AuburnGear

MODEL 40

MODEL 40 POWER WHEEL® PLANETARY GEAR DRIVES

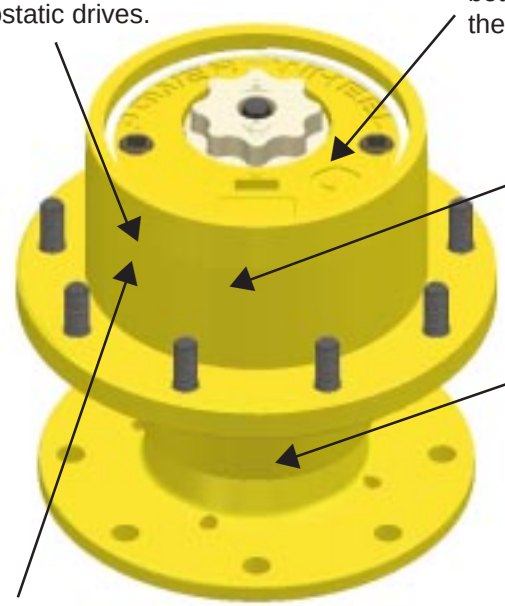
CONTENTS

AuburnGear MODEL 40 POWER WHEEL DRIVE

SPECIAL FEATURES

High efficiency (95%+) gearing provides increased battery life in DC motor drive applications and will improve fuel economy in hydrostatic drives.

Composite boltless cover provides ease of serviceability, a better value, weight reduction and the tensile strength of cast iron.



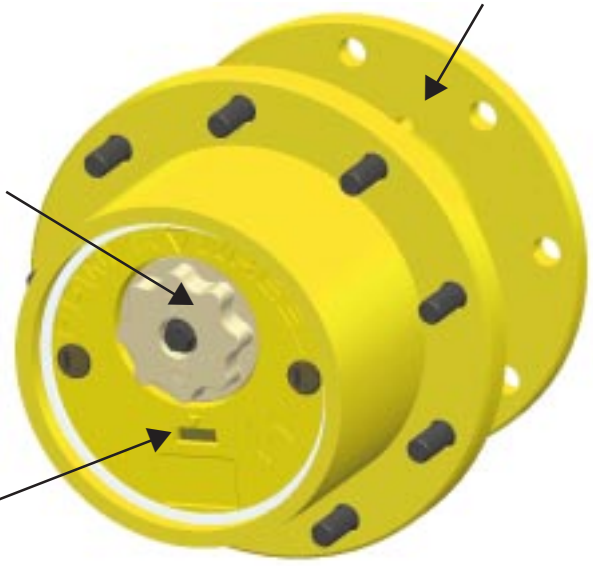
Forged cantilevered carriers significantly reduce overall length and provide reduced gear deflection, enhancing gear life.

The bearing retention device has been improved to provide increased axial loading capabilities.

Rolled involute splines are the standard on all spindles and output shafts, reducing stress concentrations and lengthening the life of the product.

Deep reduction ratios, up to 68:1, for applications that require slow speeds.

Patented TwisToTow™ quick disconnect feature is standard - no other drive supplier provides this “tool-less” disconnect as standard.



An unique, consistent, geometrically shaped input shaft eliminates stress concentrations in the shaft, increasing input shaft life.

Oil level sight glass is standard on every wheel drive, allowing the customer to check the oil level without tools, and is environmentally friendly.

Model 40 Wheel Drives - Single and Double Reduction

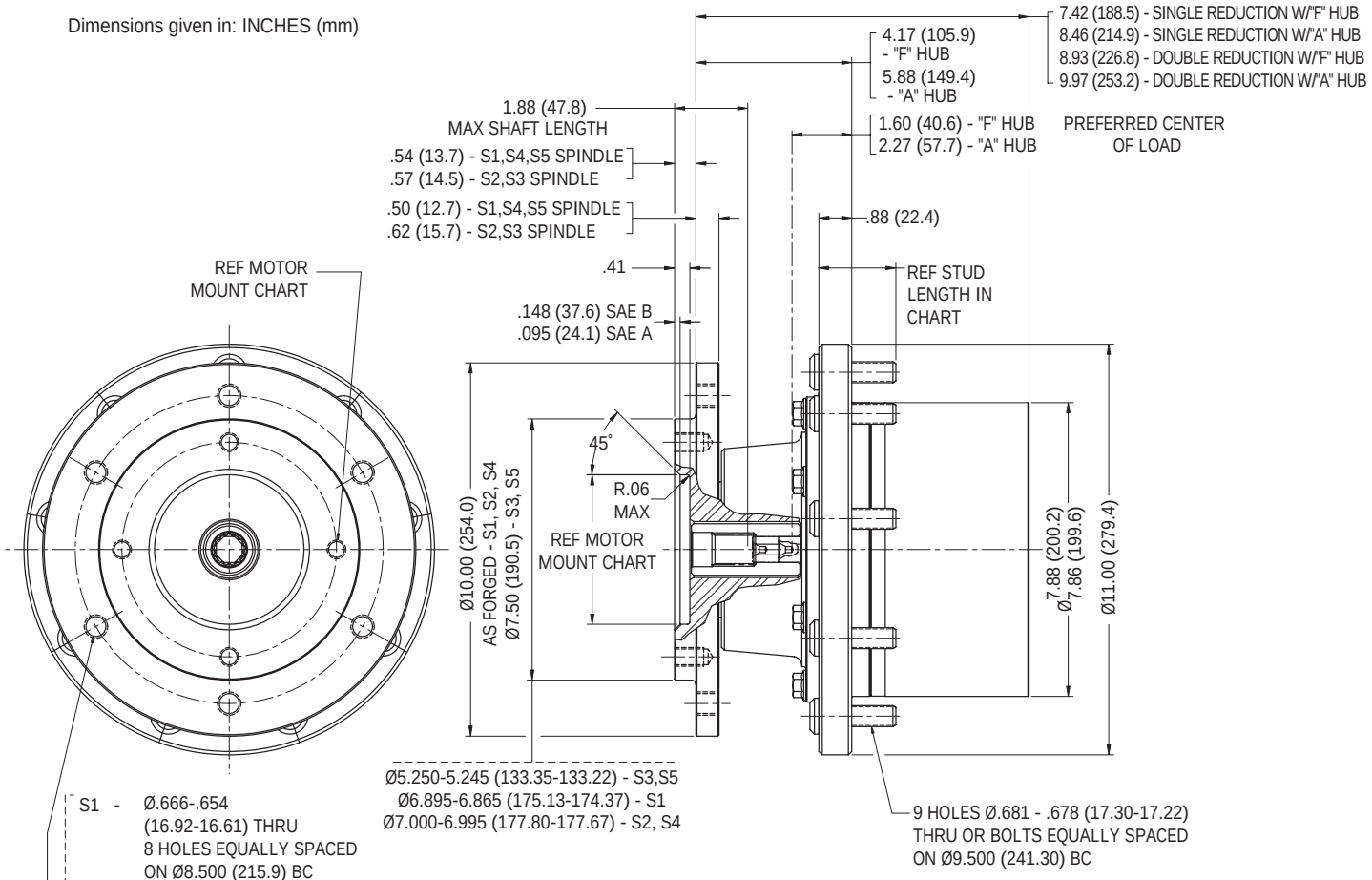
GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES	DOUBLE REDUCTION DRIVES
Max. intermittent output torque[1,2] 40,000 lb-in (4,520 Nm)	Max. intermittent output torque[1,2] 40,000 lb-in (4,520 Nm)
Max. input speed[2] ..... 3,500 RPM	Max. input speed[2] ..... 5,000 RPM
Approximate weight ..... 60 lbs (27.2 kg)	Approximate weight ..... 85 lbs (38.5 kg)
Approximate oil capacity ..... 22 oz (650 cc)	Approximate oil capacity ..... 27 oz (797 cc)

