Model 7
Power Wheel®
Planetary Gear Drive
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<td>15</td>
</tr>
</tbody>
</table>
INTRODUCTION

Auburn Gear is your reliable source for a variety of power transfer products. This catalog features the Model 7 family of Power Wheel® Planetary Gear Drives. Other models of Power Wheels are also available; for a complete offering, contact Auburn Gear.

We also offer planetary gear kits and spin resistant differentials. We offer you services for design, engineering, prototype support and full testing and production capabilities. Product applications include aerial lift, agricultural, automotive, construction, forestry, industrial and marine. Auburn Gear offers you quality and reliability backed by more than 50 years of experience.

Greater Design Flexibility

Power Wheel® planetary drives allow greater flexibility than conventional power train systems and often eliminate the need for components such as drive shafts, axles and chain drives. The many models and styles offered meet a wide range of mobile and industrial application requirements. Single, double and triple reduction ratios can be furnished. In addition, they can be supplied with a variety of motor mounts and inputs which allow them to be used with most makes of hydraulic motors.

High Efficiency and Compact Design

Providing 94 to 98% power transfer efficiency, Power Wheel® planetary drives are significantly more efficient than many other types of drives, including differential design planetaries. The rugged, compact design of these drives saves space and provides for long service life.

All models can be furnished with parking brakes. Auburn Gear has designed integral A2 Series parking brakes in Models 5, 6, 6B, 7, 8, 8B and 9. These units provide a very compact planetary drive/parking brake package which is particularly useful in applications where space is limited.

Responsive Performance

Power Wheel® drives deliver the power you require for smooth operation and precise control. These units are also fully reversible. Reverse power is easily obtained by reversing rotation of the input. For vehicle applications, the positive traction provided by individually powered wheels results in superior maneuverability and improved ground clearance than conventional drive systems.

Auburn Gear Power Wheel drives can be an efficient solution for any application where you need to increase torque or reduce speed to achieve usable power. Let Power Wheel® planetary drives help you put power in its place.

MODEL 7 FEATURES

HIGH STRENGTH SECONDARY CARRIER CASTING HELPS RESIST SHOCK LOADING

DUCTILE IRON HUBS PROVIDE ADDED STRENGTH FOR RESISTANCE TO IMPACT LOADING

OPTIMIZED GEAR GEOMETRY INCREASES THE CONTACT RATIO, WHICH ENHANCES GEAR LIFE

HIGH STRENGTH GEAR MATERIAL ALLOWS GREATER POWER DENSITY AND IMPROVES GEAR LIFE

LARGE TAPERED ROLLER BEARINGS ALLOW INCREASED AXIAL AND RADIAL LOADING

DOUBLE HEAT TREAT SPINDLES PROVIDE TOUGHNESS AND INCREASE FATIGUE LIFE

BEARING NUT PROVIDES PRELOAD TO OPTIMIZE BEARING LIFE

HIGH STRENGTH SECONDARY CARRIER CASTING HELPS RESIST SHOCK LOADING

BEARING NUT PROVIDES PRELOAD TO OPTIMIZE BEARING LIFE

DUCTILE IRON HUBS PROVIDE ADDED STRENGTH FOR RESISTANCE TO IMPACT LOADING

OPTIMIZED GEAR GEOMETRY INCREASES THE CONTACT RATIO, WHICH ENHANCES GEAR LIFE

HIGH STRENGTH GEAR MATERIAL ALLOWS GREATER POWER DENSITY AND IMPROVES GEAR LIFE
**Model 7 Wheel Drives**

**Double Reduction**

### GENERAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. intermittent output torque</td>
<td>70,000 lb-in (7,910 Nm)</td>
</tr>
<tr>
<td>Max. input speed</td>
<td>5,000 RPM</td>
</tr>
<tr>
<td>Approximate Weight</td>
<td>120 lbs (54 kg)</td>
</tr>
<tr>
<td>Oil capacity</td>
<td>31 oz (920 cc)</td>
</tr>
</tbody>
</table>

For Lubrication Data, see Page 15

1 Depending on the duty cycle and the nature of the application, a normal continuous output torque of \(\frac{1}{2}\) to \(\frac{1}{3}\) of the Maximum Intermittent should yield satisfactory Power Wheel life. Also, due to the Model 7's unique combination of small physical size and high torque potential, thermal capacity may become a limiting factor.

