

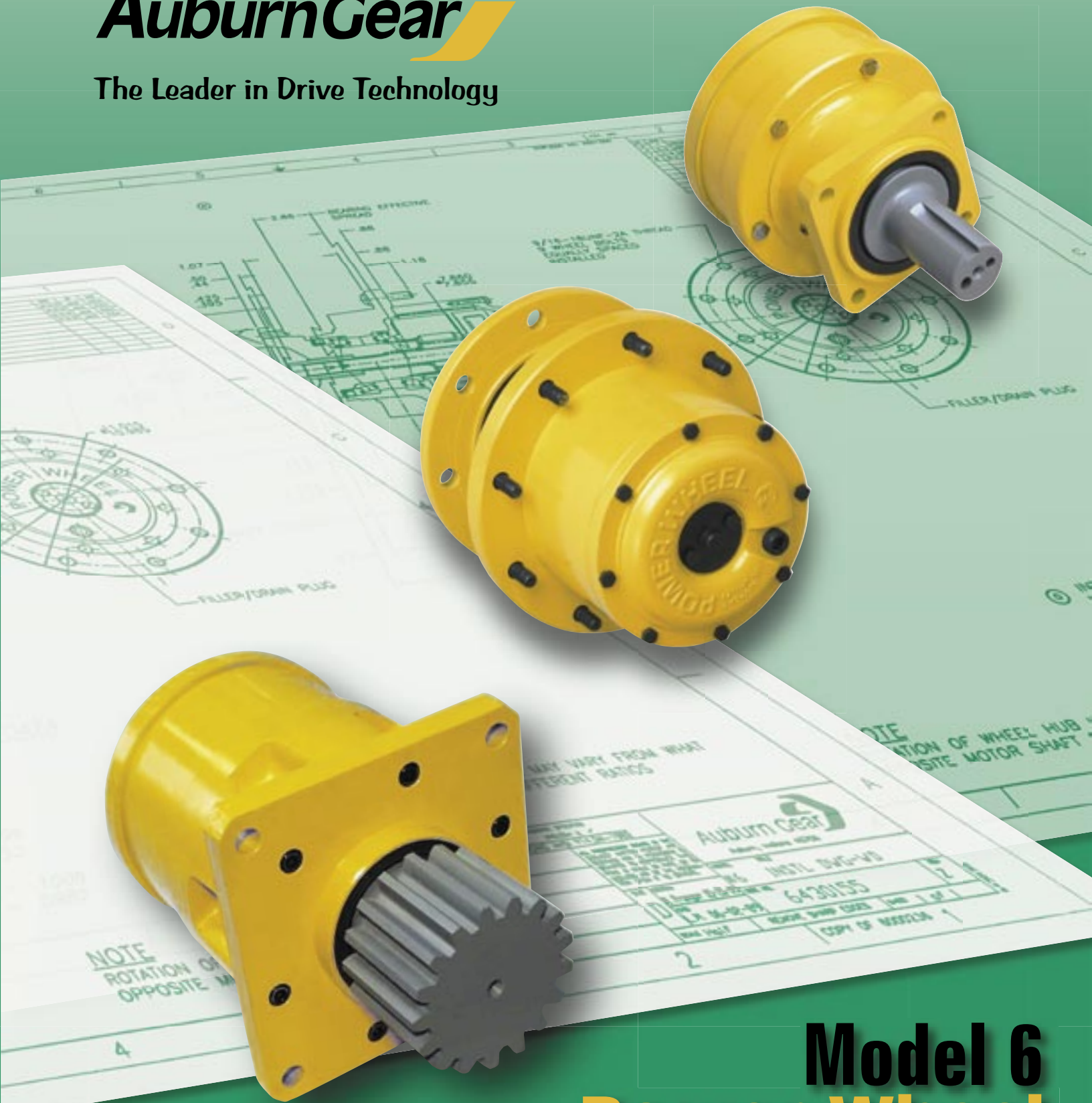
ZEUS HYDRATECH LTD
Global Suppliers of Premium Hydraulic Components

Official UK Distributor for Auburn Gear Power Wheel Drives

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The Leader in Drive Technology



Model 6 Power Wheel Planetary Gear Drive



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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.

AuburnGear Power Wheel® FINAL DRIVES

INTRODUCTION

Auburn Gear is your reliable source for a variety of power transfer products. This catalog features the Model 6 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 60 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 96 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.

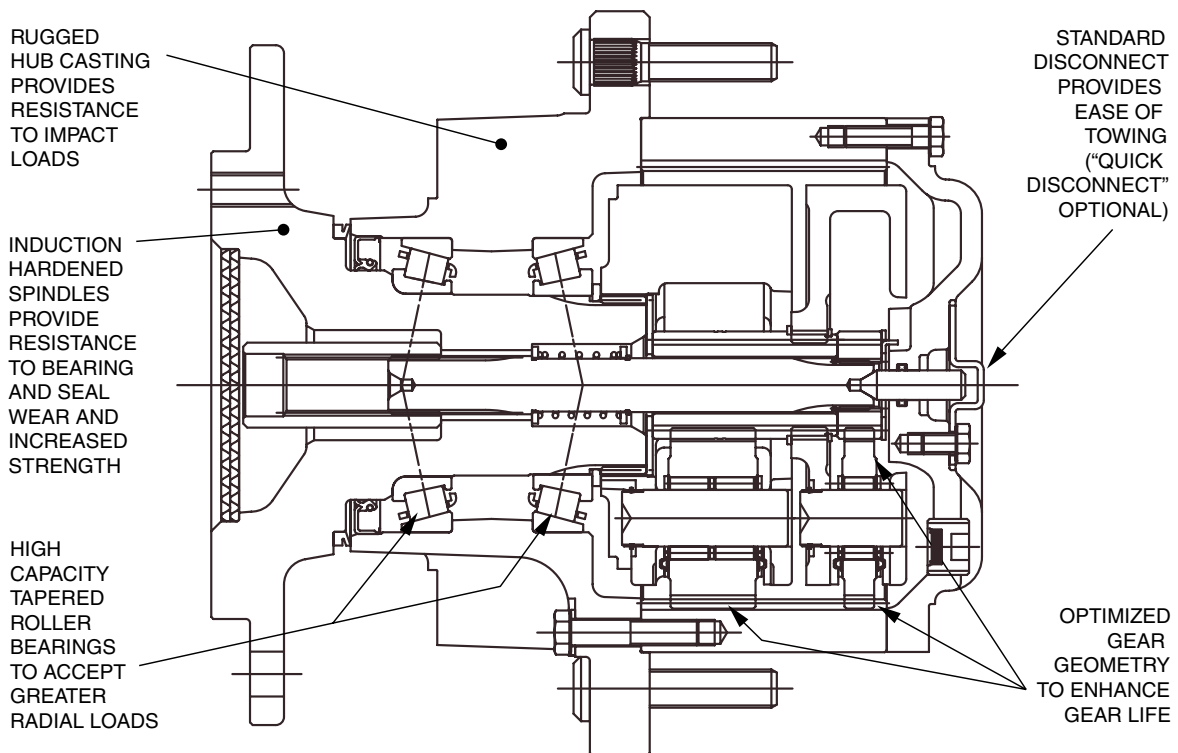
All models can be furnished with parking brakes. Auburn Gear has designed integral A2 Series parking brakes in Models 40, 5, 6, 6B, 60, 7, 75, 8, 8B and 9. These units provide a very compact planetary drive/parking brake package which is particularly useful in applications where space is limited.

Responsive Performance

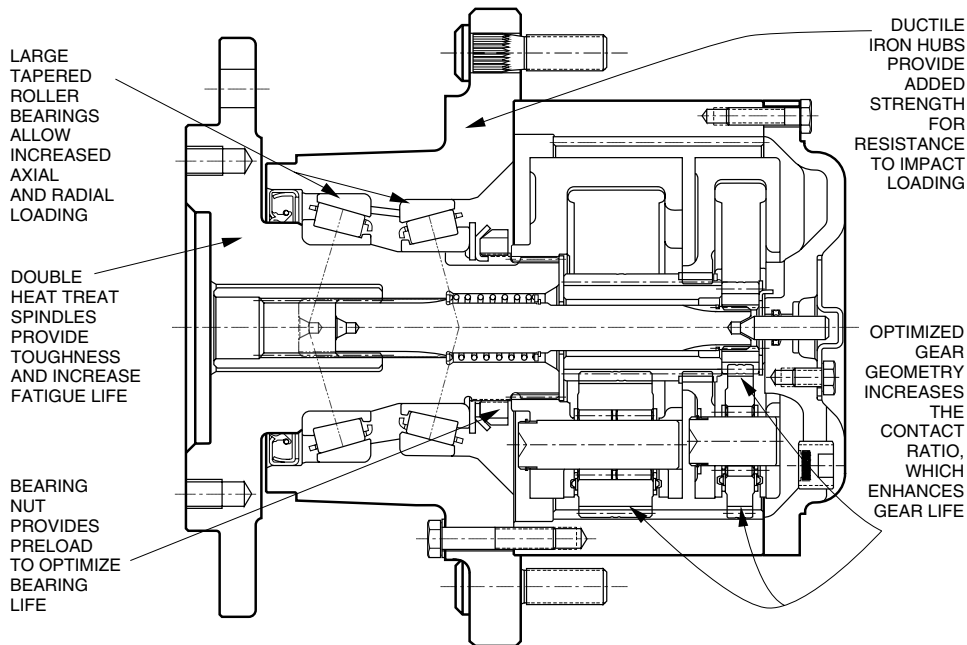
Power Wheel® drives deliver the power you require for smooth operation and precise control. These units are also fully reversible. Reverse power is easily obtained by reversing rotation of the input. For vehicle applications, the positive traction provided by individually powered wheels results in superior 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 6 FEATURES



FEATURES: MODEL 6 SERIES B



PERFORMANCE FEATURES - MODEL 6 VERSUS STANDARD MODEL 6 SERIES B

SIMILARITIES:

- Torque Rating: Both use the same optimized gear geometry and gear material, therefore they both are rated at 50,000 lb-in (5,650 Nm) of intermittent output torque.

DIFFERENCES:

- Bearing Retention: Standard Model 6 uses a snap ring which provides end play/clearance. The Model 6 Series B uses a bearing nut which provides preload/no clearance. Therefore, the Model 6 Series B will provide reduced deflections in the gear box, which will enhance the life of a unit in certain applications.
- Hub Material: The strength properties of Model 6 Series B hub are slightly greater than the standard Model 6. This provides a greater resistance to impact loads, which are common in certain applications.
- Spindle Material and Heat Treatment: Again, the Model 6 Series B spindle properties differ and are enhanced over the Model 6. These differences allow for increased fatigue life under high impact and side loading.
- Bearing Capacity: The Model 6 Series B has greater radial and axial bearing capacity which may be required in certain applications.

FEATURES - MODEL 6 SWING DRIVES - STYLE "SW"

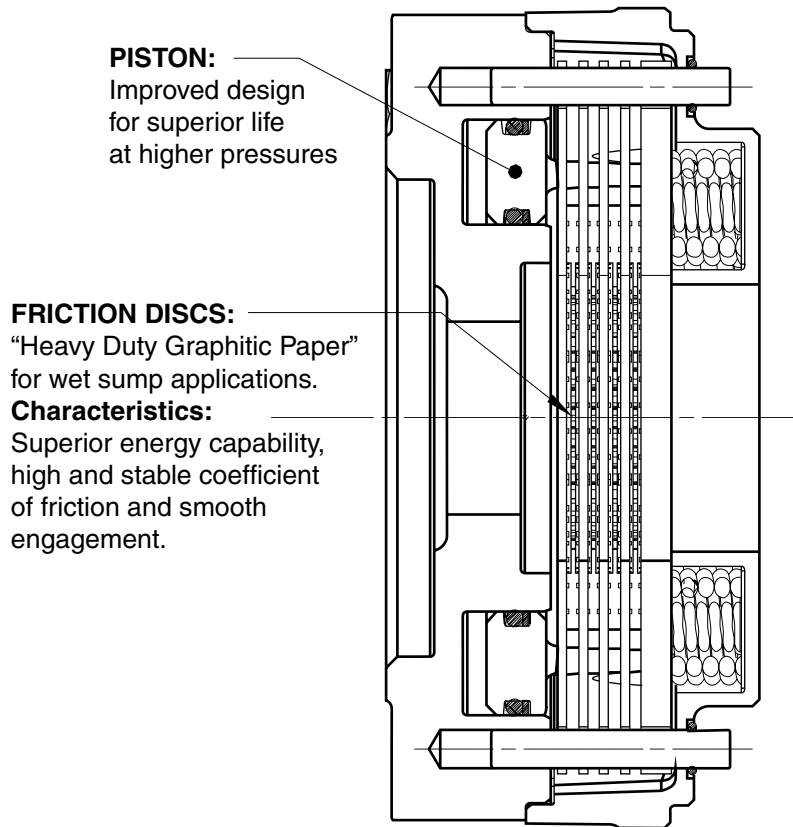
WITH OPTIONAL INTEGRAL PARKING BRAKES

Auburn Gear's "SW" line of Model 6 swing drives (with or without integral parking brakes) deliver performance and value unmatched by competitive drives. The "SW" line of Power Wheel drives have design features specifically geared to swing drive applications. Extra-large tapered roller bearings handle the high overhung loads characteristic of most swing applications. A rugged ductile iron hub provides shock resistance and long service life. The heat-treated ring gear, not included in some competitive units, minimizes wear which can lead to increased backlash. An external bearing nut—standard on all Model 6 "SW" drives—combines the ultimate in shaft retention with greater shaft strength.

Single reduction ratios from 3.75:1 to 5.8:1 and double reduction ratios from 14.06:1 to 33.79:1 are available. Units can be furnished with or without a spring applied, hydraulically released integral parking brake. A variety of brake torques are offered so that you can select the size best suited to your application. SAE A, A2, and SAE B motor mounts are available to accommodate most makes of hydraulic motors.

The "SW" line of Auburn Gear Power Wheel swing drives are ideally suited for a wide variety of swing applications including cranes and construction machinery, utility equipment, aerial lifts and logging equipment.

A2 SERIES INTEGRAL PARKING BRAKE INFORMATION



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 ensure proper brake configuration is specified.

Model 6 Wheel Drives - Single and Double Reductions

GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES

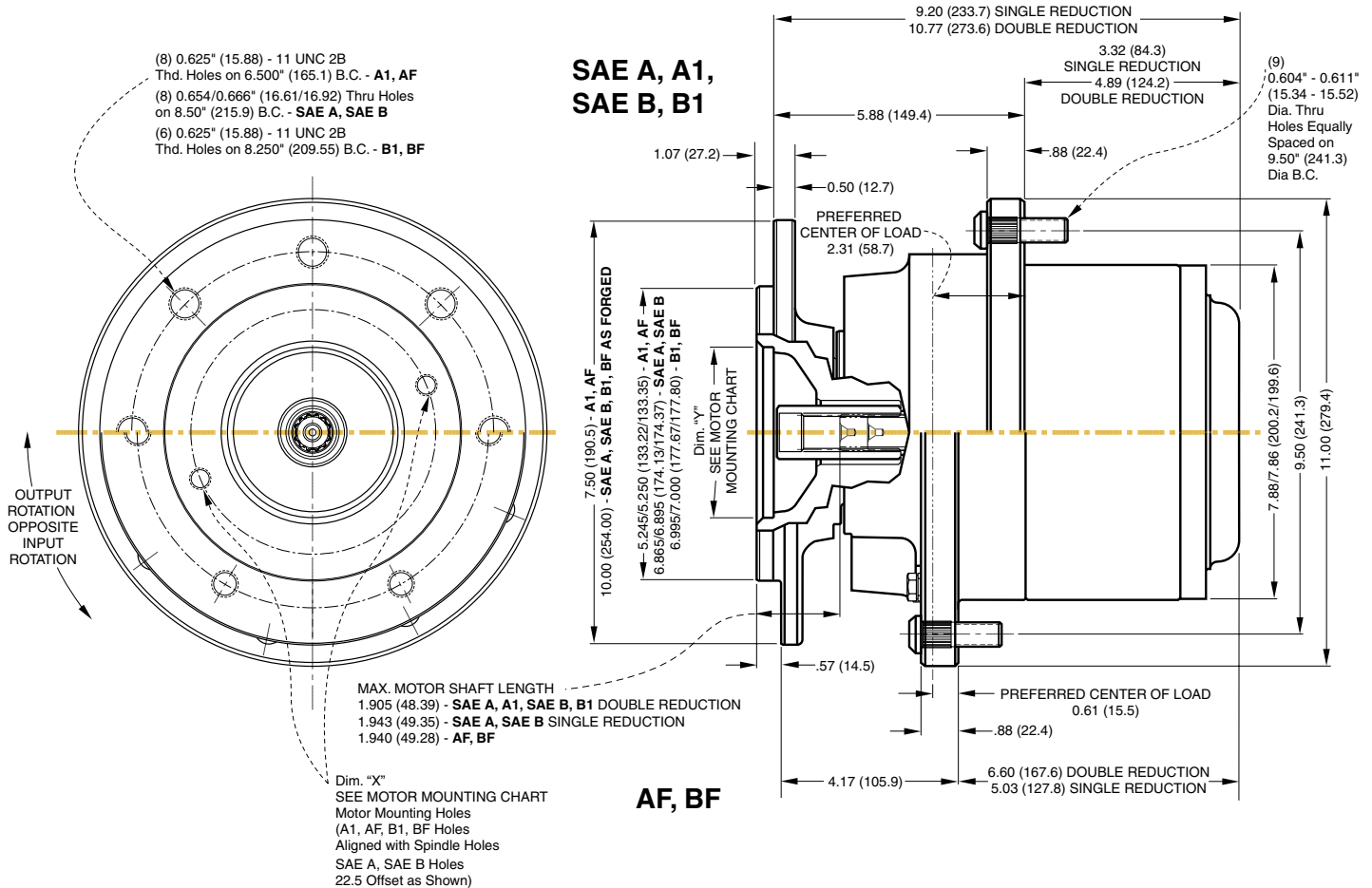
Max. intermittent output torque^{1,2} 22,000 lb-in (2,485 Nm)
 Max. input speed² 3,500 RPM
 Approximate Weight 70 lbs (31.7 kg)

DOUBLE REDUCTION DRIVES

Max. intermittent output torque^{1,2} 50,000 lb-in (5,650 Nm)
 Max. input speed² 5,000 RPM
 Approximate Weight 95 lbs (43.1 kg)
 Oil capacity 30 oz (885 cc)

¹ 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. Customer testing and application analysis is strongly recommended.

