



GAMAJET®

*It's a tank cleaning
revolution*

Tank cleaning solutions
you can trust, from **START TO FINISH.**

GAMAJET CLEANING SYSTEMS



GO WITH THE LEADER.

patented state-of-the-art tank cleaning technology

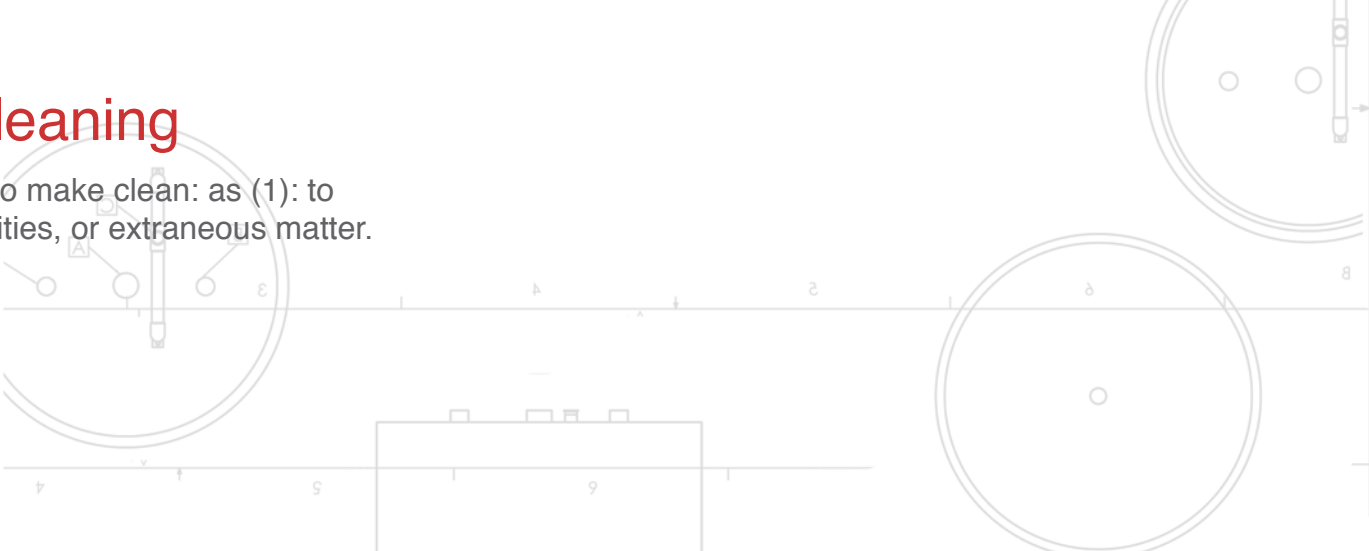


Gamajet Mission:

Gamajet is committed to providing the world's processing industries with tank cleaning solutions by designing, manufacturing and innovating the most effective and efficient automated tank cleaning machines and systems that meet our customers needs.

What is Cleaning

Cleaning: (adj) to make clean: as (1): to rid of dirt, impurities, or extraneous matter.



Dr. Herbert Sinner, a former chemical engineer for Henkel, first summarized the basic principals of cleaning in 1959. His summary, now referred to as the Sinner's Circle (seen left), describes the four factors that can be manipulated in any cleaning scenario: Temperature, Chemical Reaction, Time and Mechanical Action. When the effectiveness of any factor is reduced, it must be compensated with the increase of one or multiple other factors. Washing dishes is an effective example of how the four factors interact. Hot water temperature is going to remove stuck on food better than cold. Adding soap (chemical reaction) makes the process even easier, and you can either soak a dish overnight (time) or scrub the dish clean (mechanical action). Gamajet utilizes the "mechanical action" to its maximum benefit, resulting in a drastic reduction of the three remaining factors; time, chemical and temperature.

