

# GAMAJET<sup>®</sup>

CLEANING SYSTEMS, INC.

## Product Data Gamajet IV "GT" Tank Cleaning Machines



Developed and upgraded from the proven Gamajet III. **Hydraulically driven rotary tank cleaning machine** revolves 360° in both horizontal and vertical planes with synchronized solid jets providing a tight and thorough scouring pattern covering all interior tank surfaces in one complete cycle.

A choice of twelve nozzle sizes and hydraulic turbines and stators, including two gear systems, offer a **wide operating range of flow rates, nozzle rotation speeds, and wash cycles**. Capable of high concentration chemical recirculation cleaning or high pressure – low volume water jet scrubbing in fixed CIP automated systems.

### Operating Range:

Pressure: ..... 20 to 500 psi (1.4 to 34.0 bar) for standard model  
..... 20 to 700+ psi (47.6 bar) for high pressure model  
Temperature: ..... -60° to 250°F (-29° to 121°C)  
Flow Rate: ..... 30 to 320 gpm (7 to 80 tons/hr) for standard model  
Wash Cycle Time: ..... 3 to 30 Minutes  
Nozzle Rotation Speed: 2 to 20 rpm

### Overall Dimensions:

Height: ..... 12.2 in. (31.0 cm)  
Diameter: ..... 4.2 in. (10.7 cm)  
Width: ..... 6.1 in. (15.5 cm) including nozzle housing

### Clearance Dimensions:

Pin Drive: ..... Dual: 12.7 in (32.3 cm) Triple: 11.5 in (29.2 cm)  
Optional Clutch Drive: ... Dual: 6.7 in (17.0 cm) Triple: 9.6 in (24.4 cm)

### Weight:

Dual: 28 lb (12.7 kg) Triple: 29 lb. (13.2 kg)

### Dual Inlet Connection:

Standard: ..... 2 in. NPT female and 2 1/2 in. quick disconnect male  
Optional: ..... 2 in. NPT female and 2 1/2 in. NST (NH) hose thread male

### Construction / Design:

**New Features:** Streamlined turbine and internal flow passages, including a patented porting design that significantly improves efficiency.  
**Castings:** Investment cast parts of type 316 stainless steel insure consistent strength and quality for higher pressure ratings

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## Gamajet IV "GT"

- Shafts:** Rotor shaft and gearbox shafts are made of hardened stainless steel. For increased wear resistance, the rotor shaft is supplied with a plasma-sprayed ceramic or other protective coating. The rotor shaft is also fitted with a polished carbide thrust washer for added durability.
- Bearings, Shaft:** Rotor shaft bearings are tungsten carbide. Gearbox shaft bearings in flo-thru (oilless) gearboxes are PTFE or other non-cupric materials. Standard bearings in oil-lubricated gearboxes are Oilite bronze with nonmetallic bearings available as an option.
- Bearings, Waterside:** Tee and nozzle housing bearings are made of carbon fiber reinforced polyphenylene sulfide with PTFE added as a lubricant. Nozzle housing bearings are now pin-located for positive indexing and ease of assembly.
- Bearings, Cups:** Main body castings are protected against wear by replaceable stainless steel cups installed at all bearing locations.
- Seals, Dynamic:** Rotary shaft and housing seals are spring-loaded reinforced PTFE for extra long wear and protection against leakage, abrasion damage, and deposit build-up.
- Seals, Static:** O-ring materials are selected for each application. Viton is standard. Other available materials include Kalrez® and EPDM. Others can be supplied on order.
- Drive Gears:** A new gear system of improved design and construction is incorporated in Gamajet IV "GT" models for increased wear life. All gears are manufactured entirely of selected stainless steel alloys and the two bottom gears are fitted with long-life tungsten carbide thrust washers. Gear bushings compounded of PTFE or ETFE are standard in flo-thru oilless gearboxes and are optional in sealed lubricated gearboxes where Oilite bronze is standard.
- Lubrication, Gearbox:**  
 Sealed: Oil-lubricated machines have a sealed gearbox filled with FDA approved oil. Any heavy duty gear oil, high or low temperature lubricant or grease may be used.  
 Flo-thru: The flo-thru gearbox is lubricated by the cleaning solution. With this option maintenance of gearbox seals is eliminated.
- Lubrication, Waterside:** A controlled amount of the cleaning solution is permitted to flow through the tee and nozzle housing bearings for lubrication and cooling. This flow also aids in removing solid particles from between the bearings and cups to minimize abrasion damage to these parts.
- Self-Cleaning Provisions:** In all Gamajet models, a low-pressure bypass system keeps the bevel gears and other internal parts flushed free of debris that could interfere with proper functioning.  
 Self-cleaning CIP models are additionally equipped with the following:
1. A small auxiliary nozzle which washes the exterior of the machine.
  2. Internal passages to provide direct high-pressure rinsing of any areas where build-up of deposits could allow bacterial growth.
  3. Holes to allow complete drainage of any cleaning solution remaining in the machine at the end of the cleaning cycle that could cause product contamination. The gearbox of the flo-thru model also drains completely when the machine is not in use.
- Nozzles:** Redesigned dual and triple nozzle housings with centerline nozzle mounting on the Gamajet IV "GT" eliminate unbalanced reaction forces. Interchangeable nozzles are now available in twelve sizes from 5/8 in. (15.9mm) down to .177 in. (4.5 mm). Nozzle sizes of 1/4 in. and smaller are offered with new tungsten carbide inserts for improved jet wear at high pressures.
- Operating & Maintenance:** Complete operating and maintenance procedures are covered in a detailed instruction manual furnished with all machines. Ready availability of spare parts or kits and ease of maintenance on-site minimizes or eliminates the need for factory repairs. Prompt factory overhaul or repair service is always available. Replacement parts are stocked year-round. Special 24-48 hour delivery upon request at no extra charge.
- Warranty:** Gamajets are warranted for eighteen months from the date of shipment against any defects in workmanship or materials. Normal maintenance parts such as O-rings, bearings, bushings, and seals are not included under this warranty, nor is damage caused by dropping, use of destructively corrosive fluids, or other abuse. This warranty shall not apply to any malfunction resulting from use of non-Gamajet replacement parts purchased from any source other than Gamajet or an authorized Gamajet distributor. **For full details, see Gamajet "Terms and Conditions of Sale".**