Customer testing and application analysis is strongly recommended.

Dimensions given in: INCHES (mm)

---

### NON-POWERED UNITS ARE ALSO AVAILABLE

Contact Auburn Gear for Information
NOTE:

These curves are supplied as a design guide and apply to resultant radial load only. They indicate the importance of maintaining wheel position over the bearing center.

For actual analysis, applications should be reviewed by Auburn Gear Engineering using data supplied on Application Data Form.

NOTE:

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NOTE:

The same torsional loading constraints used in the driving mode must be used in the braking mode when braking through the Power Wheel drive gear set.
PISTON:
Improved design for superior life at higher pressures

FRICTION DISCS:
“Heavy Duty Graphitic Paper” for wet sump applications.
Characteristics: Superior energy capability, high and stable coefficient of friction and smooth engagement.

GENERAL A2 SERIES DATA:

1. Maximum operating pressure is 3,000 psi (206.4 Bar). Pressure spikes or surges not to exceed 3,500 psi (240.8 Bar). Surge pressure in excess of 3,500 psi (240.8 Bar) caused by spikes in the hydraulic system could shorten brake life and must be avoided.

2. Use only SAE grade 8 mounting bolts and torque to 80-90 lb. ft. (108-122 N-m) for motor mounting.

3. PRECAUTION: Bench testing may cause distortion of components or bolt failure. Mounting bolts must be used for supplemental clamping.

4. Minimum Release Pressure is defined as the hydraulic pressure required to obtain full running clearance.

5. Cubic Inch Displacement is the volume of oil required to release the brake piston 1.0 in³ (16.4cc) for a new brake and 2.0 in³ (32.8cc) for a worn brake pack.
1 Depending on the duty cycle and the nature of the application, a normal continuous output torque of \( \frac{1}{3} \) to \( \frac{1}{2} \) of the Maximum Intermittent should yield satisfactory Power Wheel life. Also, due to the Model 7’s unique combination of small physical size and high torque potential, thermal capacity may become a limiting factor.

2 For input speed between 2,000 and 3,600 rpm please contact Auburn Gear for duty cycle analysis. Customer testing and application analysis is strongly recommended.

For Lubrication Data, see Page 15

Dimensions given in: INCHES (mm)
BRAKE RATINGS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>TORQUE</th>
<th>MINIMUM RELEASE PRESSURE</th>
<th>STYLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>1,540 lb-in (174 N-m)</td>
<td>190 PSI (13.1 Bar)</td>
<td>Short</td>
</tr>
<tr>
<td>B2</td>
<td>1,800 lb-in (203 N-m)</td>
<td>220 PSI (15.1 Bar)</td>
<td>Short</td>
</tr>
<tr>
<td>B3</td>
<td>2,400 lb-in (271 N-m)</td>
<td>290 PSI (20.0 Bar)</td>
<td>Short</td>
</tr>
<tr>
<td>B4</td>
<td>2,400 lb-in (271 N-m)</td>
<td>220 PSI (15.1 Bar)</td>
<td>Long</td>
</tr>
<tr>
<td>B5</td>
<td>3,200 lb-in (362 N-m)</td>
<td>220 PSI (15.1 Bar)</td>
<td>Long</td>
</tr>
<tr>
<td>B6</td>
<td>3,600 lb-in (407 N-m)</td>
<td>230 PSI (15.8 Bar)</td>
<td>Long</td>
</tr>
<tr>
<td>B7</td>
<td>4,200 lb-in (475 N-m)</td>
<td>260 PSI (17.9 Bar)</td>
<td>Long</td>
</tr>
</tbody>
</table>

Maximum Release Pressure = 3,000 PSI (206.4 Bar)

Wheel Stud – Detail

Note that the stud lengths shown in the feature chart represent the total length of the stud under the head.

