

Boilers

Furnaces

Hot Water Heaters

Stack Economizers

Flue Drains

Your **GREEN**  
SOLUTION  
FOR NEUTRALIZATION



V-250



NBT-230



NB-4



NBT-23



CBM-225



NBT-24-P

The solution for treating the highly acidic condensate produced by today's highly efficient products.

# ALL JJM NEUTRALIZING PRODUCTS

## **WARNING**

**JJM neutralizers are sized by BTU input to establish a flow rating. Job site conditions will determine neutralizer design. See GPH chart below.**

### **How much fireside condensate will my equipment develop?**

Hot water heaters / Boilers / Furnaces / Economizers

Equipment Efficiency	GPH Condensate
90%	.725 / Per 100,000 BTU Input
91%	.733 / Per 100,000 BTU Input
92%	.741 / Per 100,000 BTU Input
93%	.750 / Per 100,000 BTU Input
94%	.758 / Per 100,000 BTU Input
95%	.766 / Per 100,000 BTU Input
96%	.774 / Per 100,000 BTU Input
97%	.782 / Per 100,000 BTU Input
98%	.790 / Per 100,000 BTU Input
99%	.798 / Per 100,000 BTU Input

Multiple Boiler Common Flue drains: 33.3% of total BTU input of connected equipment.

Example: (3) Boilers @ 100,000 BTU Input would need a pH treatment kit rated @ 100,000 BTU for the stack drain and a flow rate of .725 to .798 depending on efficiency.

**Consider the following when choosing a neutralizer for less maintenance during operation of your heating equipment.**

- 1. Your location in relation to weather (Very Cold, Cold, Moderately Cold)**
- 2. System Design (Process, Radiate, Snow Melt, Heating, etc.)**
- 3. Yearly Operating Hours**
- 4. pH level out of heating equipment (3.2 to 4.0 is normal)**
- 5. If pH out of the heating equipment is below 3.2 pH contact the factory for sizing.**
- 6. Abnormally low pH out of the equipment condensate drain can be caused by the following:**
  - A. Improper Combustion**
  - B. Contaminated Combustion Air**
  - C. High Sulfur Content in Gas Supply**
  - D. pH below 2.0 is considered hazardous waste by EPA.**

**Contact JJM Technical Service at 413-427-3373 or 413-527-1893**

JJM highly recommends operating your heating equipment for 24-48 hours prior to connecting a neutralizer so as to flush out dirt, grease, and oils from connected piping and the heater. This is also the best time to check the heater condensate pH level for sizing your neutralizer.

# About Us

**JJM® Boiler Works is an industry leader in the design and manufacture of acidic wastewater condensate neutralizing products.**

Established in 2005, our founder George Carney brought over thirty-seven years of heating, hot water, and warm air heating experience to JJM® Boiler Works.

We offer the industry a solution for treating acidic wastewater produced by today's highly efficient boilers, hot water heaters, furnaces, flue stack drains, and stack economizers. Our products help the engineer, contractor and end user stay in compliance with UPC, IPC, PHCC, EPA, state, and local codes.

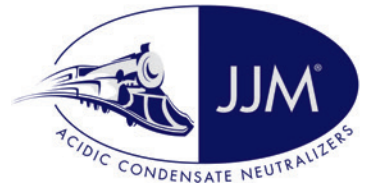
With over fourteen OEM accounts, JJM® products have been well respected in our HVAC industry for over thirteen years.

Our accounts include plumbing wholesalers, HVAC wholesalers, manufacturer's representatives, and dealers throughout the U.S., Canada, and Europe.



**Flow ratings based on 99.0% efficiency. Refer to our GPH sheet on our website for flow rates at lower efficiencies.**

# JM SERIES INLINE TUBES



The **JM Inline Series** of pH treatment products are designed to raise the pH of acidic liquid produced by condensing furnaces, hot water heaters, direct fired unit heaters, infrared unit heaters, and boilers to a safe level as recognized by national, state and local codes.



