



2013 Digital Brochure & Rink Information

Introduction



For 100 years, it's been accepted that ice rinks come with a multitude of expensive and reoccurring problems; not to mention astoundingly high energy costs. Much of this is due to the fact that outdated rink technology is still commonly manufactured and installed throughout North America, potentially leaving rink owners with more of a liability than a worthwhile investment. With truly cutting edge technology and unprecedented flexibility, **blü line™** seeks to transform an industry that has been notoriously slow to change.

For everything from the pump station, pipe grid, and project-designed chiller to fittings, accessories and ice maintenance products, **blü line™** only sources high quality, durable components packaged for optimal value and longevity. Our products and installation processes aren't just updated versions of old technology and methods; they're truly the **next generation in ice rink technology.**

Our ice rink technology will last longer, save more money, use less energy, and will simply provide you with the best product in the market. A **blü line™** ice rink can be installed in virtually any climate across the globe, for any situation, event, time period, or size requirement. For short-term needs, **blü line™** will come to you with a fully mobile rink that utilizes the same core technologies as our permanent rinks. Our foolproof mobile rinks can be quickly installed and broken down by local labor anywhere in the world, saving time and money.

blü line's™ adept and accomplished team can design, engineer and produce a customized nuts to bolts solution for any size project...and with our core principles of simplicity, efficiency, and flexibility, we seek to provide the new industry standard in ice rinks for any occasion – no matter how demanding.

Features, Advantages, and Benefits



REFRIGERATION PIPE GRID

In many cases, competitors offer inefficient, 128-year-old pipe technology that leaves 11,480 square feet of dead space (non-heat-absorbing space) under the ice. Even the competition's updated rink pipe grid systems still utilize internal "hose barb" connectors to attach their pipes, resulting in a significant loss in heat extraction and thus "soft ice" during high demand times. **blü line's™** "barb-less" technology allows for the full flow of the secondary refrigerant, unlike the flow restrictive pipe fittings often installed in new rinks to this day.

blü line™ has also eliminated all the liquid-to-metal components in their Pipe Grid, thus eliminating corrosion and increasing life expectancy to a full lifetime of service - well beyond that of standard, less effective components.

- Efficient Heat Extraction from the ice...up to 49% Greater Efficiency over competitors.
- Short "Heat Dwell Time" = healthier, uniform ice and less maintenance.
- Energy costs reduced 15% to 35% per annum
- 3.5 times a greater number of pipes – achieves more efficient refrigeration & superior ice quality. Ice will stay consistently hard for great skating.
- Refrigeration Pipes lay flat & straight
- No gaps between pipe grid & perimeter boards – resulting in solid ice right up to the Boards (no beveling of the ice near the Rink Boards).
- Pipes spacing close together – avoiding a "washboard" ice surface.
- Pipe Grid rolls out & snaps into the Header – quick installation
- No Warm (soft) Spots on the Ice.
- Reverse Return Balanced Flow Header – ensures balanced flow and even heat absorption – resulting in no wet ice at end of a pipe run.

Features, Advantages, and Benefits



AIR CONDENSED CHILLER

blü line™ chillers are computer controlled and produce detailed graphics and historical data to help monitor and manage conditions, making **blü line™** chillers some of the most accurate system available. This feature is not available at most rinks and not offered by many competitors. The only historical information contained in some competitors' chillers is what rink operators must manually log in on a daily log sheet. Thus, the signs detected by infrared sensors that concerning conditions are occurring are obscured in the inaccurate, insufficient, or totally unavailable historical data.

The **blü line™** chiller is air cooled and eliminates the need for an evaporative condenser which uses additional power, space, masses of water, additional inputs such as water softener, algacide, and higher maintenance costs that if forgone could create a breeding ground for pathogenic bacteria such as Legionella.

The **blü line™** Chiller is low maintenance; simply check the fans and clear debris away from the condenser air intake. There is no noisy mechanical room inside your building, no outdoor water condensing unit, no water bill, no mildew, no slime, and no mess.

- No maintenance
- Ice temperature maintained within 0.3oC of the set point.
- Fully packaged system – connect electrical & plumbing and it is ready to run.
- Air condensed refrigeration, no water tower to mess with = no corrosion.
- Helical Rotary Screw Compressors.