CLEANING IS A MUST, HOW YOU CLEAN IS OPTIONAL

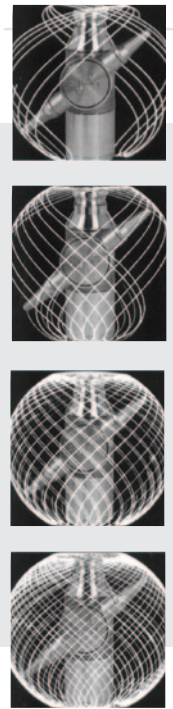
Things to observe when selecting a tank cleaning machine:

- Level of cleanliness
- Cleaning pattern
- Operating costs
- Confined space entry
- Mechanical reliability

There are millions of tanks being used and cleaned per day, throughout every processing industry.



EFFICIENCY

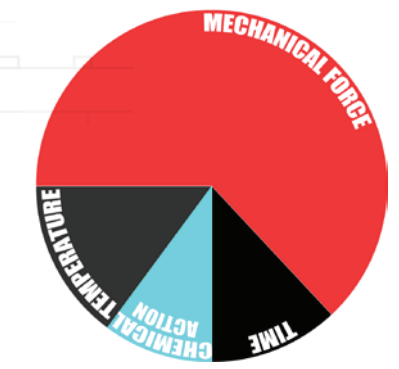


How do Gamajets Work?

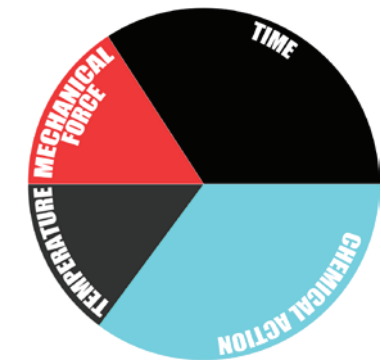
Gamajet's rotary impingement tank cleaning machines combine pressure and flow to create high impact cleaning jets. Cleaning occurs at the point in which the concentrated stream impacts the surface. It is this impact and the tangential force that radiates from that point which blasts contaminants from the surface, scouring the tank interior. In conjunction with this impact, the Gamajet is engineered to rotate in a precise, repeatable and reliable, 360-degree pattern (seen right). This full-coverage, indexing pattern ensures the entire tank interior is cleaned, every time. This combination of impact in a controlled indexing manner results in an economic ideal, because impact is a one time investment; chemicals, temperature and time are continual, never-ending expenditures. With a short ROI, Gamajet's Impingement Cleaning is guaranteed to positively impact the ultimate scorecard, your bottom line.

A guaranteed cleaning pattern, you can trust.

GAMAJET ROTARY IMPINGEMENT



ROTARY WETTING



SPRAY BALL

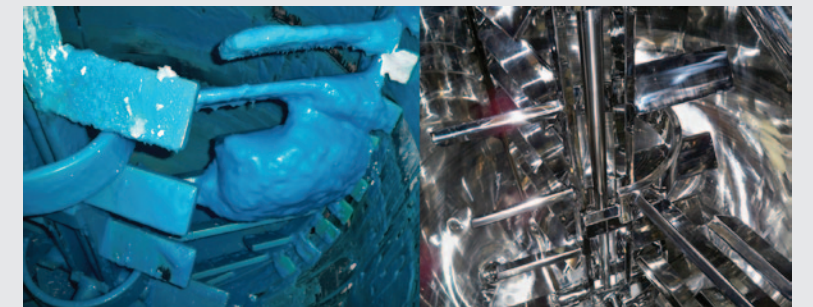


EFFECTIVE

100% CLEANING, EVERY TIME.

BEFORE

AFTER



Tank cleaning is the number one culprit in water wastage as well as a major cause for lost production and revenue, due to tank downtime. Maximizing impingement (mechanical force), allows for the minimum amount of resources to be utilized.



Engineering, Manufacturing, and Innovating Tank Cleaning Solutions to Meet Your Needs

Designing and Developing The Solution

Our experience has shown that "off-the-shelf" solutions rarely provide a thorough or effective cleaning. At Gamajet, every cleaning application is resolved with its own unique solution. This process begins with a clear understanding of your needs, what benefits mean the most to you and your company; whether it be a guaranteed clean, the elimination of confined space entry, a reduction in time or water usage, etc. Once the needs are clearly defined and prioritized, we examine your existing process and facility, including:

- The Residue: Amount, Consistency, Properties, Disposal Regulations
- The Tank: Size, Drainage, Inlet, Material, Obstacles, Accessibility
- The Facility: Available Pressure and Flow, Standards and Requirements
- Other Factors: Preferred Wash Fluid, Filters, Available Temperature, Ability to Recirculate.

