

Power Transmission Solutions for the Servo Motor Industry



SPRING APPLIED BRAKES FOR SERVO MOTOR APPLICATIONS

For more than 30 years, Matrix, a company of Altra Industrial Motion, has manufactured more than 1000 variants of spring-applied, electromagnetically released brakes for servo motor manufacturers in Europe, USA and Asia.

Servo-driven solutions can achieve faster speeds with more precise accuracy while providing greater flexibility and quicker changeover in various industrial applications including:

- Robotics & Industrial Automation
- Machine Tool
- Medical
- Automotive
- Printing & Paper Converting
- Assembly & Semiconductors
- Renewable Energy



SPECIFIC DESIGNS FOR CUSTOMISED APPLICATIONS

Our experienced design and development team provide solutions that meet the specific requirements of a wide range of servo motor applications. 3D CAD and mathematical modeling software, alongside computer-controlled test and data capture equipment ensure very high quality and consistency levels.

Our flexible engineering systems support design, development, manufacturing and testing of custom solutions. Working with your design team, we can engineer brakes that:

- Provide specified performance within given space restrictions
- Closely integrate the brake with the motor
- Use friction materials to meet specific torque, temperature & energy requirements

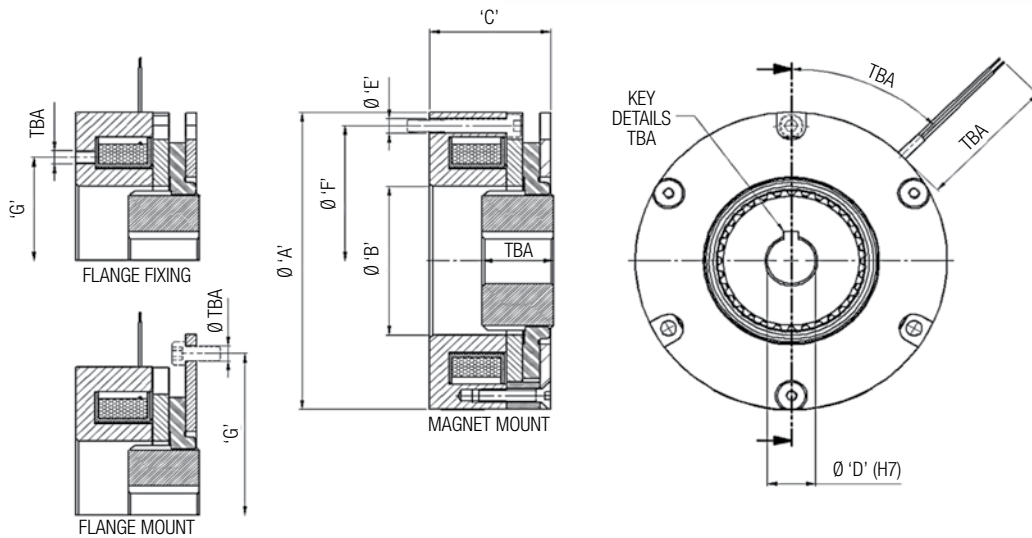


Quality

Matrix's quality system is accredited to ISO 9001 ensuring that product design and development, manufacturing and service are of the highest standard. Our refined manufacturing processes and quality supply chain partners help us provide cost effective products that meet or exceed our customer expectations.

CUSTOMISED BRAKE OPTIONS

- Toleranced recesses for bearings and encoders
- Customised geometry for space critical applications
- Adapter plates to mount on smaller PCDs & larger
- Lead length, colour, type and connectors
- Low/Zero backlash
- Operating voltage
- Reduced power consumption options
- Double disc, 2 x torque option



| Ref | Dim 'A' (mm) | Dim 'B' (mm) | Dim 'C' (mm) | Dim 'D' (mm) | Dim 'E' (mm) | Dim 'F' (mm) | Dim 'G' (mm) | Holding Torque (Nm) |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------------------------------------------------------------------------|------------------------|
| 1EB011 | 40 | 13 | 30 | 10 | Ø3.2 | 33.8 | Information (size, quantity, position & PCD) to be provided by the customer | 0.4 |
| 1EB012 | 46 | 14 | 31 | 12 | Ø3.4 | 42.0 | | 1.2 |
| 1EB014 | 50 | 20 | 35 | 12* | Ø3.4 | 45.0 | | 2 |
| 1EB017 | 56 | 26 | 30 | 15 | Ø3.4 | 50.0 | | 2.5 |
| 1EB018 | 60 | 20 | 31 | 17 | Ø4.5 | 52.0 | | 4 |
| 1EB020 | 70 | 30 | 33 | 20* | Ø4.5 | 63.0 | | 7 |
| 1EB024 | 77 | 30 | 35 | 27* | Ø4.5 | 70.0 | | 12 |
| 1EB026 | 83 | 35 | 37 | 32* | Ø4.5 | 75.0 | | 13.5 |
| 1EB027 | 85 | 35 | 40 | 25 | Ø4.5 | 74.0 | | 15 |
| 1EB028 | 90 | 35 | 36 | 32* | Ø4.5 | 83.0 | | 25 |
| 1EB030 | 100 | 42 | 44 | 30* | Ø5.5 | 90.0 | | 30 |
| 1EB035 | 110 | 55 | 44 | 40 | Ø6.5 | 100.0 | | 40 |
| 1EB037 | 120 | 55 | 45 | 40 | Ø5.5 | 110.0 | | 55 |
| 1EB040 | 128 | 55 | 46 | 40 | Ø5.5 | 114.0 | | 60 |
| 1EB045 | 145 | 55 | 60 | 40 | Ø6.5 | 132.0 | | 70 |
| 1EB050 | 160 | 58 | 70 | 40 | Ø9.0 | 145.0 | | 150 |
| 1EB060 | 185 | 66 | 76 | 40 | Ø9.0 | 170.0 | | 180 |
| 1EB070 | 212 | 80 | 94 | 55 | Ø9.0 | 196.0 | 400 | |