<b>MODEL #</b> CBM-225	<b>PART #</b> 5002
<b>MBH</b>	225
<b>FLOW RATE/GPH</b>	1.70
<b>INLET PORT</b>	.5" or .75"
<b>OUTLET PORT</b>	.5" or .75"
<b>MOUNTING</b>	Horizontal Floor or Wall
<b>CLEAR PVC</b>	Clear Tube
<b>FITTINGS/BRACKETS CLAMPS</b>	Provided



<b>MODEL #</b> CBM-226	<b>PART #</b> 5003
<b>MBH</b>	1,500 Max.
<b>FLOW RATE/GPH</b>	16.0 GPH Max.
<b>INLET PORT</b>	1" Coupling/ Sch40 PVC Pipe
<b>OUTLET PORT</b>	1" Coupling/ Sch40 PVC Pipe
<b>MOUNTING/HORZ.</b>	Floor/Wall

<b>MODEL #</b> CBM-227	<b>PART #</b> 5004
<b>MBH</b>	3,000 Max.
<b>FLOW RATING/GPH</b>	24.0 GPH Max.
<b>INPUT PORT</b>	1" Coupling/ Sch40 PVC Pipe
<b>OUTLET PORT</b>	1" Coupling/ Sch40 PVC Pipe
<b>MOUNTING/HORZ.</b>	Floor/Wall

CBM-227 System Flow Patterns

### Series



### Parallel



### Serpentine



<b>MODEL #</b> JM-40	<b>PART #</b> 1013
<b>MBH</b>	3,000-4,000
<b>FLOW RATE/GPH</b>	24.0 - 32.0
<b>INLET PORT</b>	2 - 1.0" NPT
<b>OUTLET PORT</b>	1 - 1.0" NPT
<b>MOUNTING</b>	Horizontal
<b>SOLID PVC</b>	X

<b>MODEL #</b> JM-50	<b>PART #</b> 1014
<b>MBH</b>	4,000-5,000
<b>FLOW RATE/GPH</b>	32.0 - 40.0
<b>INLET PORT</b>	2 - 1.0" NPT
<b>OUTLET PORT</b>	1 - 1.0" NPT
<b>MOUNTING</b>	Horizontal
<b>SOLID PVC</b>	X

# VERTICAL MOUNT CANISTERS

**The V-125** is the smallest of the V series vertical neutralizers rated at a maximum input of 125,000 BTU's and a flow rate of .95 GPH. Wall mounted for use with wall hung heaters, condensing unit heaters, and Infrared units. The V-125 is equipped a mounting bracket and pre-charged pellet bag.



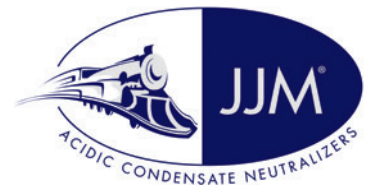
**The V-250** is a single canister neutralizer designed for up to 250,000 BTU's maximum. Wall mounted for use with wall hung boilers, hot water heaters; ceiling hung condensing unit heaters, and infrared heaters. The V-250 comes with mounting bracket , and pre-charged inner cartridges.



MODEL #	V-125	PART #	4008
<b>MBH MAXIMUM</b>	125		
<b>FLOW RATE</b>	.95 GPH		
<b>INLET PORT</b>	.75" PVC Socket		
<b>OUTLET PORT</b>	.75" PVC Socket		
<b>MOUNTING</b>	Steel Wall Mount Bracket		
<b>POLYPROPYLENE</b>	Blue Canister		
<b>REFILL</b>	Loose Pellets		

MODEL #	V-250	PART #	4000
<b>MBH</b>	250		
<b>FLOW RATE</b>	1.90 GPH		
<b>INLET PORT</b>	.75" Socket or Barb		
<b>OUTLET PORT</b>	.75" Socket or Barb		
<b>MOUNTING</b>	Steel Wall Mount		
<b>POLYPROPYLENE</b>	Clear Canister		
<b>REFILL</b>	Yes - Cartridge		

# VERTICAL MOUNT CANISTERS



**The V-252** is a dual canister neutralizer designed for up to 500,000 BTU's maximum. Wall mounted for use with wall hung boilers, hot water heaters; ceiling hung condensing unit heaters, and infrared heaters. The V-252 is prepackaged with a built in manifold, mounting bracket, and pre-charged inner cartridges.



**The V-253** is a triple canister neutralizer designed for up to 750,000 BTU's maximum. Wall mounted for use with wall hung boilers, hot water heaters; ceiling hung condensing unit heaters, and infrared heaters. The V-253 is prepackaged with a built in manifold, mounting bracket, and pre-charged inner cartridges.



