



Vibration Control Technology  
**TOKKYOKIKI**

# Active Magnetic Field Cancellor **AMC-332**



**TOKKYOKIKI**

# High Performance Active Magnetic Field Canceller controlling magnetic field fluctuations

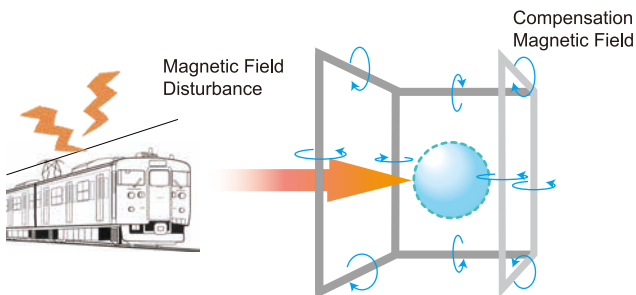
# AMC-332

## Basic Principle of Active Magnetic Field Canceller

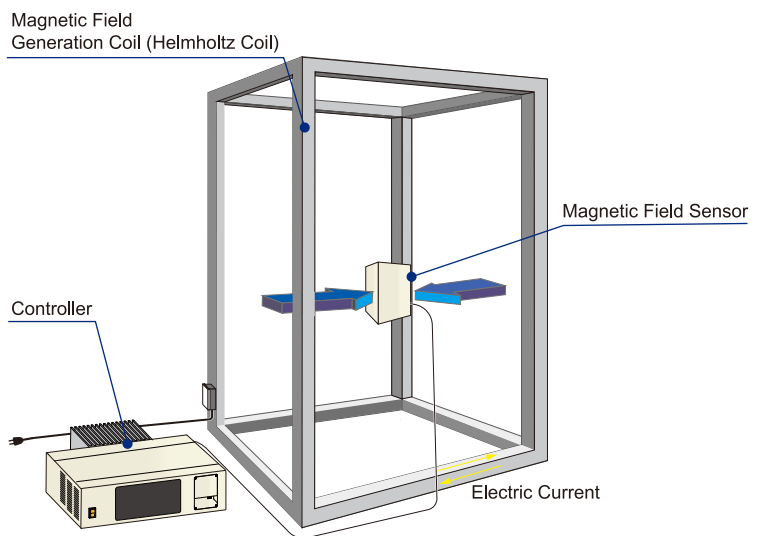
The active magnetic field canceller system "AMC-332" outputs a compensation magnetic field (magnetic field of opposite phase) controlled by the controller from a Helmholtz coil in response to disturbance magnetic fields detected by the magnetic field sensor.

By this operation, "AMC-332" cancels magnetic fields disturbance and stabilizes the magnetic field inside the device, helping to improve the images of electron microscopes and the accuracy of electron beam processing equipment.