² If application exceeds published limit, contact Auburn Gear.



MOTOR MOUNTING CHART

DIMENSION "X"	DIM. "Y"
SAE A, A1, AF (2) - .375 (9.53) -16 UNC, -2B Thd Holes on 4.187 (106.35) B. C. diameter*	Ø 3.251 - 3.256 (82.58 - 82.70)
SAE B, B1, BF (2) - .50 (12.7) -13 UNC, -2B Thd Holes on 5.75 (146.1) B. C. diameter*	Ø 4.001 - 4.006 (101.62 - 101.75)

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

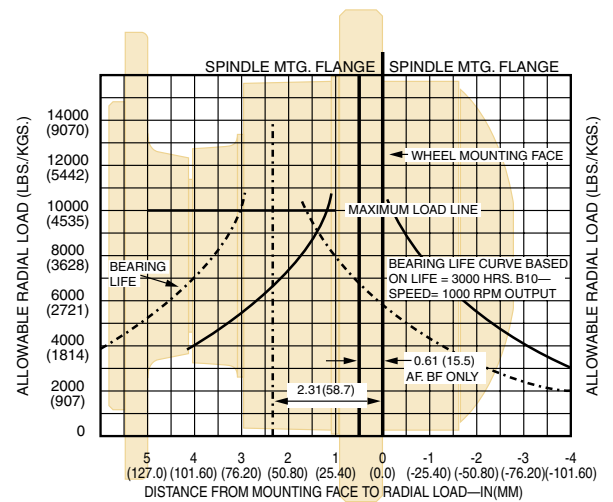
NON-POWERED UNITS ARE ALSO AVAILABLE
 Contact Auburn Gear for Information

FEATURE CHART: MODEL 6 WHEEL DRIVES SINGLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN			ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER		
MOTOR PILOT/HUB	SAE A SAE B	•	•	•	6WA 6WB	6WB		
INPUT SPLINE	13T. ¹⁶ / ₃₂ 15T. ¹⁶ / ₃₂ 1" - 6B*	•	•	•	13 15 6B	13		
RATIO OPTIONS	3.50:1 4.05:1 4.81:1	•	•	•	03 04 05		03	
WHEEL STUDS	¹ / ₂ x 1.89 ¹ / ₂ x 2.50 ⁹ / ₁₆ x 2.06 ⁹ / ₁₆ x 2.75 ⁵ / ₈ x 2.36 NONE	•	•	•	15 16 17 18 8 0			0
SPECIAL FEATURES	Brake Disc Holes Brake Disc** Boot Seal Cast Iron Cover Quick Disconnect Oil Plugs/Spindle Side High Strength Carrier	•	•	•	DH D Z C Q P Y			C
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:						6WB 13 03 0 C		

FEATURE CHART: MODEL 6 WHEEL DRIVES DOUBLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN			ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER		
MOTOR PILOT/HUB	SAE A A1 AF SAE B B1 BF	•	•	•	6WA 6WA1 6WAF 6WB 6WB1 6WBF	6WA		
INPUT SPLINE	13T. ¹⁶ / ₃₂ 15T. ¹⁶ / ₃₂ 1" - 6B*	•	•	•	13 15 6B	13		
RATIO OPTIONS	13.06:1 15.88:1 19.62:1 21.74:1 24.53:1 28.37:1 32.79:1	•	•	•	13 15 19 21 24 28 32		28	
WHEEL STUDS	¹ / ₂ x 1.89 ¹ / ₂ x 2.50 ⁹ / ₁₆ x 2.06 ⁹ / ₁₆ x 2.75 ⁵ / ₈ x 2.37 NONE	•	•	•	15 16 17 18 8 0			18
SPECIAL FEATURES	Brake Disc Holes Brake Disc** Boot Seal Cast Iron Cover Quick Disconnect Oil Plugs/Spindle Side High Strength Carrier	•	•	•	DH D Z C Q P Y			Z
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:						6WA 13 28 18 Z		



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.

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)

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

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.

* Units equipped with 1" - 6B Input Spline cannot be disengaged
 ** Customer supplied, Auburn Gear assembled
BOLDFACE INDICATES REGULAR VOLUME PRODUCED ITEMS WITH BEST AVAILABILITY.

Model 6 Wheel Drives - with A2 Series Integral Parking Brake Single and Double Reductions

See page 5 for brake information

GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES

DOUBLE REDUCTION DRIVES

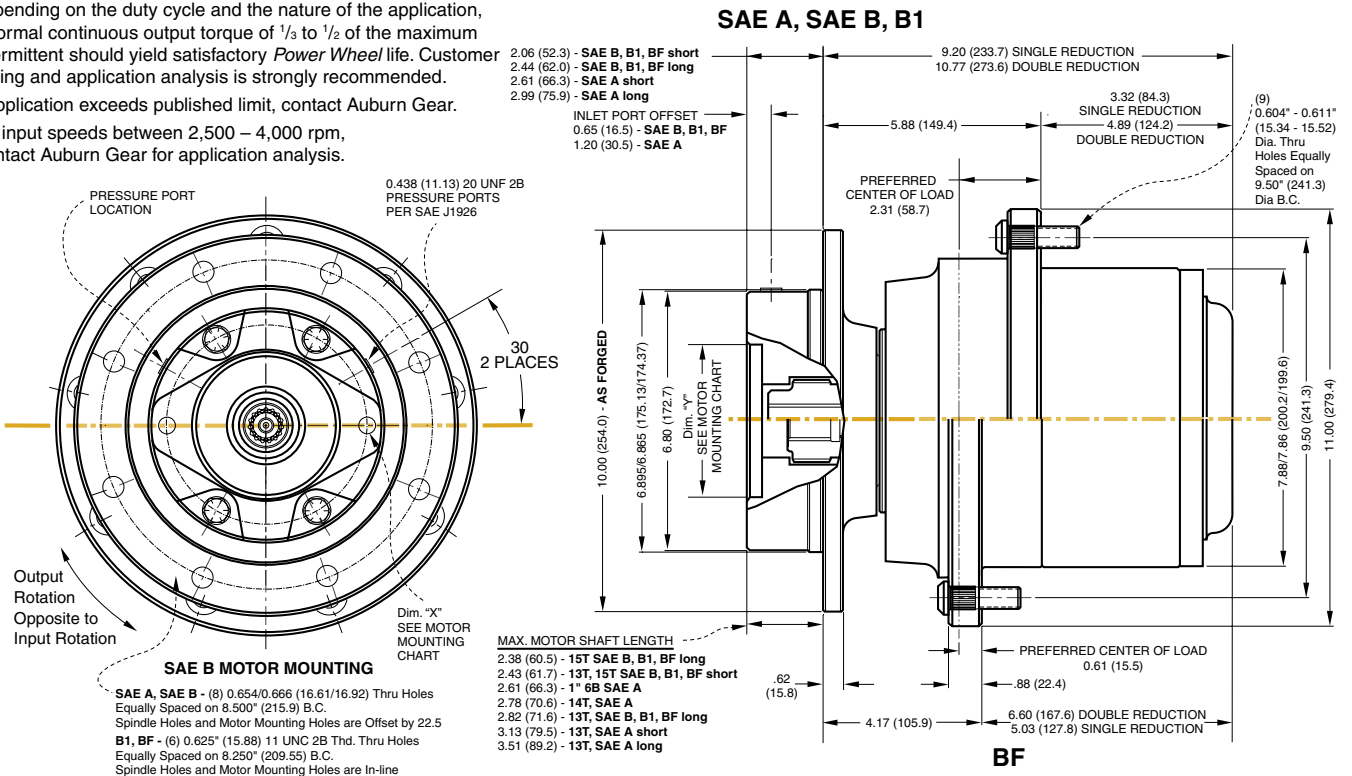
Max. intermittent output torque^{1,2} 22,000 lb-in (2,485 Nm)
 Max. input speed³ 3,500 RPM
 Approximate Weight 87 lbs (39.5 kg)
 Oil capacity 30 oz (887 cc)

Max. intermittent output torque^{1,2} 50,000 lb-in (5,650 Nm)
 Max. input speed³ 4,000 RPM
 Approximate Weight 112 lbs (50.8 kg)
 Oil capacity 35 oz (1,035 cc)

¹ 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. Customer testing and application analysis is strongly recommended.

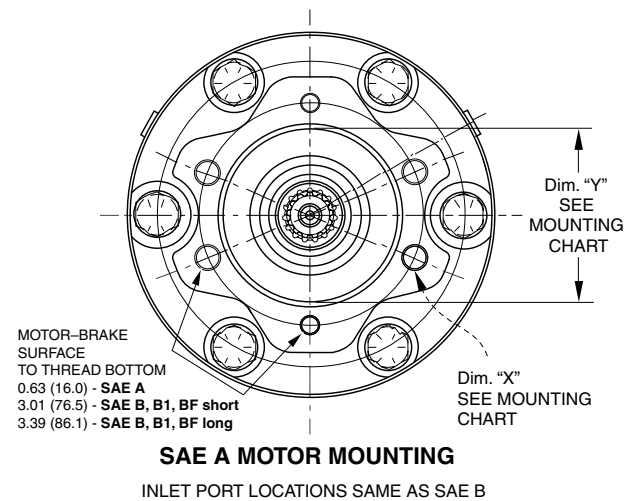
² If application exceeds published limit, contact Auburn Gear.

³ For input speeds between 2,500 – 4,000 rpm, contact Auburn Gear for application analysis.



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

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



MOTOR MOUNTING CHART

DIMENSION "X"	DIM. "Y"
SAE A (2) - .375 (9.53) -16 UNC, - 2B Thd Holes on 4.187 (106.35) B. C. diameter*	Ø 3.251 - 3.256 (82.58 - 82.70)
AND (4) - .50 (12.7) -13 UNC, - 2B Thd Holes on 4.187 (106.35) B. C. diameter*	
SAE B, B1, BF (2) - .50 (12.7) -13 UNC, - 2B Thd Holes on 5.75 (146.1) B. C. diameter*	Ø 4.001 - 4.006 (101.62 - 101.75)

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

FEATURE CHARTS:

MODEL 6 WHEEL DRIVES SINGLE REDUCTION with BRAKE

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN		ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER		
MOTOR PILOT/HUB	SAE A SAE B	•	•	6WA 6WB	6WB		
INPUT SPLINE	13T. ¹⁶ / ₃₂ 14T. ¹² / ₂₄ 15T. ¹⁶ / ₃₂ 1" - 6B	•	•	13 14 15 6B		13	
RATIO OPTIONS	3.50:1 4.05:1 4.81:1*	•	•	03 04 05*			05
WHEEL STUDS	¹ / ₂ x 1.89 ¹ / ₂ x 2.50 ⁹ / ₁₆ x 2.06 ⁹ / ₁₆ x 2.75 ⁵ / ₈ x 2.36 NONE	•	•	15 16 17 18 8 0			17
PARKING BRAKE	SHORT VERSION 1,540 lb-in 1,800 lb-in 2,400 lb-in	•	•	B1 B2 B3			B2
	LONG VERSION 2,400 lb-in 3,200 lb-in 3,600 lb-in 4,200 lb-in	•	•	B4 B5 B6 B7			
SPECIAL FEATURES	Brake Disc Holes Brake Disc* Quick Disconnect Oil Plugs/Spindle Side Boot Seal High Strength Carrier	•	•	DH D Q P Z Y			Q

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

6WB 13 05 17 B2 Q

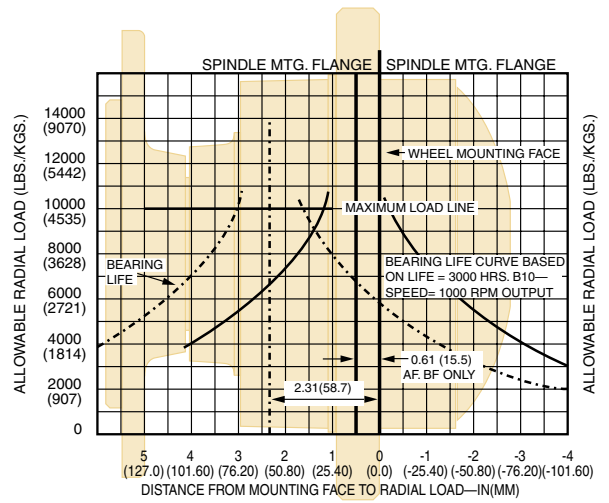
* 6WA1405 will not disengage.

MODEL 6 WHEEL DRIVES DOUBLE REDUCTION with BRAKE

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN		ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER		
MOTOR PILOT/HUB	SAE A SAE B B1 BF	•	•	6WA 6WB 6WB1 6WBF	6WB		
INPUT SPLINE	13T. ¹⁶ / ₃₂ 14T. ¹² / ₂₄ 15T. ¹⁶ / ₃₂ 1" - 6B	•	•	13 14 15 6B		13	
RATIO OPTIONS	13.06:1 15.88:1 19.62:1 21.74:1 24.53:1 28.37:1 32.79:1	•	•	13 15 19 21 24 28 32			24
WHEEL STUDS	¹ / ₂ x 1.89 ¹ / ₂ x 2.50 ⁹ / ₁₆ x 2.06 ⁹ / ₁₆ x 2.75 ⁵ / ₈ x 2.36 NONE	•	•	15 16 17 18 8 0			15
PARKING BRAKE	SHORT VERSION 1,540 lb-in 1,800 lb-in 2,400 lb-in	•	•	B1 B2 B3			B2
	LONG VERSION 2,400 lb-in 3,200 lb-in 3,600 lb-in 4,200 lb-in	•	•	B4 B5 B6 B7			
SPECIAL FEATURES	Brake Disc Holes Brake Disc* Cast Iron Cover Quick Disconnect Oil Plugs/Spindle Side Boot Seal High Strength Carrier	•	•	DH D C Q P Z Y			Z

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

6WB 13 24 15 B2 Z



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.

BEARING LOAD, LIFE AND SPEED RELATIONSHIPS

$$LF = \frac{SF \times R}{R'}$$

R = Allowable resultant load for given location from mounting flange

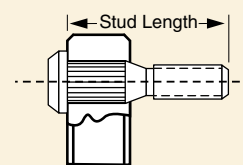
R' = Anticipated load at location from mounting flange

LF = Life Factor from table (see below)

SF = Speed Factor from table (see below)

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

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.



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

Model 6 Wheel Drives - Bearingless Motor Units³ Single and Double Reductions

GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES

DOUBLE REDUCTION DRIVES

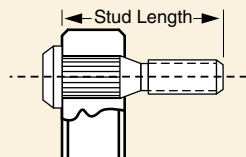
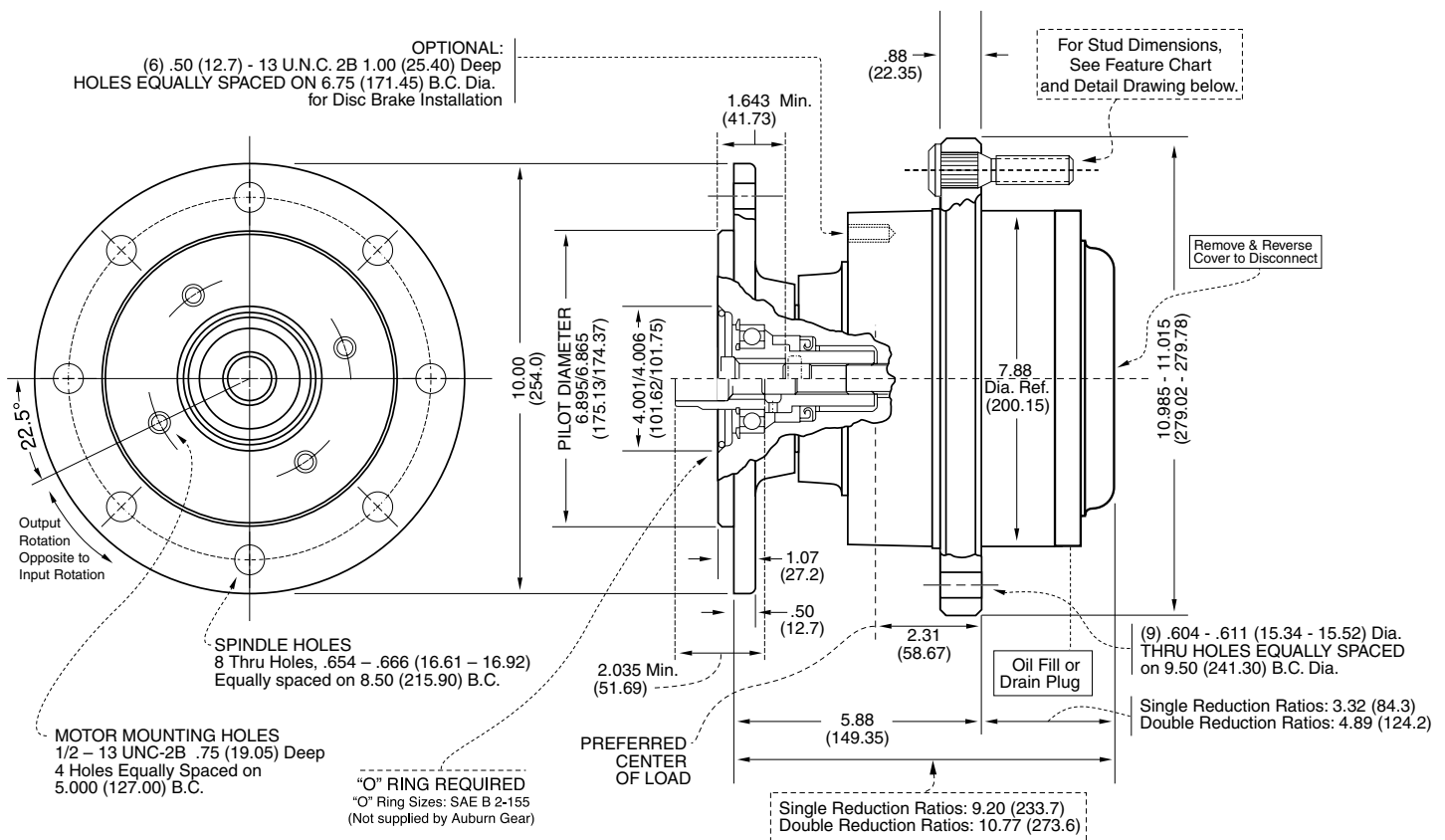
Max. intermittent output torque^{1,2} 22,000 lb-in (2,485 Nm)
 Max. input speed² 3,500 RPM
 Approximate Weight 73 lbs (33.1 kg)
 Oil capacity 25 oz (740 cc)
 Max. case drain pressure 1,500 PSI (103.2 bar)

Max. intermittent output torque^{1,2} 50,000 lb-in (5,650 Nm)
 Max. input speed² 5,000 RPM
 Approximate Weight 98 lbs (44.5 kg)
 Oil capacity 30 oz (890 cc)
 Max. case drain pressure 1,500 PSI (103.2 bar)

¹ 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. Customer testing and application analysis is strongly recommended.