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MODEL # V-252	PART # 4006
<b>MBH</b>	500
<b>FLOW RATE</b>	3.80 GPH
<b>INLET PORT</b>	.75" Socket or Barb
<b>OUTLET PORT</b>	.75" Socket or Barb
<b>MOUNTING</b>	Steel Wall Mount
<b>POLYPROPYLENE</b>	Clear Canister
<b>REFILL</b>	Yes - Cartridge

MODEL # V-253	PART # 4007
<b>MBH</b>	750
<b>FLOW RATE</b>	5.70 GPH
<b>INLET PORT</b>	.75" Socket or Barb
<b>OUTLET PORT</b>	.75" Socket or Barb
<b>POLYPROPYLENE</b>	Clear Canister
<b>REFILL</b>	Yes - Cartridge
<b>PLATFORM MOUNTING</b>	Pre Drilled Wall or Floor

The **NB Series** of pH treatment kits come in nine different tank sizes, with an input range of up to 12,000 MBH. Applied to both small and large capacity boiler rooms and multiple connections to the same neutralizer. All are gravity fed and some models employ pumps and pH monitoring panels with alarms.



<b>MODEL #</b> NBT-23	<b>PART #</b> 2009
<b>MBH</b>	1 - 300
<b>FLOW RATE/GPH</b>	0 - 2.4
<b>INLET PORT</b>	.75" Socket
<b>OUTLET PORT</b>	.75" Socket
<b>BLUE OR LIGHT GREY POLYPROPYLENE</b>	Tank
<b>MOUNTING</b>	Floor or Wall



<b>MODEL #</b> NBT-610	<b>PART #</b> 2010
<b>MBH</b>	1500 MAX
<b>FLOW RATE/GPH</b>	11.0
<b>INLET PORT</b>	1" PVC Socket
<b>OUTLET PORT</b>	1" PVC Socket
<b>POLYPROPYLENE</b>	Tank
<b>MOUNTING</b>	Horizontal Floor

The **NB-5LP** (low profile) is a tank type design to allow for installation with low condensate outlet drains on heating or hot water units. The NB-5LP is field rechargeable by removing the top clean out cover. Each unit is equipped with eight bags of charging pellets. Recharge kits are available.



<b>MODEL #</b> NB-5LP	<b>PART #</b> 2002
<b>MBH</b>	500 - 5,000
<b>FLOW RATE/GPH</b>	4.0 - 40.0
<b>INLET PORT</b>	2 - 1.0" NPT
<b>OUTLET PORT</b>	2 - 1.0" NPT
<b>VENT PORT</b>	.75" NPT
<b>MOUNTING</b>	Floor



<b>MODEL #</b> NBT-230	<b>PART #</b> 2011
<b>MBH</b>	3500 MAX
<b>FLOW RATE/GPH</b>	26.0
<b>INLET PORT</b>	1" PVC Socket
<b>OUTLET PORT</b>	1" PVC Socket
<b>POLYPROPYLENE</b>	Tank
<b>MOUNTING</b>	Horizontal Floor

# NBSERIES TANKS



<b>MODEL #</b>	NB-2	<b>PART #</b>	2000
<b>MBH</b>	600 - 2,000		
<b>FLOW RATE/GPH</b>	16 GPH MAX		
<b>INLET PORT</b>	.75" FNPT		
<b>OUTLET PORT</b>	.75" FNPT		
<b>VENT PORT</b>	.50" FNPT		
<b>MOUNTING</b>	Floor		



<b>MODEL #</b>	NB-4	<b>PART #</b>	2001
<b>MBH</b>	500 - 4,000		
<b>FLOW RATE/GPH</b>	32 MAX		
<b>INLET PORT</b>	1" FNPT		
<b>OUTLET PORT</b>	1" FNPT		
<b>VENT PORT</b>	.75" FNPT		
<b>MOUNTING</b>	Floor		



<b>MODEL #</b>	NB-6	<b>PART #</b>	2003
<b>MBH</b>	500 - 6,000		
<b>FLOW RATE/GPH</b>	45 MAX		
<b>INLET PORT</b>	1" FNPT		
<b>OUTLET PORT</b>	1" FNPT		
<b>VENT PORT</b>	.75" FNPT		
<b>MOUNTING</b>	Floor		

