

Fusion®

Magnetic Bearings

The Fusion® magnetic bearing is a breakthrough innovation in bearing technology. For the first time, an active magnetic bearing is available that fully integrates the control system within the actual bearing structure. Simplified integration enables customers to realize the full value of magnetic bearings in a broad range of applications, such as pumps, electric motors, blowers and fans.

Fusion® bearings are available in a number of standard frame sizes, in both Radial and Thrust configurations.



Features

- Fully integrated bearing control system
- Standard Ethernet port for communications
- Available in standard frame sizes
- Health monitoring of coils and amplifiers
- Vibration and position monitoring
- Rotordynamic condition monitoring and protection
- MTBF > 80,000 hours
- Synchrony's advanced control algorithms:
 - Dynamic Force Compensation™
 - Flux Command™
 - Inertial Balance™
 - Magnetic Balance™

Benefits

- Elimination of mechanical friction and wear
- Improved machine reliability - reduced downtime
- Cost reduction through simplification
- Reduced machine vibration
- Virtually maintenance-free operation
- Elimination of oil lubrication systems
- No toxic or flammable lubricants
- Ease of integration
- No separate control cabinet

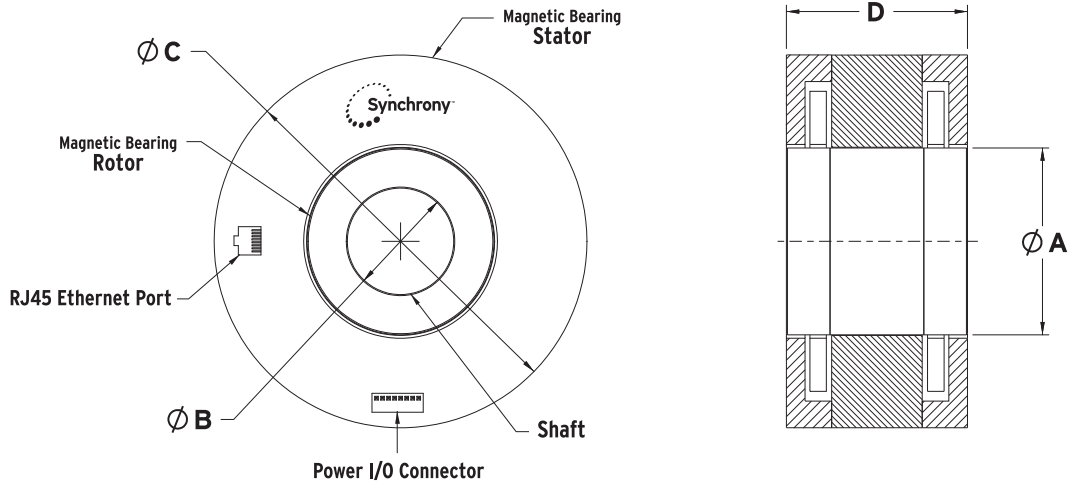
Fusion® Radial Magnetic Bearings

General Specifications

Max. Temperature: 140°F (60°C) at stator OD

Input Voltage: 48 VDC

Communications Protocol: Modbus TCP/IP



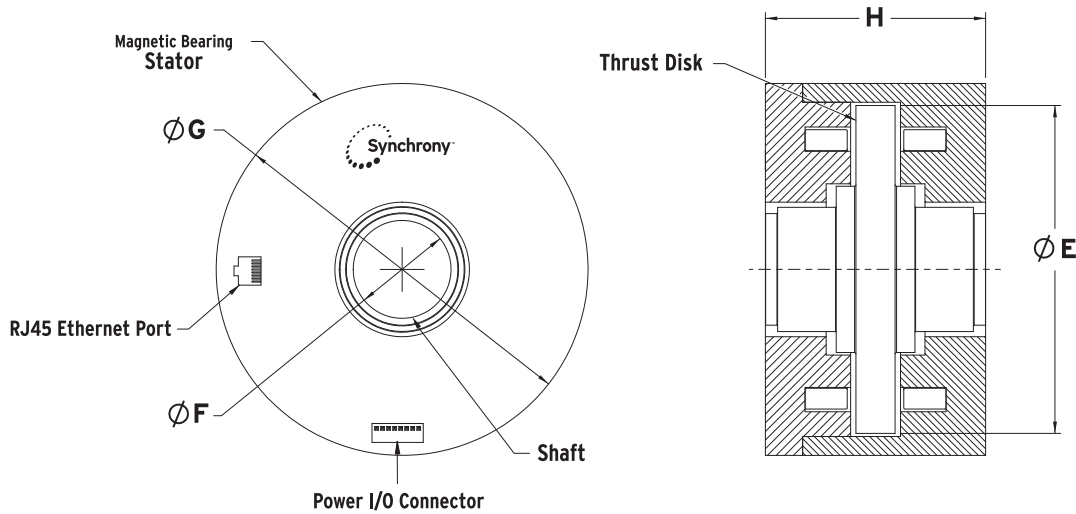
Fusion® Radial Bearing Size Chart						
Model Number	Dimensions	A	B	C	D	Max. Operating Speed (rpm)
	Load Capacity (lb)	Rotor OD (in)	Max. Shaft OD (in)	Stator OD (in)	Overall Length (in)	