² If application exceeds published limit, contact Auburn Gear.

³ Case drain must be contained in motor.

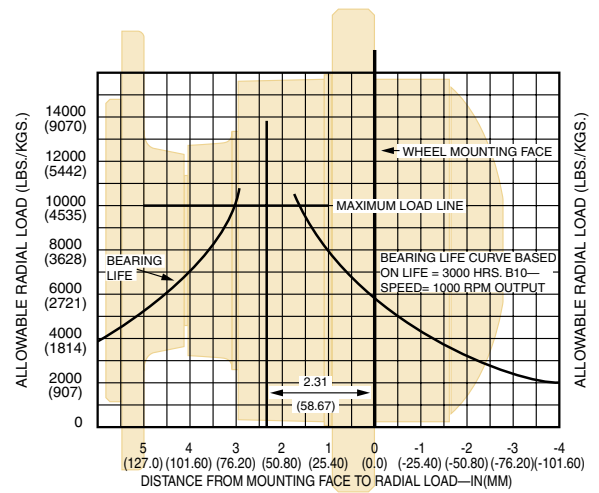


Wheel Stud - Detail

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

FEATURE CHART: MODEL 6 WHEEL DRIVE BEARINGLESS MOTOR UNITS - SINGLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN		ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER
MOTOR PILOT/HUB	2000Series OMSS	•	•	6WBC 6WBD	6WBD
INPUT SPLINE	12T. ¹²/₂₄	•	•	12	12
RATIO OPTIONS	3.50:1 4.05:1 4.81:1	•	•	03 04 05	04
WHEEL STUDS	¹ / ₂ x 2.50 ⁹ / ₁₆ x 2.75 ⁵ / ₈ x 2.37 NONE	•	•	5 7 8 0	8
SPECIAL FEATURES	Brake Disc Holes Brake Disc* • Boot Seal Cast Iron Cover Quick Disconnect Oil Plugs/Spindle Side High Strength Secondary Carrier	• • • Std • • • •	• • • Std • • • •	DH D • Z C Q P Y	C
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:					6WBD 12 04 8 C



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.

FEATURE CHART: MODEL 6 WHEEL DRIVE BEARINGLESS MOTOR UNITS - DOUBLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN		ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER
MOTOR PILOT/HUB	2000Series OMSS	•	•	6WBC 6WBD	6WBD
INPUT SPLINE	12T. ¹² / ₂₄	•	•	12	12
RATIO OPTIONS	13.06:1 15.88:1 19.62:1 21.74:1 24.53:1 28.37:1	•	•	13 15 19 21 24 28	15
WHEEL STUDS	¹ / ₂ x 2.50 ⁹ / ₁₆ x 2.75 ⁵ / ₈ x 2.37 NONE	•	•	5 7 8 0	8
SPECIAL FEATURES	Brake Disc Holes Brake Disc* • Boot Seal Cast Iron Cover Std Quick Disconnect • Oil Plugs/Spindle Side • High Strength • Secondary Carrier	• • • Std • • • • • • •	• • • Std • • • • • • •	DH D • Z C Q P Y	C
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:					6WBD 12 15 8 C

* Customer supplied, Auburn Gear assembled

BOLDFACE INDICATES REGULAR VOLUME PRODUCED ITEMS WITH BEST AVAILABILITY.

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)

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

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.

Model 6 Wheel Drives - Series B - Double Reduction

See page 4 for Series B Features

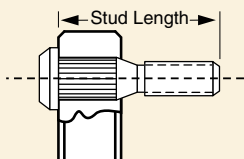
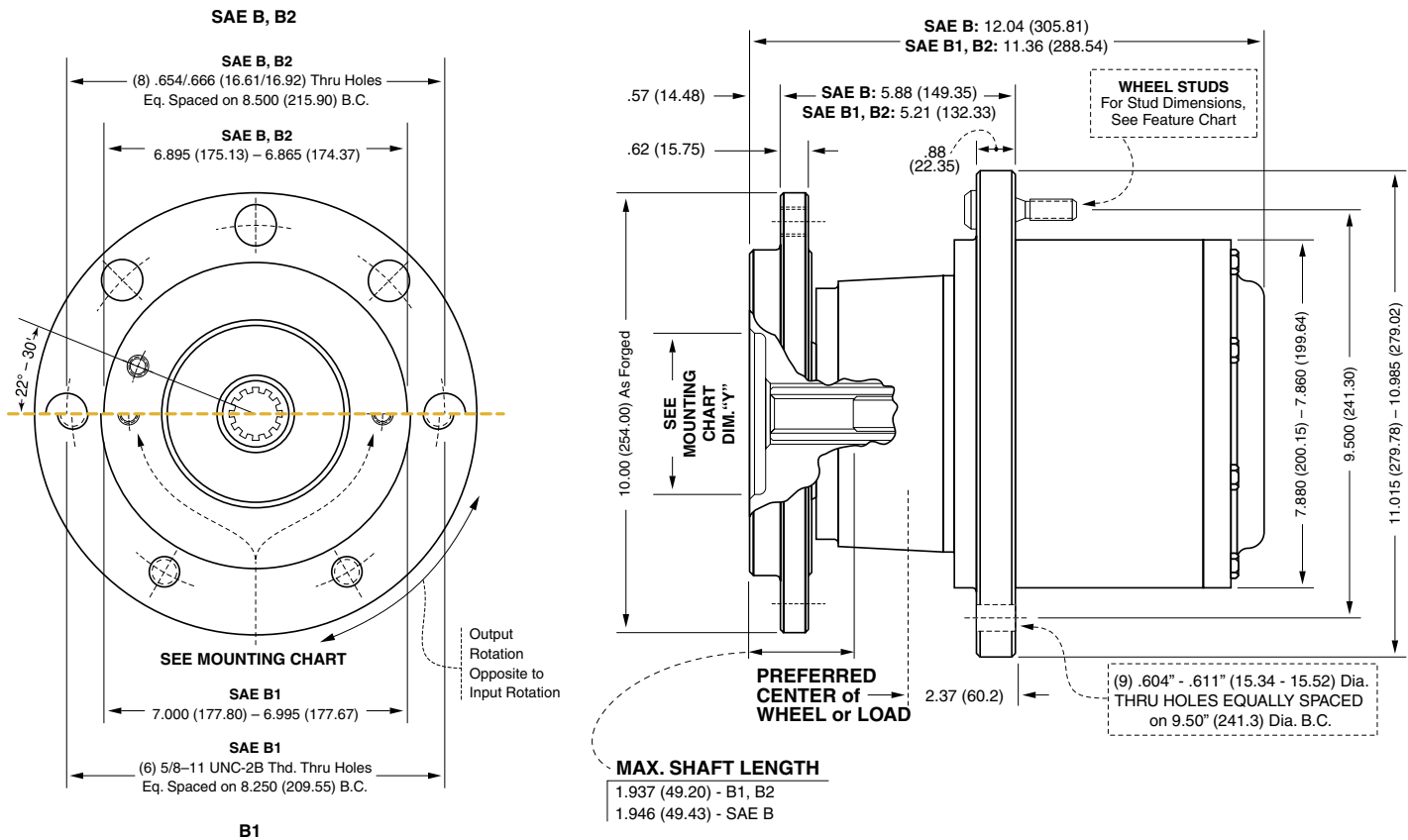
GENERAL SPECIFICATIONS

Max. intermittent output torque ^{1,2}	50,000 lb-in (5,650 Nm)	Approximate Weight	105 lbs (48 kg)
Max. input speed ²	5,000 RPM	Oil capacity	31 oz (920 cc)

¹ 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.

Customer testing and application analysis is strongly recommended.

² If application exceeds limit, contact Auburn Gear.



Wheel Stud - Detail

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

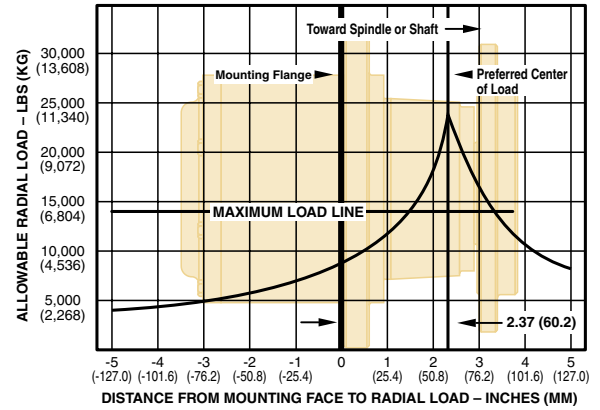
**NON-POWERED UNITS
ARE ALSO AVAILABLE**
Contact Auburn Gear for Information

FEATURE CHART: MODEL 6 SERIES B WHEEL DRIVES - DOUBLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN		ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER
MOTOR PILOT/HUB	SAE B B1 B2	•	•	6W2B 6W2B1 6W2B2	6W2B
INPUT SPLINE	13T. ¹⁶ / ₃₂ 15T. ¹⁶ / ₃₂	•	•	13 15	13
RATIO OPTIONS	13.06:1 15.88:1 19.62:1 21.74:1 24.53:1 28.37:1 32.79:1	•	•	13 15 19 21 24 28 32	28
WHEEL STUDS	¹ / ₂ " x 1.89 ¹ / ₂ " x 2.50 ⁹/₁₆" x 2.06 ⁹/₁₆" x 2.75 ⁵/₈" x 2.37 NONE	•	•	15 16 17 18 8 0	17 Z
SPECIAL FEATURES	Boot Seal Quick Disconnect Oil Plugs/Spindle Side	•	•	Z Q P	
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:				6W2B132817Z	

BOLDFACE INDICATES REGULAR VOLUME PRODUCED ITEMS WITH BEST AVAILABILITY.

MODEL 6 – SERIES B WHEEL DRIVE BEARING LIFE CURVE
Based On: LIFE = 3,000 Hours B10 SPEED = 100 RPM Output



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.

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)

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

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.

MOTOR MOUNTING CHART

DIMENSION "X"	DIA. "Y"
SAE B, B1, B2 (2) – .500 (12.70) - 13 UNC, - 2B Thd Holes on 4.187 (106.35) B. C. diameter*	Ø 4.001 - 4.006 (101.62 - 101.75)

*"O" RING OR GASKET REQUIRED (Not Supplied by Auburn Gear)
"O" RING SIZES: SAE "B" 2-155

Model 6 Wheel Drives - Series B -

with A2 Series Integral Parking Brake
Double Reductions

See page 5 for brake information
 See page 4 for Series B Features

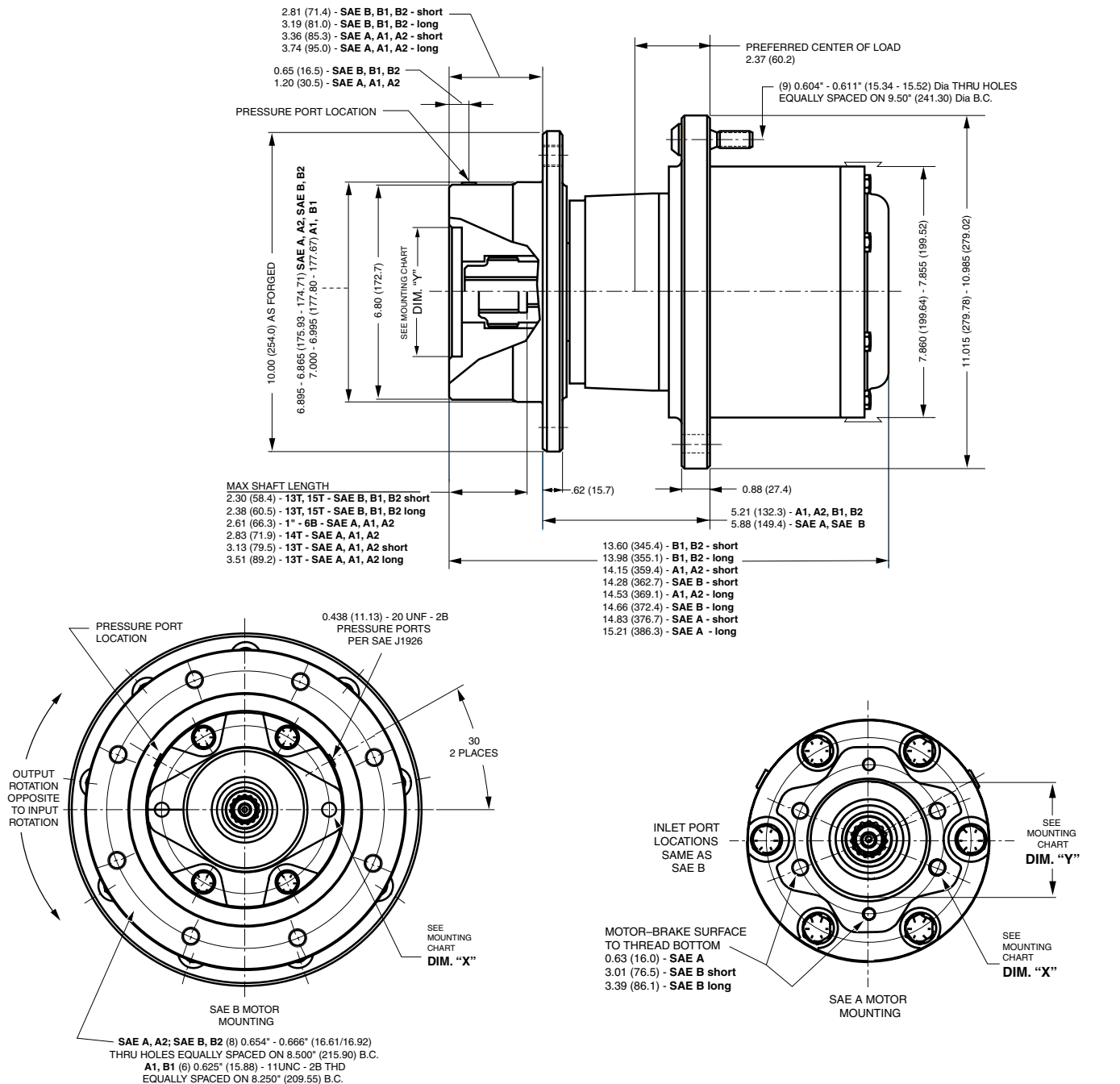
GENERAL SPECIFICATIONS

Max. intermittent output torque^{1,2} 50,000 lb-in (5,650 Nm) Approximate Weight 125 lbs (57 kg)
 Max. input speed³ 4,000 RPM Oil capacity 36 oz (1070 cc)

¹ Depending on the duty cycle and the nature of the application, a normal continuous output 1/3 to 1/2 of the Maximum Intermittent should yield satisfactory Power Wheel life.

² If application exceeds published limit, contact Auburn Gear.

³ For input speeds between 2,500 – 4,000 rpm, contact Auburn Gear for application analysis.



FEATURE CHART: MODEL 6 SERIES B WHEEL DRIVES DOUBLE REDUCTION with BRAKE

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN			ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER
MOTOR PILOT/HUB	SAEA A1 A2	•	•		6W2A 6W2A1 6W2A2	
	SAE B B1 B2	•		•	6W2B 6W2B1 6W2B2	6W2B
INPUT SPLINE	13T. - ¹⁶ / ₃₂ " 14T. - ¹² / ₂₄ " 15T. - ¹⁶ / ₃₂ " 1" - 6B	•		•	13 14 15 6B	15
RATIO OPTIONS	13.06:1 15.88:1 19.62:1 21.74:1 24.53:1 28.37:1 32.79:1	•	•	•	13 15 19 21 24 28 32	24
WHEEL STUDS	¹ / ₂ " by 1.89 ¹ / ₂ " by 2.50 ⁹/₁₆" by 2.06 ⁹/₁₆" by 2.75 ⁵/₈" by 2.37 NONE	•	•	•	15 16 17 18 8 0	17
PARKING BRAKE	SHORT VERSION 1,540 lb-in 1,800 lb-in 2,400 lb-in	•	•	•	B1 B2 B3	
	LONG VERSION 2,400 lb-in 3,200 lb-in 3,600 lb-in 4,200 lb-in	•	•	•	B4 B5 B6 B7	B4
SPECIAL FEATURES	Boot Seal Quick Disconnect Oil Plugs/Spindle Side	•	•	•	Z Q P	Z

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

6W2B 15 24 7 B4 Z

BOLDFACE INDICATES REGULAR VOLUME PRODUCED ITEMS WITH BEST AVAILABILITY.

BRAKE RATINGS

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

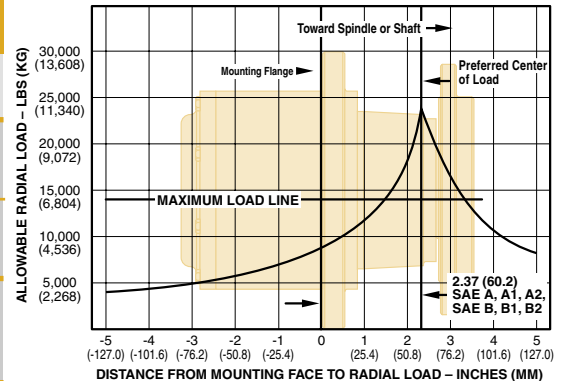
Maximum Release Pressure = 3,000 PSI (206.4 Bar)

MOTOR MOUNTING CHART

DIMENSION "X"	DIM. "Y"
SAE A, A1, A2 (2) - .375 (9.53) - 16 UNC, - 2B Thd Holes Equally Spaced on 4.188 (106.38) B. C. ⁺ AND (4) - .500 (12.70) - 13 UNC, - 2B Thd Holes on 4.188 (106.38) B. C. ⁺	Ø 3.251 - 3.256 (82.58 - 82.70)
SAE B, B1, B2 (2) - .500 (12.70) - 13 UNC. - 2B Thd Holes Equally Spaced on 5.750 (146.05) B. C. ⁺	Ø 4.001 - 4.006 (101.62 - 101.75)

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

MODEL 6 SERIES B BEARING LIFE CURVE Based On
LIFE = 3,000 Hours B10 SPEED = 100 RPM Output



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.