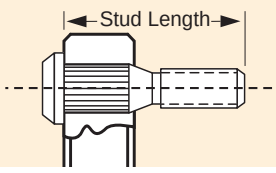
[1] Depending on the duty cycle and the nature of the application, a normal continuous output torque of 1/3 to 1/2 of the maximum Intermittent should yield satisfactory *Power Wheel* life. Customer testing and application analysis is strongly recommended.

[2] If application exceeds published limit, contact Auburn Gear.

Dimensions given in: INCHES (mm)



NOTE: S1 - SPINDLE HOLES 22.5° OFFSET FROM MOTOR MOUNT HOLES
S2,S4 - SPINDLE HOLES IN LINE AND 30 ° OFFSET WITH MOTOR MOUNT HOLES (AS SHOWN)
S3,S5 - SPINDLE HOLES IN LINE WITH 3/8" MOTOR MOUNT HOLES AND WITH (2) 1/2" MOTOR MOUNT HOLES



Wheel Stud – Detail

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

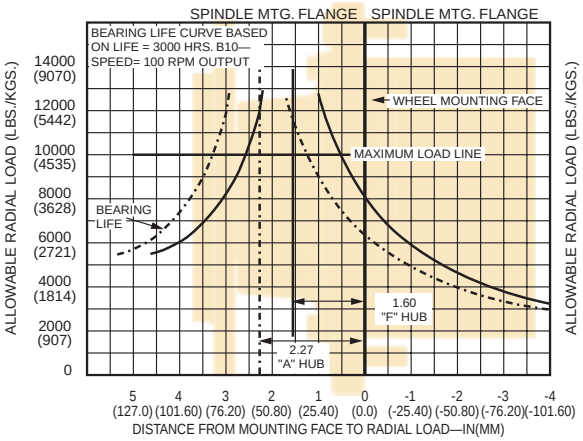
FEATURE CHART: MODEL 40 WHEEL DRIVES - SINGLE AND DOUBLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN				ORDER CODES	USE OPTION ORDER CODES TO BUILD ORDER NUMBER
MOTOR MOUNT	SAE A	•	•			40W0A	
	SAE B			•	•	40W0B	40W0B
INPUT SPLINE	13T - 16/32	•	•	•	•	13	13
	15T - 16/32	•	•	•	•	15	
	1"- 6B	•	•	•	•	6B	
RATIO OPTIONS	SINGLE REDUCTION 3.50:1	•	•	•	•	003	
	SINGLE REDUCTION 4.05:1	•	•	•	•	004	
	SINGLE REDUCTION 4.81:1	•	•	•	•	005	
	DOUBLE REDUCTION 14.30.1	•	•	•	•	014	
	DOUBLE REDUCTION 15.88:1	•	•	•	•	015	
	DOUBLE REDUCTION 17.95:1	•	•	•	•	017	
	DOUBLE REDUCTION 20.80:1	•	•	•	•	020	020
	DOUBLE REDUCTION 22.72:1	•	•	•	•	022	
	DOUBLE REDUCTION 25.16:1	•	•	•	•	025	
	DOUBLE REDUCTION 28.37:1	•	•	•	•	028	
	DOUBLE REDUCTION 32.79:1	•	•	•	•	032	
	DOUBLE REDUCTION 37.55:1	•	•	•	•	037	
	DOUBLE REDUCTION 46.74:1	•	•	•	•	046	
	DOUBLE REDUCTION 51.65:1	•	•	•	•	051	
	DOUBLE REDUCTION 58.12:1	•	•	•	•	058	
	DOUBLE REDUCTION 67.01:1	•	•	•	•	067	
HUB	5.88" fl -to -fl (9) on 9.50" BC	•		•		A	A
	4.17" fl -to -fl (9) on 9.50" BC		•		•	F	
SPINDLE	(8) on 8.50" BC, .66" thru holes	•		•		S1	S1
	(6) on 8.25" BC, 5/8-11, SAE B				•	S2	
	(8) on 6.50" BC, 5/8-11, SAE A		•			S3	
	(6) on 8.25" BC, 5/8-11, SAE B			•		S4	
	(8) on 6.50" BC, 5/8-11, SAE A	•				S5	
WHEEL STUDS	NONE	•	•	•	•	0	
	1/2-20 x 1.88"	•	•	•	•	A	
	1/2-20 x 2.50"	•	•	•	•	B	
	9/16-18 x 2.06"	•	•	•	•	C	C
	5/8-18 x 2.36"	•	•	•	•	D	
	9/16-18 x 2.75"	•	•	•	•	G	
BRAKE	NONE	•	•	•	•	00	00
SPECIAL FEATURES	NONE	•	•	•	•	00	
	Multi-Lip Oil Seal	•	•	•	•	01	01
	Oil Plugs - Spindle Side		•		•	04	
	S2 Spindle w/Thru Holes				•	07	
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:							40W0B 13 020 A S1 C 00 01

MOTOR MOUNTING CHART

HOLE SIZE AND LOCATION	PILOT Ø
SAE A (2) – 3/8" -16 UNC - 2B Thd Holes 0.78 (19.8) Deep, Equally Spaced on 4.188 (106.38) B. C.+ AND (4) – 1/2" -13 UNC - 2B Thd Holes 0.78 (19.8) Deep, on 4.188 (106.38) B. C.+	Ø 3.251 - 3.256 Ø (82.58 - 82.70)
SAE B (4) – 1/2" -13 UNC - 2B Thd Holes Equally Spaced on 5.750 (146.05) B. C.+	Ø 4.001 - 4.006 Ø (101.63 - 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.