Upon completion of examination, our tank cleaning experts and engineers implement the latest state-of-the-art rotary impingement technology to design a solution, specifically tailored to meet your needs, guaranteeing the most effective clean, while minimizing resources.

Can clean tanks up to 200ft in diameter

The Only Rotary Impingement Cleaner to meet 3-A Standard 78-01

NO MATTER THE TANK TYPE OR SIZE, WE HAVE A TANK CLEANING SOLUTION.

Cleans a Tote or IBC in Under 4 Minutes

180-Degree Option for Open Top Vessels

Fits through a 2' Sanitary Inlet

BEFORE



AFTER



ROTARY IMPINGEMENT TANK CLEANING MACHINES

Gamajet IV

Impact: Up to 85lbs at 25'
(39kg at 7.5m)
Cleaning Range: 100' (30m)
Pressure: 20-700 psi (2-45 bar)
Flow: 30-320 gpm (115-1210 lpm)
Clearance: 6.7" (170mm)
Cycle Time: 10-25 min.
Self Cleaning and Draining
Directional Option

Gamajet Aseptic-1

Impact: Up to 10lbs at 10'
(4.5kg at 3m)
Cleaning Range: 25' (7.5m)
Pressure: 20-80 psi (1-5 bar)
Flow: 20-70 gpm (75-265 lpm)
Clearance: 5.75" (145mm)
Cycle Time: 3-6 min.
Self Cleaning and Draining
FDA/3-A Compliant Materials
Ultra Sanitary Design: Meets the
Requirements of 3-A 78-01

Gamajet VIII

Impact: Up to 40lbs at 25'
(18kg at 7.5m)
Cleaning Range: 35' (10.5m)
Pressure: 20-1000 psi (3-70 bar)
Flow: 25-130 gpm (95-490 lpm)
Clearance: 4.75" (121mm)
Cycle Time: 8-12 min.
Self Cleaning and Draining
Directional Option
The Most Versatile, Light-Weight,
Ergonomic Large Tank Cleaner

Gamajet PowerFLEX

Impact: Up to 25lbs at 25'
(11.5kg at 7.5m)
Cleaning Range: 30' (9m)
Pressure: 30-500 psi (3-35 bar)
Flow: 20-120 gpm (75-450 lpm)
Clearance: 3.80" (97mm)
Cycle Time: 8-20 min.
Self Cleaning and Draining
FDA Compliant Materials
Ultra Sanitary Design

Gamajet X

Impact: Up to 25lbs at 25'
(12kg at 7.5m)
Cleaning Range: 35' (10m)
Pressure: 50-750 psi (4-50 bar)
Flow: 40-80 gpm (150-300 lpm)
Clearance: 4" (102mm)
Cycle Time: 8-15 min.
Fits Through a Standard UST Pipe

Gamajet V

Impact: Up to 15lbs at 10'
(7kg at 3m)
Cleaning Range: 7.5' (2.5m)
Pressure: 50-1200 psi (4-80 bar)
Flow: 5-45 gpm (25-160 lpm)
Clearance: 3" (76mm)
Cycle Time: 8-11 min.
Directional Option

Gamajet IX

Impact: Up to 12lbs at 10'
(5.5kg at 3m)
Cleaning Range: 7.5' (2.5m)
Pressure: 50-1000 psi (4-70 bar)
Flow: 3-30 gpm (15-110 lpm)
Clearance: 2.8" (71mm)
Cycle Time: 4-12 min.
Self Cleaning and Draining
Ideal for Totes and IBCs

Gamajet NanoJET

Impact: Up to 7lbs at 5'
(3kg at 1.5m)
Cleaning Range: 7.5' (2.5m)
Pressure: 20-200+ psi (2-14 bar)
Flow: 5-30 gpm (20-110 lpm)
Clearance: 1.85" (47mm)
Cycle Time: 4-20 min.
Self Cleaning and Draining
FDA Compliant Materials
Ultra Sanitary Design