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<b>MODEL #</b>	NB-7	<b>PART #</b>	2004
<b>MBH</b>	4,000 - 7,000		
<b>FLOW RATE/GPH</b>	56 MAX		
<b>INLET PORT</b>	1" Socket		
<b>OUTLET PORT</b>	1" Socket		
<b>POLYPROPYLENE</b>	Tanks		
<b>(2) PARALLEL MOUNTED TANKS</b>	Factory Piped		
<b>MOUNTING</b>	Floor/Strut Channel		



<b>MODEL #</b>	NB-9	<b>PART #</b>	2005
<b>MBH</b>	7,000 - 9,000		
<b>FLOW RATE/GPH</b>	72.0 MAX		
<b>INLET PORT</b>	1" Socket		
<b>OUTLET PORT</b>	1" Socket		
<b>POLYPROPYLENE</b>	Tanks		
<b>(2) PARALLEL MOUNTED TANKS</b>	Factory Piped		
<b>MOUNTING</b>	Floor/Strut Channel		

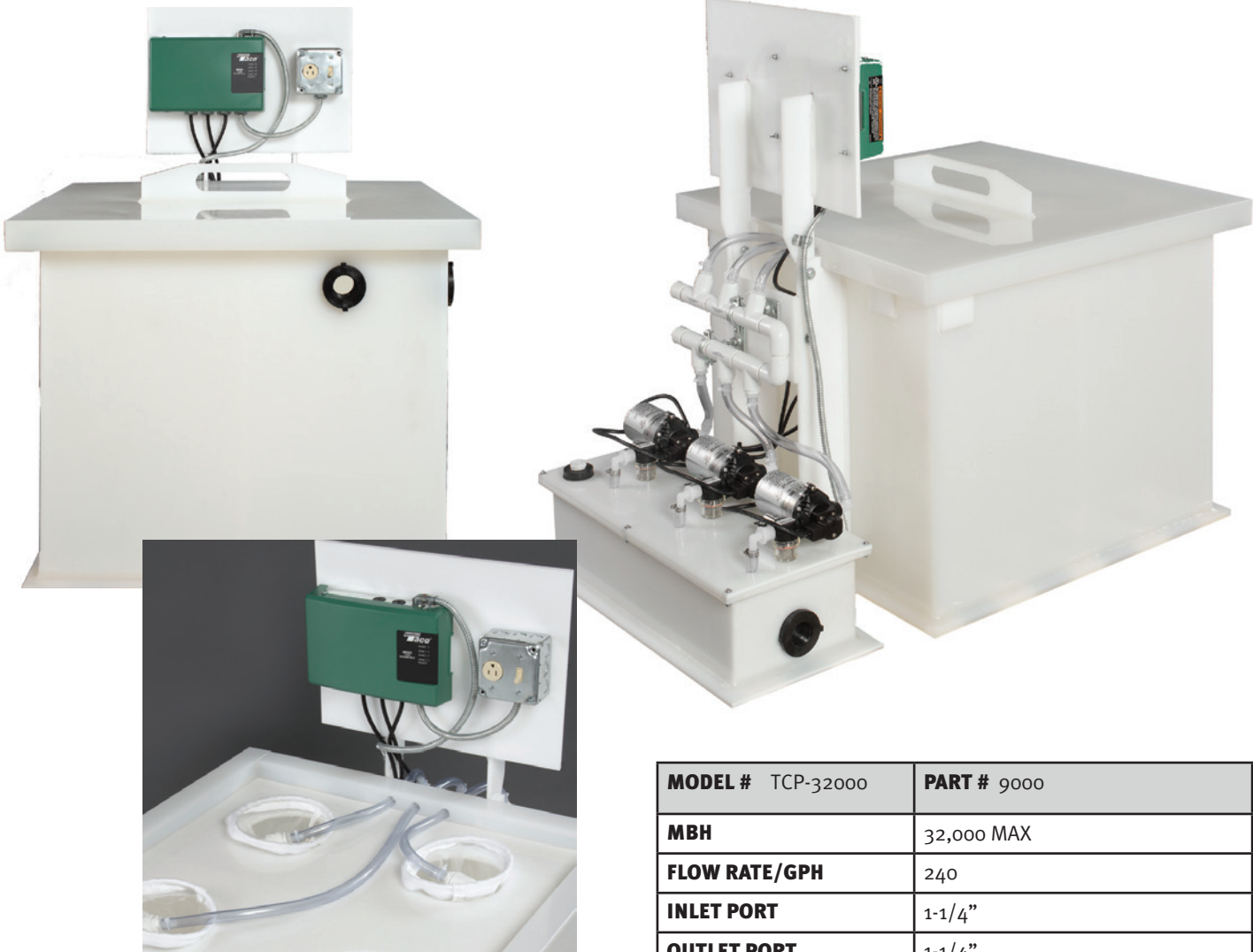


<b>MODEL #</b>	NB-12	<b>PART #</b>	2007
<b>MBH</b>	7,000 - 12,000		
<b>FLOW RATE/GPH</b>	95 MAX		
<b>INLET PORT</b>	1" Socket		
<b>OUTLET PORT</b>	1" Socket		
<b>POLYPROPYLENE</b>	Tanks		
<b>(2) PARALLEL MOUNTED TANKS</b>	Factory Piped		
<b>MOUNTING</b>	Floor/Strut Channel		



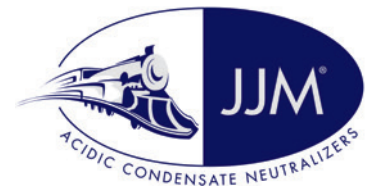
**The TCP** neutralizing tanks are designed for large capacity boilers and hot water heaters. They are also used in cases where the operating hours of the equipment is excessive.

The TCP-32000 tank is isolated from the low heater condensate drain and high level tank outlet drains by a small receiving tank and pump. The TCP-32000 can come with a single, dual, or triple pump set up. The media pellets are placed into 30 inch long porous polyester bag(s) which surround a distribution tube(s) connected to the pump outlet port. The TCP-32000 is equipped with a service switch and pump control relay. Optional equipment included BMS capability, pH alarm, pH sensor, and pH control monitor.



<b>MODEL #</b> TCP-32000	<b>PART #</b> 9000
<b>MBH</b>	32,000 MAX
<b>FLOW RATE/GPH</b>	240
<b>INLET PORT</b>	1-1/4"
<b>OUTLET PORT</b>	1-1/4"
<b>ISOLATION TANK</b>	1, 2, or 3 Pumps
<b>ACTIVE INGREDIENT</b>	Magnesium Hydroxide Pellets
<b>MOUNTING</b>	Floor Only