Non-Powered Units are also available

Contact Auburn Gear for Information

Stud Length

Wheel Stud – Detail

Note that the stud lengths shown in the feature chart represent the total length of the stud under the head.

Non-Powered Units are also available

Contact Auburn Gear for Information
**FEATURE CHART: MODEL 7 WHEEL DRIVES DOUBLE REDUCTION with BRAKE**

### OPTIONS DESCRIPTION

<table>
<thead>
<tr>
<th>MAKE ALL SELECTIONS WITHIN ONE COLUMN</th>
<th>ORDER CODES</th>
<th>USE OPTION ORDER CODES TO BUILD ORDER NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAE A, A1, A2, AF, AF1</td>
<td>*</td>
<td>7WA</td>
</tr>
<tr>
<td>SAE B, B1, B2, BF, BF1</td>
<td>*</td>
<td>7WB</td>
</tr>
</tbody>
</table>

**MOTOR PILOT/HUB**

- SAE B
  - B1
  - B2
  - BF
  - BF1

**INPUT SPLINE**

- 13T. - 16/32
  - 15T. - 1/4
  - 1" - 6B

**RATIO OPTIONS**

- 13.06:1
- 15.88:1
- 17.94:1
- 19.62:1
- 21.74:1
- 24.53:1
- 28.37:1
- 32.79:1

**WHEEL STUDS**

- 1/2 by 2.50
- 5/16 by 2.75
- Ø7.0 by 2.37

**PARKING BRAKE**

- 1,540 lb-in
- 1,800 lb-in
- 2,400 lb-in
- 2,400 lb-in

**SPECIAL FEATURES**

- Boot Seal
- Quick Disconnect
- Oil Plugs/Spindle Side

Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:

**7WB 15 19 7 B4 Z**

**BOLDFACE** INDICATES REGULAR VOLUME PRODUCED ITEMS WITH BEST AVAILABILITY.

---

### MOTOR MOUNTING CHART

**DIMENSION “X”**

<table>
<thead>
<tr>
<th>SAE A, A1, A2, AF, AF1</th>
<th>Ø 3.251 - 3.256</th>
</tr>
</thead>
<tbody>
<tr>
<td>(12.70) -16 UNC. - 2B Thd Holes</td>
<td>(82.58 - 82.70)</td>
</tr>
<tr>
<td>SAE B, B1, B2, BF, BF1</td>
<td>Ø 4.001 - 4.006</td>
</tr>
<tr>
<td>(12.70) -13 UNC. - 2B Thd Holes</td>
<td>(101.62 - 101.75)</td>
</tr>
<tr>
<td>Equally Spaced on 4.178 (106.2) B. C.</td>
<td>Equally Spaced on 5.750 (146.05) B. C.</td>
</tr>
</tbody>
</table>

**DIM. “Y”**

- O RING OR GASKET REQUIRED (Not Supplied by Auburn Gear)
- O RING SIZES: SAE “A” 2–042, SAE “B” 2–155