Gamajet AlphaJET

Impact: Up to 7lbs at 5'
(3kg at 1.5m)
Cleaning Range: 10' (3m)
Pressure: 50-100+ psi (4-7 bar)
Flow: 6-20 gpm (25-75 lpm)
Clearance: 2" (50mm)
Cycle Time: 4-20 min.
Fits through Standard 2" ASTs

All Gamajets are made with 316L Stainless Steel.
Seals and bearings made from Teflon based materials. Elastomers are offered in EPDM, Viton® and Kalrez®



Gamajet Aseptic VI

Impact: Up to 10lbs at 5'
(4.5kg at 1.5m)
Cleaning Range: 5' (1.5m)
Pressure: 10-700 psi (1-45 bar)
Flow: 5-40 gpm (20-150 lpm)
Clearance: 2.80" (71mm)
Cycle Time: 10-14 min.
Self Cleaning and Draining
FDA Compliant Materials
Ultra Sanitary Design

Gamajet GentleJET

Impact: Up to 1lbs at 2.5'
(.5kg at 1m)
Cleaning Range: 1.5' (0.5m)
Pressure: 60 psi (4 bar)
Flow: 6 gpm (23 lpm)
Clearance: 2" (50mm)
Cycle Time: 1-2 min.
The Ultimate Barrel Cleaning
Machine

Gamajet VII

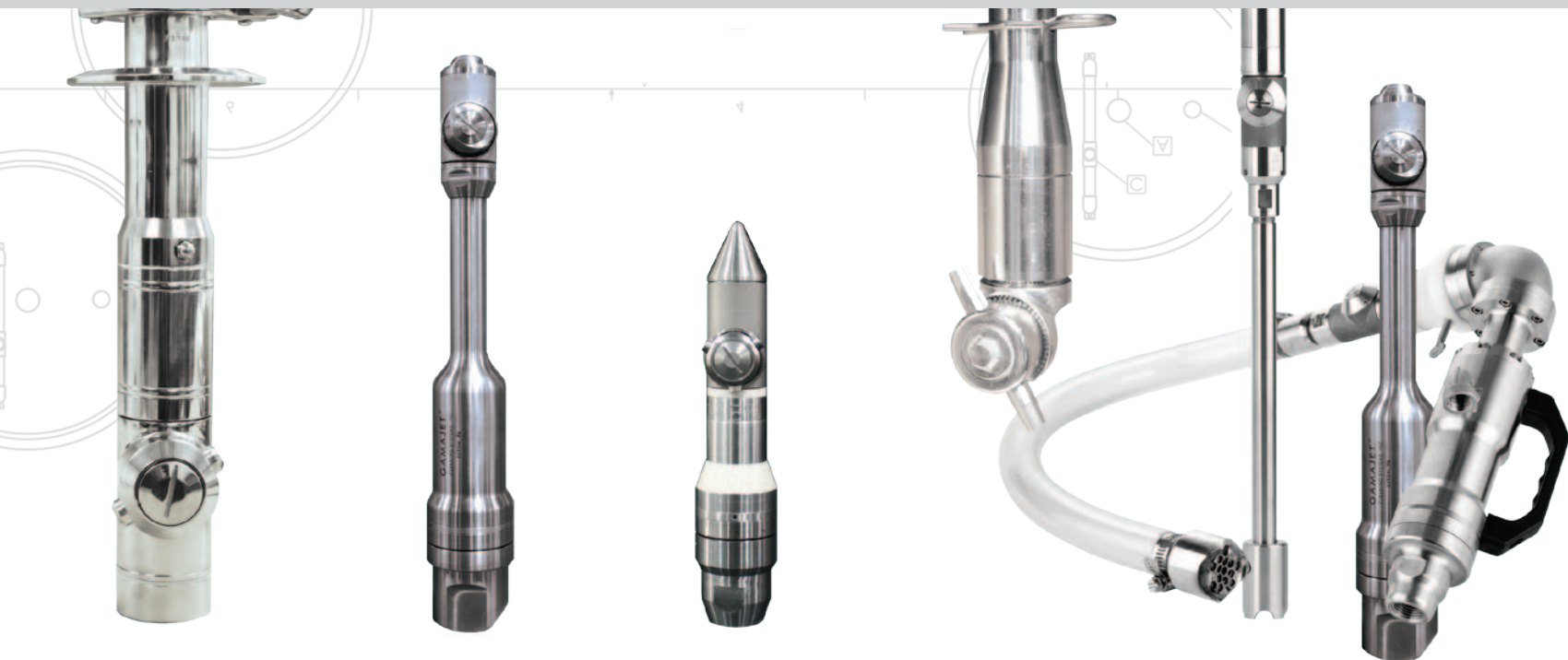
Impact: Up to 5lbs at 2.5'
(2.5kg at 1m)
Cleaning Range: 2.5' (1m)
Pressure: 50-1500 psi (4-100 bar)
Flow: 2-8 gpm (8-30 lpm)
Clearance: 1.5" (38mm)
Cycle Time: 2-5 min.
The Smallest Rotary Impingement
Tank Cleaner

