

Digitized Automation for a Changing World

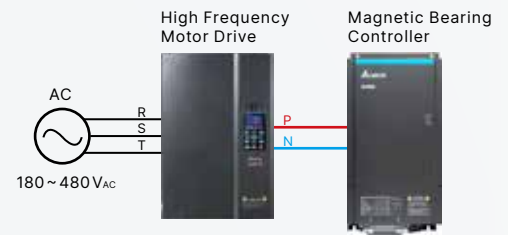
Delta Magnetic Bearing Controller AMBD Series



- High-speed solution sets the trend for fluid machines, with higher revolutions (rpm) providing higher flow and pressure
- Less mechanical friction loss and vibration with magnetic bearing control; suitable for high speed applications
- Extends equipment lifespan and enhances reliability
- Direct-drive mechanism eliminates gearbox, reduces footprint requirement, and increases system efficiency
- Oil-free design lowers maintenance costs and expands the application field

Wide Range of Input Voltage

- Design with wide range of 230 / 460V AC terminals, suitable for variable systems
- Lower stock level



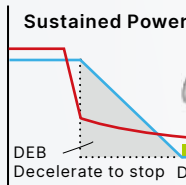
Magnetic Bearing Controller AMBD



Photo is for reference only

Reduces Total Cost of Ownership

- No need for extra UPS in case of power outage, built-in Deceleration Energy Backup (DEB) function in the drive regenerates power from motors to control deceleration and maglev bearing when power blink or failure



5 Independent Maglev Bearing Control

- 4 radial and 1 axial maglev bearing control provides smooth rotation and decrease vibration
- Axial clearance checking detection avoids motor shaft bumping due to high temperature stretching

Position Sensor—
Electromagnet—
High Speed Motor
Rotor

High Precision Magnetic Levitation Control

- Compliant with ISO 14839-2-4 Zone A, the rotor movement is less than 30% of max. movement tolerance



Comprehensive Motor Protection

- Supports 6 sets of thermal sensors (PT100 / PT1000) for monitoring, each warning level can be adjusted by parameter settings



Maximum 3 kW Output Power Rating of Magnetic Controller

- Supports the magnetic bearing of 50 to 500kW motors, flexible for variable conditions