**NOTE:**

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### BEARING LOAD, LIFE AND SPEED RELATIONSHIPS

**LF = SF x R**

**R** = Allowable resultant load for given location from mounting flange

**R’** = Anticipated load at location from mounting flange

**LF** = Life Factor from table (see below)

**SF** = Speed Factor from table (see below)

**OUTPUT SPEED (RPM)**

<table>
<thead>
<tr>
<th>SF</th>
<th>LF</th>
<th>BEARING HOURS B-10 LIFE</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>2.456</td>
<td>.584</td>
</tr>
<tr>
<td>10</td>
<td>1.994</td>
<td>.719</td>
</tr>
<tr>
<td>20</td>
<td>1.620</td>
<td>.812</td>
</tr>
<tr>
<td>30</td>
<td>1.345</td>
<td>.886</td>
</tr>
<tr>
<td>40</td>
<td>1.316</td>
<td>.947</td>
</tr>
<tr>
<td>50</td>
<td>1.231</td>
<td>1.000</td>
</tr>
<tr>
<td>60</td>
<td>1.165</td>
<td>1.047</td>
</tr>
<tr>
<td>70</td>
<td>1.113</td>
<td>1.090</td>
</tr>
<tr>
<td>80</td>
<td>1.069</td>
<td>1.130</td>
</tr>
<tr>
<td>90</td>
<td>1.032</td>
<td>1.166</td>
</tr>
<tr>
<td>100</td>
<td>1.000</td>
<td>1.231</td>
</tr>
<tr>
<td>200</td>
<td>.812</td>
<td>1.289</td>
</tr>
<tr>
<td>300</td>
<td>.719</td>
<td>1.342</td>
</tr>
<tr>
<td>400</td>
<td>.659</td>
<td>1.390</td>
</tr>
<tr>
<td>500</td>
<td>.617</td>
<td>1.435</td>
</tr>
</tbody>
</table>

**CAUTION:** The same torsional loading constraints used in the driving mode must be used in the braking mode when braking through the *Power Wheel* drive gear set.

---

**NOTE:**

These curves are supplied as a design guide and apply to resultant radial load only. They indicate the importance of maintaining wheel position over the bearing center.

For actual analysis, applications should be reviewed by Auburn Gear Engineering using data supplied on Application Data Form.

---

**CAUTION:**

When braking through the drive gear set. The same torsional loading constraints used in the driving mode must be used in the braking mode.
Model 7 Shaft Output Drives
Double Reduction

GENERAL SPECIFICATIONS

Max. intermittent output torque\(^1\) 70,000 lb-in (7,910 Nm)
Max. input speed ................................. 5,000 RPM
Approximate Weight .............................. 107 lbs (49 kg)
Oil capacity ........................................ 31 oz (920 cc)

For Lubrication Data, see Page 15

\(^1\) Depending on the duty cycle and the nature of the application, a normal continuous output torque of \(\frac{1}{2}\) to \(\frac{1}{3}\) of the Maximum Intermittent should yield satisfactory Power Wheel life. Also, due to the Model 7’s unique combination of small physical size and high torque potential, thermal capacity may become a limiting factor.

Customer testing and application analysis is strongly recommended.

Dimensions given in: INCHES (mm)
NOTE:
These curves are supplied as a design guide and apply to resultant radial load only. They indicate the importance of maintaining wheel position over the bearing center.

For actual analysis, applications should be re-viewed by Auburn Gear Engineering using data supplied on Application Data Form.

NOTE:
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PISTON:
Improved design for superior life at higher pressures

FRICITION DISCS:
“Heavy Duty Graphitic Paper” for wet sump applications.

Characteristics:
Superior energy capability, high and stable coefficient of friction and smooth engagement.

GENERAL A2 SERIES DATA:

1. Maximum operating pressure is 3,000 psi (206.4 Bar). Pressure spikes or surges not to exceed 3,500 psi (240.8 Bar). Surge pressure in excess of 3,500 psi (240.8 Bar) caused by spikes in the hydraulic system could shorten brake life and must be avoided.

2. Use only SAE grade 8 mounting bolts and torque to 80-90 lb. ft. (108-122 N-m) for motor mounting.

3. PRECAUTION: Bench testing may cause distortion of components or bolt failure. Mounting bolts must be used for supplemental clamping.

4. Minimum Release Pressure is defined as the hydraulic pressure required to obtain full running clearance.

5. Cubic Inch Displacement is the volume of oil required to release the brake piston 1.0 in³ (16.4cc) for a new brake and 2.0 in³ (32.8cc) for a worn brake pack.

