ROLLER CLUTCHES WITH BEARING SUPPORT

SINTERED BEARING SUPPORT
UNIDIRECTIONAL DRIVE

 MATERIAL:
 Roller Cup - Case-Hardened Steel
 Needle Bearing - 52100 Hardened Chrome Steel
 Springs - Stainless Steel
 Cage - Plastic
 Bearing Support - Sintered Bronze Bearings

 SHAFT REQUIREMENTS:
 Shaft surface hardness must be HRC 58 min.

 HOUSING RECOMMENDATION:
 Recommended tolerances for housing bore are N6 for steel, R6 for aluminum. Tolerances for housing bore of N7 for steel and R7 for aluminum can be used if only 50% of the torque is used.

 METRIC COMPONENT

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>d Dia. Nm</th>
<th>D Dia.</th>
<th>S Face Width</th>
<th>Torque Limit N • m</th>
<th>Max. Speed Limit rpm</th>
<th>Max. Load Limit N</th>
<th>Max. Load Speed Limit N/min.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>4</td>
<td>8</td>
<td>8</td>
<td>0.34</td>
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<tr>
<td>* S99NH4MURC040B</td>
<td>6</td>
<td>10</td>
<td>15</td>
<td>1.76</td>
<td>23000</td>
<td>13000</td>
<td>110</td>
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</table>

* During operation of the above items:
  \( F_{max} = \) Load Speed Limit (N/min.)
  \( F_R = \) Load Limit (N)
  \( n = \) Speed Limit (housing or shaft) (rpm)
  \( F_R \cdot n = F_{max} \)

\( \Delta \) Equipped with plastic springs.

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NEEDLE BEARING SUPPORT
UNIDIRECTIONAL DRIVE

 MATERIAL:
Roller Cup - Case-Hardened Steel
Needle Bearing - 52100 Hardened Chrome Steel
Springs - Stainless Steel
Cage - Plastic
Bearing Support - Needle Bearings

 SHAFT REQUIREMENTS:
Shaft surface hardness must be HRC 58 min.

 HOUSING RECOMMENDATIONS:
Recommended tolerances for housing bore are
N6 for steel, R6 for aluminum. Tolerances for
housing bore of N7 for steel and R7 for aluminum
can be used if only 50% of the torque is used.

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### METRIC COMPONENT

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<thead>
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<th>Catalog Number</th>
<th>Shaft Dia. D Dia.</th>
<th>S Face Width 0.2</th>
<th>Max. Torque N • m</th>
<th>Rotating Overrun Speed Max. rpm</th>
<th>Load Ratings N</th>
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</table>

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HYSTERESIS BRAKES AND CLUTCHES

TECHNICAL INFORMATION

FEATURES:
- Torque proportional to input current
- Torque virtually independent of slip speed
- Smooth stable, noise-free operation
- Long-life no-wearing components
- Maintenance-free
- Infinitely adjustable

APPLICATIONS:
- Tensioning of wire, cable, films, paper, etc.
- Positioning of fuel flow controls, film processors
- Braking for motors and dereeling
- Load simulation for motor testing, fuse testing, etc.

OPTIONS:
- Nonstandard coil voltages
- Special mounting configurations
- Modified shafts

Hysteresis clutches provide an efficient, smooth, electrically controllable link between a motor and a load. While presenting integral ball bearing supported input and output shafts, the clutch features a field (electromagnet) assembly that is prevented from rotating by fixing to a bulkhead. When the coil is energized, the input and output shafts are coupled by magnetic fluxes, thus driving the load. The torque transmitted is proportional to the current supplied to the device.

TORQUE AS A FUNCTION OF INPUT CURRENT:

When a field setting is approached from zero current, it will produce less torque than if approached from prior current because of residual magnetism. Accurate and repeatable torque outputs are delivered when the setting is approached from the same direction.