Applications

Maglev Centrifugal Chiller

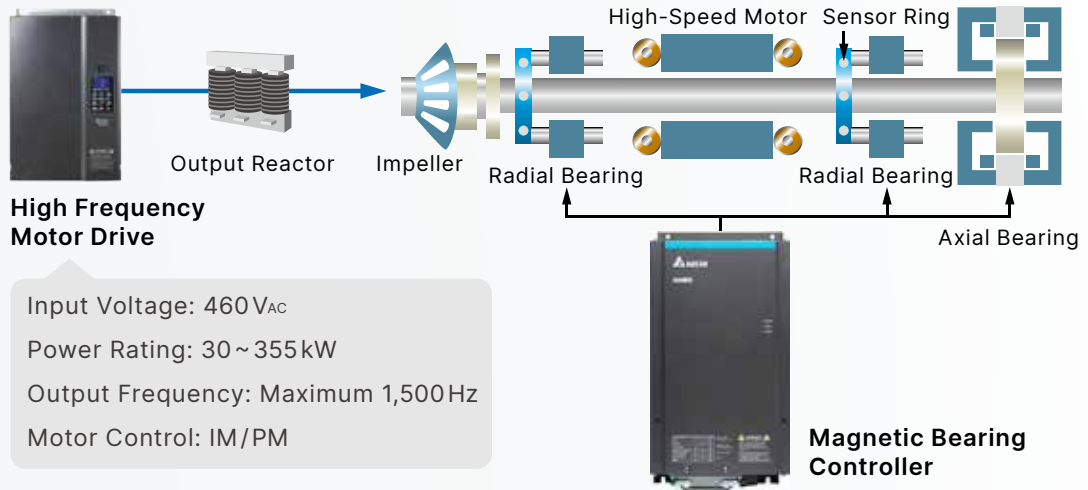


Maglev High-Speed Blower



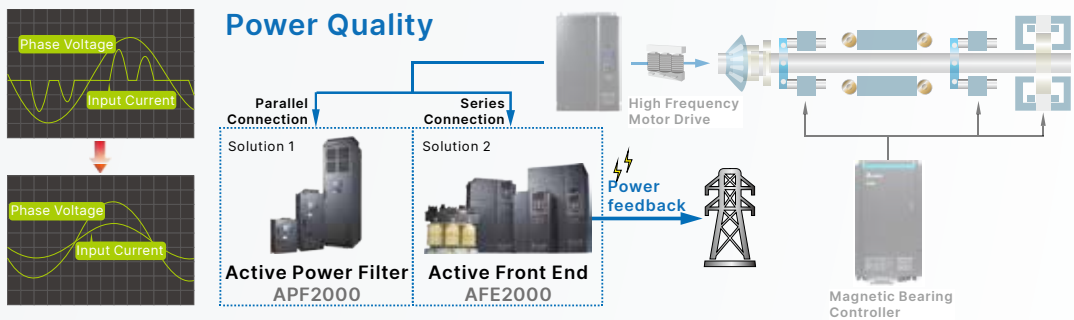
One-Stop High-Speed Fluid Machinery Solution Integrates Delta's High Speed Drive C2000-HS and Output Reactors

- Output frequency is up to 1,500 Hz to in line with world trends for fluid machinery
- Reduces current ripple in motors to prevent overheating



Integrates Delta's Power Quality Solution to Compensate Reactive Power and Achieve Power Regeneration

- Recycles power back to grid for lower power usage
- Improves power factor to 0.95~0.99
- Reduces harmonic current distortion, THDi<5%






Micro Gas Turbine Generator



Flywheel Energy Storage



Specifications

Series	Standard Model		Chiller-Specific Model		
Model Name			Control Module		SPS Module
					
	VFDC0612 C205D1K00A	VFDC1012 C205D3K00A	VFDC0612 P00121K00A	VFDC1012 P00123K00A	VFDDD1012 C205D-0A
Rated Input Voltage (V _{DC})	250 ~ 600		145~155		250 ~ 600
Rated Output Current (Arms)	6	10	6	10	10
Peak Power (kW)	1	3	1	3	3
Installation Method	Wall mount		Embedded mount*		Wall mount
Carrier Voltage (kHz)	40				
Output Voltage (V _{DC})	150				
Load Type	High-speed permanent-magnet synchronous motor / High-speed induction motor with active magnetic bearing control				
Feedback Sensor	6 Inductive position sensors 1 Motor rotation speed sensor				
Protection Level	IP20		IP00		IP20
Cooling Method	Fan cooling		The power dissipation of the cooling panel has to be at least 100W and the HSK temperature must remain under 50°C		Fan cooling
Dimensions (mm)	267.8 x 518 x 161		266 x 260 x 57		267.8 x 503 x 101
Weight (kg)	11.5		2.4		7

*The installation environment must be above IP54 or in an environment with proper anti-condensation protection to avoid the electronic parts failures caused by condensation

General Specifications

Control Characteristics	Control Mode	PID closed-loop control
	Control Accuracy	ISO 14839-2-4, Zone A/B
	Main Control Function	Auto-tuning, eccentric force compensation, PID control, Modbus communication, parameter copy
Protection Characteristics	Over-Temperature Protection	Built-in temperature sensor
		Compatible with up to 6 sets of external motor temperature protection such as PTC: PT100/PT1000 Sets the parameter to change motor temperature protection level
	Over-Current Protection	Over-current protection for 185% of the rated current
	Over-Voltage Protection	The drive stops running when DC bus voltage exceeds 820V
Certifications		CE, cULus, cRUus

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