# TCP SERIES TANKS



The TCP-8000 tanks is isolated from the low heater condensate drain and high level tank outlet drains by a small receiving tank and pump. The TCP-8000 is equipped with a single pump. The media pellets are placed into 30 inch long porous polyester bag(s) which surround a distribution tube(s) connected to the pump outlet port.



<b>MODEL #</b>	TCP-8000	<b>PART #</b>	9001
<b>MBH</b>			8,000 MAX
<b>FLOW RATE/GPH</b>			60
<b>INLET PORT</b>			1-1/4"
<b>OUTLET PORT</b>			1-1/4"
<b>ISOLATION TANK</b>			Single Pumps
<b>ACTIVE INGREDIENT</b>			Magnesium Hydroxide Pellets
<b>MOUNTING</b>			Floor Only

**The NB-6-P** is a combination neutralizing tank and self priming pump package. Use in applications where the treated condensate must be moved via pump to a remotely located drain. This model can also be used to separate the heating unit condensate supply from a high volume neutralizing tank with a high outlet port.



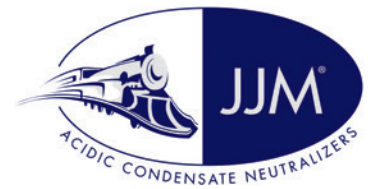
MODEL #	NB-6-P	PART #	2008
<b>MBH</b>	4,000 MBH		
<b>FLOW RATE</b>	30		
<b>INLET PORT</b>	1" FNPT		
<b>OUTLET PORT</b>	.5" Barb		
<b>TANK</b>	7 Gallon Polypropylene		
<b>ACTIVE INGREDIENT</b>	Magnesium Hydroxide Pellets		
<b>FILL AND CLEANOUT LID</b>	5" Screw On		
<b>VOLTS</b>	115/1/60		
<b>AMPS</b>	1.7		
<b>PUMP GPM</b>	1.5 Maximum		
<b>HEAD</b>	60 PSI Maximum		
<b>TEMPERATURE RATING</b>	140F Const.		
<b>MOUNTING</b>	Floor Mount		
<b>CONTROL PANEL</b>	Wall Mounted		
<b>SERVICE SWITCH, RECEPTACLE AND RELAY</b>	On Wall Mounted Panel Pre-Wired		
<b>FLOAT HEIGHT STANDARD IS 6"</b>	Contact Factory for other Float Levels		

**The NBT-24-P** is a combination condensate neutralizer and condensate pump, rated at 350 MBH and 2.6 GPH. The design has a low inlet port for floor mounted condensating heaters, a top inlet port for wall mounted heaters, and two top ports for Non acidic air conditioning condensate.



