The Chinook controller is a fully featured, high-power magnetic bearing controller for turbomachinery and high-speed rotating equipment in the power range of 10 MW to 25 MW.

- Simple and fail-safe integration of the control cabinet with the machine station via the digital output/input from the digital cabinet
- An optimised, automated commissioning and tuning process available to the OEM/end user
- Remote monitoring and adjustment capabilities
- Built-in condition monitoring system provides comprehensive diagnostics
- High processing performance which allows for more complex algorithms that provide higher dynamic efficiency, improved usability and ergonomics, and noise immunity
- The integrity of functional testing, verification and development of new features performed on the world’s biggest super-critical test rig is far superior to simulation testing methods used by others

**CONFIGURATION**

- 5 axis controller (option for 4 axis control)

**INTERFACES**

- Door mounted operator panel
- Hardwired discrete DCS interface
- Analogue diagnostic outputs
- PROFIBUS DP slave (option)
- MODBUS RTU or TCP slave (option)
- SOAP slave (option)

**CONTROL LAW CAPABILITY**

- SISO/MIMO controller with tracking filters
- Multi-coordinate control (MCC)
- Automatic balancing algorithm (ABA)
- Runout compensation
- Synchronous open loop feed forward
- Advanced amplifier algorithm (for canned bearings, software flux feedback)

**SENSOR SUPPORT**

- Magnetic displacement
- Inductive, eddy current
- Capacitive
- Dual position sensor ring option
- Redundancy
- Flux feedback

**DIAGNOSTIC CAPABILITIES**

- Web server interface
- High speed capture buffer
- Trend logging
- Event logging
- Automatic clearance check
- Integrated transfer function measurement
- Integrated spectra capability
- Integrated harmonic capture
- 3rd level trip
- Built-in tools show compliance with ISO sensitivity performance criteria

**OTHER**

- Cabinet comes in dual-bay and space-saving single-bay versions
- Support for purge protected bearings

**AT A GLANCE**

**Machinery power range:** 10 to 25 MW

**For critical applications requiring the highest availability:**

- Oil & gas transportation, storage and production
- Petrochemical and process equipment
- High temperature gas cooled reactor (helium use)
- Natural gas pipeline compressors
- Energy recovery flywheel
- Loop layer machine
- Sour gas with canned or sealed bearings

**Benefits:**

- Proven availability exceeds 99.9%
- Reduced maintenance cost with planned and predictive maintenance programmes
- Lower total cost of ownership due to higher reliability and lower maintenance costs
- Automated Commissioning can eliminate OEM/end user dependence on the supplier
- Built-in UPS for immunity to supply interruptions
- Capability of retrofit to magnetic bearings supplied by others

**Certification:**

- CE, CB and TR-CU

**Support:**

- 24-7 on-call service (reply within 1 hour)
- Spares service and extended warranty option
- Comprehensive training programme
### SPECIFICATION

| **Cabinet Size & Rating** | SINGLE BAY CHINOOK BEARING
| CONTROL CABINET E6260601 | 800(D) x 800(W) x 2000(H) mm; removable top vent box (100mm); plinth (100mm). Cable entry from bottom. IP54 (roof air vent IP33). Forced air cooled.  
| DUAL BAY CHINOOK BEARING
| CONTROL CABINET E8800601 | 800(D) x 1600(W) x 1800(H) mm; removable top vent box (100mm); plinth (100mm). Cable entry from bottom. IP54 (roof air vent IP33). Forced air cooled.  
| **Access** | Front full length door (lock optional)  
| **Maximum Case Weight** | 400 kg  
| 965 kg  
| **Input Voltage: Mains Options** | Model Type: D626-1P: 230VAC (50/60Hz) (180VAC to 254VAC)  
|  | Model Type: D626-3P: 400VAC 3Ø+N (50/60Hz); Phase rotation not critical 5kW¹  
|  | Model Type: D880-1P: 230VAC (50/60Hz) 3Ø; 7.5kVA (180VAC to 254VAC)  
|  | Model Type: D880-3P 400VAC 3Ø+N (50/60Hz); 11A 7.5kVA  
| **Input Voltage: DC Option** | Model Type: D626-DC  
|  | Model Type: D626-DC/1P: 230VAC (50/60Hz); 5A; 1kVA (AC supply required for ancillary options) 48 VDC supply (42VDC to 57VDC)  
|  | Model Type: D880-DC  
|  | Model Type: D880-DC/1P: 230VAC (50/60Hz); 5A; 1kVA (AC supply required for ancillary options) 48 VDC supply (42VDC to 57VDC)  
| **Output Power** | 300V @ 25A per magnet (continuous), 30A (peak)  
| **Operating Temperature Range** | 5°C to 35°C ambient temperature (when levitated)  
| 5°C to 40°C (de-levitated)  
| **Relative Humidity Range** | 80% max non-condensing  
| **Transport & Storage Temperature Range** | -40°C to +45°C, humidity 80% max non-condensing  
| **Area Classification** | Non-hazardous  
| **Maximum Cable Length Between Cabinet & Bearings** | 150m; consult for extended cable lengths to 500+m  
| **Certification** | CE, CB and TR-CU; contact Waukesha Magnetic Bearings for certificate numbers  

¹Heat Load: Refer to customer specific manual for heat load in a particular application