BEARING LOAD, LIFE AND SPEED RELATIONSHIPS

$$LF = \frac{SF \times R}{R'}$$

R = Allowable resultant load for given location from mounting flange

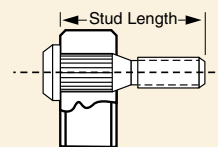
R' = Anticipated load at location from mounting flange

LF = Life Factor from table (see below)

SF = Speed Factor from table (see below)

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

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.



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

Model 6 Shaft Output Drives - Single and Double Reductions

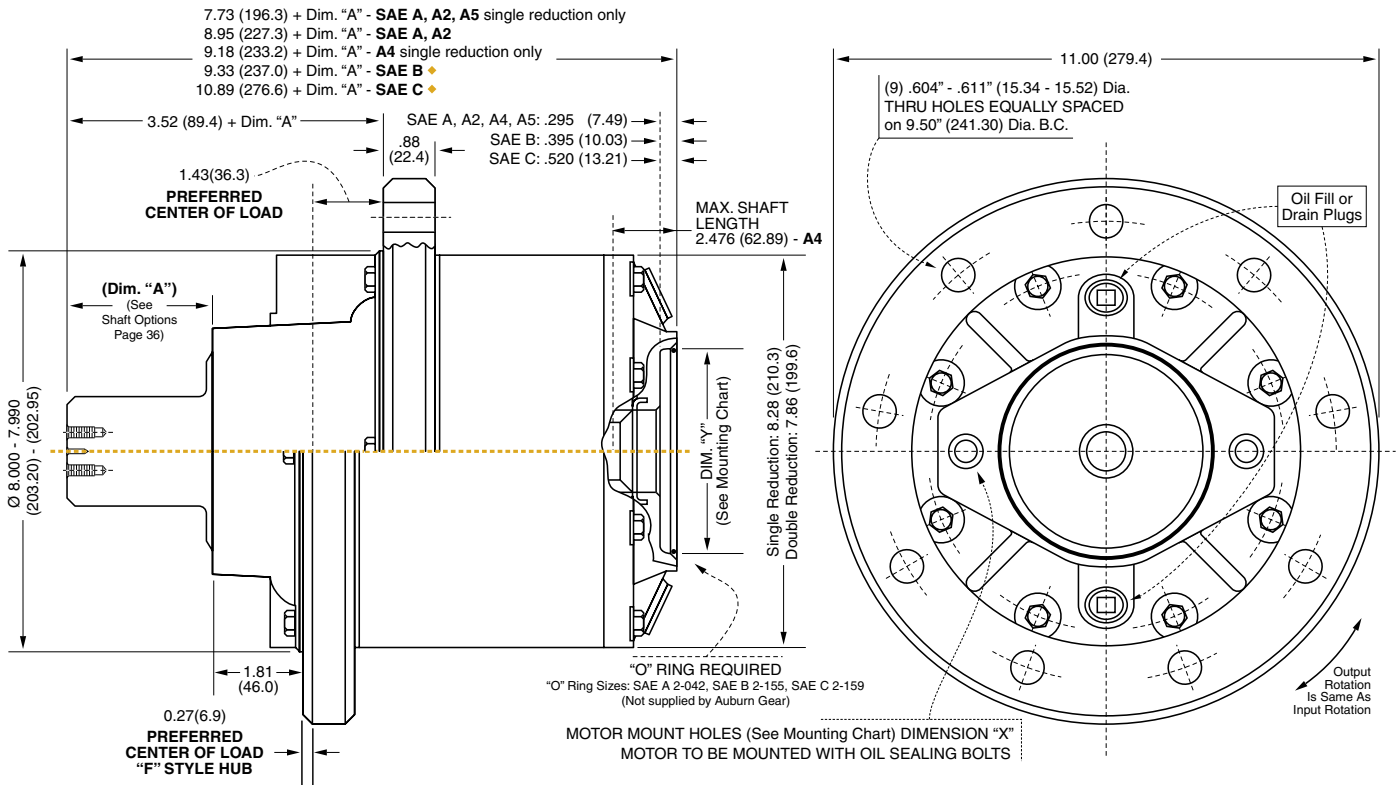
GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES

DOUBLE REDUCTION DRIVES

Max. intermittent output torque^{1,2} 30,000 lb-in (3,390 Nm)
 Max. input speed² 3,500 RPM
 Approximate Weight 57 lbs (26.3 kg)
 Oil capacity 17 oz (500 cc)

Max. intermittent output torque^{1,2} 50,000 lb-in (5,650 Nm)
 Max. input speed² 5,000 RPM
 Approximate Weight 83 lbs (37.6 kg)
 Oil capacity 24 oz (700 cc)



MOTOR MOUNTING CHART

DIMENSION "X"	DIM. "Y"
SAE A (2) - .375 (9.53) -16 UNC,-2B Thd Holes on 4.187 (106.35) B. C. diameter*	Ø 3.251 - 3.256 (82.58 - 82.70)
A2 (2) - .500 (12.70) -13 UNC,-2B Thd Holes on 4.187 (106.35) B. C. diameter*	
A4, A5 (4) - .500 (12.70) -13 UNC,-2B Thd Holes on 4.187 (106.35) B. C. diameter*	
SAE B (2) - .500 (12.70) -13 UNC,-2B Thd Holes on 5.75 (146.1) B. C. diameter*	Ø 4.001 - 4.006 (101.62 - 101.75)
SAE C (4) - .500 (12.70) -13 UNC,-2B Thd Holes on 6.375 (161.93) B. C. diameter* OR (2) - .625 (15.88) -13 UNC,-2B Thd Holes on 7.125 (180.97) B. C. diameter*	5.001 - 5.008 (127.02 - 127.15)

*"O" RING OR GASKET REQUIRED (Not Supplied by Auburn Gear)
 "O" RING SIZES: SAE "A" 2-042, SAE "B" 2-155, SAE "C" 2-159

¹ 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. Customer testing and application analysis is strongly recommended.

² If application exceeds published limit, contact Auburn Gear.

♦ Note: For single reductions, SAE B and SAE C, subtract 1.60" (40.6) from overall length.

FEATURE CHART: MODEL 6 SHAFT OUTPUT DRIVES - SINGLE REDUCTION • STYLE T

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN	ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER
MOTOR PILOT/HUB ¹	SAE A A2 A4 A5 SAE B SAE C	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6TA 6TA2 6TA4 6TA5 6TB 6TC	6TA
INPUT SPLINE	13T - 1⁶/32 1" - 6B* 14T - 1²/24**	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	13 6B 14	13
RATIO OPTIONS	3.75:1 4.50:1 5.05:1 5.81.1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	03 04 05 06	05
OUTPUT OPTIONS	1 ³ / ₄ J501 Taper 17T. ¹² / ₂₄ Spline 23T. ¹²/₂₄ Spline 23T. ¹²/₂₄ Short 1.75 Keyed 2.00 Keyed 2.00 Hollow 1.75 Hollow 2.00 Keyed 2.00 Round 2.56 Round 2.00 Hex	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	T1 17 23 23S K1 K2 K3 K4 K5 A1 A2 H1	K2
SPECIAL FEATURES	Brake Disc Holes Oil Plugs/Output Side High Strength Carrier	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	DH P Y	Y

Select desired characteristics from chart, note correct order codes, and order using sample format shown at right: **6TA13 05 K2 Y**

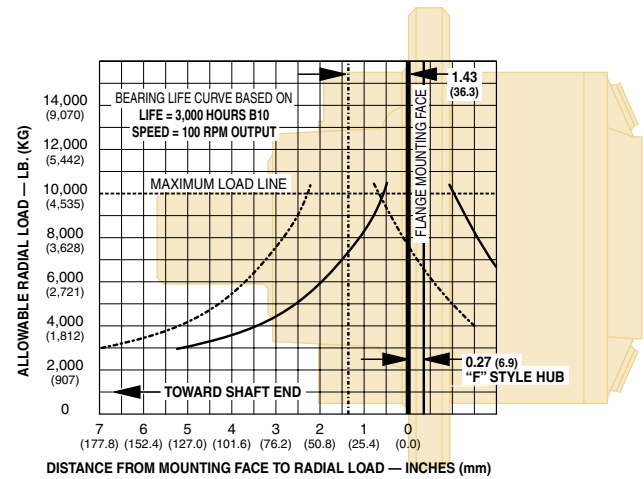
* 1" - 6B input spline not available with SAE or A2 motor pilot/hub and 3.75:1 ratio.
 ** 14T - 1²/₂₄ input spline not available with SAE A or A2 motor pilot/hub and 5.05:1 ratio.
¹ If "F" style hub required, place letter "F" between motor pilot/hub and input spline (i.e. **6TAF6B04K2**)

FEATURE CHART: MODEL 6 SHAFT OUTPUT DRIVES - DOUBLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN	ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER
MOTOR PILOT/HUB ²	SAE A A2 SAE B SAE C	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6SA 6SA2 6SB 6SC	6SA
INPUT SPLINE	13T - 1⁶/32 1" - 6B 14T - 1 ² / ₂₄ 15T - 1⁶/32	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	13 6B 14 15	6B
RATIO OPTIONS	14.06:1 16.88:1 20.62:1 22.74:1 25.53:1 29.37:1 33.79:1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	14 16 20 22 25 29 33	22
OUTPUT OPTIONS	1 ³ / ₄ J501 Taper 17T. ¹² / ₂₄ Spline 23T. ¹²/₂₄ Spline 23T. ¹²/₂₄ Short 1.75 Keyed 2.00 Keyed 2.00 Hollow 1.75 Hollow 2.00 Keyed 2.00 Round 2.56 Round 2.00 Hex	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	T1 17 23 23S K1 K2 K3 K4 K5 A1 A2 H1	23
SPECIAL FEATURES	Brake Disc Holes Oil Plugs/Output Side High Strength Carrier	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	DH P Y	P

Select desired characteristics from chart, note correct order codes, and order using sample format shown at right: **6SA 6B 22 23 P**

BOLDFACE INDICATES REGULAR VOLUME PRODUCED ITEMS WITH BEST AVAILABILITY.
² If "F" style hub required, place letter "F" between motor pilot/hub and input spline (i.e. **6SBF1329K2**)



NOTE:
 These curves are supplied as a design guide and apply to resultant radial load only. They indicate the importance of maintaining load position over the bearing center.
 For actual analysis, applications should be reviewed by Auburn Gear Engineering using data supplied on Application Data Form.

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)

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

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.

Model 6 Shaft Output Drives -

with A2 Series Integral Parking Brake¹

Single and Double Reductions

See page 5 for brake information

GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES

DOUBLE REDUCTION DRIVES

Max. intermittent output torque^{2,3} 30,000 lb-in (3,390 Nm)
 Max. input speed⁴ 3,500 RPM
 Approximate Weight 87 lbs (39.5 kg)
 Oil capacity 30 oz (887 cc)

Max. intermittent output torque^{2,3} 50,000 lb-in (5,650 Nm)
 Max. input speed⁴ 4,000 RPM
 Approximate Weight 112 lbs (50.8 kg)
 Oil capacity 35 oz (1035 cc)

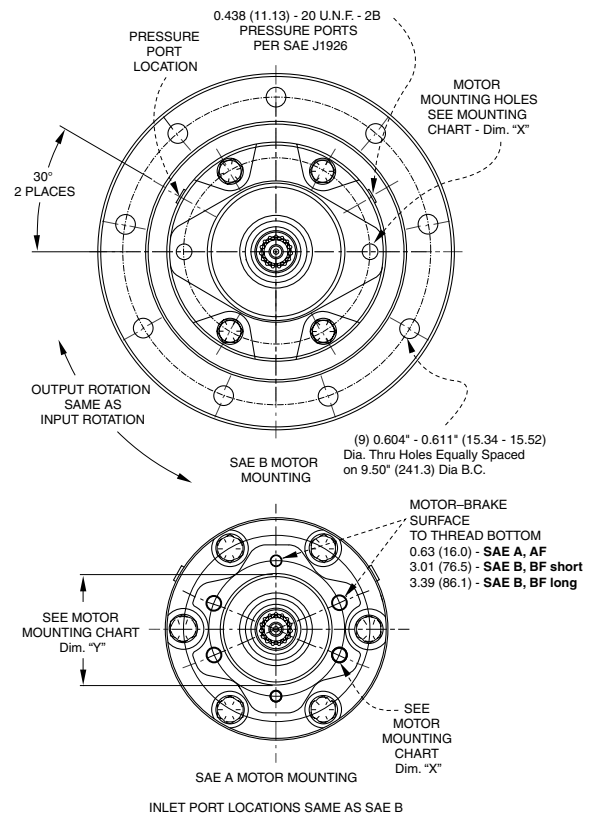
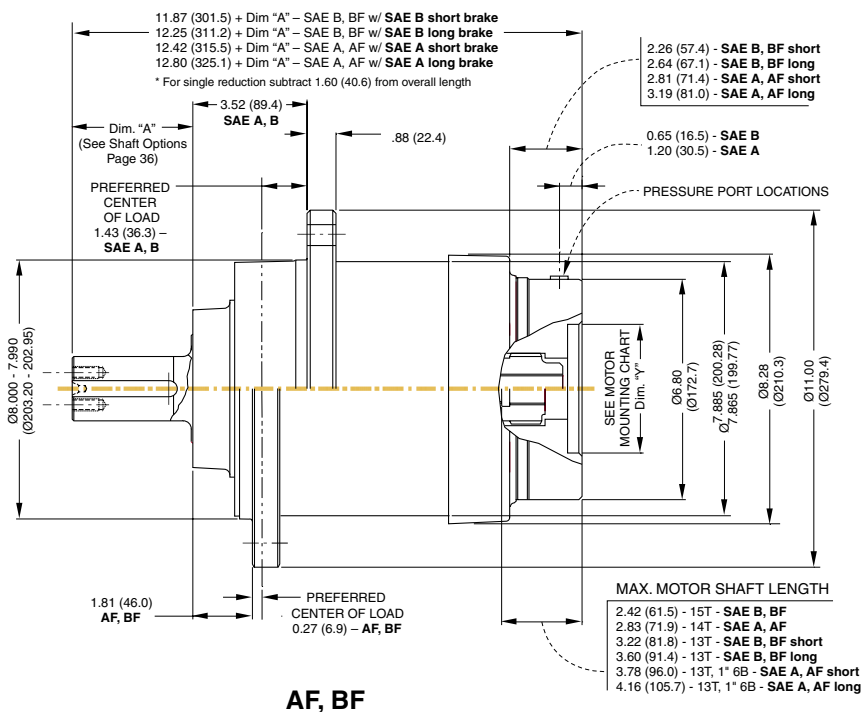
¹ For vertical applications, shaft up or shaft down, contact Auburn Gear.

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. Customer testing and application analysis is strongly recommended.

³ If application exceeds published limit, contact Auburn Gear.

⁴ For input speeds between 2,500 – 4,000 rpm, contact Auburn Gear for application analysis.

SAE A, SAE B



MOTOR MOUNTING CHART

DIMENSION "X"	DIM. "Y"
SAE A, AF (2) - .375 (9.53) -13 UNC,- 2B Thd Holes Equally Spaced on 4.188 (106.38) B. C.* AND (4) - .500 (12.70) -13 UNC,- 2B Thd Holes on 4.188 (106.38) B. C.*	Ø 3.251 - 3.256 (82.58 - 82.70)
SAE B, BF (2) - .500 (12.70) -13 UNC. 2B Thd Holes Equally Spaced on 5.750 (146.05) B. C.*	Ø 4.001 - 4.006 (101.62 - 101.75)

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

BRAKE RATINGS

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

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

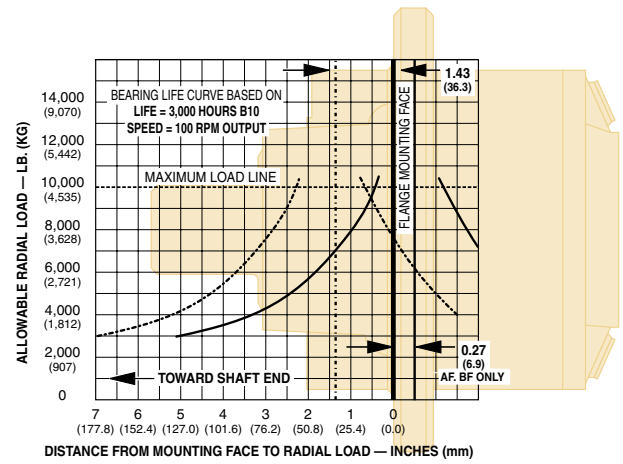
FEATURE CHARTS:

MODEL 6 SHAFT OUTPUT SINGLE REDUCTION STYLE T with BRAKE

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN		ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER
MOTOR PILOT/HUB	SAE A AF SAE B BF	•	•	6TA 6TAF 6TB 6TBF	6TB
INPUT SPLINE	13T. ^{16/32} 1" - 6B 14T. ^{12/24} 15T. ^{16/32}	•	•	13 6B 14 15	13
RATIO OPTIONS	3.75:1 4.50:1 5.05:1 5.81:1	•	•	03 04 05 06	04
OUTPUT SHAFT OPTIONS	1 3/4 J501 Taper 17T. ^{12/24} Spline 23T. ^{12/24} Spline 23T. ^{12/24} Short 1.75 Keyed 2.00 Keyed 2.00 Hollow 1.75 Hollow 2.00 Keyed 2.00 Round 2.56 Round 2.00 Hex	•	•	T1 17 23 23S K1 K2 K3 K4 K5 A1 A2 H1	23
PARKING BRAKE*	SHORT VERSION 1,540 lb-in 1,800 lb-in 2,400 lb-in	•	•	B1 B2 B3	B2
	LONG VERSION 2,400 lb-in 3,200 lb-in 3,600 lb-in 4,200 lb-in	•	•	B4 B5 B6 B7	
SPECIAL FEATURES	Oil Plugs/Output Side High Strength Carrier	•	•	P Y	P
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:					6TB 13 04 23 B2 P

MODEL 6 SHAFT OUTPUT DOUBLE REDUCTION with BRAKE

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN		ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER
MOTOR PILOT/HUB	SAE A AF SAE B BF	•	•	6SA 6SAF 6SB 6SBF	6SB
INPUT SPLINE	13T. ^{16/32} 1" - 6B 14T. ^{12/24} 15T. ^{16/32}	•	•	13 6B 14 15	13
RATIO OPTIONS	14.06:1 16.88:1 20.62:1 22.74:1 25.53:1 29.37:1 33.79:1	•	•	14 16 20 22 25 29 33	16
OUTPUT SHAFT OPTIONS	1 3/4 J501 Taper 17T. ^{12/24} Spline 23T. ^{12/24} Spline 23T. ^{12/24} Short 1.75 Keyed 2.00 Keyed 2.00 Hollow 1.75 Hollow 2.00 Keyed 2.00 Round 2.56 Round 2.00 Hex	•	•	T1 17 23 23S K1 K2 K3 K4 K5 A1 A2 H1	23
PARKING BRAKE*	SHORT VERSION 1,540 lb-in 1,800 lb-in 2,400 lb-in	•	•	B1 B2 B3	B2
	LONG VERSION 2,400 lb-in 3,200 lb-in 3,600 lb-in 4,200 lb-in	•	•	B4 B5 B6 B7	
SPECIAL FEATURES	Oil Plugs/Output Side High Strength Carrier	•	•	P Y	Y
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:					6SB 13 16 23 B2 Y



NOTE:

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

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

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)

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

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.