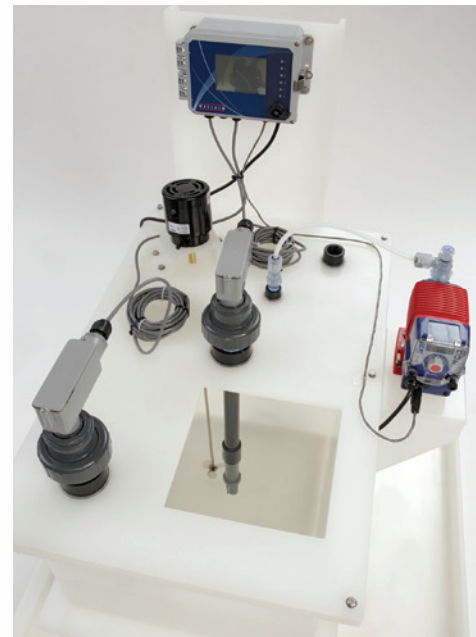
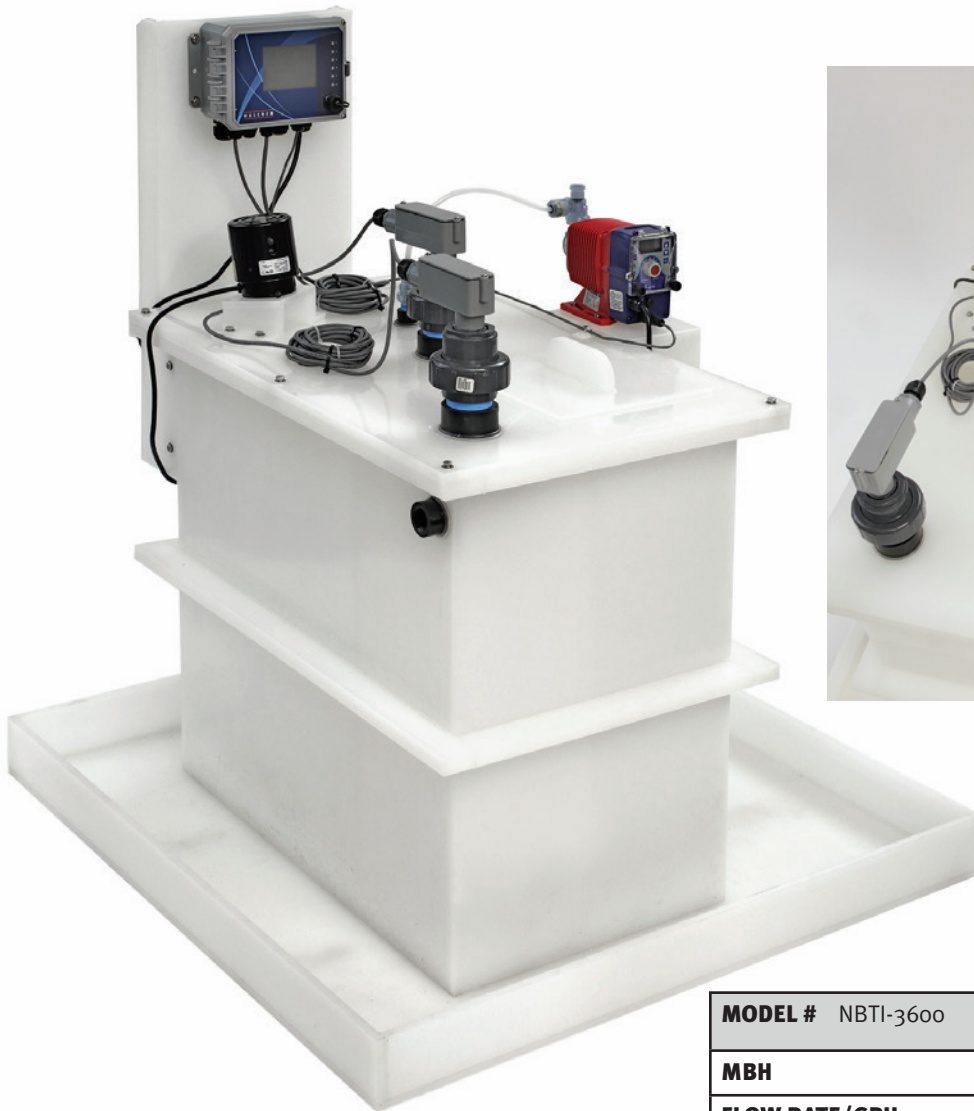
MODEL #	NBT-24-P	PART #	2012
<b>MBH</b>	350		
<b>FLOW RATE/GPH</b>	2.6		
<b>INLET PORT</b>	All are .75" for PVC Pipe		
<b>OUTLET PORT</b>	3/8" O.D. Barb		
<b>TANK MATERIAL</b>	Poly Resin		
<b>ACTIVE INGREDIENT</b>	Magnesium Hydroxide Pellets		
<b>FILL LID</b>	Removable		
<b>VOLTS</b>	120/1/60		
<b>AMPS</b>	1.6		
<b>WATTS</b>	90		
<b>TEMPERATURE</b>	140F Const.		
<b>MOUNTING</b>	Floor		

