

# FAQ: WHAT IS PULSATING?

HECAT began production of its first air operated pulsating flusher in 1982. Sometime later HECAT applied for and was awarded a patent for its air operated “Pulsating” process, using **no moving parts** (Patent #5615695).

This patented process utilizes dimensional control of air and liquid paths with differing flow velocities. This sends a slug of flushing fluid separated by a segment of compressed air followed by another slug of fluid and another segment of air, and so on. The compressed air acts like springs between the slugs of liquid, providing the physics properties required to hammer out trapped debris and effectively scrub deep into parallel paths, corners, and crevices. This process has a blasting and impacting effect on contaminants within a transmission oil cooler or A/C heat exchanger and is sometimes referred to as being similar to a “water hammer” effect or an industrial sized “water pick”.

The pulsating action is so effective and proven by years of success that it has become a standard feature that technicians require in a flusher. HECAT is flattered that our competitors are trying to copy our pulsating action with their pulsating and reversing features but don't be fooled, we are the manufacturer of the **Original Patented “Pulsator”**. Without the use of HECAT technology that accomplishes this process with **no moving parts**, they have resorted to using diaphragm pumps (simulated pulsing dissipates immediately), “banging” valves on and off, and stopping and starting pumps. This drives up the initial cost of their product and produces multiple wear and failure components over time, due to the constant and abusive cycling.

Heat exchanger cleaning requires more than just flowing a cleaner through it. Industry standard methods to clean heat exchangers in huge refineries, oil rigs, ships, heavy equipment, trucks, and automobiles require some form of agitation. Lubricating oil systems are designed for smooth linear flow without cavitations or vibration and therefore will require some turbulence in order to provide effective cleaning. There is ultrasonic, vibration, and pulse technologies being used worldwide to accomplish this process effectively.

HECAT flushers have been so successful because internal heat exchanger cleaning equipment requires three principles to get the job done and all three are incorporated into every model we make. Equipment and processes lacking these principles such as a “pour in” and “spray can” products cannot get it done.

- Use of a capable chemical cleaner – ability to dissolve waste oils, varnishes, sludge, & other residues.
- Strong agitation action (“Pulsating”) – ability to penetrate and loosen sediment and trapped debris.
- Blasting flow velocity - capable of carrying away the now loosened debris.

HECAT flushers are economical, reliable, effective, and designed to produce a quick return on investment and years of trouble free service and profits. Today we produce multiple models so you can select the HECAT pulsating flusher that best fits your volume use needs and budget.

We are so confident in the durability and quality of our products that we are now offering a **Lifetime Warranty** with exclusive use of our environmentally sound **Safe-Flush** cleaning chemicals.

