DO YOU HAVE THESE ICE MACHINE PROBLEMS?

- LIME SCALE FORMATION
- SLIME GROWTHS
- SEDIMENT
- CLOUDY OR MILKY ICE
- DIRTY COOLING COILS
- ROUGH FREEZING SURFACE
- OBJECTIONABLE TASTES OR ODORS

Reduce Service Calls On Major Water Problems Encountered In Ice Making Equipment

Lime Scale Formation
Lime scale is a common problem in ice machines. Scale-forming minerals tend to reduce heat transfer concentrate in the water and precipitate on the freezing surfaces. The ice tends to stick to the scale and this jams the machine. Years of experience with ice making equipment have proven that the best way to solve this problem and reduce service calls is to prevent this scale formation by treating the water with the food-grade polyphosphate, Micromet®. Before the treatment is started, however, the machine should be cleaned, and sanitized.

Removing Scale Deposits

**Liquid Ice Machine Cleaner**
Liquid Ice Machine Cleaner is a food-grade phosphoric acid that is fast acting yet safe to use. It has been formulated for removing scale deposits from ice machines and coffee urns, and does not give off any harsh fumes or contain chlorine or chlorides that would attack stainless steel. USDA Accepted.
- 8 fl. oz. bottle: 4207-47
- 1 gallon bottle: 4207-08

**Nickel Safe Ice Machine Cleaner**
Nickel-Safe Ice Machine Cleaner is a specially formulated food-grade product for removing scale deposits from ice machines having nickel-plated or tin-plated evaporators. It is acceptable for use in such machines made by Manitowoc and other manufacturers using nickel. It mixes to form a green solution which makes rinsing easier. USDA Accepted.
- 16 fl. oz. bottle: 4287-34
- 1 gallon bottle: 4287-08

Controlling Slime Growth

**IMS-III Sanitizing Concentrate**
IMS-III is an EPA-registered sanitizing concentrate formulated exclusively to sanitize hard, non-porous surfaces to eliminate odors and slime growths. No rinsing is required when used as directed. Formulated for general use in ice machines, ice cream dispensing equipment and other hard surface equipment.
- 16 fl. oz. bottle: 4211-34

**Aerosol Lubricant**
Food Grade Silicone sprays a perfect non-stick surface on ice machine surfaces, vending machines, coin slots, slicing machines, dairy machinery, and other food processing and packaging equipment. An excellent lubricant that prevents binding and sticking. Contains ingredients approved by the FDA for food contact use. USDA approved.
- 11 oz. can: 4084-03

Preventing Scale Deposits

Micromet is a slowly soluble food-grade polyphosphate that keeps scale-forming minerals in solution, preventing the formation of scale on the evaporator or freezing surface. There are two types of Micromet that may be used: Micromet Crystals which dissolve at the rate of about 25% per month and require monthly recharging, or 6Rsp Micromet which dissolves about 3-5% per month and lasts up to 6 months between service calls. Both are NSF-listed and are USDA-accepted.

**6Rsp Micromet®**
Food-grade phosphate specifically formulated for inhibiting scale in ice machines and other equipment using low water volumes. 6Rsp Micromet is available in 50 lb. pails and in self-contained cartridges for use in the NP Series housings and in the Micro-Plus® Treatment Systems. It requires replacement only once every 6 months. Typically the required dosage is 8 ounces for each 450 pounds of ice (50 gallons of water) per day.
- 51 lb. pail: 4265-50
Prevent Lime Scale, Sediment or Objectionable Tastes and Odors

NP Series

The NP Series is a complete, multi-functional treatment system, consisting of two different size housings, the NP24DD and the NP48DD, and a family of “problem-solving” cartridges.

The NP Series has been developed in order to permit the service technician or user to customize their installation to address a specific water-related problem or problems. There are six different cartridges for the control of scale, silt and sediment and for the removal of objectionable tastes and odors. And, the cartridges are available in sizes to fit both NP Housings.

The product line is also augmented by accessory items. Two different bracket assemblies are available to permit the installation in series of two or three NP Housings. By using the bracket assemblies, the installation can be customized to correct two or three water-related problems on larger equipment. Also, a gauge package is available for use where it is necessary to continually monitor the pressure of the water serving the ice machine, beverage machine, etc. This is often a recommended procedure when filtering water with a high level of silt or sediment. (See bulletin 3-107 for additional information)

NP24DD Housing, 3/8˝ FPT: 4704-24
NP48DD Housing, 1/2˝ FPT: 4714-24

Select the Appropriate NP Cartridge* to Solve Your Specific Problem

Carbon Block Cartridge

The NP24C Cartridge fits the NP24DD Housing while the NP48C fits the NP48DD. These carbon blocks will remove most objectionable tastes and odors and are rated down to 10 microns.