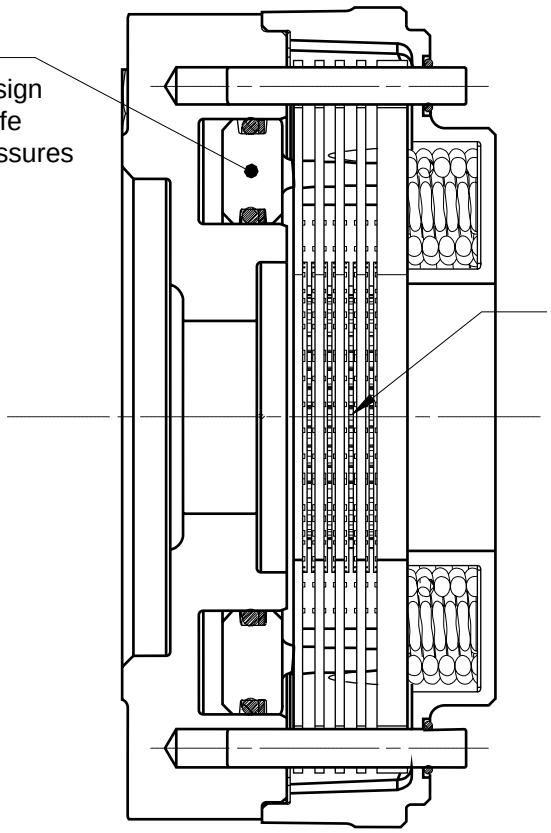
NOTE:

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.

Power Wheel®

Model 40 Wheel Drives - Single and Double Reduction

with A2 Series Integral Parking Brake



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 in^3 (16.4cc) for a new brake and 2.0 in^3 (32.8cc) for a worn brake pack.

Model 40 Wheel Drives - Single and Double Reduction

with A2 Series Integral Parking Brake

GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES	DOUBLE REDUCTION DRIVES
Max. intermittent output torque[1,2] 40,000 lb-in (4,520 Nm)	Max. intermittent output torque[1,2] 40,000 lb-in (4,520 Nm)
Max. input speed[3] ..... 2,000 RPM	Max. input speed[3] ..... 2,000 RPM
Approximate weight ..... 70 lbs (31.8 kg)	Approximate weight ..... 95 lbs (43.1 kg)
Approximate oil capacity ..... 27 oz (798 cc)	Approximate oil capacity ..... 32 oz (946 cc)

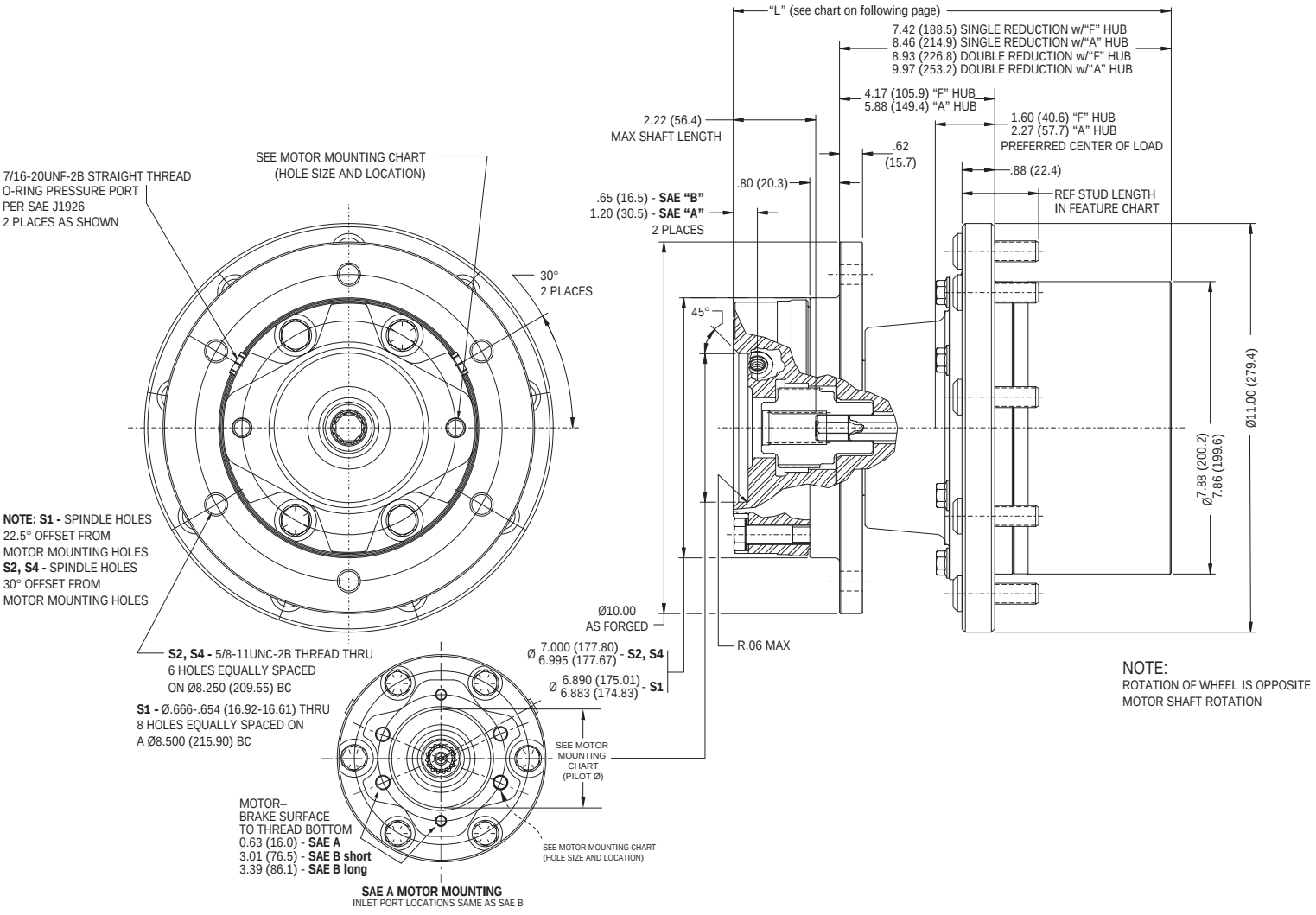
For Lubrication Data, see Page 26

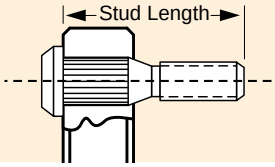
[1] Depending on the duty cycle and the nature of the application, a normal continuous output torque of 1/3 to 1/2 of the maximum Intermittent should yield satisfactory *Power Wheel* life. Customer testing and application analysis is strongly recommended.

[2] If application exceeds published limit, contact Auburn Gear.

[3] For input speeds between 2,000 and 3,600 rpm, contact Auburn Gear for duty cycle analysis.

