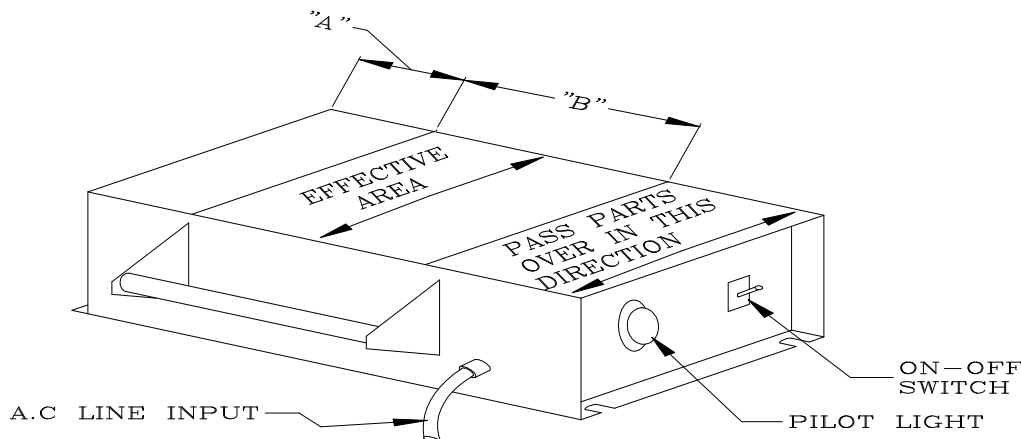


November 14, 2008

INSTRUCTIONS DM SERIES DEMAGNETIZERS



INSTALLATION:

Place the unit in the desired location. Fasten to the mounting surface with bolts suitable for the mounting holes and slots, which are provided in the mounting flanges. Do not permanently mount any ferrous items inside the demagnetizing field. Induction heating will result if any ferrous item is left in the field for an excessive time (this can be as little as 2-5 minutes). The DM series units are continuous duty at rated voltage 50/60 Hertz. 115 VAC units will be provided with a standard wall plug. Voltages over 125 VAC will be provided with a heavy-duty locking plug and receptacle. Demagnetizers may be integrated with the controls for conveyors or other processing equipment. A magnetic motor starter should be used to switch the AC supply line.

For demagnetizers over 125 VAC a fused disconnect switch should be inserted in the A.C. supply line for protection, in accordance with The National Electrical Code. Refer to the unit nameplate for voltage and amperage ratings. All wiring and devices should be rated appropriately.

SPECIFICATIONS & RECOMMENDED FUSING

MODEL	VOLTAGE (Single Phase)	FUSE	EFFECTIVE AREA	
			"A"	"B"
DM-3	115 VAC @ 0.5KVA	6 AMP	1 1/2"	3"
DM-4	115 VAC @ 1.0KVA	5 AMP	2"	5"
DM-4	230 VAC @ 1.0KVA	7 AMP	2"	5"
DM-4	*460 VAC @ 1.0KVA	4 AMP	2"	5"
DM-6	230 VAC @ 4.0KVA	25 AMP	2 3/16"	6 1/8"
DM-6	*460 VAC @ 4.0KVA	15 AMP	2 3/16"	6 1/8"
DM-7	230 VAC @ 11.0KVA	60 AMP	4"	10"
DM-7	*460 VAC @ 11.0KVA	30 AMP	4"	10"

**Units over 240 VAC, Do Not include switch or connector (plug).*

OPERATION:

Turn the Demagnetizer "ON". Pass the magnetized work piece completely over the Demagnetizer in the direction shown. Parts should be moved steadily into the demagnetizing field to the maximum field strength and then moved steadily out of the field. Standard time within the field is 2 - 30 seconds. Leaving the part to "soak" in the field will not demagnetize better and may re-magnetize part. Leaving the part in the field may cause the part to become hot. Never turn the demagnetizer off while the part is in the field, the part will become magnetized. Thicker pieces may have to be demagnetized on both sides. On large pieces the Demagnetizer may be passed over the work using the handles provided. The unit is constructed of materials capable of withstanding its own temperature rise when used at proper duty cycle operation. To minimize heat rise and reduce power consumption the unit should be turned off when not in use. There is no need to warm up the unit it is ready to use at the moment it is turned on. DM Series demagnetizers are 100% duty cycle and may be left on continuously.

If any installation or operation issues occur please contact our engineering staff. Be sure to have model and serial numbers available.



505 Elmwood

Troy, Michigan 48083-2755

Phone: (248) 588-5400

Fax: (248) 588-5710

TIPS FOR EFFECTIVE DEMAGNETIZING

The action of the release pulse of a magnet controller will demagnetize a workpiece only to the point where the part releases. A magnet controller is not intended to demagnetize a part to any given level. The part must be checked for magnetism with a gauss meter to determine if the level of magnetism needs to be reduced. Demagnetization must be performed separately by a demagnetizer.

Proper demagnetizing requires the part to be exposed to a steadily increasing and decreasing alternating field. The piece being demagnetized should pass completely through the demagnetizing field. In a loop type demagnetizer, the piece should pass completely through the opening of the demagnetizer. For a surface type demagnetizer, the part should pass completely over the center of the demagnetizer core. The strength of the demagnetizing field varies throughout the opening or across the surface area of the demagnetizer. Small work pieces should pass through the area where the strongest magnetic fields are present. Inserting the part into the field area and moving the part to where the strongest vibration is felt can determine this. Be sure that when the operator removes the part it is completely out of the magnetic field. To determine when the part is out of the field, slowly remove the part until it does not vibrate or hum any longer.

Most effective demagnetizing is achieved by passing one part at a time through the demagnetizing field. When demagnetizing assemblies, especially those composed of different grades of steel, or those with many internal parts, we recommend that the assembly be dismantled and each part demagnetized individually. This prevents the internal parts from being magnetically shielded. This shielding effect also comes into play when attempting to demagnetize multiple parts in a container. The operation may properly demagnetize parts at the periphery of the container but they will shield the parts near the center. In this case demagnetize the parts individually or in smaller quantities.

When demagnetizing long or rectangular work pieces, the operator should orient the longest dimension of the piece longitudinally through the demagnetizer aperture or magnetic field area. The proper orientation will provide the maximum magnetic saturation force.

Normal machining practices can induce 10-20 gauss into a low carbon steel part without the part ever contacting a magnet. A standard demagnetizer typically will demagnetize low carbon soft steel parts to a 2-10 gauss range. Alloy steels with high carbon and hardened steels are far more difficult to demagnetize and can be expected to retain more magnetism. A standard demagnetizer may reduce these parts to 5-20 gauss although some parts may have "hot spots" of 30-50 gauss. The shape of the part, size, and cross section thickness will also affect how well the part will demagnetize. A part cannot be demagnetized to zero gauss.

The acceptable standard for non-critical industrial applications is less than 10 gauss. Typical standards for critical applications specify less than 5 gauss. This critical standard would apply to parts such as bearing races, transmission parts, or valve bodies. Nothing can be demagnetized to zero gauss.

Magnetic material left in the demagnetizing field will induction heat.

Contact Magnetool Inc. if magnetization is a problem in your operation.