FR 35-10	424	3.5	2.2	7.0	3.8	34,000
FR 35-20	849	3.5	2.2	7.0	5.5	34,000
FR 50-10	778	5.0	3.3	9.0	4.6	24,000
FR 50-20	1,556	5.0	3.3	9.0	7.1	24,000
FR 60-10	1,167	6.0	3.9	10.5	5.0	20,000
FR 60-20	2,334	6.0	3.9	10.5	7.9	20,000
FR 70-10	1,584	7.0	4.6	12.0	5.5	17,000
FR 70-20	3,168	7.0	4.6	12.0	8.9	17,000
FR 80-10	2,206	8.0	5.2	13.5	6.2	15,000
FR 80-20	4,412	8.0	5.2	13.5	10.1	15,000
FR 90-10	3,026	9.0	5.8	15.0	7.0	13,000
FR 90-20	6,053	9.0	5.8	15.0	11.7	13,000

***Magnetic bearings listed above are examples of standard radial bearings.**
 For more information on Fusion radial specifications or for application assistance, please contact us or visit our web site at www.synchrony.com

Fusion[®] Thrust Magnetic Bearings

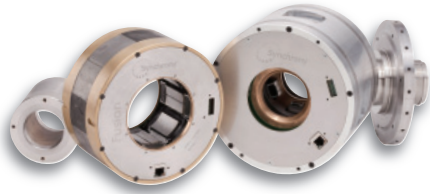
General Specifications

Max. Temperature: 140°F (60°C) at stator OD
 Input Voltage: 48 VDC
 Communications Protocol: Modbus TCP/IP



Fusion [®] Thrust Bearing Size Chart						
	Dimensions	E	F	G	H	
Model Number	Load Capacity (lb)	Thrust Disk OD (in)	Max. Shaft OD (in)	Stator OD (in)	Overall Length (in)	Max. Operating Speed (rpm)
FT 67-10	1,000	6.7	2.0	7.6	5.3	24,000
FT 86-10	2,350	8.6	3.0	9.6	7.1	19,000
FT 109-10	3,950	10.9	4.0	12.2	8.6	15,000
FT 144-10	8,100	14.4	5.0	15.9	11.6	11,000
FT 179-10	13,600	17.9	6.0	19.7	14.4	9,000

***Magnetic bearings listed above are examples of standard thrust bearings.**
 For more information on Fusion thrust specifications or for application assistance, please contact us or visit our web site at www.synchrony.com



Fusion® Radial and Thrust
magnetic bearings

Synchrony®

Setting the standard for performance, size, simplicity and value.



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