Dimensions given in: INCHES (mm)





Wheel Stud – Detail

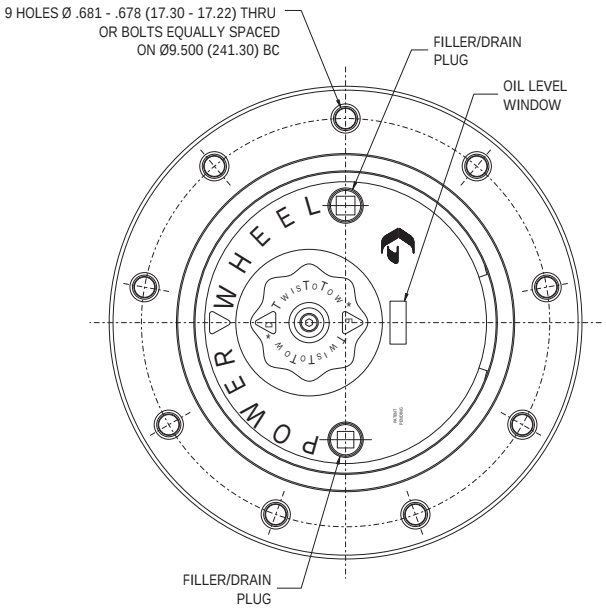
Note that the stud lengths shown in the feature chart represent the total length of the stud under the head.

LENGTH "L"				
	"F" HUB S.R.	"A" HUB S.R.	"F" HUB D.R.	"A" HUB D.R.
"B" MOUNT - SHORT BRAKE	10.27 (260.9)	11.06 (280.9)	11.78 (299.2)	12.57 (319.3)
"B" MOUNT - LONG BRAKE	10.65 (270.5)	11.44 (290.6)	12.16 (308.9)	12.95 (328.9)
"A" MOUNT - SHORT BRAKE	10.82 (274.8)	11.61 (294.9)	12.33 (313.2)	13.12 (335.3)
"A" MOUNT - LONG BRAKE	11.20 (284.5)	11.99 (304.5)	12.71 (322.8)	13.50 (342.9)

S.R. = SINGLE REDUCTION, D.R. = DOUBLE REDUCTION

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)

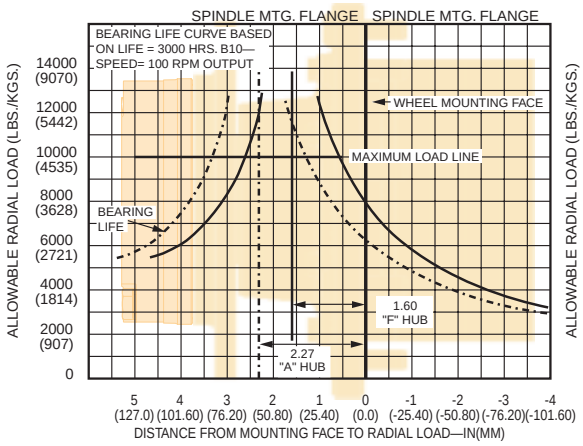


MOTOR MOUNTING CHART	
HOLE SIZE AND LOCATION	PILOT Ø
SAE A (2) – 3/8" -16 UNC,- 2B Thd Holes on 4.187 (106.35) B. C. diameter+ **AND** (4) – 1/2" -13 UNC,- 2B Thd Holes on 4.187 (106.35) B. C. diameter+	Ø 3.251 - 3.255 (82.58 - 82.67)
SAE B (2) – 1/2" -13 UNC,- 2B Thd Holes on 5.750 (146.05) B. C. diameter+	Ø 4.001 - 4.004 (101.62 - 101.70)

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

FEATURE CHART: MODEL 40 WHEEL DRIVES - SINGLE AND DOUBLE REDUCTION with BRAKE

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN			ORDER CODES	USE OPTION ORDER CODES TO BUILD PART NUMBER
MOTOR MOUNT	SAE A	•	•	•	40W0A	
	SAE B	•	•	•	40W0B	40W0B
INPUT SPLINE	13T - 16/32	•	•	•	13	13
	14T - 12/24	•	•	•	14	
	15T - 16/32	•	•	•	15	
	1"- 6B	•	•	•	6B	
RATIO OPTIONS	SINGLE REDUCTION 3.50:1	•	•	•	003	
	SINGLE REDUCTION 4.05:1	•	•	•	004	
	SINGLE REDUCTION 4.81:1	•	•	•	005	
	DOUBLE REDUCTION 14.30.1	•	•	•	014	
	DOUBLE REDUCTION 15.88:1	•	•	•	015	
	DOUBLE REDUCTION 17.95:1	•	•	•	017	
	DOUBLE REDUCTION 20.80:1	•	•	•	020	
	DOUBLE REDUCTION 22.72:1	•	•	•	022	
	DOUBLE REDUCTION 25.16:1	•	•	•	025	
	DOUBLE REDUCTION 28.37:1	•	•	•	028	
	DOUBLE REDUCTION 32.79:1	•	•	•	032	
	DOUBLE REDUCTION 37.55:1	•	•	•	037	037
	DOUBLE REDUCTION 46.74:1	•	•	•	046	
	DOUBLE REDUCTION 51.65:1	•	•	•	051	
	DOUBLE REDUCTION 58.12:1	•	•	•	058	
	DOUBLE REDUCTION 67.01:1	•	•	•	067	
HUB	5.88" fl -to -fl (9) on 9.50" BC	•		•	A	
	4.17" fl -to -fl (9) on 9.50" BC		•		F	F
SPINDLE	(8) on 8.50" BC, .66" thru holes	•			S1	
	(6) on 8.25" BC, 5/8-11, SAE B		•		S2	S2
	(6) on 8.25" BC, 5/8-11, SAE B			•	S4	
WHEEL STUDS	NONE	•	•	•	0	
	1/2-20 x 1.88"	•	•	•	A	
	1/2-20 x 2.50"	•	•	•	B	
	9/16-18 x 2.06"	•	•	•	C	
	5/8-18 x 2.36"	•	•	•	D	D
	9/16-18 x 2.75"	•	•	•	G	
BRAKE SHORT VERSION	1,540 lb-in	•	•	•	B1	
	1,800 lb-in	•	•	•	B2	
	2,400 lb-in	•	•	•	B3	B3
BRAKE LONG VERSION	2,400 lb-in	•	•	•	B4	
	3,200 lb-in	•	•	•	B5	
	3,600 lb-in	•	•	•	B6	
	4,200 lb-in	•	•	•	B7	
SPECIAL FEATURES	NONE	•	•	•	00	
	Multi-Lip Cartridge Seal	•	•	•	01	
	Oil Plug on Spindle Side		•		04	
	S2 Spindle w/Thru Holes		•		07	07
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:						40W0B 13 037 F S2 D B3 07



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.