* FOR HORIZONTAL OPERATION ONLY. Where vertical operation is required, contact Auburn Gear.

BOLDFACE INDICATES REGULAR VOLUME PRODUCED ITEMS WITH BEST AVAILABILITY.

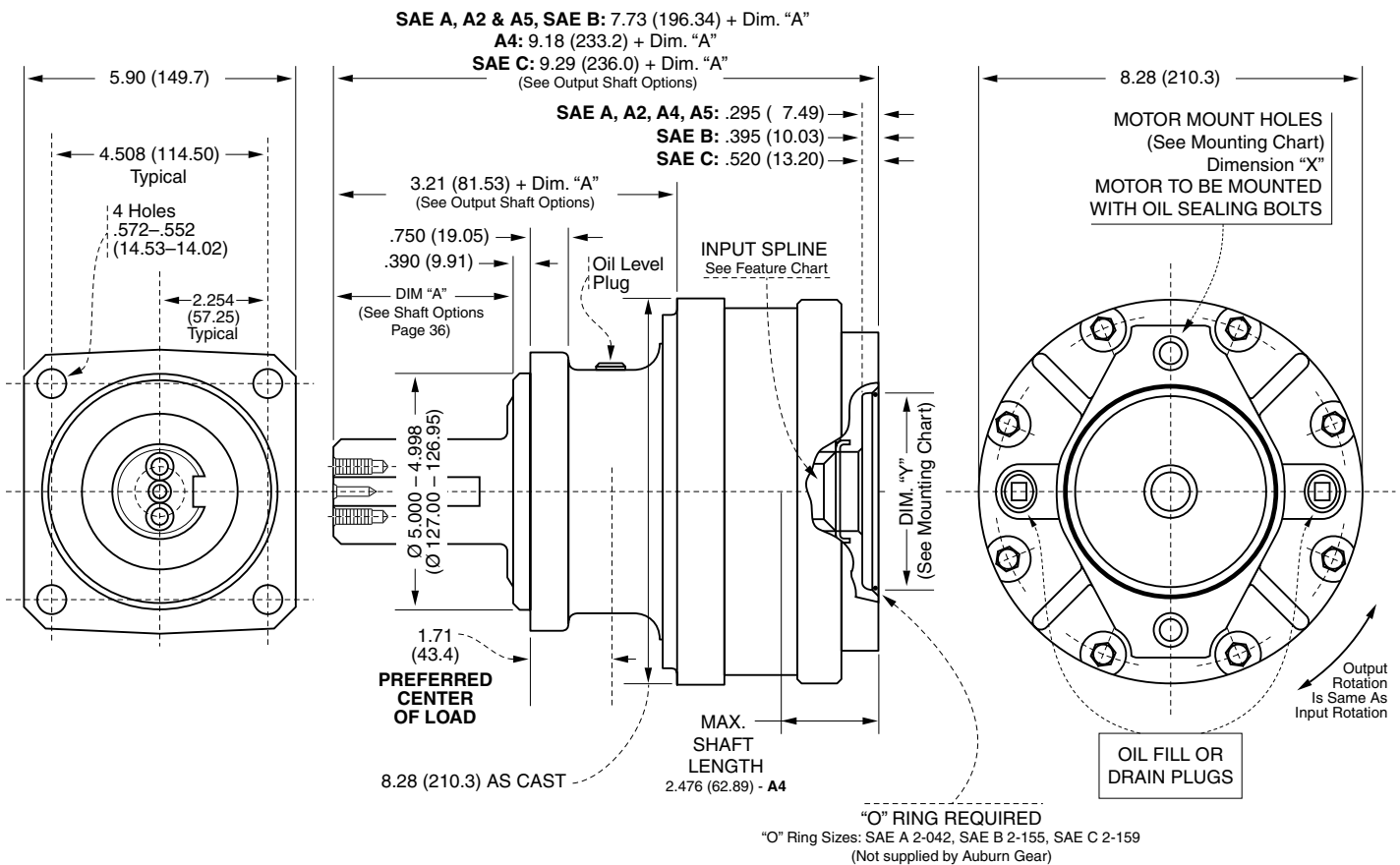
Model 6 Shaft Output Drives - Style "R" - Single Reduction

GENERAL SPECIFICATIONS

Max. intermittent output torque ^{1,2}	30,000 lb-in (3,390 Nm)	Approximate Weight	58 lbs (26.3 kg)
Max. input speed ²	3,500 RPM	Oil capacity	17 oz (500 cc)

¹ 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. Customer testing and application analysis is strongly recommended.

² If application exceeds published limit, contact Auburn Gear.



INTEGRAL PARKING BRAKE UNITS ARE ALSO AVAILABLE
 Contact Auburn Gear for Information

FEATURE CHART: MODEL 6 SHAFT OUTPUT DRIVES - SINGLE REDUCTION • STYLE R

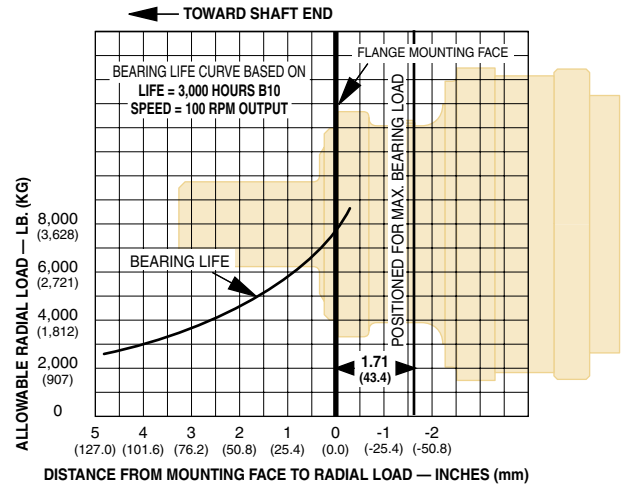
OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN	ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER
MOTOR PILOT/HUB	SAE A A2 A4 A5 SAE B SAE C	• •	6RA 6RA2 6RA4 6RA5 6RB 6RC	6RB
INPUT SPLINE	13T - 16/32 1" - 6B* 14T - 12/24**	• • • • • • • • • • • • • • •	13 6B 14	13
RATIO OPTIONS	3.75:1 4.50:1 5.05:1 5.81:1	• • • • • • • • • • • • • • • • • • • •	03 04 05 06	05
OUTPUT SHAFTS	1 3/4 J501 Taper 17T. 12/24 Spline 23T. 12/24 Spline 23T. 12/24 Short 1.75 Keyed 2.00 Keyed 2.00 Hollow 1.75 Hollow 2.00 Keyed 2.0 Dia.w/Thru Hole	• •	T1 17 23 23S K1 K2 K3 K4 K5 A1	17
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:				6RB 13 05 17

*1" 6B input spline not available with SAE A or A2 motor pilot/hub and 3.75:1 ratio.
 ** 14T - 12/24 input spline not available with SAE A or A2 motor pilot/hub and 5.05:1 ratio.
BOLDFACE INDICATES REGULAR VOLUME PRODUCED ITEMS WITH BEST AVAILABILITY.

MOTOR MOUNTING CHART

DIMENSION "X"	DIM. "Y"
SAE A (2) - .375 (9.53) -16 UNC,- 2B Thd Holes on 4.187 (106.35) B. C. diameter*	Ø 3.251 - 3.256 (82.58 - 82.70)
A2 (2) - .50 (12.7) -13 UNC,- 2B Thd Holes on 4.187 (106.35) B. C. diameter*	
A4, A5 (4) - .50 (12.7) -13 UNC,- 2B Thd Holes on 4.187 (106.35) B. C. diameter*	
SAE B (2) - .50 (12.7)-13 UNC,- 2B Thd Holes on 5.75 (146.1) B. C. diameter*	Ø 4.001 - 4.006 (101.62 - 101.75)
SAE C (4) - .50 (12.7) -13 UNC,- 2B Thd Holes on 6.375 (161.93) B. C. diameter* OR (2) - .625 (15.88) -13 UNC,- 2B Thd Holes on 7.125 (180.97) B. C. diameter*	Ø 5.001 - 5.008 (127.02 - 127.15)

*"O" RING OR GASKET REQUIRED (Not Supplied by Auburn Gear)
 "O" RING SIZES: SAE "A" 2-042, SAE "B" 2-155, SAE "C" 2-159



NOTE:
 These curves are supplied as a design guide and apply to resultant radial load only. They indicate the importance of maintaining load position over the bearing center.
 For actual analysis, applications should be reviewed by Auburn Gear Engineering using data supplied on Application Data Form.

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)

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

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.

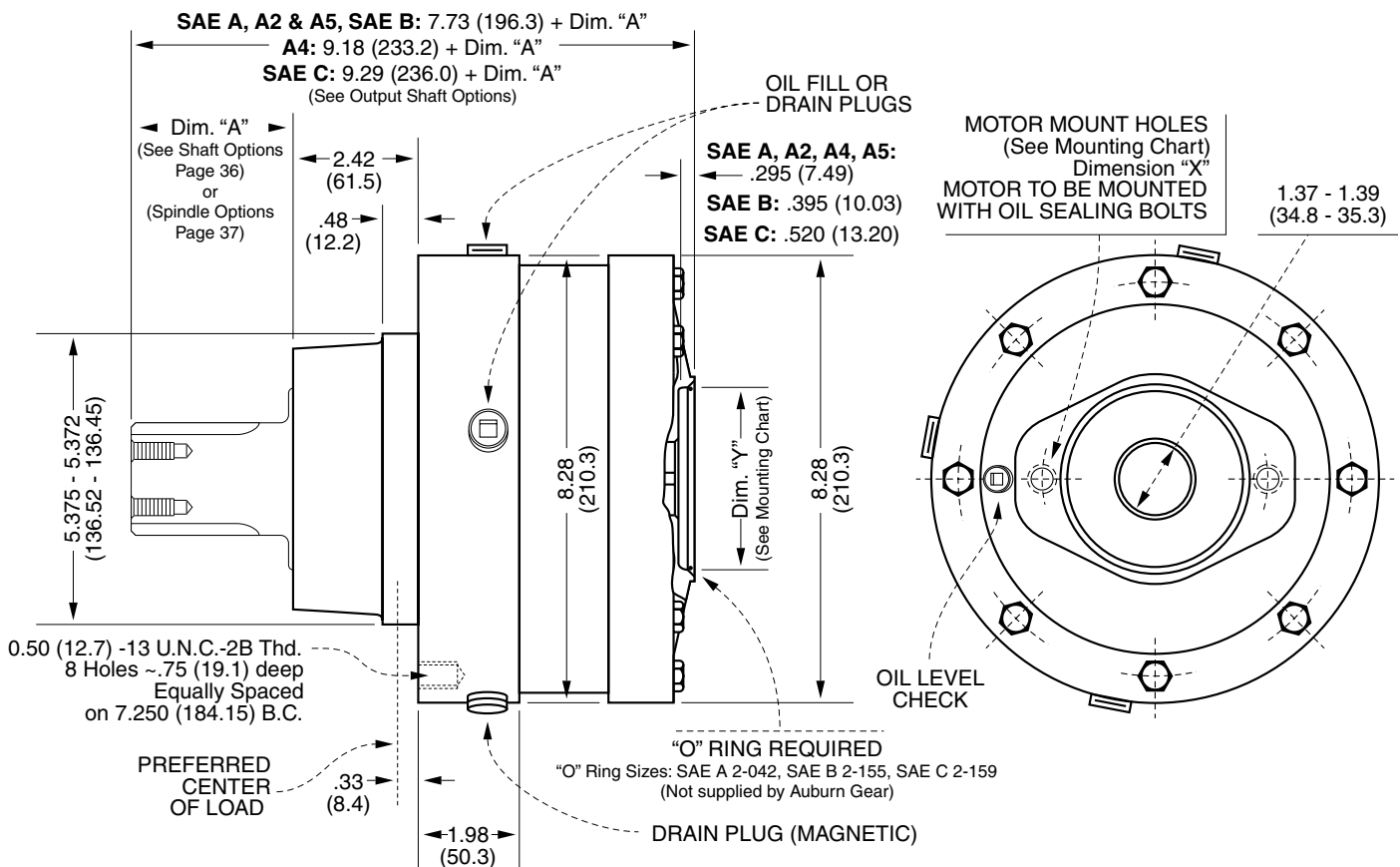
Model 6 Shaft Output Drives - Style "F" - Single Reduction

GENERAL SPECIFICATIONS

Max. intermittent output torque ^{1,2}	30,000 lb-in (3,390 Nm)	Approximate Weight	65 lbs (29.5 kg)
Max. input speed ²	3,500 RPM	Oil capacity	17 oz (500 cc)

¹ 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. Customer testing and application analysis is strongly recommended.

² If application exceeds published limit, contact Auburn Gear.



INTEGRAL PARKING BRAKE UNITS ARE ALSO AVAILABLE
 Contact Auburn Gear for Information

Model 6 Shaft Output Drives - Series B Double Reduction

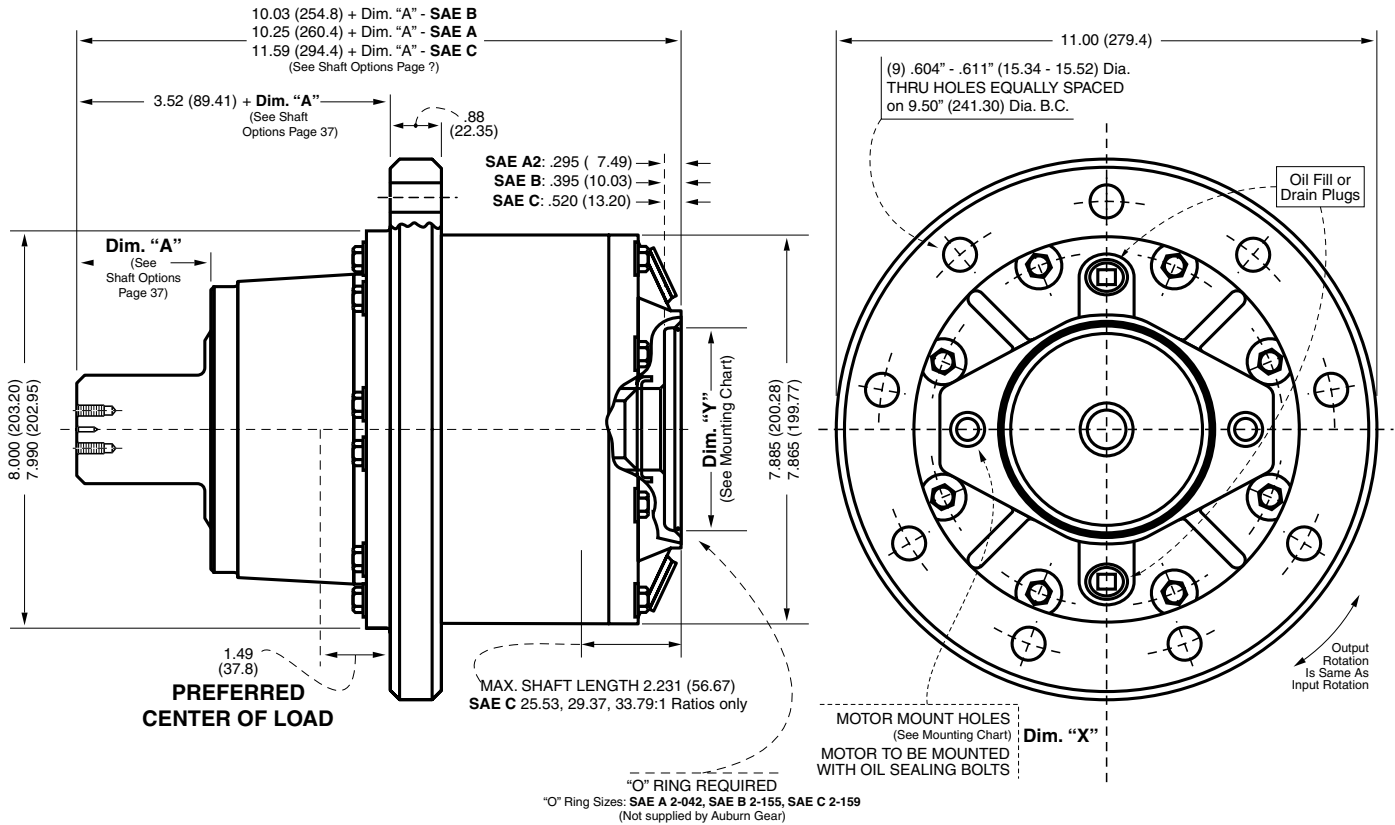
See page 4 for Series B Features

GENERAL SPECIFICATIONS

Max. intermittent output torque ^{1,2}	50,000 lb-in (5,650 Nm)	Approximate Weight	92 lbs (42 kg)
Max. input speed ²	5,000 RPM	Oil capacity	31 oz (920 cc)

¹ 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. Customer testing and application analysis is strongly recommended.

