes necessary, these units may be cleaned with *Muriatic* (HCl) *Acid* to remove any carbonate deposits or *Chlorine* to dissolve any bacteria/algae growth. Keep in mind that all of this is achieved without the need of *Chemicals*, *Bacteria*, or *Ozone*. Each **SPA System** is virtually maintenance free, oil-free and is risk free for patrons and other visitors to your facility. With the savings you will receive from no chemicals, bacteria and no water quality fines; your **SPA System** will pay for itself within 1 year.



Please note that **FREE** systems design assistance is always available by contacting one of our *Technical Representatives* at **800-257-AREA** (2732). We look forward to hearing from you and having the opportunity to serve you. Call today to clean up your *Settling Pit* and request an informative **SPA SYSTEM BROCHURE** for additional information and pricing on our standard systems. You can also visit our full service website at www.areainc.com for our *On-Line Catalog*, *Newsletter*, *Area In Action*, and more.

HEATING CORNER

'MODERN HEAT' DE-ICER

Our **'Modern Heat' De-Icer** is the most innovative de-icer ever developed! We use our 36 years of technology and experience in producing our **'Modern Heat' Titanium Heaters** to offer a low cost de-icing unit. Each de-icing unit is manufactured from the highest quality metal providing for years of use in keeping any body of water open for *Koi Ponds*, *Ornamental Ponds*, *Water Features* and more. Our **'Modern Heat' De-Icer** comes ready to install and all you have to do is set the unit on the bottom of your pond/feature and **PLUG IT IN!** *Special Price Available Until April 1, 2006!*



LIST PRICE
\$150.00

SPECIAL PRICE
\$120.00



QUESTION:**WHAT GOES INTO SIZING A 'MODERN HEAT' HEATER?****ANSWER:**

This is the most critical part to the process. There are many areas where a person can miscalculate the kW requirement so I will identify key areas when properly sizing a heater. First, we manufacture our heaters out of three (3) key metals. They are *316SS*, *Marine Metal*, and *Titanium*. All three metals transfer heat appropriately with the only factor being the liquid being operated in. typically, any saltwater or corrosive liquid should use our *Marine Metal* or *Titanium*.

The first items required to properly size a heater includes the following:

- 1/ **QUANTITY OF TANKS**
- 2/ **DIMENSIONS OF TANKS**
- 3/ **TYPE OF SOLUTION**
- 4/ **POWER AVAILABLE** (Volts, Phase, Hz)
- 5/ **CURRENT TEMPERATURE**
- 6/ **DESIRED TEMPERATURE**
- 7/ **IS THERE NEW WATER IN THE SYSTEM?**

The next step is to accommodate for **Heat Dissipation** which is the heat that is lost throughout the system when the ambient air temperature is lower than the water temperature. Please note that this is a function of *Surface Area*.

Then, the kW's required to **HEAT Existing Water** has to be calculated. This formula is based on the relationship of the *Total Gallons* in the system with the *Desired Change In Temperature* and *The Amount Of Time* (in hours) *The Temperature Changed Is Desired*.

Then last step is only used if in fact there is **New Water** added to the system. If so, the kW's required to **HEAT New Water** has to be calculated. This formula is based on the relationship of the *New Water* (gallons per minute) added to the system with the *Desired Change In Temperature*.

Once the above calculations have been completed, the next step is to choose the best **Heater Option** (ie. L Type, Submersible, etc.) based on the clients application, tanks, et. al.. Once the heater is selected, the final step is to select the proper **Digital Controller** which is based on the *Amp Draw* required which can be calculated by dividing the *Watts of The Selected Heater* by the *Volts* (ie. 115 Volt, 230 Volt, etc.)..

THREE MAIN FACTORS WHEN SIZING HEATERS

- 1/ **HEAT DISSIPATION.** Heat that is lost throughout the system when the ambient air temperature is lower than the water temperature.
- 2/ **EXISTING WATER.** Total gallons in the entire system being sized.
- 3/ **NEW WATER.** New water (gpm/gph) that is added to the system being sized at any time.

If You Ever Require Technical Assistance, Our Technical Representatives Are Always Available At 800-257-AREA (2732). Further, We Offer FREE AERATION, WATER PUMPING, WATER FILTRATION, HEATING and CHILLING Systems Design. This Will Insure you have the Most Efficient and Cost Effective System You Can That Is Specific To Your Application And Facility!

IN-LINE AIR FILTERS

Our **In-Line Air Filters** are a result of our clients desire to improve air filtration to specific areas of their operations including *Hatchery, Algae Culture Rooms, Laboratories*, and more. Our standard blower air filters (considered the best in the industry) are constructed of polyester cloth and are nominally rated at 99+% removal at 10 microns. Their dust loading capacity is increased by 40-50% with a polyurethane prefilter. Both prefilter and cartridge are washable, but should be replaced annually.

One of the most important elements to an effective and efficient *Algae Room* is air quality. Our **In-Line Air Filters** provide this solution! Our **In-Line Air Filters** can be used with any size system and the size of your room(s) is no longer an issue. Improved algae culture results have been reported by a number of clients. In some cases clients have desired to improve the air filtration to the entire hatchery. Results on the latter effort are not yet in. Some clients are reported to be adding alcohol inside the housing for cartridge purification. The size size ranges of our **In-Line Air Filters** are from 1/2"Ø to 12"Ø. These new units are designed to supplement the primary filtration by installing inline to specific areas such as algae culture rooms. The high purity cartridges are also manufactured of polyester cloth therefore are moisture resistant and washable. They are nominally rated for 99+% efficient at 1 micron. Also available are units with HEPA elements nominally rated at 99.9+% at 0.3 micron. These units are manufactured of paper and are not moisture resistant nor washable. Call today for more information or **FREE** sizing assistance for your specific application!

**WATER CORNER****WATERFALL PUMP**

Our **Waterfall Pump** is custom designed for the specific demands of waterfalls and other water features. Our diffuser and impeller combination is engineered to deliver quiet operation in high flow applications. Contact an *AREA Technical Representative* for sizing to ensure you receive the perfect pump for your water feature.

Some of the superior features of our **Waterfall Pumps** include:

- **Costs Less To Operate (Energy Efficient Motors)**
- **Quiet Operation**
- **Oversized Strainer Basket**
- **See Thru Lid On Basket Strainer**
- **High Efficiency Impeller and FunnellFlo Diffuser**
- **Available In 1 Speed and 2 Speed**
- **1 Year Warranty**

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