# NBSERIES TANKS



## The NBTI-3600 Small Industrial Neutralizer

is a 75 gallon poly tank neutralizer for large capacity mechanical room systems. It is recommended for those systems with total BTU's of over 18,000 MBH. This neutralizer uses Sodium Hydroxide liquid at either 25% or 50% to precisely control pH levels within 5% at all times. Equipment includes (2) pH sensors, (1) metering pump, pH control panel, mixing propeller, BMS capability, isolation tank and pump, along with out of range alarms.



<b>MODEL #</b>	NBTI-3600	<b>PART #</b>	7000
<b>MBH</b>			32,000 MAX
<b>FLOW RATE/GPH</b>			255
<b>INLET PORT</b>			1" Standard Or 1-1/4" Option
<b>OUTLET PORT</b>			1" Standard Or 1-1/4" Option
<b>ACTIVE INGREDIENT</b>			25% Or 50% Sodium Hydroxide Liquid
<b>MOUNTING</b>			Floor Only

## Bulk Pellets



#3001 12.5#  
2 gallon

#3002 25.0#  
4 gallon

#3003 31.5#  
5 gallon

#3004 50.0#  
8 gallon

## Pellet Refill Tubes (Clear and Solid)



#1102 JM-2R Clear  
#1101 JM-2R

#1104 JM-3R Clear  
#1103 JM-3R

#6002 CBM-225R

#6003 CBM-226R

#6004 CBM-227R

## Packaging



#1105 JM-6R

#1106 JM-10R

#1107 JM-20R

#1108 JM-30R

#1109 JM-40R

#1110 JM-50R

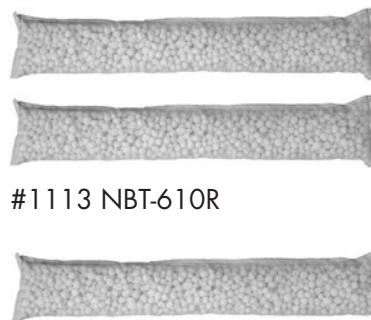
## Pellet Bag Refills



#1111 NBT-23R

#1115 NBT-24-PR

### OLD STYLE



#1113 NBT-610R

### NEW STYLE

#1113-A NBT-610AR

### OLD STYLE

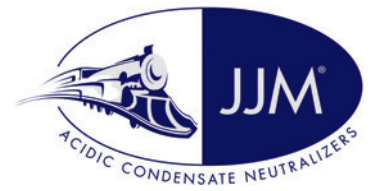


#1114 NBT-230R

### NEW STYLE

#1114-A NBT-230AR

# REFILL KITS



## V-Series Refills



#4001 V-125R



#4003 V-250



#4004 V-252



#4005 V-253

## NB & TCP Series Pellet Refills

MODEL #	Pellet Wt. / #'s	Part #	# of Units
<b>NB-4</b>	25	3002	1
<b>NB-6</b>	31.5	3003	1
<b>NB-7</b>	50	3004	1
<b>NB-9</b>	56.5	3002 & 3001	1 each
<b>NB-12</b>	63	3004	2
<b>NB-5Lp</b>	31.5	8 Porous Bags	8
<b>NB-6-Pump</b>	25	3002	1
<b>TCP-8000</b>	35	3001 & 3002	1 each
<b>TCP-3200</b>	132	3004	5 each