² If application exceeds limit, contact Auburn Gear.

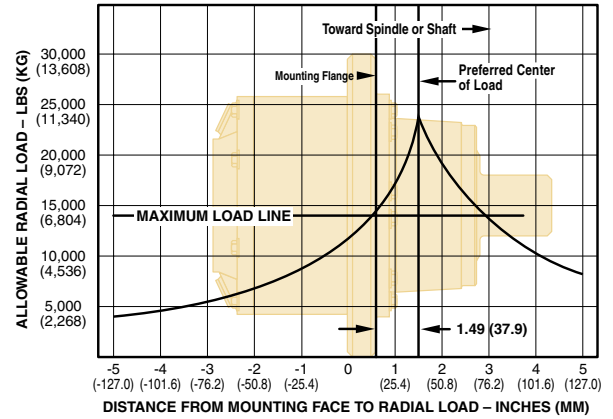


FEATURE CHART: MODEL 6 SERIES B SHAFT OUTPUT DRIVES DOUBLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN		ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER	
MOTOR PILOT/HUB	SAE A2 SAE B SAE C	•	•	6S2A2 6S2B 6S2C	6S2B	
INPUT SPLINE	13T. ^{16/32} 14T. ^{12/24}	•	•	13 14	13	
RATIO OPTIONS	14.06:1 16.88:1 20.62:1 22.74:1 25.53:1 29.37:1 33.79:1	•	•	14 16 20 22 25 29 33		22
OUTPUT SHAFTS	3.0" KEYED 23T - ^{9/16}	•	•	K2 23L		K2
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:				6S2B 13 22 K2		

BOLDFACE INDICATES REGULAR VOLUME PRODUCED ITEMS WITH BEST AVAILABILITY.

MODEL 6 SERIES B BEARING LIFE CURVE Based On
LIFE = 3,000 Hours B10 SPEED = 100 RPM Output



NOTE:

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

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

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)

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

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.

MOTOR MOUNTING CHART

DIMENSION "X"	DIM. "Y"
SAE A2 (2) – .500 (12.70) -13 UNC,-2B Thd Holes Equally Spaced on 4.188 (106.38) B. C.*	Ø 3.251 - 3.256 (82.58 - 82.70)
SAE B (2) – .500 (12.70) -13 UNC,-2B Thd Holes Equally Spaced on 5.750 (146.05) B. C.*	Ø 4.001 - 4.006 (101.62 - 101.75)
SAE C (2) – .625 (15.87) -11 UNC,-2B Thd Holes Equally Spaced on 7.125 (180.97) B. C.* <i>OR</i> (4) – .500 (12.70) -13 UNC,-2B Thd Holes Equally Spaced on 6.375 (161.93) B. C.*	Ø 5.001 - 5.006 (127.02 - 127.15)

*"O" RING OR GASKET REQUIRED (Not Supplied by Auburn Gear)
"O" RING SIZES: SAE "A" 2-042, SAE "B" 2-155, SAE "C" 2-159

Model 6 Shaft Output Drives - Series B - with A2 Series Integral Parking Brake¹ Double Reduction

See page 5 for brake information
See page 4 for Series B Features

GENERAL SPECIFICATIONS

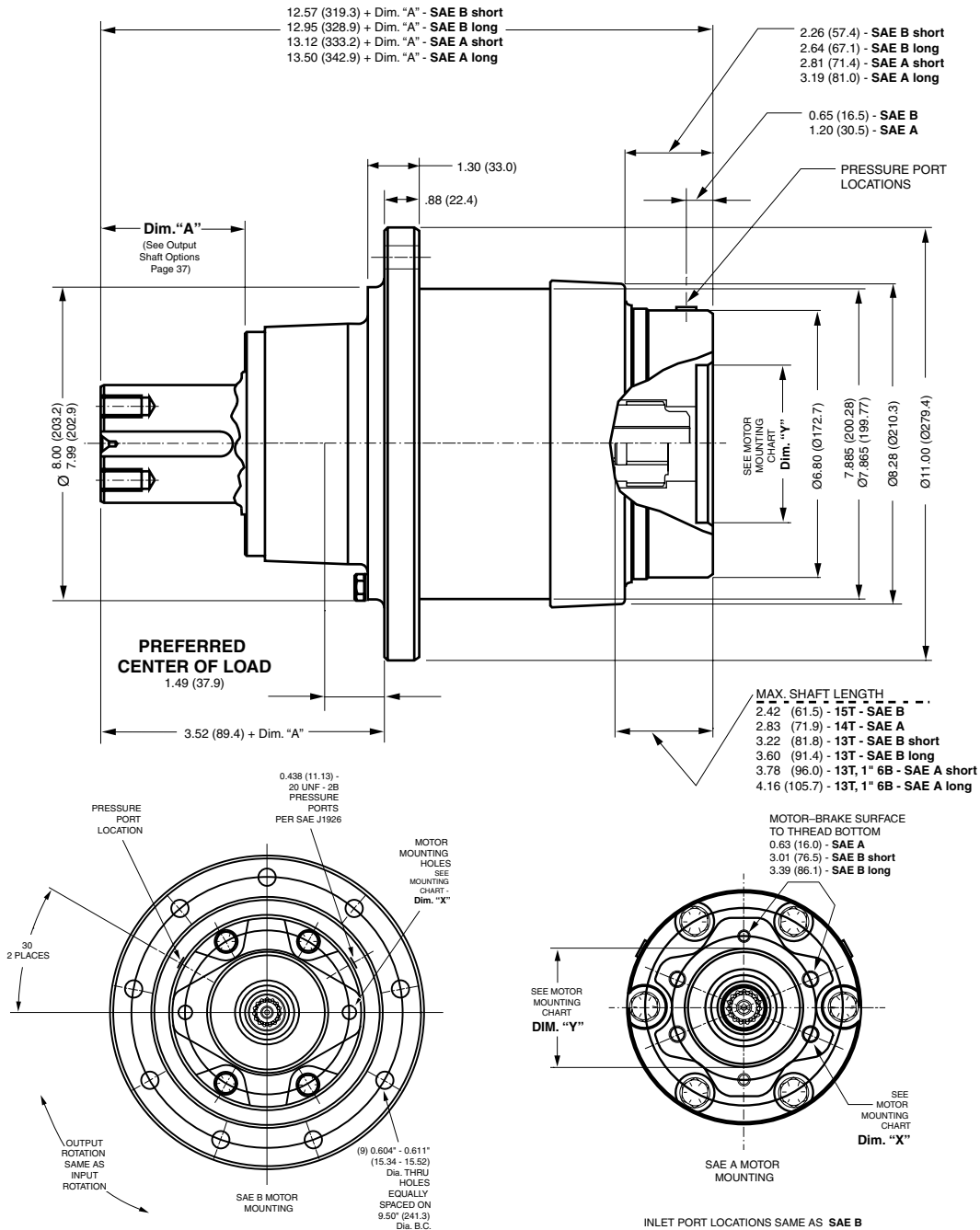
Max. intermittent output torque ^{2,3}	50,000 lb-in (5,650 Nm)	Approximate Weight	122 lbs (55 kg)
Max. input speed ⁴	4,000 RPM	Oil capacity	42 oz (1250 cc)

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 1/3 to 1/2 of the Maximum Intermittent should yield satisfactory Power Wheel life.

³ If application exceeds published limit, contact Auburn Gear.

⁴ For input speeds between 2,500 – 4,000 rpm, contact Auburn Gear for application analysis.



FEATURE CHART: MODEL 6 SERIES B SHAFT OUTPUT DRIVES DOUBLE REDUCTION with BRAKE

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN		ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER	
MOTOR PILOT/HUB	SAE A SAE B	•	•	6S2A 6S2B	6S2B	
INPUT SPLINE	13T. - 1 ⁶ / ₃₂ 14T. - 1 ² / ₂₄ 15T. - 1 ⁶ / ₃₂ 1" - 6B	•	•	13 14 15 6B	13	
RATIO OPTIONS	14.06:1 16.88:1 20.62:1 22.74:1 25.53:1 29.37:1 33.79:1	•	•	14 16 20 22 25 29 33	25	
OUTPUT SHAFTS	3.0" KEYED 23T-⁹/₁₆	•	•	K2 23L	K2	
PARKING BRAKE	SHORT VERSION	•	•	B1 B2 B3		
	LONG VERSION	•	•	B4 B5 B6 B7	B4	
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:				6S2B 13 25K2 B4		

BOLDFACE INDICATES REGULAR VOLUME PRODUCED ITEMS WITH BEST AVAILABILITY.
 ▲ For vertical applications, shaft up or shaft down, contact Auburn Gear.

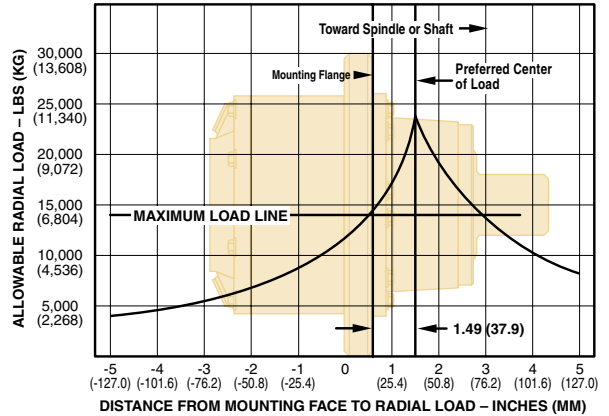
MOTOR MOUNTING CHART	
DIMENSION "X"	DIM. "Y"
SAE A (2) – .375 (9.53) -16 UNC, -2B Thd Holes Equally Spaced on 4.188 (106.38) B. C. * AND	Ø 3.251 - 3.256 (82.58 - 82.70)
(4) – .500 (12.70) -13 UNC, -2B Thd Holes on 4.188 (106.38) B. C. *	
SAE B (2) – .500 (12.70) -13 UNC. 2B Thd Holes Equally Spaced on 5.750 (146.05) B. C. *	Ø 4.001 - 4.006 (101.62 - 101.75)

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

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

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

MODEL 6 SERIES B BEARING LIFE CURVE Based On
 LIFE = 3,000 Hours B10 SPEED = 100 RPM Output



NOTE:
 These curves are supplied as a design guide and apply to resultant radial load only. They indicate the importance of maintaining load position over the bearing center.
 For actual analysis, applications should be reviewed by Auburn Gear Engineering using data supplied on Application Data Form.

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

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.

Model 6 Spindle Output Drives - Single and Double Reductions

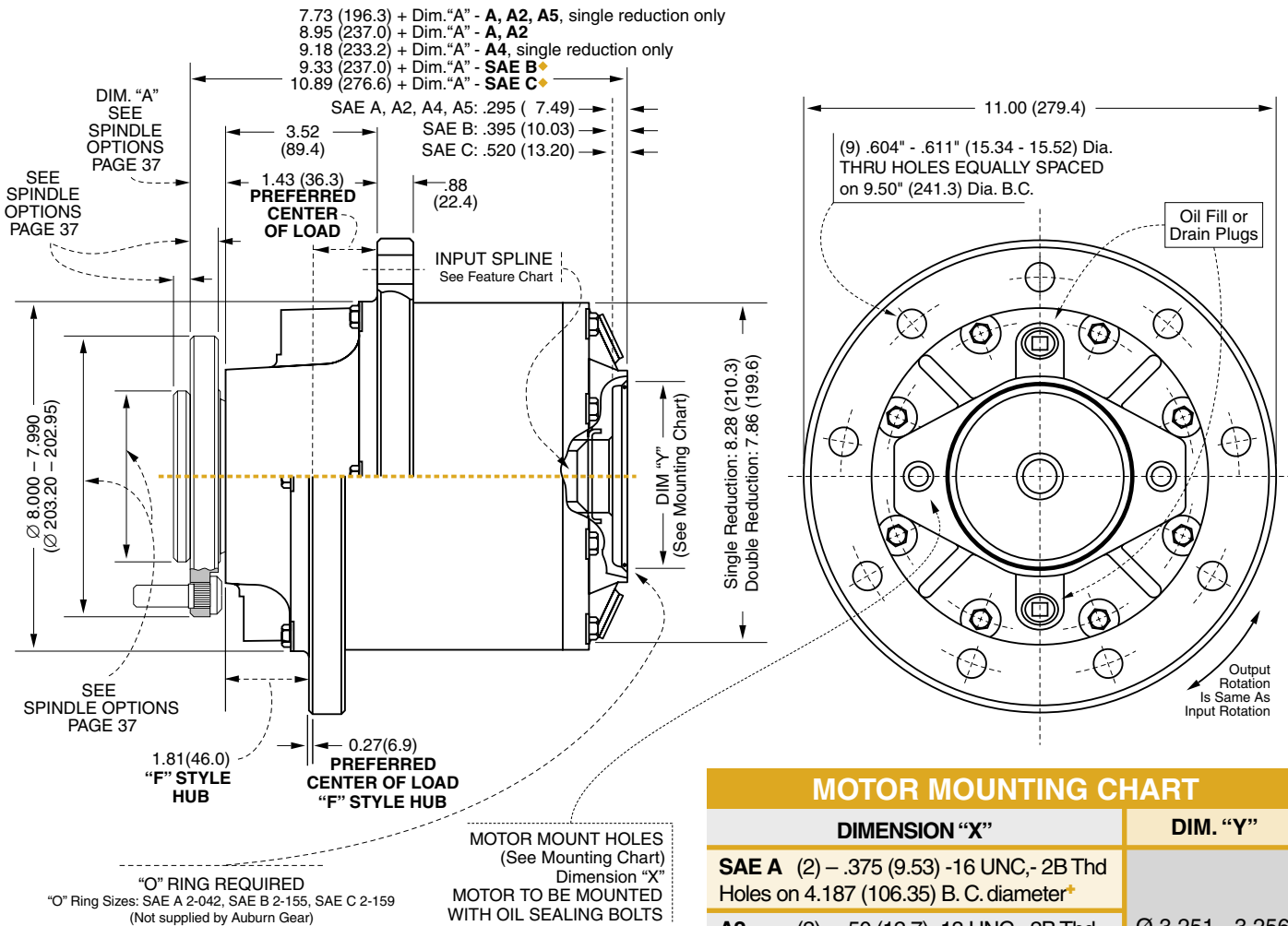
GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES

Max. intermittent output torque^{1,2} 30,000 lb-in (3,390 Nm)
 Max. input speed² 3,500 RPM
 Approximate Weight 56 lbs (26.3 kg)
 Oil capacity 17 oz (500 cc)

DOUBLE REDUCTION DRIVES

Max. intermittent output torque^{1,2} 50,000 lb-in (5,650 Nm)
 Max. input speed² 5,000 RPM
 Approximate Weight 83 lbs (37.6 kg)
 Oil capacity 24 oz (700 cc)



MOTOR MOUNTING CHART

DIMENSION "X"	DIM. "Y"
SAE A (2) - .375 (9.53) -16 UNC,- 2B Thd Holes on 4.187 (106.35) B. C. diameter*	Ø 3.251 - 3.256 (82.58 - 82.70)
A2 (2) - .50 (12.7) -13 UNC,- 2B Thd Holes on 4.187 (106.35) B. C. diameter*	
A4, A5 (4) - .50 (12.7) -13 UNC,- 2B Thd Holes on 4.187 (106.35) B. C. diameter*	
SAE B (2) - .50 (12.7) -13 UNC,- 2B Thd Holes on 5.750 (146.05) B. C. diameter*	Ø 4.001 - 4.006 (101.62 - 101.75)
SAE C (4) - .50 (12.7) -13 UNC,- 2B Thd Holes on 6.375 (161.93) B. C. diameter* OR (2) - .625 (15.88) -13 UNC,- 2B Thd Holes on 7.125 (180.97) B. C. diameter*	Ø 5.001 - 5.008 (127.02 - 127.15)

*"O" RING OR GASKET REQUIRED (Not Supplied by Auburn Gear)
 "O" RING SIZES: SAE "A" 2-042, SAE "B" 2-155, SAE "C" 2-159

¹ 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. Customer testing and application analysis is strongly recommended.

² If application exceeds published limit, contact Auburn Gear.

♦ Note: For single reductions, SAE B and SAE C, subtract 1.60" (40.6) from overall length.

FEATURE CHART: MODEL 6 SPINDLE OUTPUT DRIVES - SINGLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN				ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER			
MOTOR PILOT/HUB ¹	SAE A A2 A4 A5 SAE B SAE C	•	•			6TA 6TA2 6TA4 6TA5 6TB 6TC	6TA			
INPUT SPLINE	13T - 1 ⁶ / ₃₂ 1" - 6B * 14T - 1 ¹² / ₂₄ **	•	•			13 6B 14	13			
RATIO OPTIONS	3.75:1 4.50:1 5.05:1 5.81:1	•	•	•	•	03 04 05 06			05	
OUTPUT SPINDLE (see page 37 for detail)	F1 F2 F3 F4 F5	•	•	•	•	F1 F2 F3 F4 F5				F1
WHEEL STUDS	1/2" 9/16" NONE	•	•	•	•	4 7 0				0
SPECIAL FEATURES	Boot Seal - F2 Spindle Only Metal Seal Guard - F2 Spindle Only	•	•	•	•	Z G				Z

Select desired characteristics from chart, note correct order codes, and order using sample format shown at right: **6TA 13 05 F1 0 Z**

* 14T - 1¹²/₂₄ input spline not available with SAE A or A2 motor pilot/hub and 5.05:1 ratio.