### Principle of Active Magnetic Field Canceller

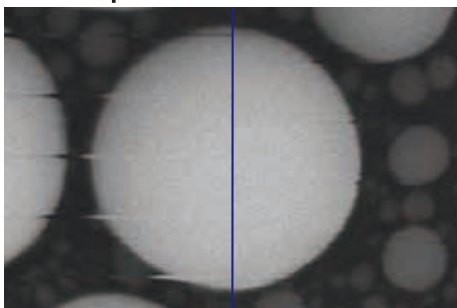


### System Configuration of Magnetic Field Canceller



## SEM Screen Improvement

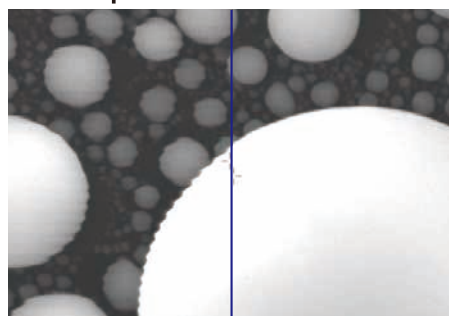
### DC Component



Control OFF

Control ON

### AC Component



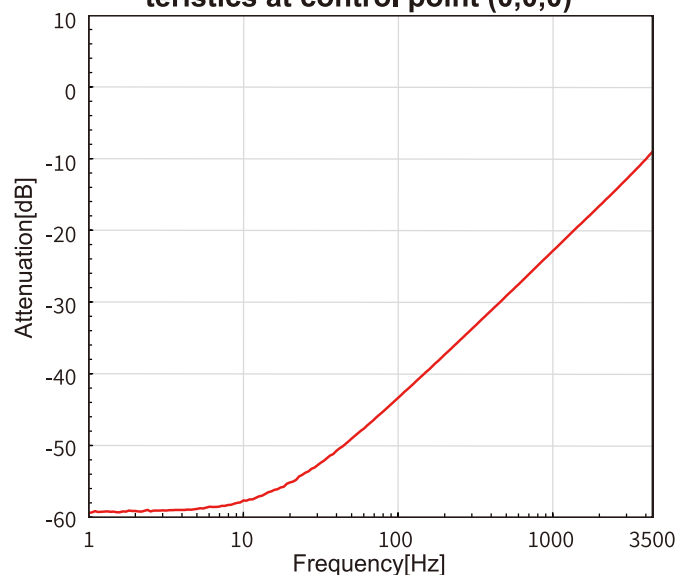
Control OFF

Control ON

## Attenuation Performance

Supports magnetic field fluctuations over the wide frequency range from quasi-DC to 3.5 kHz.  
Achieves magnetic field attenuation of maximum -60 dB.

### Frequency attenuation characteristics at control point (0,0,0)



Measurement Condition

Evaluation point coordinates : Cage Center (0, 0, 0)

Control Coil (Cage): 1000(W)×1000(D)×2000(H)mm

# Realize optimal environment without PC

## All-in-one design not requiring PC

AMC-332 is an independent system, and all functions can be used without separate device such as PC.

## Touch panel for easier operability

Touch panel is used as user interface, achieving both intuitive operation and functionality.

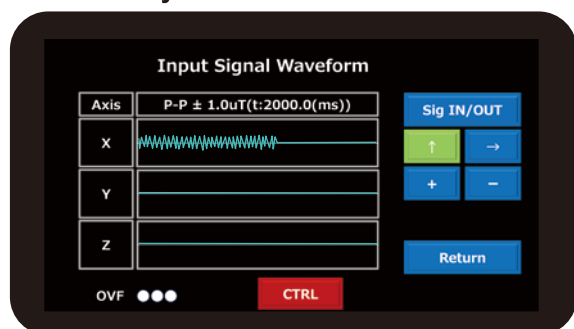
## Equipped with auto-tuning function

Equipped with auto-tuning function that automatically adjusts the controller to adapt the installation environment. The optimal magnetic field environment can be achieved with simple operation just by pressing one button.

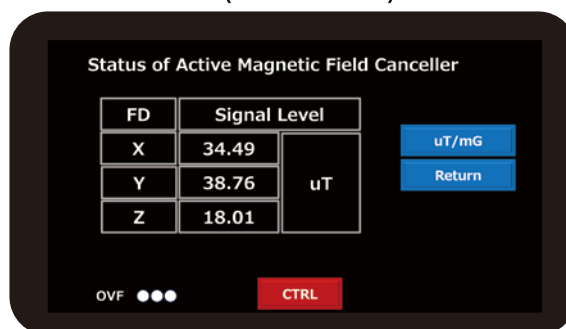
## Confirm the fluctuating magnetic field on site

The touch panel allows the operator to check the magnetic field by selecting from two display methods: time history waveform and numerical value (Tesla/Gauss).

### Time History Waveform



### Numerical Value (Tesla/Gauss)



## Equipped with magnetic field applying function

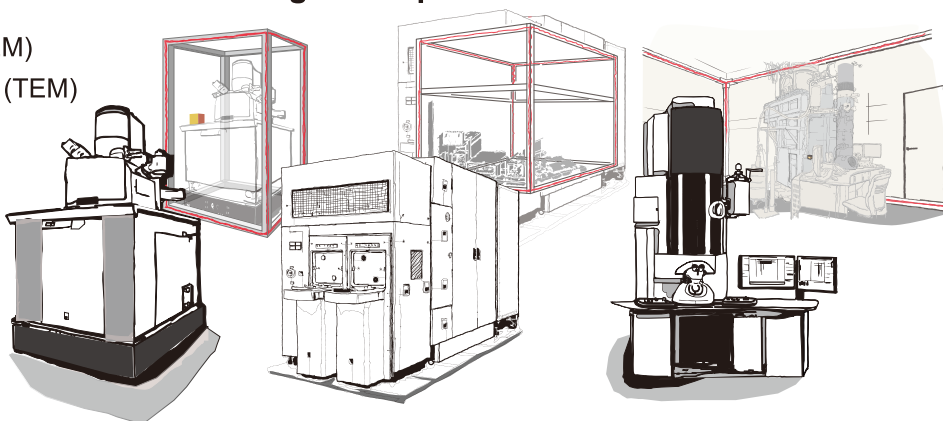
A magnetic field can be applied, enabling various evaluations.

