Listed on the U.S. National Security Agency's Evaluated Products List (NSA EPL-Degausser) and complies with DoD requirements for destroying classified information on magnetic media.

Proton T-4 Hard Drive Degausser w/Internal Gaussmeter

Produces a bi-directional field that provides a 20,000 Gauss positive field and a 20,000 Gauss negative field. The Proton T-4 Degausser achieves this by using unique, patented "Reverse Polarity" technology - this creates the HIGHEST flux field of any degausser available! Other degaussers may have EITHER a positive or negative pulse but they do not possess both. The Proton T-4 Degausser will degauss the highest coercivity media available today and is projected to sanitize future media coercivities for many years to come.

Specifications

Cycle Time:	Continuous
Duty Cycle:	45 - 60 seconds
Power:	**Dual Voltage** - Automatically converts between 110V and 220V; 60/50 Hz; single phase
Media Size:	Accommodates all magnetic media within 1" x 6" x 4.3" (2.5 cm x 15 cm x 11 cm)
Dimensions:	19"H x 10"W x 26"D (48 cm x 25 cm x 66 cm)
Weight:	128 lbs. (58 kg)
Altitude:	Operates at up to 25,000 feet (7,620 meters)
Field Strength:	At least 20,000 Gauss positive (+2 Tesla) and at least 20,000 Gauss negative (-2 Tesla) per cycle

Features

- Listed on the National Security Agency's Evaluated Products List (NSA EPL-Degausser) and complies with DoD requirements for destroying **TOP SECRET** and classified information on magnetic media.
- Internal gaussmeter guarantees consistent performance by reporting the magnetic field strength of every cycle numerically on a blue LCD display.
- **Patented "Reverse Polarity" Electro Magnetic Pulse (EMP) technology produces two pulses per cycle, one positive and one negative.**
- Fully automatic operation - no drawer to open and close. Simply insert media into top slot and push start button.
- Lightweight and portable design enables tabletop or floor operation.
- Has digital cycle counter and status display.
- CESG Approved (UK) and CE Approved (EU).
- **Manufactured in the USA in ISO 9001 certified facilities**.

Shown with optional deployment case with wheels

Benefits

- Permanent destruction of confidential and classified data.
- Compliance with recognized standards and regulations, including FACTA, HIPAA, PCI, GLB, DPA, etc.
- Sanitizes both Longitudinal and Perpendicular recorded media and is projected to reliably degauss future media with increased coercivities and higher Oersteds (Oe).
- Stores energy from previous cycles to reduce subsequent cycle times and save energy.
- Options include: 12 Volt battery, deployment case with wheels, custom dust cover, and more

Made in the USA

Tel: (+361) 246-8000 **Fax:** (+361) 246-8006 **Email:** info@mediavault.hu
Web: www.mediavault.hu **Webshop:** www.turtlecase.eu

T-4 REVERSE POLARITY

We know that degaussing works for data stored magnetically on hard disk drives (see Figure 1) but sometimes a magnetic field in one direction may not be strong enough to degauss a high density hard disk and a reverse field is necessary. The T-4 uses patented technology to automatically create a uniform reverse field.

Magnetic media (hard disk drive, tape, etc.) does not respond differently to pulses in the same direction but it undoubtedly responds differently to pulses in different directions (positive/ negative), which creates a field spread.

+ - The use of a positive and negative pulse creates a higher field saturation, which means a more thorough and stronger degaussing operation.

If you examine National Security Agency (NSA) documents, you will see that certain degaussers require the magnetic media to be physically reversed (flipped over) and a second cycle performed with the hard disk or tape upside down. This is because they do not produce a strong enough magnetic field.

With the T-4's patented technology, a second cycle will never be needed because it automatically produces a reverse field. It will also not be outdated as hard drive technology continues to advance.

The Magnetic Hysteresis Plot (see Figure 1) explains the reason for bi-directional erasure. The vertical centerline is "zero," so while single direction erasure may get most of the recorded signal, some remains in the opposite polarity for a number of reasons. Only a fully reversed field can erase securely.

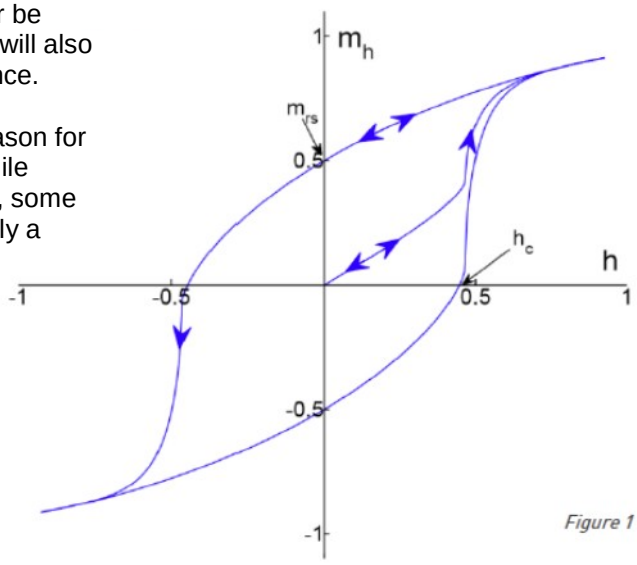

Figure 1

How is data recorded on a hard disk drive?

When an external magnetic field is applied to a ferromagnet, such as iron, the atomic dipoles align themselves with it. Even when the field is removed, part of the alignment will be retained: the material has become magnetized. Once magnetized, the magnet will stay magnetized indefinitely. This is the effect that provides the element of memory in a hard disk drive. To demagnetize it requires a magnetic field in the opposite direction.

A plot of magnetization m against magnetic field h calculated using a theoretical model. Starting at the origin, the upward curve is the initial magnetization curve. The downward curve after saturation, along with the lower return curve, form the main loop. The intercepts hc and mrs are the coercivity and saturation remanence. When an external magnetic field is applied to a ferromagnet such as iron, the atomic dipoles align themselves with it. Even when the field is removed, part of the alignment will be retained: the material has become magnetized. Once magnetized, the magnet will stay magnetized indefinitely. To demagnetize it requires heat or a magnetic field in the opposite direction. This is the effect that provides the element of memory in a hard disk drive. The relationship between field strength H and magnetization M is not linear in such materials. If a magnet is demagnetized (H=M=0) and the relationship between H and M is plotted for increasing levels of field strength, M follows the initial magnetization curve. This curve increases rapidly at first and then approaches an asymptote called magnetic saturation. If the magnetic field is now reduced monotonically, M follows a different curve. At zero field strength, the magnetization is offset from the origin by an amount called the remanence. If the H-M relationship is plotted for all strengths of applied magnetic field the result is a hysteresis loop called the main loop. The width of the middle section is twice the coercivity of the material.

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