6. For vertical shaft output applications, shaft up or shaft down, please contact Auburn Gear to insure proper brake configuration is specified.
Model 7 Shaft Output Drives
Double Reduction with A2 Series Integral Parking Brake

GENERAL SPECIFICATIONS

Max. intermittent output torque 2 70,000 lb-in (7,910 Nm)
Max. input speed 3 2,000 RPM
Approximate Weight 137 lbs (62 kg)
Oil capacity 42 oz (1250 cc)

For Lubrication Data, see Page 15

1 For vertical applications, shaft up or shaft down, contact Auburn Gear.
2 Depending on the duty cycle and the nature of the application, a normal continuous output torque of 1/3 to 1/2 of the Maximum Intermittent should yield satisfactory Power Wheel life. Also, due to the Model 7’s unique combination of small physical size and high torque potential, thermal capacity may become a limiting factor.
3 For input speed between 2,000 and 3,600 rpm please contact Auburn Gear for duty cycle analysis.

Customer testing and application analysis is strongly recommended.

Dimensions given in: INCHES (mm)
### BRAKE RATINGS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>TORQUE</th>
<th>MINIMUM RELEASE PRESSURE</th>
<th>STYLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>1,540 lb-in (174 N-m)</td>
<td>190 PSI (13.1 Bar)</td>
<td>Short</td>
</tr>
<tr>
<td>B2</td>
<td>1,800 lb-in (203 N-m)</td>
<td>220 PSI (15.1 Bar)</td>
<td>Short</td>
</tr>
<tr>
<td>B3</td>
<td>2,400 lb-in (271 N-m)</td>
<td>290 PSI (20.0 Bar)</td>
<td>Short</td>
</tr>
<tr>
<td>B4</td>
<td>2,400 lb-in (271 N-m)</td>
<td>160 PSI (11.0 Bar)</td>
<td>Long</td>
</tr>
<tr>
<td>B5</td>
<td>3,200 lb-in (362 N-m)</td>
<td>220 PSI (15.1 Bar)</td>
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<tr>
<td>B6</td>
<td>3,600 lb-in (407 N-m)</td>
<td>230 PSI (15.8 Bar)</td>
<td>Long</td>
</tr>
<tr>
<td>B7</td>
<td>4,200 lb-in (475 N-m)</td>
<td>260 PSI (17.9 Bar)</td>
<td>Long</td>
</tr>
</tbody>
</table>

Maximum Release Pressure = 3,000 PSI (206.4 Bar)
NOTE:
These curves are supplied as a design guide and apply to resultant radial load only. They indicate the importance of maintaining wheel position over the bearing center.

For actual analysis, applications should be reviewed by Auburn Gear Engineering using data supplied on Application Data Form.

NOTE:
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BEARING LOAD, LIFE AND SPEED RELATIONSHIPS

R = Allowable resultant load for given location from mounting flange
R' = Anticipated load at location from mounting flange
LF = Life Factor from table (see below)
SF = Speed Factor from table (see below)

BEARING HOURS B-10 LIFE

<table>
<thead>
<tr>
<th>OUTPUT SPEED (RPM)</th>
<th>LF</th>
<th>BEARING HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>.584</td>
<td>500</td>
</tr>
<tr>
<td>10</td>
<td>.719</td>
<td>1000</td>
</tr>
<tr>
<td>20</td>
<td>.812</td>
<td>1500</td>
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<tr>
<td>30</td>
<td>.886</td>
<td>2000</td>
</tr>
<tr>
<td>40</td>
<td>.947</td>
<td>2500</td>
</tr>
<tr>
<td>50</td>
<td>1.000</td>
<td>3000</td>
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<td>60</td>
<td>1.047</td>
<td>3500</td>
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<tr>
<td>70</td>
<td>1.090</td>
<td>4000</td>
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<tr>
<td>80</td>
<td>1.130</td>
<td>4500</td>
</tr>
<tr>
<td>90</td>
<td>1.166</td>
<td>5000</td>
</tr>
<tr>
<td>100</td>
<td>1.231</td>
<td>6000</td>
</tr>
<tr>
<td>200</td>
<td>1.289</td>
<td>7000</td>
</tr>
<tr>
<td>300</td>
<td>1.342</td>
<td>8000</td>
</tr>
<tr>
<td>400</td>
<td>1.390</td>
<td>9000</td>
</tr>
<tr>
<td>500</td>
<td>1.435</td>
<td>10000</td>
</tr>
</tbody>
</table>