** 1" - 6B spline not available with SAE A or A2 motor pilot/hub and 3.75:1 ratio.

¹ If "F" style hub required, place letter "F" between motor pilot/hub and input spline (i.e. **6TA2F6B04F30**)

FEATURE CHART: MODEL 6 SPINDLE OUTPUT DRIVES - DOUBLE REDUCTION

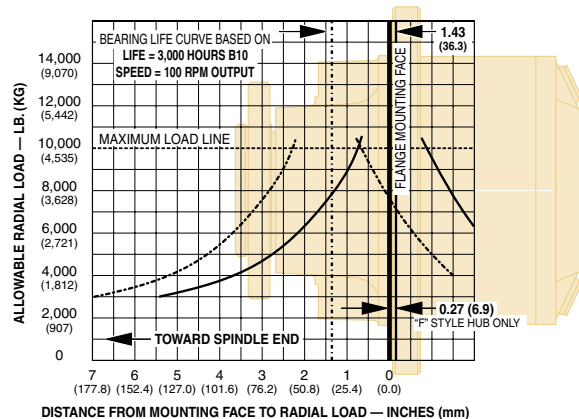
OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN				ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER			
MOTOR PILOT/HUB ²	SAE A A2 SAE B SAE C	•	•			6SA 6SA2 6SB 6SC	6SA			
INPUT SPLINE	13T - 1 ⁶ / ₃₂ 1" - 6B 14T - 1 ¹² / ₂₄ 15T - 1 ⁶ / ₃₂	•	•			13 6B 14 15	6B			
RATIO OPTIONS	14.06:1 16.88:1 20.62:1 22.74:1 25.53:1 29.37:1 33.79:1	•	•	•	•	14 16 20 22 25 29 33			22	
OUTPUT SPINDLE (see page 37 for detail)	F1 F2 F3 F4 F5	•	•	•	•	F1 F2 F3 F4 F5				F2 0
WHEEL STUDS	1/2" 9/16" NONE	•	•	•	•	4 7 0				
SPECIAL FEATURES	Boot Seal - F2 Spindle Only Metal Seal Guard - F2 Spindle Only	•	•	•	•	Z G				Z

Select desired characteristics from chart, note correct order codes, and order using sample format shown at right: **6SA 6B 22 F2 0 Z**

² If "F" style hub required, place letter "F" between motor pilot/hub and input spline

(i.e. **6SBF1329F10**)

BOLDFACE INDICATES REGULAR VOLUME PRODUCED ITEMS WITH BEST AVAILABILITY.



NOTE:

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

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

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)

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

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.

Model 6 Spindle Output Drives -

with A2 Series Integral Parking Brake¹

See page 5 for brake information

Single and Double Reductions

GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES

DOUBLE REDUCTION DRIVES

Max. intermittent output torque^{2,3} 30,000 lb-in (3,390 Nm)
 Max. input speed⁴ 3,500 RPM
 Approximate Weight 87 lbs (39.5 kg)
 Oil capacity 30 oz (887 cc)

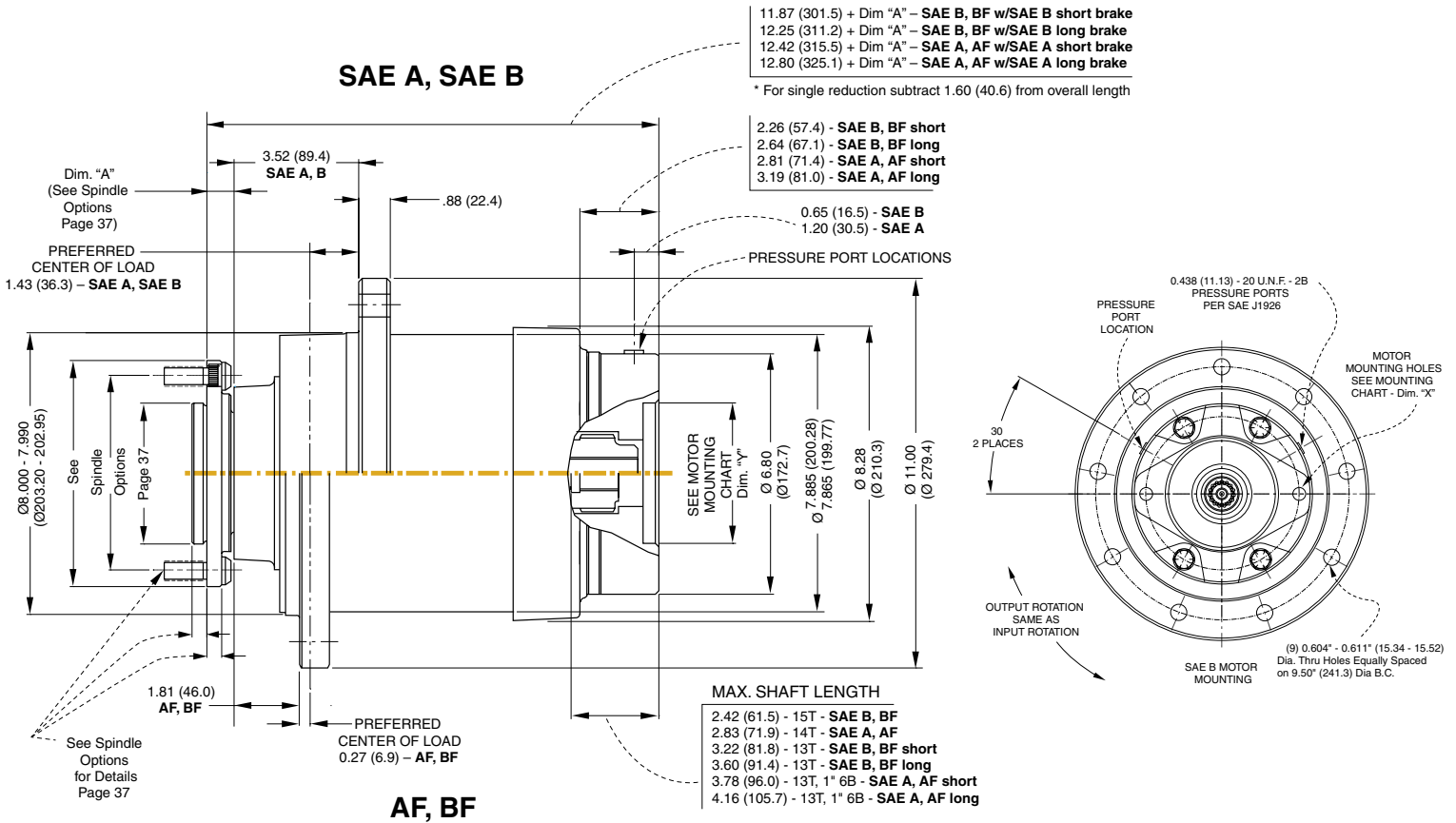
Max. intermittent output torque^{2,3} 50,000 lb-in (5,650 Nm)
 Max. input speed⁴ 4,000 RPM
 Approximate Weight 112 lbs (50.8 kg)
 Oil capacity 35 oz (1,035 cc)

¹ For vertical application, spindle up or spindle 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. Customer testing and application analysis is strongly recommended.

³ If application exceeds published limit, contact Auburn Gear.

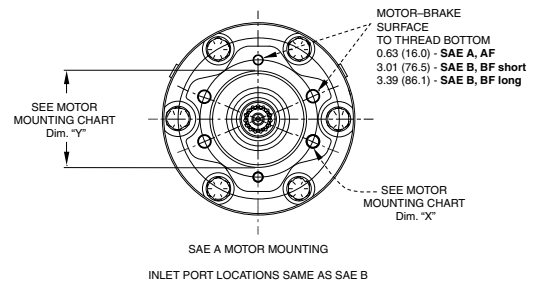
⁴ For input speeds between 2,500 – 4,000 rpm, contact Auburn Gear for application analysis.



BRAKE RATINGS

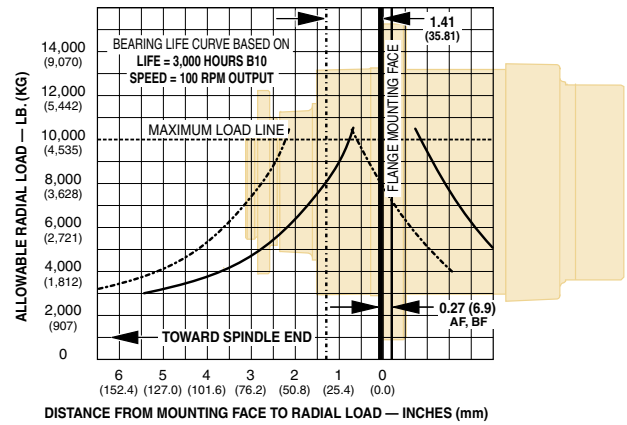
MODEL	TORQUE	MINIMUM RELEASE PRESSURE	STYLE
B1	1,540 lb-in (174 N-m)	190 PSI (13.1 Bar)	Short
B2	1,800 lb-in (203 N-m)	220 PSI (15.1 Bar)	Short
B3	2,400 lb-in (271 N-m)	290 PSI (20.0 Bar)	Short
B4	2,400 lb-in (271 N-m)	160 PSI (11.0 Bar)	Long
B5	3,200 lb-in (362 N-m)	220 PSI (15.1 Bar)	Long
B6	3,600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

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



FEATURE CHART: MODEL 6 SPINDLE OUTPUT SINGLE REDUCTION with BRAKE

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN		ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER	
MOTOR PILOT/HUB	SAE A AF SAE B BF	•	•	6TA 6TAF 6TB 6TBF	6TB	
INPUT SPLINE	13T. ¹⁶ / ₃₂ 1" - 6B 14T. ¹² / ₂₄ 15T. ¹⁶ / ₃₂	•	•	13 6B 14 15	13	
RATIO OPTIONS	3.75:1 4.50:1 5.05:1 5.81:1	•	•	03 04 05 06	04	
OUTPUT SPINDLE (See Page 37 for Detail)	F1 F2 F3 F4 F5	•	•	F1 F2 F3 F4 F5		F2
WHEEL STUDS	¹ / ₂ " ⁹ / ₁₆ " NONE	•	•	4 7 0		0
PARKING BRAKE	SHORT VERSION 1,540 lb-in 1,800 lb-in 2,400 lb-in	•	•	B1 B2 B3		B4
	LONG VERSION 2,400 lb-in 3,200 lb-in 3,600 lb-in 4,200 lb-in	•	•	B4 B5 B6 B7		
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:				6TB 13 04 F2 0 B4		



FEATURE CHART: MODEL 6 SHAFT INPUT/SHAFT OUTPUT DRIVES - SINGLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN	ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER	
HUB	STD Model 6 Shaft Output Single Red.	.	6T	6T	
INPUT SHAFT OPTIONS	1 1/2" Keyed	.	K00	K00	
RATIO OPTIONS	4.50:1 5.05:1 5.81:1	. . .	04 05 06		05
OUTPUT SHAFTS	17T. ¹² / ₂₄ Spline 23T. ¹²/₂₄ Spline 23T. ¹²/₂₄ Short 1.75 Keyed 2.00 Keyed 2.00 Hollow 1.75 Hollow 2.00 Keyed	17 23 23S K1 K2 K3 K4 K5		K2

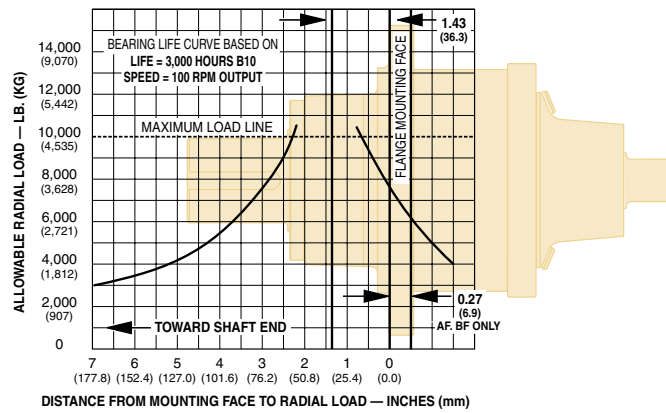
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right: **6T K00 05 K2**

BOLDFACE INDICATES REGULAR VOLUME PRODUCED ITEMS WITH BEST AVAILABILITY.

FEATURE CHART: MODEL 6 SHAFT INPUT/SHAFT OUTPUT DRIVES - DOUBLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN	ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER	
HUB	STD Model 6 Shaft Output Double Red.	.	6S	6S	
INPUT SHAFT OPTIONS	1 1/2" Keyed	.	K00	K00	
RATIO OPTIONS	14.06:1 16.88:1 20.62:1 22.74:1 25.53:1 29.73:1 33.79:1	14 16 20 22 25 29 33		22
OUTPUT SHAFTS	17T. ¹² / ₂₄ Spline 23T. ¹²/₂₄ Spline 23T. ¹²/₂₄ Short 1.75 Keyed 2.00 Keyed 2.00 Hollow 1.75 Hollow 2.00 Keyed	17 23 23S K1 K2 K3 K4 K5		23

Select desired characteristics from chart, note correct order codes, and order using sample format shown at right: **6S K00 22 23**



NOTE:

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

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

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)

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

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.

Model 6 Swing Drives - Style "SW" -

with Optional A2 Series Integral Parking Brake
Single and Double Reductions

See page 5 for brake information
See page 4 for SW Features

GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES

Max. intermittent output torque ^{1,2}	30,000 lb-in (3,390 Nm)
Max. input speed ³ with brake	3,500 RPM
without brake	3,500 RPM
Approximate Weight with brake	117 lbs (53.1 kg)
without brake	87 lbs (39.5 kg)
Oil capacity	30 oz (887 cc)

DOUBLE REDUCTION DRIVES

Max. intermittent output torque ^{1,2}	50,000 lb-in (5,650 Nm)
Max. input speed ³ with brake	4,000 RPM
without brake	5,000 RPM
Approximate Weight with brake	142 lbs (64.4 kg)
without brake	113 lbs (51.3 kg)
Oil capacity	35 oz (1035 cc)

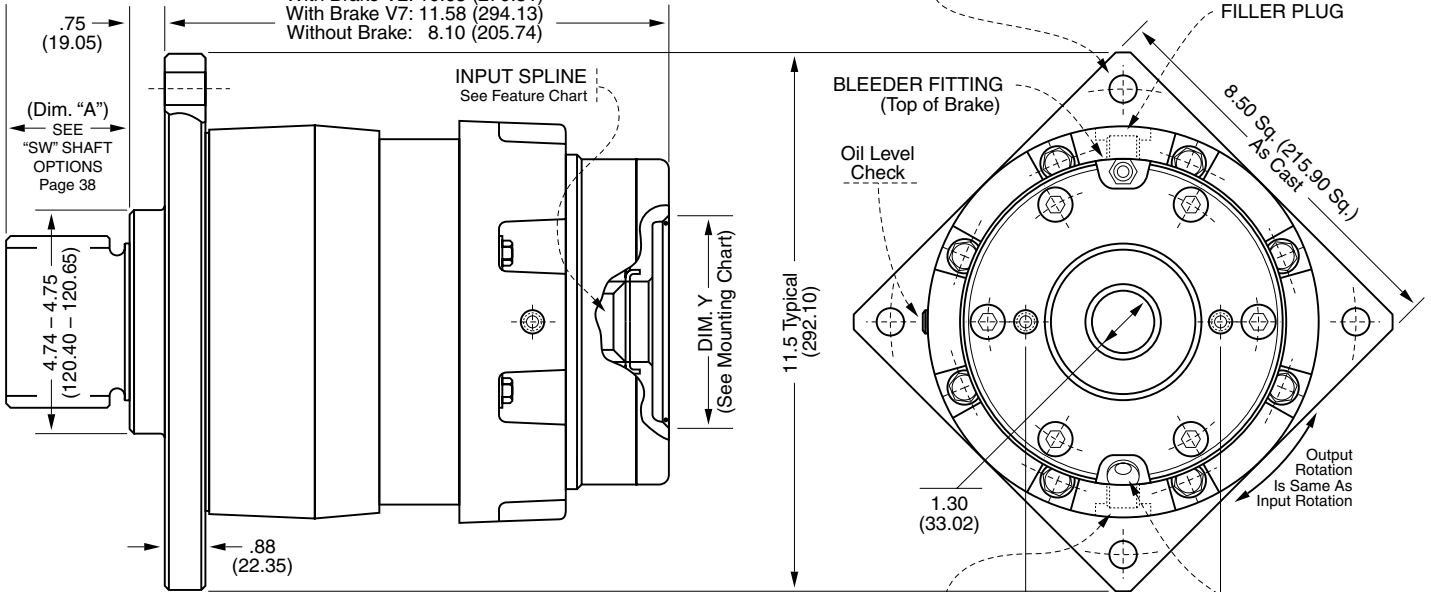
¹ Depending on the duty cycle and the nature of the application, a normal continuous output 1/3 to 1/2 of the Maximum Intermittent should yield satisfactory Power Wheel life.
² If application exceeds published limit, contact Auburn Gear.
³ For input speeds between 2,500 – 4,000 rpm, contact Auburn Gear for application analysis.

SQUARE MOUNTING FLANGES:

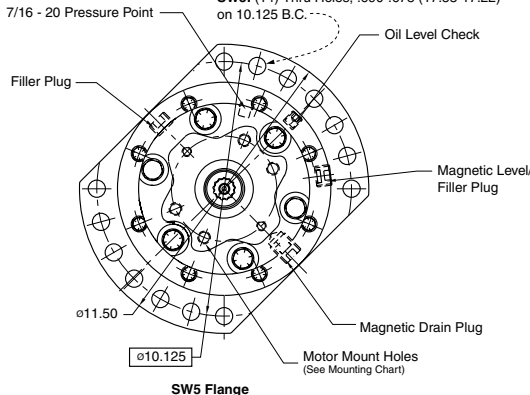
SW1: (4) Thru Holes: .666 – .654 (16.92 – 16.61)
SW2: (4) Thru Holes: .728 – .716 (18.49 – 18.19)
SW3: (4) Thru Holes: .886 – .874 (22.50 – 22.20)
All Equally Spaced on 10.125 (257.17) B. C.

NOTE: Dimensions shown are for Single Reduction units; for Double Reduction units, add 1.59 (40.4)

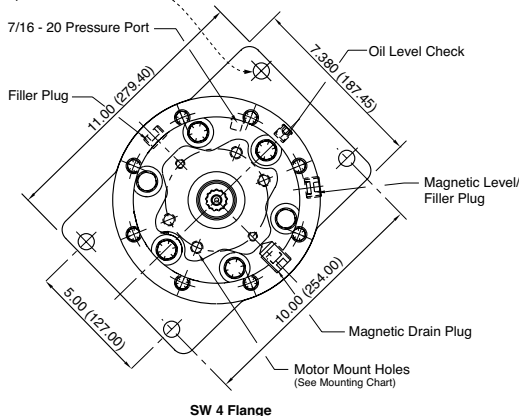
With Brake V1: 11.20 (284.48)
With Brake V2: 10.65 (270.51)
With Brake V7: 11.58 (294.13)
Without Brake: 8.10 (205.74)



ROUND w/FLATS MOUNTING FLANGE:
SW5: (14) Thru Holes, .690-.678 (17.53-17.22) on 10.125 B.C.