## Pump & pH Monitor Options



#9002  
TCP-32000  
Condensate Pump



#9003  
MD-600  
Condensate Pump



#9004  
pH Sensor



#9005  
pH Monitor

## Getting the most out of your JJM® Neutralizer

Acidic wastewater neutralizers like all filtering devices need both maintenance and replacing. The average pH level of acidic wastewater produced by today's condensing boilers, hot water heaters, furnaces, flue stack drains, and stack economizers is 3.2pH. When using a passive Inline Tube, Tank, or Canister the range of pH modification will fall in between 5.0 and 9.5 pH.

When the pH falls below 5.0 at the outlet port of any neutralizer the active ingredient must be replaced.

**Media replacement schedule will depend on several factors including Operating Hours, Efficiency, System Design, and Neutralizer Piping Scheme.** The active ingredient in the case of JJM® products is Magnesium Hydroxide Pellets. The trade name is pH Power Pellets®.

Before changing the pellets when the pH level falls below 5.0 you can get the most out of your neutralizer by first agitating the pellets. In the case of an **inline tube products** try lightly tapping the outer sides of the tube with a rubber mallet several times and then check the pH level once again at the outlet port. You may find that your pH level has risen back into the 5.0 to 9.5pH range.

When your **neutralizer is a tank product with loose pellets** you can simply use a wooded dowel to stir the pellets and again use fresh tap water to flush out the tank.

If your **neutralizer pellets are incased in a porous pellet bag** there are three methods to agitating the pellets:

1. Remove the pellet bag or bags from the tank and using your hands move the pellets around inside the bags.
2. Using a five gallon bucket filled with fresh tap water, use step one with the bag under water.
3. Using a fresh water hose slowly pour fresh water over both sides of the pellet bag and also use method one.

If the pH level is has not risen back into the safe range of 5.0 to 9.5 pH the pellets must be replaced.

If you have our **Model V-250 or V-250 Combi vertical canisters** try the following method:

1. Twist off the outer canister to get access to the inner pellet cartridge and over a five gallon pail shake the Cartridge several times to agitate the pellets.
2. Again using a five gallon pail filled with fresh tap water let the cartridge soak for five minutes under water and then drain and hand shake the cartridge to agitate the pellets. Also clean out any sediment which may be held within the outer canister.

DURING ALL OF THE ABOVE PROCEDURES THE FOLLOWING SAFETY ITEMS MUST BE USED:

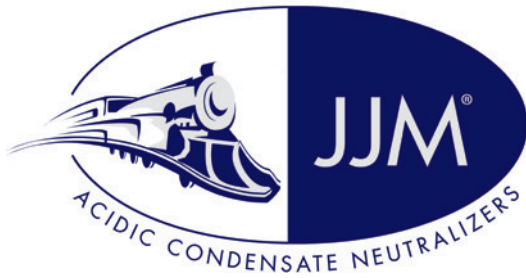
1. WEAR SAFETY GLASSES
2. WEAR RUBBER OR LATEX PROTECTIVE GLOVES
3. SHUT OFF ALL ELECTRICAL POWER TO THE HEATING UNIT OR UNITS BEFORE SERVICING YOUR NEUTRALIZERS.

The pellets are **Non-Hazardous** and can be disposed of in your normal refuge.

MSDS sheets can be found online at [www.jjmboilerworks.com](http://www.jjmboilerworks.com).

Any questions can be directed to JJM Boiler Works, Inc. at 413-527-1893 or at [www.jjmboilerworks.com](http://www.jjmboilerworks.com)

George Carney, President, JJM Boiler Works, Inc.



**CODES:**

UPC, IPC, EPA, PHCC,  
MANUFACTURES RECOMMENDATIONS,  
MANUFACTURES I&O

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**PRODUCT WARRANTY:**

JJM® products are protected by a one year warranty from the date of installation. The warranty applies to the following:

- All factory defects found in the structure of the inline tubes and poly tanks.
- Controls, pumps, sensors, electronics
- Warranty does not apply to the JJM® media. The media should be changed when the outlet port pH falls below 5.0.
- Warranty does not cover labor.