Gamajet Intrepid

Impact: Up to 3lbs at 2.5'
(1.5kg at 1m)
Cleaning Range: 2.5' (1m)
Pressure: 10-80 psi (1-5 bar)
Flow: 5-25 gpm (20-95 lpm)
Clearance: 2.80" (71mm)
Cycle Time: 4-8 min.
Self Cleaning and Draining
FDA Compliant Materials
Ultra Sanitary Design

Gamajet AIO - AIO Flex - HD Barrel Blaster

Impact: Up to 5lbs at 2.5'
(2.5kg at 1m)
Cleaning Range: 2.5' (1m)
Pressure: 50-1000 psi (4-70 bar)
Flow: 3.5-6 gpm (13-23 lpm)
Clearance: 1.75" (55mm)
Cycle Time: 2-5 min.



NO PUMP, NO PROBLEM
TANK CLEANING SYSTEMS

Let us update your process,
not your plant.

Gamajet manufactures a complete line of
Mobile CIP Systems for tank and vessel
cleaning. These units are tailored to provide
the most effective and efficient solution
based on your application, beginning **inside**
the tank with the residue.



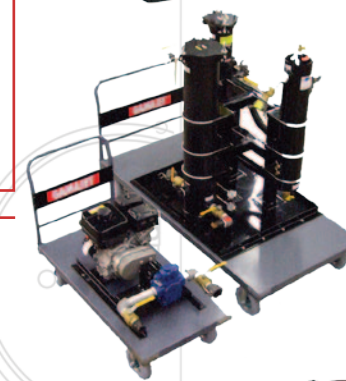
**GobyJET: Outdoor Portable
Tank Cleaning System**

Use a Gamajet to clean, any time and
anywhere with this diesel powered, high
pressure pump system.



**MegaJET and AlphaJET: Fuel
Storage Tank Cleaning and
Polishing System**

Clean any USTs and ASTs. System polishes the
fuel while utilizing it to clean. (Class II fuels only)



MCIP: Mobile CIP System

Tailored designs include pumps, filters,
recirculation options, control panels
(manual or PLC), holding tanks and
heating elements.

**ToteBlast Station: Stationary Tote
Cleaning System**

Clean the entire tote or IBC (including the
top), regardless of the residue in under 4
minutes.



COMPLETE SOLUTIONS TANK CLEANING ACCESSORIES

Choose Your Connection

Part of customizing the Gamajet includes selecting your preferred inlet connection choosing from: Tri-Clover, Female NPT, Camlock or R-Clip.



Positioning Your Gamajet

Although Gamajets are dynamically balanced, meaning they will not sway when lowered into a tank on a flexible hose, access from above is not always easily accessible. Here are a few accessories that make positioning the Gamajet easy.



Tripod: Conical bottom tanks, sludge build up

Portable Cart: Bottom manway, rolls into place.

Bipod: Wine barrels, bung down.