CAUTION: The same torsional loading constraints used in the driving mode must be used in the braking mode when braking through the Power Wheel drive gear set.

NOTE:
These curves are supplied as a design guide and apply to resultant radial load only. They indicate the importance of maintaining wheel position over the bearing center.

For actual analysis, applications should be reviewed by Auburn Gear Engineering using data supplied on Application Data Form.

NOTE:
These curves are supplied as a design guide and apply to resultant radial load only. They indicate the importance of maintaining wheel position over the bearing center.

For actual analysis, applications should be reviewed by Auburn Gear Engineering using data supplied on Application Data Form.
Model 7 Shaft Input/Shaft Output Drives - Double Reduction

GENERAL SPECIFICATIONS

Max. intermittent output torque\(^1\) 70,000 lb-in (7,910 Nm) Approximate Weight ................................. 122 lbs (55 kg)
Max. input speed ........................................ 5,000 RPM Oil capacity .................................................... 42 oz (1250 cc)

\(^1\) Depending on the duty cycle and the nature of the application, a normal continuous output torque of \(\frac{1}{3}\) to \(\frac{1}{2}\) of the Maximum Intermittent should yield satisfactory Power Wheel life. Also, due to the Model 7's unique combination of small physical size and high torque potential, thermal capacity may become a limiting factor. Customer testing and application analysis is strongly recommended.

For Lubrication Data, see Page 15

Dimensions given in: INCHES (mm)
**NOTE:**

These curves are supplied as a design guide and apply to resultant radial load only. They indicate the importance of maintaining wheel position over the bearing center.

For actual analysis, applications should be reviewed by Auburn Gear Engineering using data supplied on Application Data Form.

---

**MODEL 7 BEARING LIFE CURVE**

Based On

**LIFE** = 3,000 Hours **B10**

**SPEED** = 100 RPM **Output**

---

**CAUTION:** The same torsional loading constraints used in the driving mode must be used in the braking mode when braking through the Power Wheel drive gear set.

---

**FEATURE CHART: MODEL 7 SHAFT INPUT/SHAFT OUTPUT DRIVES - DOUBLE REDUCTION**

<table>
<thead>
<tr>
<th>OPTIONS</th>
<th>DESCRIPTION</th>
<th>MAKE ALL SELECTIONS</th>
<th>ORDER CODES</th>
<th>USE OPTION ORDER CODES TO BUILD ORDER NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUB</td>
<td>STD Model 7 Shaft Output Double Red.</td>
<td>*</td>
<td>7S</td>
<td>7S</td>
</tr>
<tr>
<td>INPUT SHAFT OPTIONS</td>
<td>1 1/2&quot; Keyed</td>
<td>*</td>
<td>KOO</td>
<td>KOO</td>
</tr>
<tr>
<td>RATIO OPTIONS</td>
<td>14.06:1</td>
<td>*</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16.88:1</td>
<td>*</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18.94:1</td>
<td>*</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20.62:1</td>
<td>*</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>22.74:1</td>
<td>*</td>
<td>22</td>
<td></td>
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<tr>
<td></td>
<td>25.53:1</td>
<td>*</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>29.73:1</td>
<td>*</td>
<td>29</td>
<td></td>
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<tr>
<td></td>
<td>33.79:1</td>
<td>*</td>
<td>32</td>
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</tr>
<tr>
<td>OUTPUT SHAFTS</td>
<td>3.00&quot; Keyed</td>
<td>*</td>
<td>K2</td>
<td>20 23</td>
</tr>
</tbody>
</table>