NOTE:

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Model 40 Shaft and Spindle Output Drives - Single and Double Reduction

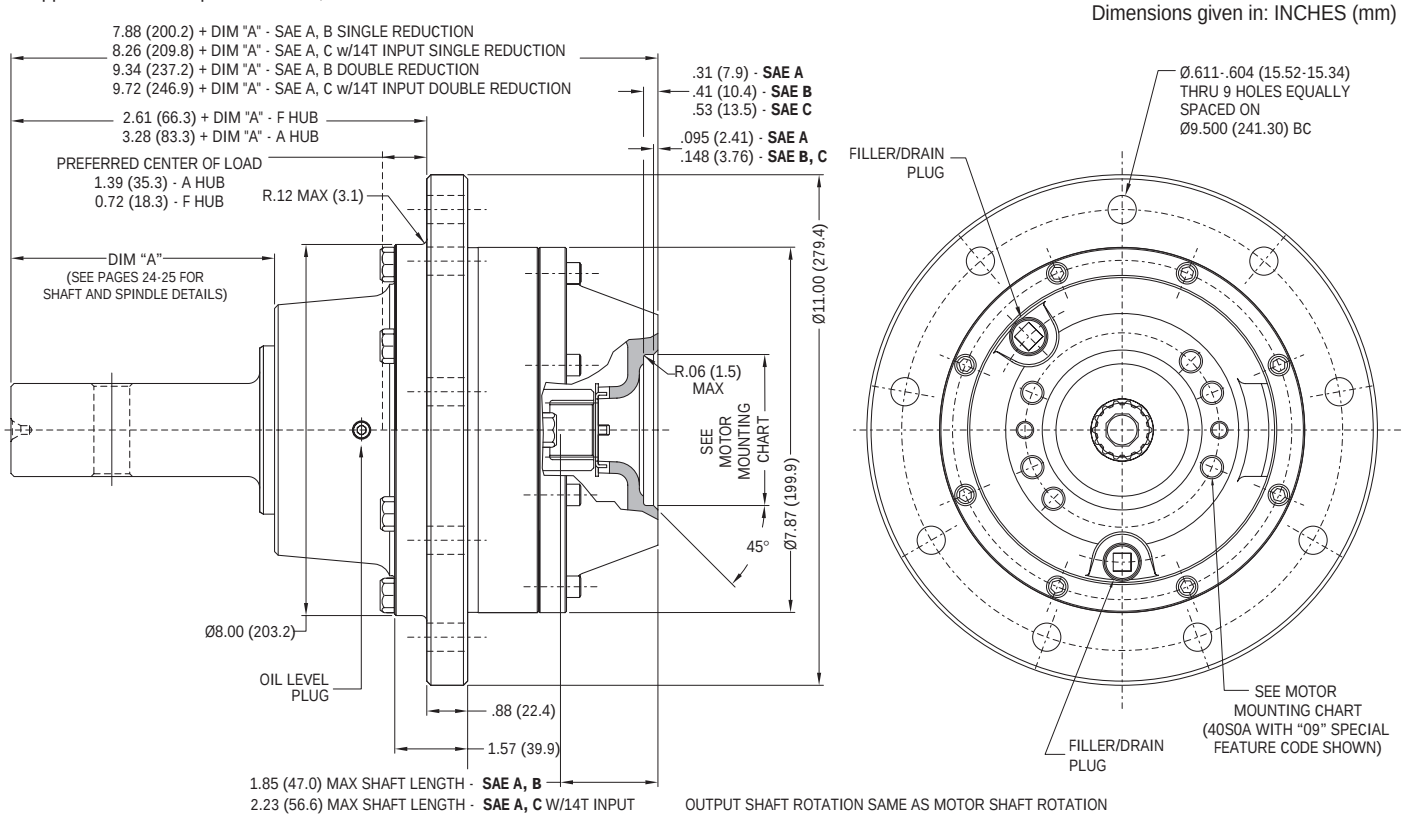
GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES	DOUBLE REDUCTION DRIVES
Max. intermittent output torque[1,2] 40,000 lb-in (4,520 Nm)	Max. intermittent output torque[1,2] 40,000 lb-in (4,520 Nm)
Max. input speed[2] ..... 3,500 RPM	Max. input speed[2] ..... 5,000 RPM
Approximate weight ..... 60 lbs (27.2 kg)	Approximate weight ..... 85 lbs (38.5 kg)
Approximate oil capacity ..... 22 oz (650 cc)	Approximate oil capacity ..... 27 oz (797 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.

Dimensions given in: INCHES (mm)



OUTPUT SHAFT ROTATION SAME AS MOTOR SHAFT ROTATION

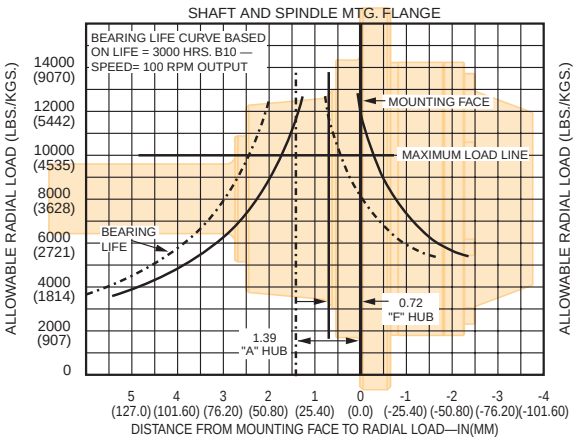
MOTOR MOUNTING CHART

	HOLE SIZE AND LOCATION	PILOT Ø
SAE A	(2) 1/2" -13 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter	Ø 3.251 - 3.256 (82.58 - 82.70)
	(2) 3/8" -16 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter **AND** (4) – 1/2" -13 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter **NOTE: Must specify SPECIAL FEATURE "09" for proper orientation.**	
SAE B	(2) – 1/2" -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) – 1/2" -13 UNC - 2B Thd Holes on 6.375 (161.93) B. C. diameter **AND** (2) – 5/8" -11 UNC - 2B Thd Holes on 7.125 (180.97) B. C. diameter	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

