

## Ice Machine Cleaning & Filtration

### 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



#### Advanced Protection

##### IceGuard Plus

Ice Guard Plus contains advanced technology to dramatically reduce ice machine maintenance and cleaning. This technology utilizes the known properties of silver and copper, incorporated into a drop-in device. The device is placed directly into the recirculating water sump, providing treatment of the machine in one easy step.

4209-07



#### 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. 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

\*Both housings are rated to 125 psi maximum pressure and 80°F max. temperature.

## 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



### 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



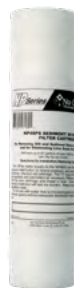
### Sediment Cartridge

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/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")



### 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



### 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

Cartridge Type	Problem to Solve			Daily Capacities	
	Sediment	Taste & Odor	Scale	"24's"	"48's"
"S" Cartridges	✓			1800 lbs. (200 gal.)	3600 lbs. (400 gal.)
"C" Cartridges	✓	✓		1800 lbs. (200 gal.)	3600 lbs. (400 gal.)
"6R" Cartridges	✓		✓	900 lbs. (100 gal.)	1800 lbs. (200 gal.)
"PC" Cartridges	✓	✓	✓	600 lbs. (65 gal.)	1200 lbs. (135 gal.)
"PS" Cartridges	✓		✓	N/A	550 lbs. (60 gal.)

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 or compression fittings.

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



Tested and Certified by NSF against ANSI NSF Standard 42 for odor and taste reduction, chlorine reduction

Part Number	Micro-Plus	TREATMENT CAPACITIES		
		Water gals/day Capacity	Ice Makers	Coffee Makers
4615-W3	MICRO-PLUS 2	12.5	125 lbs./day	25 lbs. (1,250 cups) coffee/wk.
4612-W3	MICRO-PLUS 4	25	250 lbs./day	50 lbs. (2,500 cups) coffee/wk.
4613-Y8	MICRO-PLUS 8	50	500 lbs./day	100 lbs. (5,000 cups) coffee/wk.
4614-Y8	MICRO-PLUS 16	100	1000 lbs./day	200 lbs. (10,000 cups) coffee/wk.
4617-24	MICRO-CARBON 4	50		

### Replacement Cartridges for existing CUNO®\* CFS/HFS Installations

A new and innovative, cost-conscious water filtration system for food service applications. These systems offer sanitary quick change cartridges to fit the existing (Cuno CFS/HFS brand). The Nu-Plus 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 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.

- Single, Twin, and Triple head manifolds that permit new installations (CFS only)
- Inhibit scale
- Sediment removal
- Remove objectionable taste and odor



### NU-Plus CFS/HFS Cartridge Options

Part No.	Description	Replaces	Function	Rating
4623-10	CFS - S	CFS 8110	Sediment - 5 Micron	1.67 gpm - 14,000 gallons
4623-11	CFS - SS	CFS 8110-S	Scale Inhibitor, Sediment - 5 Micron	1.67 gpm - 14,000 gallons
4623-12	CFS - TOP	CFS 8112, 8112X, 8720	Taste & Odor, Sediment - 1/2 Micron	1.67 gpm - 14,000 gallons
4623-13	CFS - STOP	CFS 8112S, 8720-S, 8812X-S	Scale Inhibitor, Taste & Odor, Sediment - 1/2 Micron	1.67 gpm - 14,000 gallons
4623-40	HFS	HF65	Taste & Odor, Sediment - 1/2 Micron	3.4 gpm - 40,000 gallons
4623-41	HFS-S	HF65-S	Scale Inhibitor, Taste & Odor, Sediment - 1/2 Micron	3.4 gpm - 40,000 gallons

## OEM Replacement Products



### The replacement for Manitowoc® Tri-Liminator® Series: CGSYS-22C5S

Filtration system to simulate and be compatible with the Tri-Liminator water filters. Contains a matching product for each of the Tri-Liminator models, and the specifications are nearly identical. In addition, the primary cartridge will replace both the K00070 and K00174 cartridges, and it has more scale control ability than either Tri-Liminator cartridge.

CGSYS-22C5S: 9101-24

Prefilter, EC210: 9534-20

Primary Cartridge, CG5-20S: 9108-27

\*Both cartridges fit old and new Tri-Liminator systems.



### i2000<sup>2</sup> and i4000<sup>2</sup>

Reduce water-related ice machine problems caused by dirt, objectionable tastes and odor and by scale build-up. Precoat submicron filtration removes particles as small as 1/2 micron along with chlorine and other offensive contaminants, and the feed of 6R Micromet® inhibits scale build-up caused by dissolved minerals. NSF Certified under NSF/ANSI Standards 42 and 53.

- Micro-Pure® II antibacterial protection
- Premier 6R Micromet scale control
- Cyst reduction

9612-27: i2000<sup>2</sup> 9,000 gallon capacity  
750 lbs. most cubers • 1,500 lbs. most flakers

9612-37: i4000<sup>2</sup> 12,000 gallon capacity  
1,000 lbs. most cubers • 2,000 lbs. most flakers

### QC7I HEADS

Designed for all Everpure filters. All sizes come with a built-in shut off, flushing valve and an outlet pressure gauge which is included on the mounting bracket. (3/8 NPT)

Single: 9272-41

Triple Parallel: 9272-23

Twin Parallel: 9272-22

Quad Parallel: 9272-11



### MC<sup>2</sup> and XC<sup>2</sup>

Reduces chlorine taste and odor and other offensive contaminants that can adversely affect the taste of fountain beverages. Precoat submicron filtration removes particles as small as 1/2 micron, and it helps retain carbonation in drinks. NSF Certified under NSF/ANSI Standards 42 and 53.

- Micro-Pure® II antibacterial protection
- Reduces objectionable tastes and odors
- Cyst reduction

9612-55: MC<sup>2</sup> 9,000 gallon capacity

9613-97: XC<sup>2</sup> 12,000 gallon capacity



### 7CB5-S

The carbon block filter finely polishes the water allowing for high quality beverage and food applications. It has scale control and reduces chlorine taste and odor and other offensive contaminants. It also reduces particulate to 5 microns. NSF Certified under NSF/ANSI Standard 42.

- Taste and odor, chlorine reduction
- Scale Control
- Problem solving cartridge for high particulate or low flow water pressure areas
- 10,000 gallon capacity

7CB5-S: 9618-26



### 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: 9534-40 (10")

EC210: 9534-20 (20")



### E10 and E20 Coarse Prefilters

10" and 20" clear housings, each including a 10" and 20" replaceable prefilter cartridge. Filters out larger dirt and rust particles thereby extending the life of submicron carbon filters.

10": 9795-80

20": 9795-90

Optional: Wing Bracket for all multiple filter head systems manufactured after 2003: 3114-34



### 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: 9799-32

IMF-10: 9799-02



### 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: 9798-45

Optional: Wing Bracket for all multiple filter head systems manufactured after 2003: 3114-35