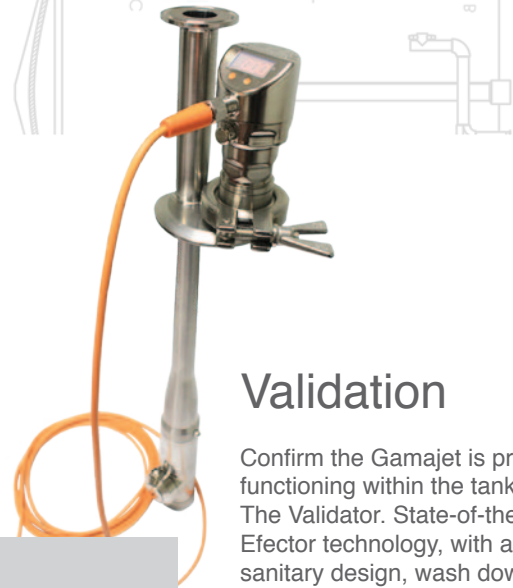
Manway Adaptor: Easy placement and sealing into tankers.

Gamajet 88: Positioning (2) two Gamajets to clean the hard to reach bulkheads.



Validation

Confirm the Gamajet is properly functioning within the tank with The Validator. State-of-the-art IFM Efector technology, with a ultra sanitary design, wash down safe, and easy to install.



OTHER ACCESSORIES INCLUDE:

Filters, Pressure Washers, Diaphragm Pumps, a deflector plate, and more.

UNMATCHED SERVICE 24 HOUR TURNAROUND

Service you can count on, from the company you trust.

Gamajets are designed for durability, periodic maintenance keeps the world's best cleaning machines performing at their peak. With standard preventative maintenance and proper care, your Gamajet will far outlast your tanks.

The entire Gamajet product line can be easily maintained in the field, no special tools required. Spare parts and customer support are readily available at all times, with a 24 hour turnaround on parts, repairs and new orders. You can conduct regular maintenance yourself with our detailed instructions, or have a Gamajet technician do it for you.

Our repair program includes:

- o A tear down of the machine
- o Ultrasonic cleaning
- o Detailed inspection, quotation, and a phone call with an explanation.
- o Reassembly
- o Hydraulic testing at customers operating conditions

ONE YEAR WARRANTY WITH ALL REPAIRS AND NEW MACHINES



Sustainability Through the Triple Bottom Line: People, Planet, Profit

PEOPLE

Gamajet machines allow for customers to ensure the utmost safety is taken when cleaning tanks through the elimination of confined space entry and the limiting of fall potential. Gamajet machines can be lowered into tanks with hazardous gases and environments that are potentially fatal to employees. When a Gamajet is implemented the dangers involved in such activities are nearly eliminated, allowing for safer work environments and peace of mind – priceless.

PLANET

Gamajet machines allow for customers to obtain the sustainable goals designed to protect our world. Through tank cleaning optimization, customers experience water savings nearing 80% and energy savings averaging around 85%. As a result greenhouse emissions and the overall impact on our environment is significantly reduced. Tank cleaning is typically the number one culprit in water waste. Many customers have obtained their company wide water savings goals through this simple implementation.

PROFIT

Gamajet machines allow for significant savings of expenditures such as time, chemicals and other operating costs. In addition, the significant savings in time allow for an increase in production and a recovery in revenue resulting in an honest profit. As a result, customers can maintain the former objectives of positively impacting the community and decreasing the negative impact on the environment in perfect harmony with the final bottom line.



WATER & CHEMICALS

92% Less Water & Chemicals
88% Less Time
\$112K Saved on Water Per Year

Columbia, MO (US)

Tank Type: 4 Ribbon Blenders
Tank Residue: Processed Meats
Current Procedure: Tanks are filled with water and agitated, followed by manual cleaning, totalling 4 hours per tank, per day.

Tank Cleaning Downtown:
 5,840 hours per year
Water Usage:
 26,280,000 gallons per year

Solution: Gamajet steam operated pump powering 5 directional Gamajet V's operating at 15 gpm (per machine). Cleaning includes a 5 minute pre-rinse, 10 minute wash and a final 5 minute rinse, totaling 20 minutes per tank.