FEATURE CHART:
MODEL 40 SHAFT & SPINDLE OUTPUT DRIVES - SINGLE AND DOUBLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN			ORDER CODES	USE OPTION ORDER CODES TO BUILD PART NUMBER
MOTOR MOUNT	SAE A	•	•	•	40S0A	40S0A
	SAE B		•		40S0B	
	SAE C	•			40S0C	
INPUT SPLINE	13T - 16/32		•		13	
	14T - 12/24	•		•	14	14
	15T - 16/32		•		15	
	1"- 6B		•		6B	
RATIO OPTIONS	SINGLE REDUCTION 4.08:1	•	•	•	003	
	SINGLE REDUCTION 4.50:1	•	•	•	004	
	SINGLE REDUCTION 5.05:1	•	•	•	005	
	SINGLE REDUCTION 5.81:1	•	•	•	006	
	DOUBLE REDUCTION 15.30.1	•	•	•	015	
	DOUBLE REDUCTION 16.88:1	•	•	•	016	016
	DOUBLE REDUCTION 18.95:1	•	•	•	018	
	DOUBLE REDUCTION 21.80:1	•	•	•	021	
	DOUBLE REDUCTION 23.72:1	•	•	•	023	
	DOUBLE REDUCTION 26.16:1	•	•	•	026	
	DOUBLE REDUCTION 29.37:1	•	•	•	029	
	DOUBLE REDUCTION 33.79:1	•	•	•	033	
	DOUBLE REDUCTION 38.55:1	•	•	•	038	
	DOUBLE REDUCTION 47.74:1	•	•	•	047	
	DOUBLE REDUCTION 52.65:1	•	•	•	052	
	DOUBLE REDUCTION 59.12:1	•	•	•	059	
	DOUBLE REDUCTION 68.01:1	•	•	•	068	
HUB	1.39" pref ctr of load (9) on 9.50"BC	•	•	•	A	A
	0.72" pref ctr of load (9) on 9.50"BC	•	•	•	F	
OUTPUT SHAFTS AND OUTPUT SPINDLES	Round 2.00"	•	•	•	A1	
	Round 2.56"	•	•	•	A2	
	Spindle-3.996" pilot (5) 0.61" thru on 5.50" BC	•	•	•	F1	
	Spindle-3.996" pilot (5) 1/2-20 on 5.50" BC	•	•	•	F2	
	Spindle-4.662" pilot (6) 1/2-20 on 6.00" BC	•	•	•	F3	
	Spindle-4.500" pilot (8) 5/8-11 on 6.50" BC	•	•	•	F4	
	Spindle-6.895" pilot (8) 0.66" thru on 8.50" BC	•	•	•	F5	
	Spindle-4.662" pilot (6) 0.61" thru on 6.00" BC	•	•	•	F6	
	Hex 2.00"	•	•	•	H1	
	1.75" Keyed	•	•	•	K1	
	2.00" Keyed	•	•	•	K2	K2
	2.00" Keyed - female	•	•	•	K3	
	1.75" Keyed - female	•	•	•	K4	
	17T 12/24	•	•	•	S1	
	23T 12/24	•	•	•	S2	
	23T 12/24 short	•	•	•	S3	
	13/4" SAE J501 Tapered	•	•	•	T1	
WHEEL STUDS IN SPINDLE	NONE	•	•	•	0	0
	1/2" x 1.62"	•	•	•	H	
	9/16" x 1.62"	•	•	•	J	
BRAKE	None	•	•	•	00	00
SPECIAL FEATURES	None	•	•	•	00	
	Multi-Lip Cartridge Seal	•	•	•	01	
	SAE A Cover Orientation (2) 3/8", (4) 1/2"			•	09	09
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:						40S0A 14 016 A K2 0 00 09



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 re-viewed 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

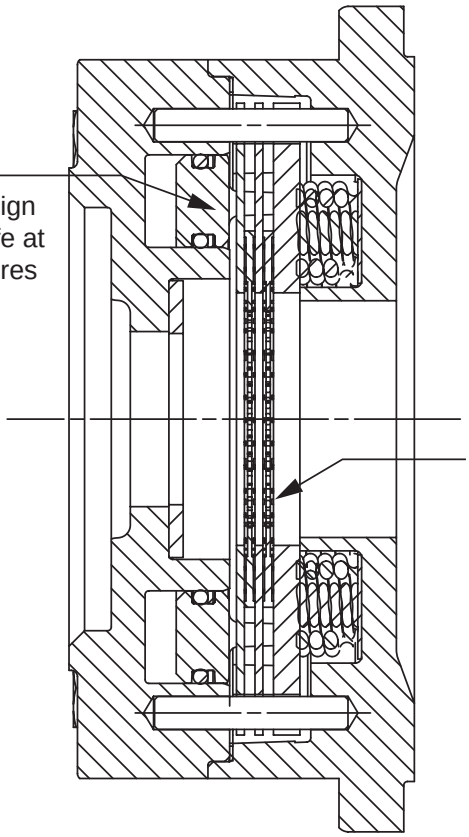
CAUTION: The same torsional loading constraints used in the driving mode must be used in the braking mode when braking through the Power Wheel drive gear set.

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.

Model 40 Shaft & Spindle Output Drives - Single and Double Reduction

with A2 Series Integral Parking Brake



PISTON:
Improved design for superior life at higher pressures

FRICTION DISCS:
"Heavy Duty Graphitic Paper" for wet sump applications.
Characterisitics:
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 in^3 (16.4cc) for a new brake and 2.0 in^3 (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 40 Shaft & Spindle Output Drives - Single and Double Reduction

with A2 Series Integral Parking Brake[1]

GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES	DOUBLE REDUCTION DRIVES
Max. intermittent output torque[2,3] 40,000 lb-in (4,520 Nm)	Max. intermittent output torque[2,3] 40,000 lb-in (4,520 Nm)
Max. input speed[4] ..... 2,000 RPM	Max. input speed[4] ..... 2,000 RPM
Approximate weight ..... 70 lbs (31.8 kg)	Approximate weight ..... 95 lbs (43.1 kg)
Approximate oil capacity ..... 27 oz (798 cc)	Approximate oil capacity ..... 32 oz (946 cc)

