

# TA Seasoning Machine

## CAPACITY

Maximum Armature Weight	3,000 lbs. (1,360.8 kgs.)
Maximum Armature Diameter	28 in. (711.2 mm)
Maximum Armature Length over Bearings	55 in. (1397 mm)
Maximum Commutator Diameter	24 in. (609.6 mm)
Minimum Commutator Diameter	10 in. (254 mm)
Maximum Rotation Speed	4,000 RPM
Maximum Heat	200° C
Electrics	460 V, 3 Ph, 60 Hz

## DESCRIPTION

The Seasoning Machine will consist of a heavy-duty steel fabrication. There will be a base, support pedestals for the armature, and a drive motor. There will be a separate control console and a separate dust collector. The armature support pedestals will move on machined ways on the base. One will be a flat way and the other will be a V-way. One pedestal will be fixed to the bed. The other pedestal will move on a flat-machined way and a separate V-way. The pedestal will have slots in it and the ways will have regularly spaced boltholes so that the pedestal can be conveniently placed to suit the armature. The pedestals will be shaped to accept the armature bearing. A bolt-on cap will hold the armature's bearings firmly in place during the operation. The caps will allow for a bearing sensor to measure the bearing temperature. If the bearing temperature should exceed a preset limit, the machine will shut down. The machine includes an electric braking system. The seasoning machine will include a lift on guard. This will be a half-inch rolled steel guard with welded end plates. There will be locked down clamps at four points on the guard to secure it in position during seasoning.

## SEASONING SPECIFICATION

The heating oven will mount to the bed way. The oven will be powered by electric heat. It will properly enclose the commutator to provide an efficient transfer of heat. The oven will have insulated baffle plates, which will be cut to suit the armature diameter and length and allow minimal heat loss. The oven will enclose the commutator as far as necessary in order to maintain proper heating throughout the process. The oven will use resistant heating elements so that the heat produced is variable by the voltage in the element. The elements will operate on a 3 Phase voltage. The ovens will be designed for easy opening so that the armature can be quickly removed or installed. The oven will allow for a sensor to produce a constant reading of the commutator temperature. The control console will include a proportional heat controller to maintain the exact heat required throughout the process. The drive motor will directly couple to the armature. There will minimally be 15 HP DC or AC variable speed motor. The motor control will have the appropriate circuits to ensure constant steady speed of the armature during the entire process. There will be vibration switches mounted to the base and pedestal to sense the vibration in both planes of movement. If the vibration exceeds a preset limit, the machine will be shut off.

## CONTROLS

The controls will include an over-temperature switch to turn the machine off in the event the commutator exceeds the preset limit. The controls will include an automatic heat cycling system. With this control, the operator will set the desired seasoning temperature, the time at temperature, and the number of seasoning cycles. The machine will automatically fulfill the cycle requirement. The controls will include a strip chart recorder, which will record the temperature against time. The controls will have displays of the bearing temperature with preset safety limits. If preset limits are exceeded the machine will automatically shut down. There will be a potentiometer control to set the armature speed and a calibrated nameplate for the speed. There will also be a tachometer readout meter.

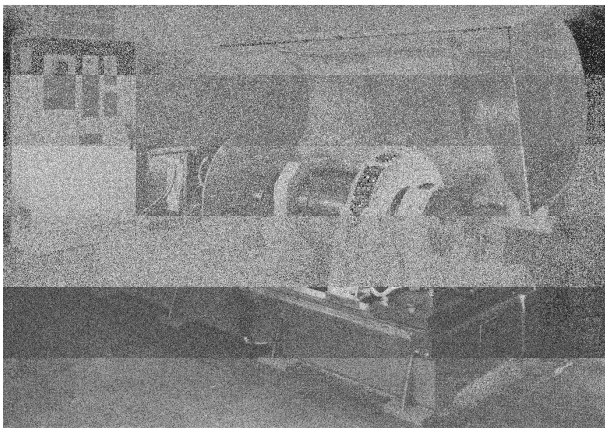
# TA Seasoning Machine

## Automatic Control, Smart Design, Precise Alignment

CAM's **TA Seasoning Machine** heats and rotates a heavy traction motor armature at high speeds. It enables a motor shop to simulate the motor's commutator operating conditions by heating and spinning the armature.

### Data Reporting

The temperature of each cycle is recorded so that a commutator seasoning history can be established for each armature. The machine's **Strip Chart Recorder** will provide your quality control team with the documentation they need for ISO 9000 purposes.



### Efficient, Safe Heating

TA Seasoners can be equipped with gas heating elements or electric tubular heating elements. Baffle Plates are used to contain the heat in the Commutator area for greater efficiency. The Baffle Plates are customized to fit each different sized armature. Safety interlock circuits prevent the application of heat unless the armature is rotating at a minimal speed to avoid creating hot spots in the surface of the Commutator.



### Designed for Safety

Just like the rest of CAM's equipment line, our TA Seasoning Machine has been designed to be safe to operate and easy to use.

- ❑ **Vibration sensors** monitor the spinning armature and are programmed to shut the machine down if the vibration rate exceeds a preset limit.
- ❑ Armature support **Bearings** are protected by **temperature sensors** that shut down the machine if they get too hot.
- ❑ **Support pedestals** are **line bored true** to each other so alignment is perfect.
- ❑ **Heavy-duty protective shield** covers the entire rotating armature to hold loose particles inside.
- ❑ A **heavy-duty machine bed** has the mass to stay stiff and accurate. Machined V- way and Flat-way ensure the alignment of the bearing pedestals.
- ❑ **Programmable Automatic Cycle Controls** allow you to produce the same cycle conditions every time. And, the **proportional heat control** will ensure that you do not overheat the commutator.
- ❑ **Variable speed drive** is controlled by a PLC with a drive tachometer.
- ❑ **Hydraulically opened guard** saves time. It is interlocked to the drive for safety.



TEL: (717) 637-5988 FAX: (717) 637-9329  
215 Philadelphia Street, Hanover, PA 17331 USA  
caminnovation.com ■ custom-taping-machines.com

## The Market's Choice – Nobody Sells More Seasoning Machines than CAM

Put our expertise to work in your shop and start realizing the economic, practical and proven value of a CAM Seasoning Machine today!