Select desired characteristics from chart, note correct order codes, and order using sample format shown at right: 7S KOO 20 23

**BOLDFACE** INDICATES REGULAR VOLUME PRODUCED ITEMS WITH BEST AVAILABILITY.

**NOTE:**

The data presented in this catalog is for general information and preliminary layout purposes only. Auburn Gear, through its policy of continual improvement, reserves the right to update its products; therefore, the information presented is subject to change. For specific application and/or dimensional information, contact Auburn Gear.

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**BEARING LOAD, LIFE AND SPEED RELATIONSHIPS**

\[
LF = \frac{SF \times R}{R'}
\]

- **R** = Allowable resultant load for given location from mounting flange
- **R'** = Anticipated load at location from mounting flange
- **LF** = Life Factor from table (see below)
- **SF** = Speed Factor from table (see below)

<table>
<thead>
<tr>
<th>OUTPUT SPEED (RPM)</th>
<th>SF</th>
<th>LF</th>
<th>BEARING HOURS B-10 LIFE</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>2.456</td>
<td>.584</td>
<td>500</td>
</tr>
<tr>
<td>10</td>
<td>1.994</td>
<td>.719</td>
<td>1000</td>
</tr>
<tr>
<td>20</td>
<td>1.620</td>
<td>.812</td>
<td>1500</td>
</tr>
<tr>
<td>30</td>
<td>1.435</td>
<td>.886</td>
<td>2000</td>
</tr>
<tr>
<td>40</td>
<td>1.316</td>
<td>.947</td>
<td>2500</td>
</tr>
<tr>
<td>50</td>
<td>1.231</td>
<td>1.000</td>
<td>3000</td>
</tr>
<tr>
<td>60</td>
<td>1.165</td>
<td>1.047</td>
<td>3500</td>
</tr>
<tr>
<td>70</td>
<td>1.113</td>
<td>1.090</td>
<td>4000</td>
</tr>
<tr>
<td>80</td>
<td>1.069</td>
<td>1.130</td>
<td>4500</td>
</tr>
<tr>
<td>90</td>
<td>1.032</td>
<td>1.166</td>
<td>5000</td>
</tr>
<tr>
<td>100</td>
<td>1.000</td>
<td>1.231</td>
<td>6000</td>
</tr>
<tr>
<td>200</td>
<td>.812</td>
<td>1.289</td>
<td>7000</td>
</tr>
<tr>
<td>300</td>
<td>.719</td>
<td>1.342</td>
<td>8000</td>
</tr>
<tr>
<td>400</td>
<td>.659</td>
<td>1.390</td>
<td>9000</td>
</tr>
<tr>
<td>500</td>
<td>.617</td>
<td>1.435</td>
<td>10000</td>
</tr>
</tbody>
</table>

**CAUTION:** The same torsional loading constraints used in the driving mode must be used in the braking mode when braking through the Power Wheel drive gear set.
Output Shaft Options

Boot Seal
An optional seal that protects the main oil seal from dirt and other debris. The boot seal will give extended life on applications operating in extremely muddy or dirty conditions. Boot seals are available on a selective model basis.

Weldable Hub
The hubs are 4140H steel and can be turned down and/or welded for mounting sprockets, pulleys, or other devices. A circular keeper plate secures the hub to the splined output shaft with two bolts (keeper plate and bolts included).