# Wide variety of options to meet required specifications and needs

## Application

- Scanning Electron Microscope (SEM)
- Transmission Electron Microscope (TEM)
- Focused Ion Beam (FIB)
- Critical Dimension SEM (CD-SEM)
- Electron Beam Lithography (EBL)
- Mass Spectrometry (MS)

## Installation image examples



Outer frame  
built-in type

Tool enclosure  
built-in type

Room wall  
installation type

# AMC-332 Specification

## ■System Specification

Model	AMC-332
Main Configuration	Controller
	Magnetic Field Sensor
	Magnetic Field Generation Coil
Control Method	3-axis control (X, Y, Z direction) Independent feedback control for each axis
Control Magnetic Field	$\pm 25\mu\text{T}$ (In case of 2m square)
Control Frequency	Quasi DC ~ 3.5kHz

## ■Controller

Model	AJ-100
Input Channel	Magnetic Field Sensor 3ch/3 axis (Option Dual Sensor)
Output Channel	Output Coil 3ch/3axis
Display	Touch Panel
USB Connector	1ch (for Mouse)
Power Supply	AC100-240V 50/60Hz
Dimension	430 (W) x 300 (D) x 132 (H) mm
Weight	7.5kg

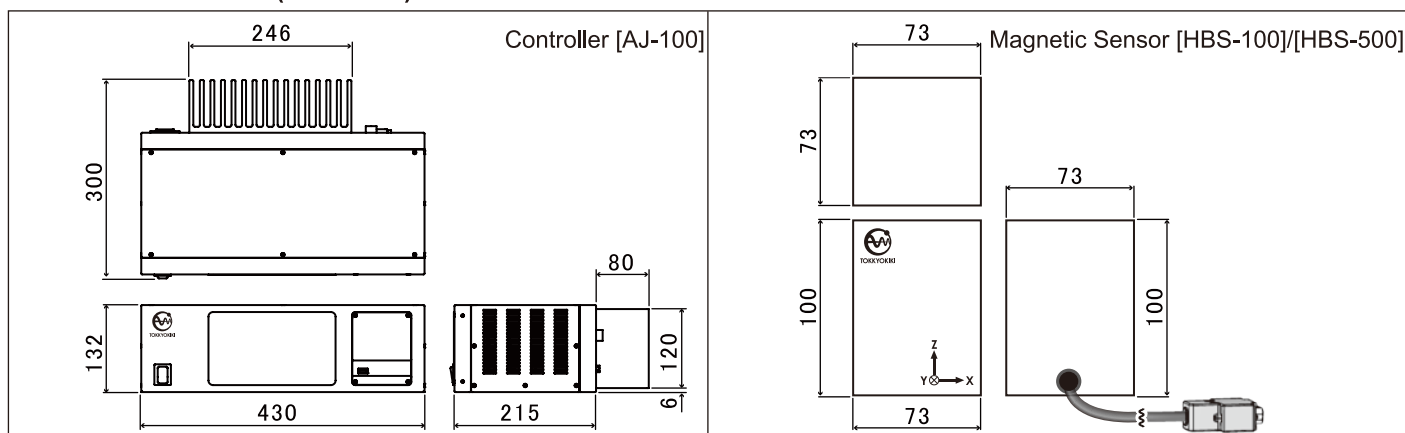
## ■Magnetic Field Sensor

Model	HBS-100 (Option HBS-500)
Frequency Band	DC~10kHz
Measurement Range	$\pm 100\mu\text{T}$ ( $\pm 500\mu\text{T}$ )
Dimension	73 (W) x 73 (D) x 100 (H) mm
Weight	420g

## ■Magnetic Field Generation Coil

Specification	3axis Helmholtz Coil
Output Current	$\pm 2\text{A}$ Max

## ■Outline Dimension (unit : mm)



[Accessories] Terminal Block, Power Cable (2m), Sensor Cable (5m), OUTPUT Cable (5m)

[ Option ] Rack, Sensor Fixing Bracket, Coil Frame, Sensor Cable (10m), OUTPUT Cable (10m)



Tkk-AJ-100



**The caution for safety**

Please read the Instruction Manuals carefully before use.

This catalogue is for the product as of Jun.2025. The specification may be modified without notice.



Vibration Control Technology

**TOKKYOKIKI**

Tokyo Office 2-5-15, Higashi-Kanda, Chiyoda-ku, Tokyo, 101-0031, Japan  
Tel: (+81) 3 - 6831 - 0011 Fax: (+81) 3 - 6831 - 0008

Head Office 10-133, Minami-Hatsushima-Cho, Amagasaki City, Hyogo, 660-0833, Japan  
Tel: (+81) 6 - 6487 - 3939 Fax: (+81) 6 - 6487 - 3947

As for the precision vibration isolation products, welcome to Tokkyokiki Corporation, the reliable, well experienced corporation of great achievements. <https://www.tokkyokiki.co.jp/en/>

Cat No.25.06.06EN