NP24C: 4701-87
NP48C: 4711-87

Sediment Cartridge

The NP24S (5˝) and the NP48S (10˝) are made from FDA-approved polypropylene construction and filter to 5 microns. In addition, the 10˝ as well as a 20˝ version are available in bulk packaging.

NP24S: 4702-87
NP48S: 4712-87
EC210: 4621-43 (20˝)

6R Micromet® Cartridge

The NP246R Micromet Cartridge contains 1 pound of 6R Micromet, and it fits the NP24DD Housing. The NP486R Cartridge contains 2 pounds of 6R and fits the NP48DD Housing.

NP246R: 4705-87
NP486R: 4715-87

Micromet/Carbon Cartridge

A custom cartridge, combining 6R Micromet for scale-control and a carbon block for taste and odor control, and sediment (10 microns).

NP24PC: 4706-87
NP48PC: 4716-87

6R Micromet/Sediment Cartridge

Another custom cartridge within the NP Series, consisting of polypropylene for filtration (5 microns) and 6R Micromet phosphate for scale-control.

NP48PS: 4717-87
CG5-20S: 9108-27 (20˝)

NP Series Brackets

Some installations may require two or three NP Series housings to meet more than one specific water-related condition. This custom installation can be accomplished through the use of one of the NP Series multi-housing brackets.

Two housing brackets: NP2BR
Three housing brackets: NP3BR

*NP24 designates 5˝ cartridges and NP48 designates 10˝ cartridges

Selection Chart for NP Series

<table>
<thead>
<tr>
<th>Cartridge Type</th>
<th>Sediment</th>
<th>Taste &amp; Odor</th>
<th>Scale</th>
<th>“24’s”</th>
<th>“48’s”</th>
</tr>
</thead>
<tbody>
<tr>
<td>“S” Cartridges</td>
<td>✔</td>
<td></td>
<td></td>
<td>1800 lbs. (200 gal.)</td>
<td>3600 lbs. (400 gal.)</td>
</tr>
<tr>
<td>“C” Cartridges</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>1800 lbs. (200 gal.)</td>
<td>3600 lbs. (400 gal.)</td>
</tr>
<tr>
<td>“6R” Cartridges</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>900 lbs. (100 gal.)</td>
<td>1800 lbs. (200 gal.)</td>
</tr>
<tr>
<td>“PC” Cartridges</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>600 lbs. (65 gal.)</td>
<td>1200 lbs. (135 gal.)</td>
</tr>
<tr>
<td>“PS” Cartridges</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>N/A</td>
<td>550 lbs. (60 gal.)</td>
</tr>
</tbody>
</table>

Select the appropriate housing according to the cartridge to be used. Replace cartridges every six months. For coffee makers, the NP246R will treat urns using up to 200 lbs. of coffee (10,000 5 oz. cups) per week for 6 months for scale control.
Prevents Scale, Removes Sediment & Objectionable Tastes And Odors

**MICRO-PLUS® IN-LINE FILTER PLUS FEEDER**

The complete “in-line” treatment program for commercial ice makers, coffee urns and brewers, beverage makers and other water-using equipment such as humidifiers, steamers and residential refrigerator ice makers. Micro-Plus is available in a variety of sizes, capable of treating capacities of 125 lbs. of ice (12.5 gallons) to 1,000 lbs. of ice (100 gallons) per day. They are designed and manufactured to eliminate or control the three primary water-related problems: lime scale, silt and sediment (down to 20 microns), and objectionable tastes and odors. When properly sized, Micro-Plus will last for six months.

All units are constructed of NSF-approved polypropylene, and are tapped on each end with 1/4” FPT connections for use with flare, compression or the MPQC Quick Connect fittings.

For taste and odor problems only on equipment using up to 50 gallons of water per day, use the Micro-Carbon 4.

**Micro-Plus “Quick Disconnect” Fittings**

This is a convenient blister pack consisting of two female “quick-connect” couples and two male plugs… all you need to hook up a Micro-Plus easily and quickly.