Notes:

- The above dimensions can be customised to suit individual applications.
- Brakes can be supplied in either Magnet Mount, Flange Mount or Rear Fixing.
- Brakes can be supplied with double friction discs.
- * Hub bores without key

| Belted Drives and Sheaves | Couplings Cont. | Gearing | Linear Products |
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| <p>TB Wood's <i>Belted Drives</i> Chambersburg, PA - USA 1-888-829-6637 – Press #5 <i>For application assistance:</i> 1-888-829-6637 – Press #7</p> | <p>TB Wood's <i>Elastomeric Couplings</i> Chambersburg, PA - USA 1-888-829-6637 – Press #5 <i>For application assistance:</i> 1-888-829-6637 – Press #7 <i>General Purpose Disc Couplings</i> San Marcos, TX - USA 1-888-449-9439</p> | <p>Bauer Gear Motor <i>Geared Motors</i> Esslingen, Germany +49 (711) 3518-0 Middlesex, NJ - USA 1-732-469-8770</p> <p>Boston Gear <i>Enclosed and Open Gearing, Electrical and Mechanical P.T. Components</i> Charlotte, NC - USA 1-800-825-6544 <i>For application assistance:</i> 1-800-816-5608</p> <p>Nuttall Gear and Delroyd Worm Gear <i>Worm Gear and Helical Speed Reducers</i> Niagara Falls, NY - USA 1-716-298-4100</p> | <p>Warner Linear <i>Linear Actuators</i> New Hartford, CT - USA 1-800-825-6544 <i>For application assistance:</i> 1-800-825-9050 Saint Barthélemy d'Anjou, France +33 (0)2 41 21 24 24</p> |
| <p>Couplings</p> <p>Ameridrives Couplings <i>Mill Spindles, Ameriflex, Ameridisc</i> Erie, PA - USA 1-814-480-5000 <i>Gear Couplings</i> San Marcos, TX - USA 1-800-458-0887 <i>Universal Joints, Drive Shafts, Mill Gear Couplings</i> Erie, PA - USA 1-920-593-2444</p> <p>Bibby Turboflex <i>Disc, Gear, Grid Couplings, Overload Clutches</i> Dewsbury, England +44 (0) 1924 460801 Boksburg, South Africa +27(0) 11 918 4270</p> <p>Guardian Couplings <i>Engineered Flywheel Couplings, Engine Housings and Pump Mounts, Flexible Shaft Couplings</i> Michigan City, IN - USA 1-219-874-5248</p> <p>Huco Dynatork <i>Precision Couplings and Air Motors</i> Hertford, England +44 (0) 1992 501900 Chambersburg, PA - USA 1-888-829-6637</p> <p>Lamiflex Couplings <i>Flexible Couplings, Bearing Isolators, and Coupling Guards</i> Cotia, SP - Brasil +55 (11) 4615-6300</p> | <p>Electromagnetic Clutches and Brakes</p> <p>Inertia Dynamics <i>Spring Set Brakes; Power On and Wrap Spring Clutch/Brakes</i> New Hartford, CT - USA 1-800-800-6445</p> <p>Matrix International <i>Electromagnetic Clutches and Brakes, Pressure Operated Clutches and Brakes</i> Brechin, Scotland +44 (0) 1356 602000 New Hartford, CT - USA 1-800-825-6544</p> <p>Warner Electric <i>Electromagnetic Clutches and Brakes</i> New Hartford, CT - USA 1-800-825-6544 <i>For application assistance:</i> 1-800-825-9050 Saint Barthélemy d'Anjou, France +33 (0)2 41 21 24 24 <i>Precision Electric Coils and Electromagnetic Clutches and Brakes</i> Columbia City, IN - USA 1-260-244-6183</p> | <p>Heavy Duty Clutches and Brakes</p> <p>Industrial Clutch <i>Pneumatic and Oil Immersed Clutches and Brakes</i> Waukesha, WI - USA 1-262-547-3357</p> <p>Svendborg Brakes <i>Industrial Brakes and Brake Systems</i> Vejstrup, Denmark +45 63 255 255</p> <p>Twiflex Limited <i>Caliper Brakes and Thrusters</i> Wichita Falls, TX - USA 1-844-723-3483 Twickenham, England +44 (0) 20 8894 1161</p> <p>Wichita Clutch <i>Pneumatic Clutches and Brakes</i> Wichita Falls, TX - USA 1-800-964-3262 Bedford, England +44 (0) 1234 350311</p> | <p>Overrunning Clutches</p> <p>Formsprag Clutch <i>Overrunning Clutches and Holdbacks</i> Warren, MI - USA 1-800-348-0881 – Press #1 <i>For application assistance:</i> 1-800-348-0881 – Press #2</p> <p>Marland Clutch <i>Roller Ramp and Sprag Type Overrunning Clutches and Backstops</i> South Beloit, IL - USA 1-800-216-3515</p> <p>Stieber Clutch <i>Overrunning Clutches and Holdbacks</i> Heidelberg, Germany +49 (0) 6221-30470</p> <p><i>For information concerning our sales offices in Asia Pacific check our website www.altramotion.com.cn</i></p> |



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