Tank Cleaning Downtown:
 486 hours per year
Water Usage:
 2,190,000 gallons per year

Savings in Water Per Year
 24,090,000 gallons: \$112,000
 (\$.00469 per Gal)

ENERGY

96% Less Water & Chemicals
81% Less Time
280,000 Less kwh Per Year

Sunshine, Victoria (AU)

Tank Type: Reactors & Storage Tanks
Tank Residue: Variety of Chemicals
Current Procedure: Tanks are filled with a total of 5,800 gallons of hot water and caustic for 4 hours, 4 times per week.

Tank Cleaning Downtown:
 832 hours per year
Water Usage:
 1,206,400 gallons per year

Solution: Gamajet CIP system, powering 1 Gamajet VIII operating at 75 gpm. Cleaning includes a 8 minute closed loop wash per tank, averaging 200 gallons of hot water for 45 minutes, 4 times per week.

Tank Cleaning Downtown:
 156 hours per year
Water Usage:
 41,600 gallons per year

Savings in Gas Per Year
 280k kwh: \$27,780 (\$.10 per kwh)
Reduction in Greenhouse Gases
 Nearly 908,000 black balloons

REVENUE RECOVERY

51% Less Water & Chemicals
69% Less Time
\$9.96 Mil. in Recovered Revenue

Somerset, NJ

Tank Type: 8 Process Vessels
Tank Residue: Cosmetic Products
Current Procedure: Tanks are cleaned daily with 3 spray balls for 1.5 hours, with a total of 14,400 gallons of hot water and caustic per day.

Tank Cleaning Downtown:
 4,380 hours per year
Water Usage:
 5,253,000 gallons per year

Solution: 2 Gamajet Aseptic VI's operating at 20 gpm (per machine). Cleaning includes a 7 minute pre-rinse, 14 minute recirculated wash with caustic and a final 7 minute rinse, totaling 28 minutes per tank, per day.

Tank Cleaning Downtown:
 1362 hours per year
Water Usage:
 2,569,600 gallons per year

Cost per Hour Tank Downtime
 \$3300.00 (Supplied by company)
Revenue Recovered
 \$9,959,400

TIME & PRODUCTIVITY

85% Less Water & Chemicals
90% Less Time
65% Increased Productivity

Mason, OH (US)

Tank Type: 12 Process Vessels
Tank Residue: Burnt on Sauces
Current Procedure: 4 production lines with 3 tanks each are cleaned with spray balls for 2.5 hours. 1,460 batches per year, 6 hours per batch.

Tank Cleaning Downtown:
 3650 hours per year
Water Usage:
 3,504,000 gallons per year

Solution: Gamajet Aseptic VI operating at 15 gpm. Cleaning includes a 2 minute pre-rinse, 5 minute recirculate wash and a final 2 minute rinse, totaling 9 minutes per tank. 2,413 batches per year, 3.63 hours per batch.

Tank Cleaning Downtown:
 362 hours per year
Water Usage:
 525,420 gallons per year

Savings in Total Batch Time
 2.37 hours
Increase in Productivity
 953 batches (65%)



Servicing Every Industry with Quality Products and Unsurpassed Customer Service

- | | | |
|--------------------|---------------------|--------------------|
| Food and Beverage | Brewing | Pulp and Paper |
| Personal Care | Distilling | Chemical |
| Pharmaceutical | Petroleum | Marine |
| Cosmetic | Ethanol and Grain | Bio-Chemical |
| Wine | Transportation | Utility/Municipal |
| Dairy | Portable Sanitation | Paint and Coatings |
| Bio-Pharmaceutical | Wastewater | Biofuel |

3 out of 4 of the leading processing manufacturers use and trust Gamajet as *the solution* to their tank cleaning applications.

What are you waiting for? **Get your Gamajet today.**

Start, cleaning your entire tank, every time.
Stop wasting time and water.
Stop sending *your crew* into your tanks.

**GO WITH THE LEADER IN TANK
CLEANING TECHNOLOGY.**

Visit www.Gamajet.com for more information.



THE WORLD LEADER IN TANK CLEANING TECHNOLOGY

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