



A Decontamination Cleaning System specifically designed to remove the bio-burden of your Laparoscopic Surgical Instruments.

# Laparoscopic Washer



## Tempest™ Laparoscopic Washer

The Tempest™ Laparoscopic Washer is a fully automated, single operator cleaning system designed for the Central Processing Department of Hospitals. It was designed from the ground up with laparoscopic instruments in mind.

The tremendous growth in laparoscopic surgery has revealed the shortcomings of the traditional ultrasonic tank cleaning of these instruments. Due to the complexity of these instruments which are hollow, and the pressurized nature of the surgical procedures we found that while the instruments may look clean on the outer surfaces, that biological fluids such as blood and fatty tissue can congeal and become encrusted in the inner diameters of the long lumen areas, even after sterilization.

The Tempest™ Laparoscopic Washer brings an unprecedented level of clean to these surgical instruments.

With the ability to process up to 36 tools in a 26 minute cycle time, the Tempest™ Laparoscopic Washer will greatly increase the throughput and provide unmatched levels of consistent, cleanliness results.

The newest member to Midbrook's Tempest™ line of decontamination equipment is the **Laparoscopic Washer**.

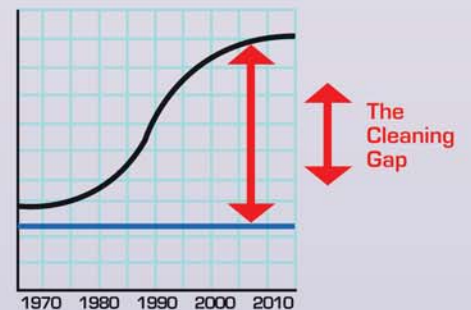


This equipment is specifically designed for the decontamination and removal of biomass from the inside and outside of these difficult to clean instruments.

This system will deliver a consistent level of cleanliness at a rate of 36 tools per every 26 minute cycle.

### Medical Cleaning Technology

- Cleaning Methodology
- Tool Complexity





### The Tempest™ Laparoscopic Washer is specifically designed for:

- Central Processing Departments.
- Sterile Processing
- Small enough to use in Post-Surgery Centers
- Portability allows for use at satellite centers.
- Veterinary & Animal Testing locations.

Midbrook is ISO-9001-2000 certified. All of Midbrook's products and services are designed and manufactured to this newest industrial quality standard.

Over the last 30 years Midbrook has become the recognized leader in industrial, automotive, and aerospace cleaning systems. We now bring that expertise into the Medical world with the Tempest™ line of Decontamination Equipment.

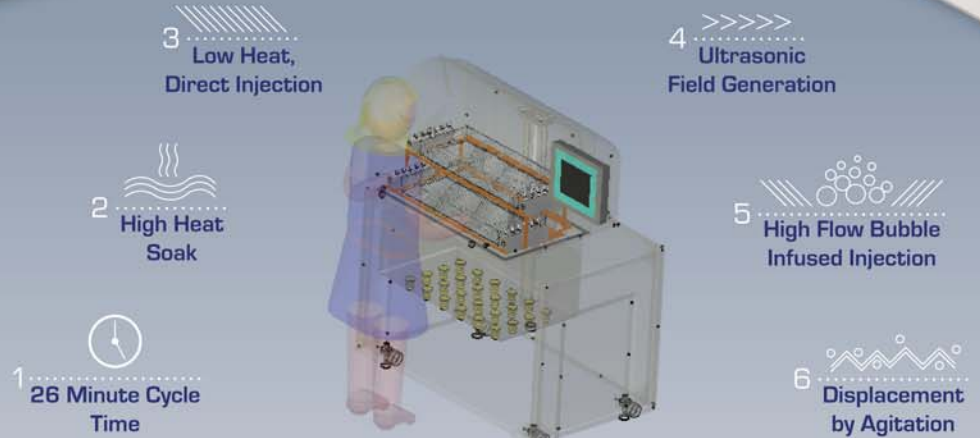


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**A minority owned enterprise**



With instrument wash feature, the cart wash floor space becomes more valuable

### Trust the Tempest™ Laparoscopic Washer to routinely and consistently remove this bio-burden using the following features:

- Process parameters allow for the consistent removal of biomass and repeatable results each and every time.
- PLC user interface that allows for full scale customization of each individual cleaning process.
- A high heat cycle up to 180°F [standard washers typically only achieve 130°F]. This is a very necessary step in order to re-liquefy encrusted materials, as any solid matter can log jam in the removal process.
- The high heat mode greatly enhances the flash drying of tools at the end of the cycle
- State-of-the-art digital ultrasonic power and frequency generation greatly optimizes the cavitation effect and blasts away particles that conventional cleaning methods may miss. Digital frequency sweeping also reduces any standing wave pattern that may develop, increasing the effective ultrasonic coverage.
- An industrial pump capable of nearly double the standard psi to blast away encrusted lumen fluids.
- Direct porting to the instruments to flush the inner diameters
  - Low flow, high heat internal flush mode designed to re-liquefy encrusted matter for ease of removal.
  - High flow [controllable up to 50 PSI] mode with a 20 micron micro bubble infused stream which greatly increases the surface tension, enhancing the scrubbing feature of the inner diameter.
- Agitation Mode – tools placed in the washer are not left statically sitting in a basket. The basket oscillates at a preset time causing contaminants that would otherwise settle on to the parts to lift away and be removed by the system. The agitation necessity is clearly visible when you see the 'red cloud' appear and then disperse immediately following agitation.