For Lubrication Data, see Page 26

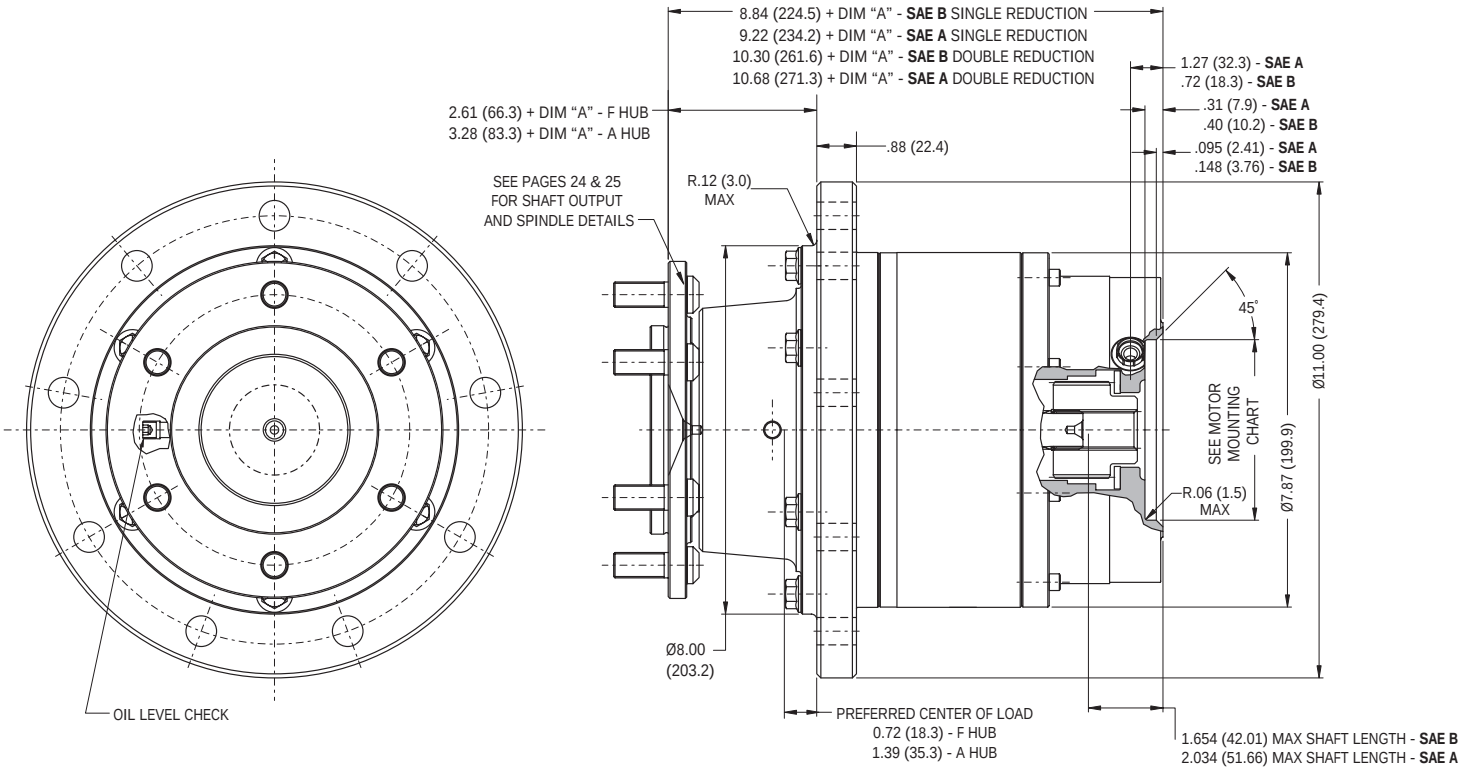
[1] For vertical applications, shaft up or shaft down, contact Auburn Gear.

[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 2,000 and 3,600 rpm, contact Auburn Gear for duty cycle analysis.

Dimensions given in: INCHES (mm)



MOTOR MOUNTING CHART

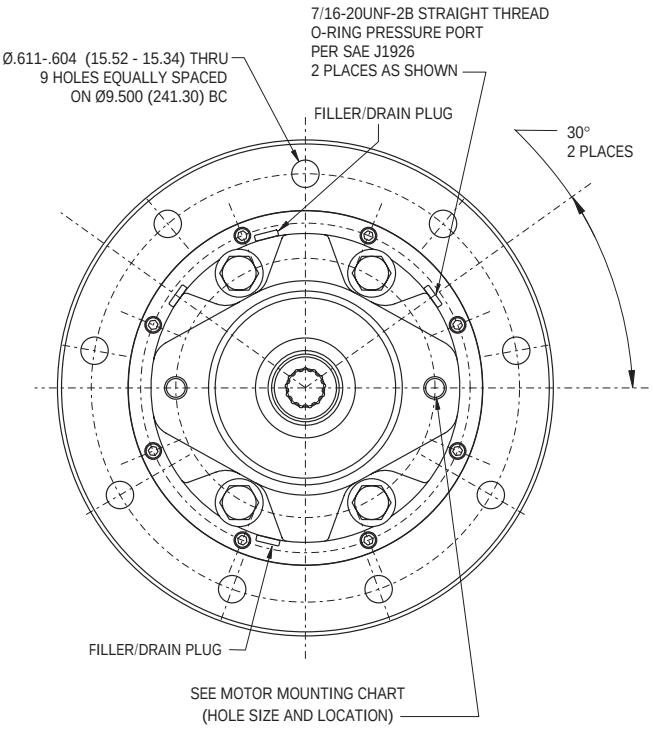
HOLE SIZE AND LOCATION	PILOT Ø
SAE A (2) – 3/8" -16 UNC,- 2B Thd Holes on 4.188 (106.38) B. C. diameter[+] **AND** (4) – 1/2" -13 UNC,- 2B Thd Holes on 4.188 (106.38) B. C. diameter[+]	Ø 3.251 - 3.255 (82.58 - 82.68)
SAE B (2) – 1/2" -13 UNC,- 2B Thd Holes on 5.750 (146.05) B. C. diameter[+]	Ø 4.001 - 4.004 (101.62 - 101.70)

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

BRAKE RATINGS

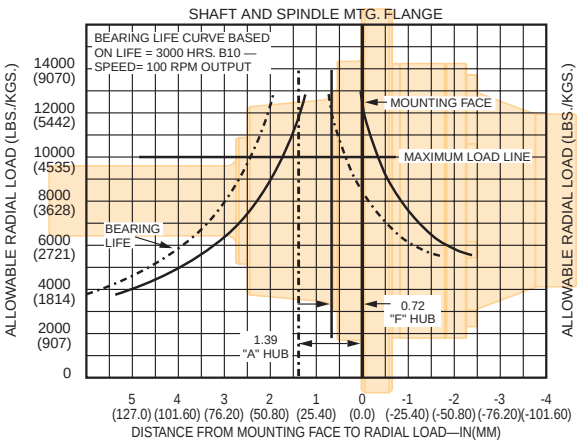
MODEL	TORQUE	MINIMUM RELEASE PRESSURE
B4	2,400 lb-in (271 N-m)	160 PSI (11.0 Bar)
B6	3,600 lb-in (407 N-m)	230 PSI (15.8 Bar)
B7	4,200 lb-in (475 N-m)	260 PSI (17.9 Bar)