Features, Advantages, and Benefits

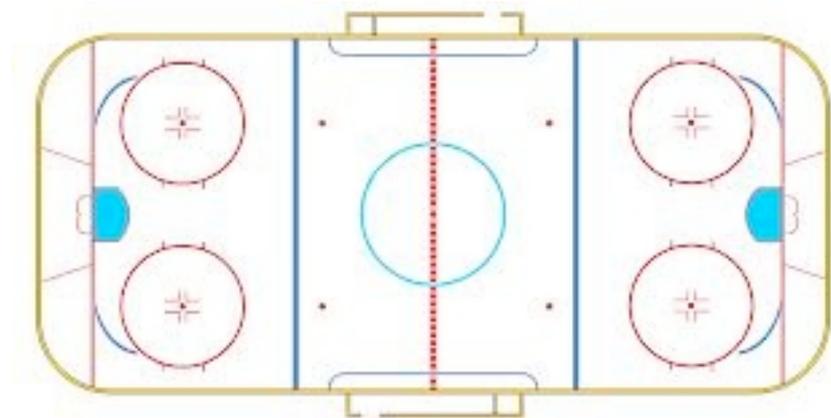


PERIMETER BOARDS

blü line™ Rink Hockey Boards are custom designed for any rink, then factory fabricated. Board frame sections bolt together, for quick and easy installation onto concrete footing.

Made from tubular aluminum with 0.2" thick walls, **blü line™** produces some of the thickest and strongest board frames in the industry [NHL Standard] – up to 40% stronger than frames installed by many competitors.

All **blü line™** board sections are mechanically fastened together for professional results unlike the flimsy welded "C" channels other dealers install. Boards are clad in ½" of Polyethylene for even greater strength and longevity.



Features, Advantages, and Benefits



ICE MAINTENANCE PRODUCTS

blü line™ offers an array of products that will help make your state-of-the-art rink and your investment last and operate like the first day it was installed.

Base Ice

- Whitens the dark color of the floor beneath the ice.
- Provides some of the whitest ice available.
- Efficient installation = less labor intensive.
- Energy Saving of 20% due to whiteness reflecting the heat.

Slush Ice

- Powder mixed with water to form a room temperature slush.
- When frozen, Slush Ice becomes real ice.
- Slush Ice seals the seam where the perimeter boards meet the rink floor.
- Repairs cracks & divots in the ice sheet.

Slick Ice

- Liquid mixed with Cold resurfacing water – eliminates expensive hot water resurfacing.
- Shinier and faster ice surface.
- Reduces fogging over the ice sheet.

Features, Advantages, and Benefits



COMPLETE ICE RINK SUPPLIER

With its packaged and easy to set up equipment and components, **blü line™** makes any rink installation process relatively quick and simple. When installing your rink, you will be provided with all the necessary pieces to fully complete construction and setup.

- Rink Refrigeration Pipe Grid
- Refrigeration reverse return Header System
- Refrigeration Transmission Piping
- Sub-ice solution & vapor barrier
- Frost Free System below the ice sheet
- Secondary refrigerant (propylene glycol)
- Packaged chillers with Rotary Screw technology
- Packaged glycol circulation Pump Station
- Rink Perimeter Boards/Hockey Dasher Boards/Tempered Glass
- Dehumidification system
- Ice building products
- Ice maintenance equipment
- Additional items:
 - Thermo Ice Decking
 - Ice Blanket
 - Ice Resurfacer
 - Rental Skates
 - Ice Edger
 - Skate Blade Sharpener



Features, Advantages, and Benefits

blü line
next generation ice rink technology

ENVIRONMENTAL/ENERGY SAVING STATS

- Competitors' pipe grids only offer 78% surface heat absorption capacity compared to **blü line's™** 127-254% (New Standard Pipe Grid - Ultimate Pipe Grid). It's easy to see that **blü line™** technology gives you as much as 50-175% greater energy efficiency.
- An Ice Rink Refrigeration Pipe Grid designed and built by **blü line™** can reduce your energy costs from 15% to 35% annually.
- The Energy Efficiency Ratio for the **blü line™** chiller (under full load) is among the best on the market for air-cooled chillers. Air cooled = no water usage.
- **blü line's™** unique Ice Blanket is manufactured with real aluminum and saves 20% on your rink's energy costs.
- **blü line's™** Secondary Refrigerant (Propylene Glycol) is non hazardous.
- R404a Primary Refrigerant is an HFC, No R22 HCFCs = non-ozone depleting).
- Powder mixture left from rink dismantlement is biodegradable and environmentally safe.



Contact



We appreciate your time and consideration. For more info, please contact us at:



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