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WALKER DEMAGNETIZERS

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**Eliminate Residual Magnetism
From Workpieces, Tables,
Drills, Cutters, Dies, Punches
and Hand Tools**

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WALKER DEMAGNETIZERS

for Every AC Application

Even when residual fields are small, magnetization in a machine shop can cause problems with mechanical equipment. For example, ferrous grit attracted by magnetized tools and dies can cause excessive wear, and magnetized parts in assembly operations may hang up in feed chutes and magazines.

The only answer to such problems is demagnetization, which is accomplished by subjecting a magnetized part to a strong reversing magnetic field to disarrange the magnetic particles so that the required residual magnetic field is obtained.

Walker demagnetizers are designed to negate the effect of residual buildup with units matched to the size and material of the workpiece and engineered with control circuits that can effectively erase the residual fields. Walker has the only compensated units available that provide increasing field strength with increases in workpiece volume.

Selecting the right Walker demagnetizing equipment for the application depends on the type of ferromagnetic material, the strength of the magnetic field, the size and shape of the piece, and the permissible level of residual magnetism.

Ferromagnetic materials are classified as either "hard" — difficult to magnetize and demagnetize — or "soft" — easily magnetized or demagnetized. Hard materials include alnico, cobalt, and tungsten steels. Soft materials are metals such as pure iron, nickel, silicon irons, and ferrites. Common structural materials such as stainless steel, carbon steel and chrome steel will be soft or hard depending on heat treatment and processing.

The residual field desired depends on the application. Job specifications usually spell out allowable levels. In many cases, 10 to 20 gauss is acceptable; in others, such as bearings and electrical components, even very small intensities will cause problems.

The size and shape of the demagnetizer depends on the shape of the part, as well as the degree of demagnetization required. It's important that it be no larger than required to do the job. Demagnetizing a small part in a large aperture will call for many times more power

than needed to do the same job with a smaller unit.

Small parts are sometimes demagnetized collectively by passing them through the demagnetizing field in a tray or tote pan. Care should be taken not to pile them on top of one another, since this can lead to inconsistent results.

After demagnetization, a Walker "Hall Effect" Gaussmeter should be used to check the results.

SELECTION CHART

WELDED PARTS	For large parts, use a portable pistol grip or flat plate demagnetizer for localized demagnetizing. For small parts, the aperture type may be more suitable.
LARGE OR IMMOVABLE PIECES	The portable pistol grip is particularly well suited for hardened plates, table ways, rods and bars.
BEARING COMPONENTS OR ASSEMBLIES	The flat plate or aperture type is recommended. Either type is often used with a conveyor.
TOOL ROOM USES	The flat plate type most often fits the purpose, and is commonly used to advantage with a conveyor on production lines.
SMALL COMPONENTS AFTER GRINDING	Here again, the flat plate type is the best choice, possibly with a conveyor.
BULK PACKED ITEMS	Packaged nails, screws, drills, etc., are easily handled by using a flat plate demagnetizer.



APERTURE TYPE DEMAGNETIZERS

Aperture Type Demagnetizers are widely used to demagnetize tools, cutters, small parts, bearing components, and assemblies. The item is simply passed through the aperture and then removed from the demagnetizing field. Care should be taken to make sure that the workpiece is well away from the demagnetizing field before the demagnetizer is switched off.

For production lines, a non-metallic chute may be used to slide the parts through the aperture.

Walker Aperture Type Demagnetizers are designed to operate on alternating current at 100% duty cycle and are also available as the only compensated units on the market, providing field strength which increases with work-piece volume. These units idle at their lowest current level, and increase the current flow and demagnetizing field when presented with a work piece. They are available in table top and floor stand models in a variety of aperture sizes.

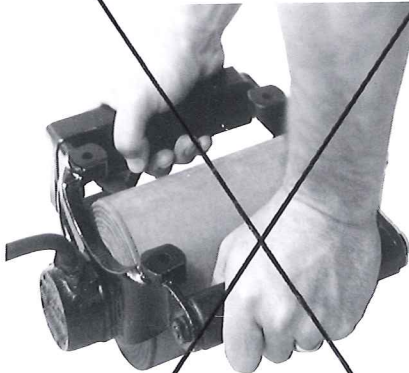
Aperture D.C. Demagnetizers also are available for demagnetizing large volume parts



such as engine blocks, and machine casting and die blocks. The D.C. Demagnetizer uses a series of pulses of alternating polarity and decreasing amplitude to accomplish demagnetizing.

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PORTABLE PISTOL GRIP DEMAGNETIZERS



Portable Pistol Grip Demagnetizers are especially useful for demagnetizing large work-pieces that are difficult or impossible to move, such as large components, hardened plates, bars, rods, and machine ways. This portable unit wipes away external magnetic poles that would otherwise attract metallic grit.

When inverted and mounted on a bench, it can also be used to demagnetize long bars by pulling them over the roller. The unit is activated with a trigger switch and operates at 115 VAC.

PLATE TYPE DEMAGNETIZERS



Plate Type Demagnetizers are ideal for toolroom use to demagnetize drills, cutters, ball and roller bearings, etc. The part is demagnetized by sliding it smoothly and slowly over the top of the plate, passing it clear of the demagnetizing field. The flat surface allows easy demagnetization of bulk packed nails, drills, screws, and welded parts.

Energized by a switch, the unit produces a field of high flux density. It plugs into a standard 115 VAC power source, and requires no accessory equipment.

Two standard plate sizes are available, 8" x 10" and 10" x 10".