RECTANGULAR MOUNTING FLANGE:
SW4: (4) Thru Holes, .666-.654 (16.92-16.61) Spaced as Shown



FEATURE CHART: MODEL 6 SWING DRIVES with OPTIONAL INTEGRAL PARKING BRAKE

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN	ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER
MOUNTING FLANGES	SW1	• • • • •	6SW1	6SW2
	SW2	• • • • •	6SW2	
	SW3	• • • • •	6SW3	
	SW4	• • • • •	6SW4	
	SW5	• • • • •	6SW5	
MOTOR PILOT	SAE A	• • • • •	A	B
	A2	• • • • •	A2	
	SAE B	• • • • •	B	
INPUT SPLINE	13T. - 16/32	• • • • •	13	13
	1" - 6B	• • • • •	6B	
RATIO OPTIONS	3.75:1*	• • • • •	03	20
	4.50:1*	• • • • •	04	
	5.05:1*	• • • • •	05	
	5.81:1*	• • • • •	06	
	14.06:1	• • • • •	14	
	16.88:1	• • • • •	16	
	20.62:1	• • • • •	20	
	22.74:1	• • • • •	22	
	25.53:1	• • • • •	25	
	29.37:1	• • • • •	29	
OUTPUT SHAFTS <small>See Page 38</small>	17T - 5/7 DP Gear	• • • • •	G1	G3
	17T - 4 DP Gear	• • • • •	G2	
	12T - 3 DP Gear	• • • • •	G3	
	23T-12/24 Spline	• • • • •	23	
PARKING BRAKE**	1,700 lb-in	• • • • •	V1	V7
	2,100 lb-in	• • • • •	V2	
	4,600 lb-in	• • • • •	V7	
SPECIAL FEATURES	Grease Cavity Fittings & Excluder Seal ♦	• • • • •	W	W
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:				6SW2 B 13 20 G3 V7 W

* Single reduction ratio; all others are double reduction.

** For vertical shaft down operation only.

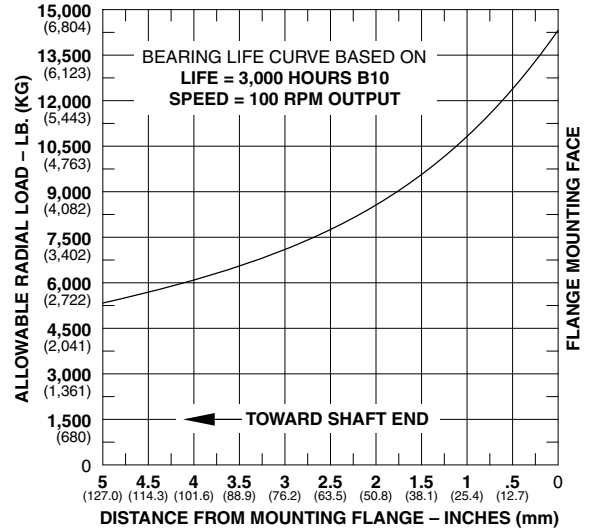
♦ **Required** for vertical shaft up applications.

BOLDFACE INDICATES REGULAR VOLUME PRODUCED ITEMS WITH BEST AVAILABILITY.

MOTOR MOUNTING CHART

DIMENSION "X"	DIM. "Y"
SAE A (2) – .375 (9.53) -16 UNC. 2B Thd Holes Equally Spaced on 4.187 (106.35) B. C.*	Ø 3.251 - 3.256 (82.58 - 82.70)
A2 (2) – .500 (12.70) -13 UNC. 2B Thd Holes Equally Spaced on 4.187 (106.35) B. C.*	Ø 3.251 - 3.256 (82.58 - 82.70)
SAE B (2) – .500 (12.70) -13 UNC. 2B Thd Holes Equally Spaced on 5.750 (146.05) B. C.*	Ø 4.001 - 4.006 (101.62 - 101.75)

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



NOTE:

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

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

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)

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

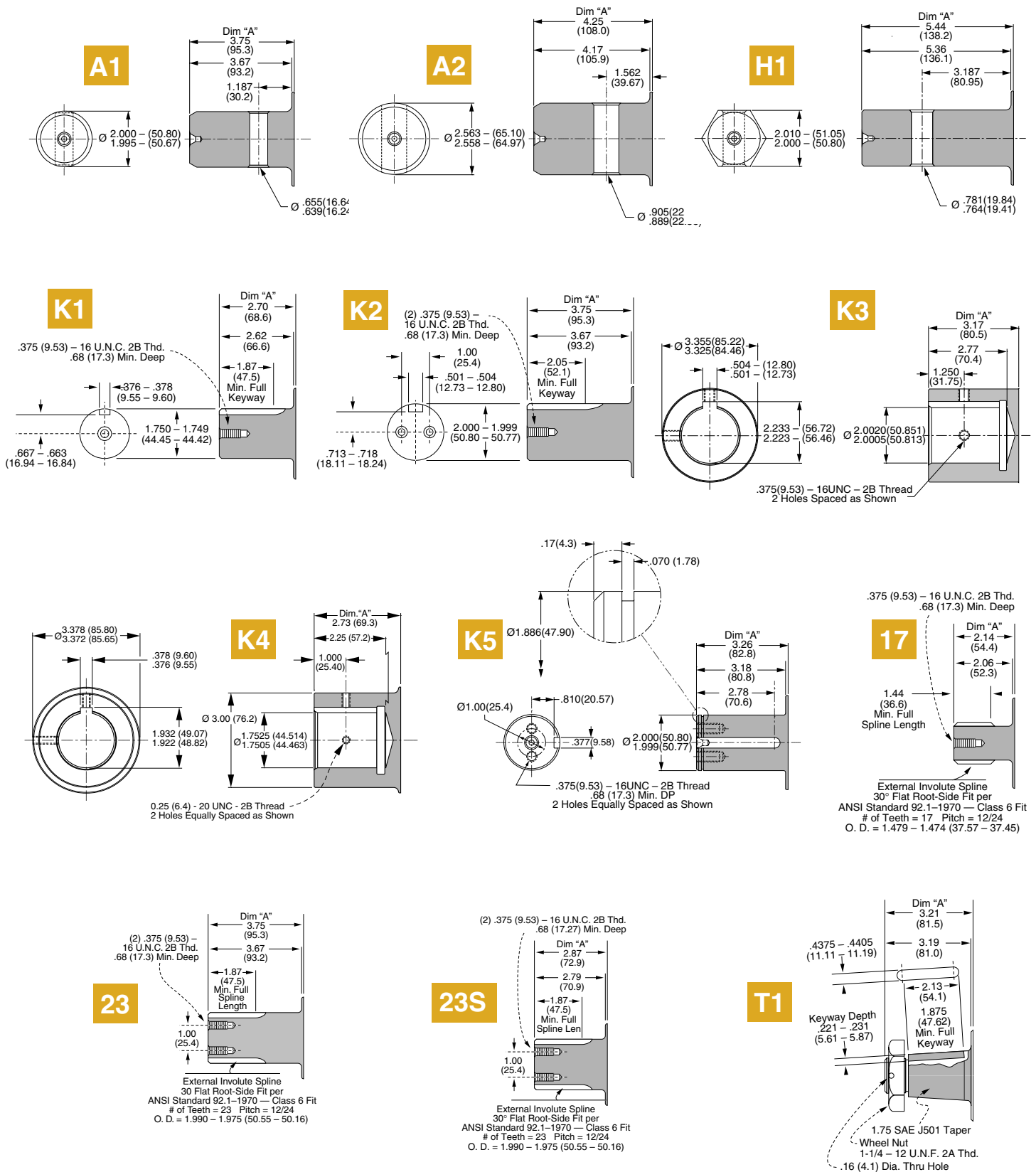
CAUTION: The same torsional loading constraints used in the driving mode must be used in the braking mode when braking through the **Power Wheel** drive gear set.

BRAKE RATINGS

MODEL	TORQUE	MINIMUM RELEASE PRESSURE
V1	1,700 lb-in (192 N-m)	190 PSI (13.1 Bar)
V2	2,100 lb-in (237 N-m)	220 PSI (15.2 Bar)
V7	4,600 lb-in (520 N-m)	260 PSI (17.9 Bar)

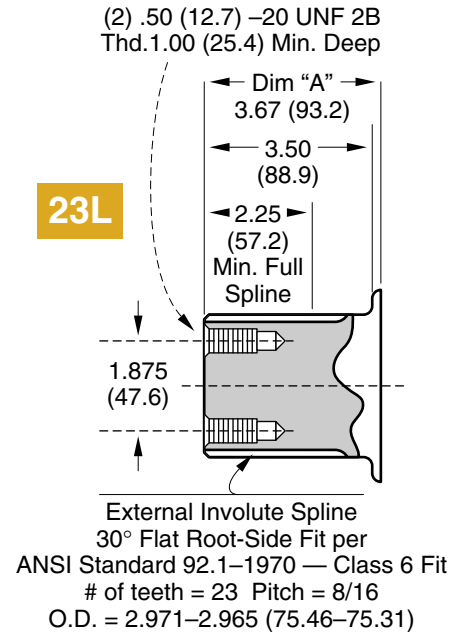
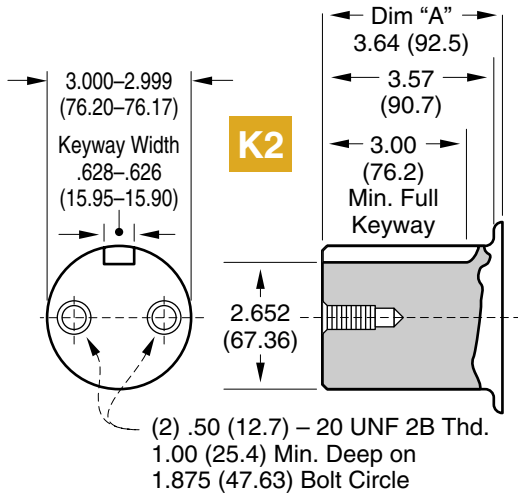
Maximum Release Pressure = 3,000 PSI (206.4 Bar)

MODEL 6 SHAFT OUTPUT OPTIONS



NOTE: All specifications and descriptive data contained herein are nominal and subject to change without notice. Specific applications should be referred to Auburn Gear for current applicable data.

MODEL 6 SERIES B SHAFT OUTPUT OPTIONS



MODEL 6 SPINDLE OUTPUT OPTIONS

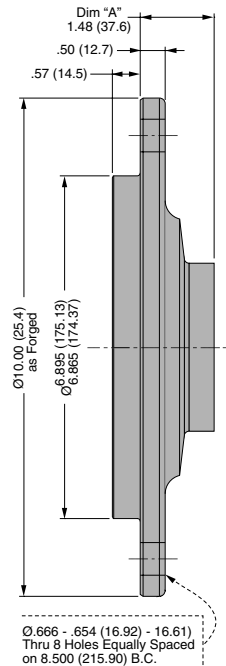
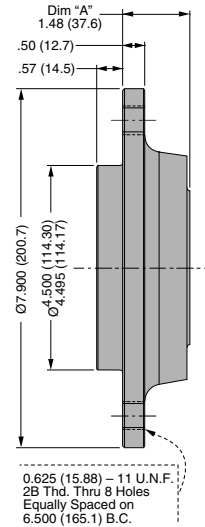
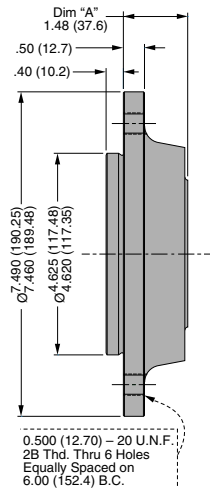
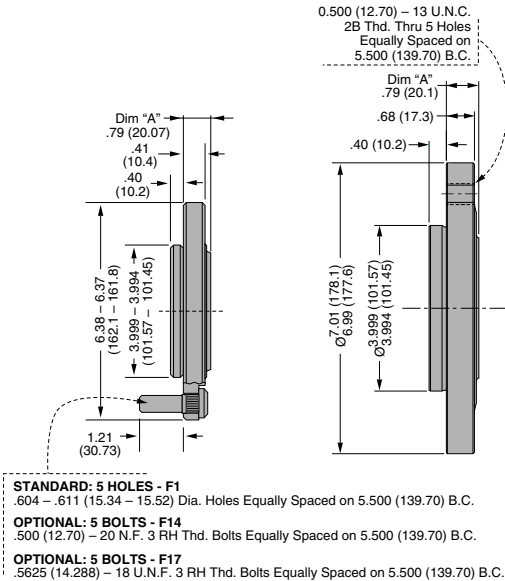
F1 F14 F17

F2 See Guard and Boot Seal Below

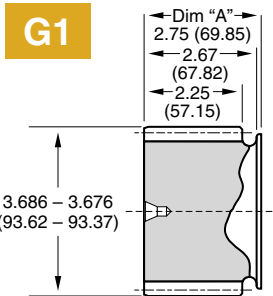
F3

F4

F5

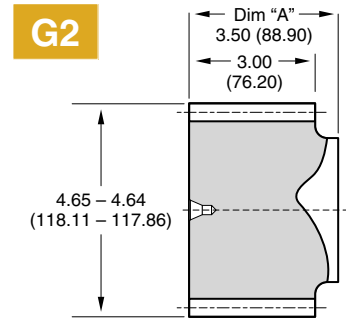


MODEL 6 SWING DRIVES - STYLE "SW" - OUTPUT OPTIONS



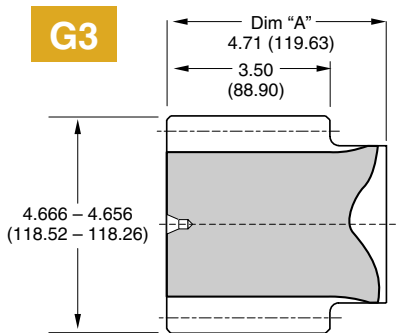
G1

SPUR GEAR DATA
 # of teeth = 17 • Diam. Pitch = 5/7 stub
 Press. Angle = 20° • Pitch Dia. = 3.40 (86.36)
 Minor Dia. = 2.936 - 2.930 (74.57 - 74.42)



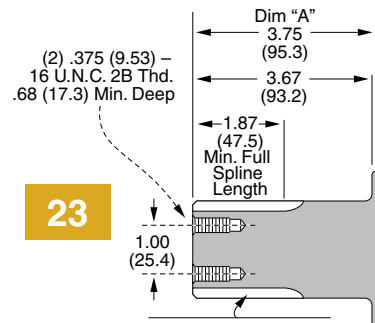
G2

SPUR GEAR DATA
 # of teeth = 17 • Diam. Pitch = 4 stub
 Press. Angle = 20° • Pitch Dia. = 4.25 (107.95)
 Minor Dia. = 3.670 - 3.662 (93.22 - 93.01)



G3

SPUR GEAR DATA
 # of teeth = 12 • Diam. Pitch = 3
 Pressure Angle = 25° • Pitch Dia. = 4.00 (101.60)
 Minor Dia. = 3.104 - 3.076 (78.84 - 78.64)



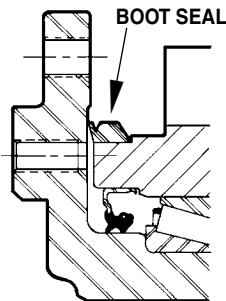
23

External Involute Spline
 30 Flat Root-Side Fit per
 ANSI Standard 92.1-1970 — Class 6 Fit
 # of Teeth = 23 Pitch = 12/24
 O. D. = 1.990 - 1.975 (50.55 - 50.16)

MODEL 6 OTHER OPTIONS

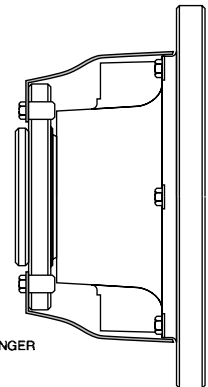
Boot Seal

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.



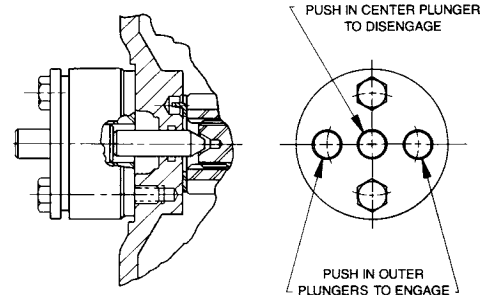
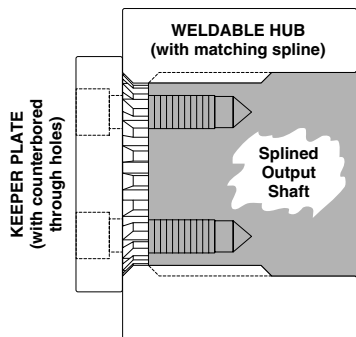
Guard and Boot Seal System

A boot seal and metal guard are **available with F2 spindle output units only**. These can be ordered separately or together. They function best together. The guard and boot seal system are utilized in extremely high grit applications. The guard protects the boot seal from contaminants which will ultimately wear the boot seal lip.



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).



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.

KIT NUMBER	SPLINE	FITS MODELS
6420105	23T- ¹² / ₂₄	5, 6, & 8
6420106	23T- ⁹ / ₁₆	6B, 7, 8, 9, & 10
6420107	20T- ⁸ / ₁₆	8, & 9

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	
SAE Viscosity Grade	Auburn Gear Recommended Minimum Temperature
75W-90	-40°F (-40°C)*
80W, 80W-90	-15°F (-26°C)*
85W, 85W-90	10°F (-12°C)*
90	35°F (2°C)

* Maximum temperature for Brookfield Viscosity¹ of 150,000 centipoise (cP)² 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

All Power Wheels® are compatible with synthetic lubricants as long as they meet the above specified parameters.

WARRANTY INFORMATION

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





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Email: powerwheel@auburngear.com
Web: www.auburngear.com



Model 6 Power Wheel Planetary Gear Drive

PW6-03/05-3500



Our international sales network covers every jurisdiction. Our global shipping partners mean you can be sure we're on hand whenever you need us.

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