KIT NUMBER SPLINE FITS MODELS
6420105 23T–12/16 5, 6, & 8
6420106 23T–5/16 7, 8, 9, & 10
6420107 20T–5/16 8, & 9

Quick Disconnect
This optional disconnect is available on all wheel drives. No tools are needed to disengage or re-engage the drive. The planetary drive is disengaged with the push of a button. The quick disconnect eliminates removal of the disconnect cover and external contaminants are sealed from the units by internal o-rings and a gasket that is sandwiched between the disconnect and planetary cover. The rugged, compact design ensures dependable service.

Boot Seal

Weldable Hub

Boot Seal

Weldable Hub

Other Options

Quick Disconnect

This optional disconnect is available on all wheel drives. No tools are needed to disengage or re-engage the drive. The planetary drive is disengaged with the push of a button. The quick disconnect eliminates removal of the disconnect cover and external contaminants are sealed from the units by internal o-rings and a gasket that is sandwiched between the disconnect and planetary cover. The rugged, compact design ensures dependable service.
Power Wheel® Warranty

Seller warrants to Purchaser that its Power Wheel® planetary gear products are free from defects in material and workmanship under normal use and service for a period of one year from the date the product is shown to have been placed into operation by original user or for two years from date of shipment from seller’s plant, whichever shall first occur.

Seller’s obligation under this warranty is expressly limited to the repair or replacement at its option, of the Power Wheel which is returned with a written claim of defect f.o.b. seller’s factory, Auburn, Indiana, U.S.A., and which is determined by Seller to be defective in fact.

THIS IS THE SOLE AND ONLY WARRANTY OF SELLER AND NO OTHER WARRANTY IS APPLICABLE, EITHER EXPRESSED OR IMPLIED, IN FACT OR BY LAW, INCLUDING ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE.

The sole and only remedy in regard to any defective Power Wheel shall be the repair or replacement thereof herein provided, and seller shall not be liable for any consequential, special, incidental, or punitive damages, losses or expenses resulting from or caused by any defects.

AUBURN GEAR, INC.
AUBURN, INDIANA, U.S.A.

Lubrication Data

Power Wheel Planetary Drives are shipped without lubricant and must be filled to the proper level prior to start-up.

1. Type
In normal applications use an extreme pressure lubricant API-GL-5 approved. AGI recommends SAE 80W, 90, 80W-90 and 85W-90 grades of lube under normal climate and operating conditions. See chart below. For severe or abnormal applications with special requirements consult either Auburn Gear or a lubricant manufacturer for further assistance.

2. Change Interval
Initial lubrication change after 50 hours of operation. Subsequent changes every 1000 hours or yearly whichever comes first.

3. Lube Temperature
Continuous operating temperatures of 160°F are allowable. Maximum intermittent temperature recommended is 200°F.

4. Amount of Lube
The unit should be half full when mounted horizontal. Lube levels for other mounts will vary. Consult Auburn Gear for details.

5. Shaft or Spindle Up Mounting
If mounting unit vertically with shaft or spindle up, special provisions apply to ensure adequate lubrication of output bearings. Consult Auburn Gear.

Auburn Gear Power Wheel Low Temperature Gear Lube Requirement

<table>
<thead>
<tr>
<th>SAE Viscosity Grade</th>
<th>Auburn Gear Recommended Minimum Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>75W-90</td>
<td>-40°F (-40°C)*</td>
</tr>
<tr>
<td>80W, 80W-90</td>
<td>-15°F (-26°C)*</td>
</tr>
<tr>
<td>85W, 85W-90</td>
<td>10°F (-12°C)*</td>
</tr>
<tr>
<td>90</td>
<td>35°F (2°C)</td>
</tr>
</tbody>
</table>

* Maximum temperature for Brookfield Viscosity of 150,000 centipoise (cP) per SAE J306 MAR85

1 Brookfield Viscosity - apparent viscosity as determined under ASTM D 2983

2 150,000 cP determined to provide sufficient low temperature lube properties for Auburn Gear Power Wheels

Warranty Information
All specifications and data contained herein are nominal and subject to change without notice. Specific applications should be referred to Auburn Gear for current information.