# Nu-Calgon Application Bulletin

NP SERIES- A customized or "problem-specific" approach to correcting water related problems in ice machines, water fountains, coffee urns, beverage machines and other commercial and residential potable water applications.



- Treat equipment making up to 1800
  lbs. of ice per day or using up to
  200 gallons of water per day where
  scale is the problem... and up to
  400 gallons of water per day where
  silt, sediment or objectionable taste
  and odors are the only problems.
- Inhibit lime scale formation
- Remove silt, sediment and turbidity
- Remove objectionable tastes and odors
- Correct only one of these problems, two of them, or all three at the same time

#### A LOOK AT THE 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 cartridges for the control of scale, for the removal of 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: Bracket assemblies are available to permit the installation in series of two or three NP Housings and a gauge package is available for use where it is necessary to continually monitor the pressure of the water serving the ice machines, beverage machines, etc.

#### **HOUSINGS**

The NP Series Housings are constructed of polypropylene plastic. The heads are tapped with FPT connections on the inlet and outlet and they are equipped with a pressure relief button to facilitate service. Each housing also comes with a small steel "L-shaped" mounting bracket (NP1BR) which, when secured to a permanent surface, can attach to the top of the housing's head.

The NP24DD has 3/8″ FPT connections while the NP48DD has 1/2″ FPT connections. All are designed with "outside-in" directional flow of the water, resulting in more efficient filtering. Both are rated to 125 psi maximum pressure and 80°F maximum temperature. The NP24DD utilizes the "24" size cartridges while the NP48DD uses the "48" sizes.

Larger 20" housings are also available in the CTL Series, including the 20" Primary Cartridge. Recommended for high volume applications as well as for replacing or servicing Tri-Liminator® installations. See Product Bulletin 3-901.

#### **Replacement Parts:**

Plastic wrench - NP01 Lid O-ring (both) - NP04W2

#### NP24DD:

lid only - NP03-24 • bowl only - NP02-24 NP48DD:

lid only - NP03-48 • bowl only - NP02-48

#### **NP SERIES CARTRIDGES**

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Scale Control Cartridges: NP246R and NP486R
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These cartridges contain 6R Micromet® and are designed to inhibit lime scale formation. The NP246R Cartridge contains sufficient 6R Micromet to treat ice machines making up to 900 lbs. of ice per day or other equipment using up to 100 gallons of water per day. The NP486R Cartridge contains double the amount of 6R Micromet and can treat up to 1800 lbs. of ice or 200 gallons of water per day, and filtration to **10 microns**. When properly sized, treatment will last for six months.



## Sediment Removal Cartridges: NP24S and NP48S

The NP Series Sediment Cartridges are composed of polypropylene that is manufactured by patented blown-microfiber technology to meet the market requirements for a pure polypropylene-depth pre-filter with exceptional dirt-holding capability. This translates to longer life, and fewer cartridge changes. All the materials meet FDA requirements, making them acceptable for food and beverage contact. The NP24S is designed to handle up to 200 gallons of water per day under average conditions, for six months while the NP48S will handle 400 gallons per day for six months. Both are rated at **5 microns** with a very low pressure drop (i.e. 1/2 psi at 5.0 gpm).





#### Scale Control & Sediment Removal Cartridge: NP48PS

This cartridge comprises another highly-specialized application of the NP Series, combining the NSF-tested 6R Micromet for scale-control and polypropylene for removal of sediment, silt and other particle matter with filtration of **5 microns**. The NP48PS can treat up to 60 gallons of water (550 lbs. of ice) per day.



#### Taste and Odor Removal Cartridges: NP24C and NP48C

These carbon block cartridges are manufactured from high-performance activated carbon that simultaneously removes free chlorine, hydrogen sulfide, and other organic chemicals that contribute to taste and odor, while providing the particle removal and dirt holding capacity down to **10 microns**. They allow for flow in the radial (outside-to-inside) direction, resulting in a higher flow rate at a comparably lower pressure drop. The NP24C is designed to handle up to 200 gallons of water per day while the NP48C can handle up to 400 gallons, for six months. They are made with FDA-approved materials and can also provide for VOC and TOC removal.



### Scale Control & Taste/Odor Removal Cartridge: NP24PC and NP48PC

These cartridges are highly-specialized elements, bringing the capabilities of 6R Micromet and activated carbon together in one element. They provide for the control of scale as well as the removal of objectionable tastes and odors and filtration to **10 microns**. The NP24PC can handle up to 65 gallons of water (600 lbs. of ice) per day, while the NP48PC can handle 135 gallons (1200 lbs.) per day. For coffee makers, the NP24PC will treat urns using up to 200 pounds of coffee (10,000 5 oz. cups) per week for 6 months for scale control; the NP48PC will handle twice that amount.

#### SELECTION CHART

CARTRIDGE TYPE	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.

#### **ACCESSORIES:**

#### **Bracket Assemblies**

On some installations, it may be desirable to use two or three NP Series Housings, installed in series, to meet more than one specific water-related condition. For example, a given water supply may be very scale-forming, have sediment and have a taste or odor condition. This application would require the installation of three NP Housings: one for a sediment cartridge, one for the carbon block cartridge and one for the 6R Micromet cartridge. These custom installations can be accomplished through the use of one of the NP Series' multi-housing brackets, the NP2BR which accommodates two housings and the NP3BR that will accommodate three housings:

BRACKET APPLICATION

NP2BR For installing two NP Housings in Series NP3BR For installing three NP Housings in Series



Both come with screws to attach the NP Housing heads to the bracket and to secure the bracket to a nearly permanent surface. (Note: MPT/MPT nipples for connecting between the housings' heads are not included; these are easily obtained from a local wholesaler.) IMPORTANT: When using these brackets to incorporate multiple housings, remember that sediment pre-filter cartridges should always precede carbon and phosphate cartridges, and carbon should always precede phosphate cartridges.

#### **Gauge Package**

On some installations, particularly where the application is filtering for the removal of silt and sediment, it may be desirable to install a gauge on the outlet of the NP Series Housing to monitor the water pressure serving the equipment. Should the filter cartridge become clogged with silt and sediment, it would result in lost water pressure and this would be displayed by the gauge, which is "red lined" at 20 psi and below. Two gauge packages are available, one for use with the NP24DD and one for use with the NP48DD. Both have inlet MPT connections and outlet FPT connections, with the NP24GG having 3/8" and the NP48GG having 1/2".

 HOUSING
 GAUGE
 GAUGE FITTINGS

 NP24DD
 NP24GG
 3/8″ MPT / 3/8″ FPT

 NP48DD
 NP48GG
 1/2″ MPT / 1/2″ FPT