MPQC: 4619-22

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Micro-Plus</th>
<th>TREATMENT CAPACITIES</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Water gals/day</td>
</tr>
<tr>
<td>4615-W3</td>
<td>MICRO-PLUS 2</td>
<td>12.5</td>
</tr>
<tr>
<td>4612-W3</td>
<td>MICRO-PLUS 4</td>
<td>25.0</td>
</tr>
<tr>
<td>4613-Y8</td>
<td>MICRO-PLUS 8</td>
<td>50.0</td>
</tr>
<tr>
<td>4614-Y8</td>
<td>MICRO-PLUS 16</td>
<td>100.0</td>
</tr>
<tr>
<td>4617-24</td>
<td>MICRO-CARBON 4</td>
<td>50.0</td>
</tr>
</tbody>
</table>

**Replacement Cartridges and Manifolds for existing CUNO®* CFS Installations**

A new and innovative, cost-conscience water filtration system for food service applications. These systems offer manifold and sanitary quick change cartridges to fit the existing Cuno CFS brand and even allow for new filtration installations altogether. The Nu-Plus CFS products provide you with “break-through” filtration technology providing performance driven filtration for all of your water using equipment: ice machines, fountain beverages, steam ovens, and drinking water applications. Nu-Plus CFS is the reliable common sense choice when looking for water filtration to prevent unwanted troubles caused by sediment, scale, or taste & odor. *Cuno® is a trademark of 3M. This product is not manufactured, sponsored, or affiliated with 3M.

- OEM quality replacement cartridges for:
  - CFS 8110, 8110-S, 8112, 8112X, 8720, 8112S, 8720-S, 8812X-S
- Single, Twin, and Triple head manifolds that permit new installations
- Inhibit scale
- Particulate removal
- Remove objectionable taste and odor

**Available Nu-Plus CFS Cartridge Options**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Replaces</th>
<th>Function</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>4623-10</td>
<td>NU-PLUS CFS - S</td>
<td>CFS 8110</td>
<td>Sediment - 5 Micron</td>
<td>1.67 gpm (6.32 lpm) - Life up to 12 months</td>
</tr>
<tr>
<td>4623-11</td>
<td>NU-PLUS CFS - SS</td>
<td>CFS 8110-S</td>
<td>Sediment - 5 Micron Scale Inhibitor</td>
<td>1.67 gpm (6.32 lpm) - Life 6 months</td>
</tr>
<tr>
<td>4623-12</td>
<td>NU-PLUS CFS - TOP</td>
<td>CFS 8112, 8112X, 8720</td>
<td>Taste &amp; Odor - ½ Micron Particulate Reduction</td>
<td>1.67 gpm (6.32 lpm) - Life up to 12 months</td>
</tr>
<tr>
<td>4623-13</td>
<td>NU-PLUS CFS - STOP</td>
<td>CFS 8112S, 8720-S, 8812X-S</td>
<td>Scale Inhibitor, Taste &amp; Odor - ½ Micron Particulate Reduction</td>
<td>1.67 gpm (6.32 lpm) - Life 6 months</td>
</tr>
</tbody>
</table>
**OEM Replacement Products**

**Nu-Plus EC110 and EC210**

10 and 20 inch 10 micron nominal sediment filters for filtering out larger dirt and rust particles, extending the life of primary filters.

- **EC110**: 4621-41 (10")
- **EC210**: 4621-43 (20")

**Nu-Plus IMF-7 and IMF-10**

Scale inhibition cartridges. The translucent cartridge allows for easy visual monitoring of the product’s usage. (The IMF-10 is a longer life scale inhibition cartridge.)

- **IMF-7**: 4621-15
- **IMF-10**: 4621-16

**Nu-Plus IMF-7 and IMF-10**

Scale inhibition cartridges. The translucent cartridge allows for easy visual monitoring of the product’s usage. (The IMF-10 is a longer life scale inhibition cartridge.)

- **IMF-7**: 4621-15
- **IMF-10**: 4621-16

**Scale Inhibitor Feeder**

A complete system for the control of scale in steam ovens, ice, coffee and combination applications. It dispenses a controlled amount of HydroBlend™ compound which provides for a more consistent feed and longer life. The system includes a clear housing and one cartridge and spacer.

- **Part Number**: 4621-05
  - Optional: Wing Bracket for all multiple filter head systems manufactured after 2003: 4621-06