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



FEATURE CHART:
MODEL 40 SHAFT/SPINDLE OUTPUT DRIVES
- SINGLE AND DOUBLE REDUCTION with BRAKE

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN		ORDER CODES	USE OPTION ORDER CODES TO BUILD PART NUMBER
MOTOR MOUNT	SAE A	•		40S0A	
	SAE B		•	40S0B	40S0B
INPUT SPLINE	13T - 16/32	•	•	13	
	14T - 12/24	•	•	14	
	15T - 16/32	•	•	15	15
	1"- 6B	•	•	6B	
RATIO OPTIONS	SINGLE REDUCTION 4.08:1	•	•	003	
	SINGLE REDUCTION 4.50:1	•	•	004	
	SINGLE REDUCTION 5.05:1	•	•	005	
	SINGLE REDUCTION 5.81:1	•	•	006	
	DOUBLE REDUCTION 15.30.1	•	•	015	
	DOUBLE REDUCTION 16.88:1	•	•	016	016
	DOUBLE REDUCTION 18.95:1	•	•	018	
	DOUBLE REDUCTION 21.80:1	•	•	021	
	DOUBLE REDUCTION 23.72:1	•	•	023	
	DOUBLE REDUCTION 26.16:1	•	•	026	
	DOUBLE REDUCTION 29.37:1	•	•	029	
	DOUBLE REDUCTION 33.79:1	•	•	033	
	DOUBLE REDUCTION 38.55:1	•	•	038	
	DOUBLE REDUCTION 47.74:1	•	•	047	
	DOUBLE REDUCTION 52.65:1	•	•	052	
	DOUBLE REDUCTION 59.12:1	•	•	059	
	DOUBLE REDUCTION 68.01:1	•	•	068	
HUB	1.39" pref ctr of load (9) on 9.50"BC	•	•	A	A
	0.72" pref ctr of load (9) on 9.50"BC	•	•	F	
OUTPUT SHAFTS AND OUTPUT SPINDLES	Round 2.00"	•	•	A1	
	Round 2.56"	•	•	A2	
	Spindle-3.996" pilot (5) 0.61" thru on 5.50" BC	•	•	F1	
	Spindle-3.996" pilot (5) 1/2-20 on 5.50" BC	•	•	F2	
	Spindle-4.662" pilot (6) 1/2-20 on 6.00" BC	•	•	F3	
	Spindle-4.500" pilot (8) 5/8-11 on 6.50" BC	•	•	F4	
	Spindle-6.895" pilot (8) 0.66" thru on 8.50" BC	•	•	F5	
	Spindle-4.662" pilot (6) 0.61" thru on 6.00" BC	•	•	F6	
	Hex 2.00"	•	•	H1	
	1.75" Keyed	•	•	K1	
	2.00" Keyed	•	•	K2	K2
	2.00" Keyed - female	•	•	K3	
	1.75" Keyed - female	•	•	K4	
	17T 12/24	•	•	S1	
	23T 12/24	•	•	S2	
	23T 12/24 short	•	•	S3	
	13/4" SAE J501 Tapered	•	•	T1	
WHEEL STUDS IN SPINDLE	NONE	•	•	0	0
	1/2"	•	•	H	
	9/16"	•	•	J	
BRAKE	2,400 lb-in	•	•	B4	B4
	3,600 lb-in	•	•	B6	
	4,200 lb-in	•	•	B7	
SPECIAL FEATURES	None	•	•	00	
	Multi-Lip Cartridge Seal	•	•	01	01
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:					40S0B 15 016 A K2 0 B4 01



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.

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.

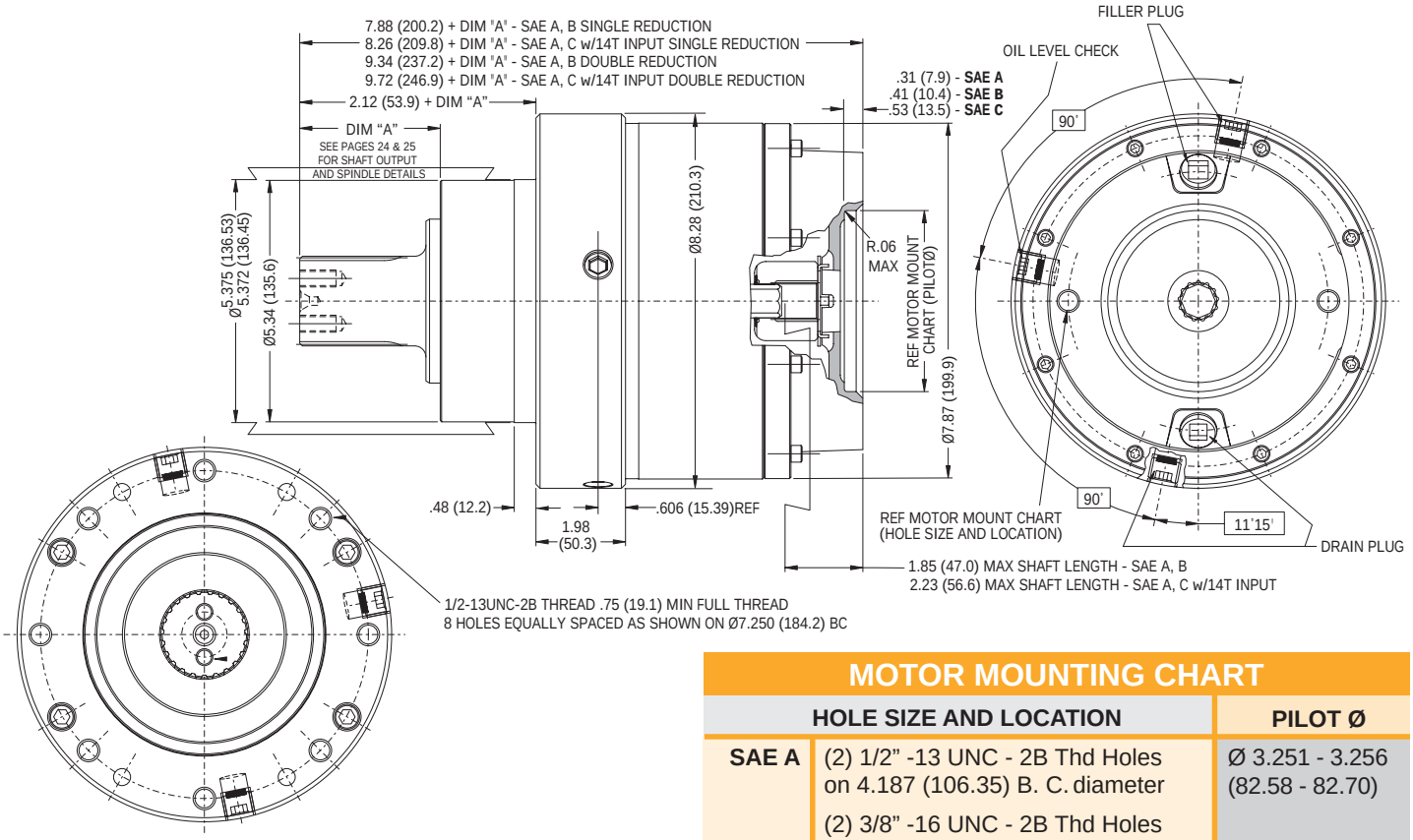
Model 40 Shaft and Spindle Output Drives with “N” Style Hub - Single and Double Reduction

GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES	DOUBLE REDUCTION DRIVES
Max. intermittent output torque[1,2] 40,000 lb-in (4,520 Nm)	Max. intermittent output torque[1,2] 40,000 lb-in (4,520 Nm)
Max. input speed[2] ..... 3,500 RPM	Max. input speed[2] ..... 5,000 RPM
Approximate weight ..... 60 lbs (27.2 kg)	Approximate weight ..... 85 lbs (38.5 kg)
Approximate oil capacity ..... 22 oz (650 cc)	Approximate oil capacity ..... 27 oz (797 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.



Dimensions given in: INCHES (mm)

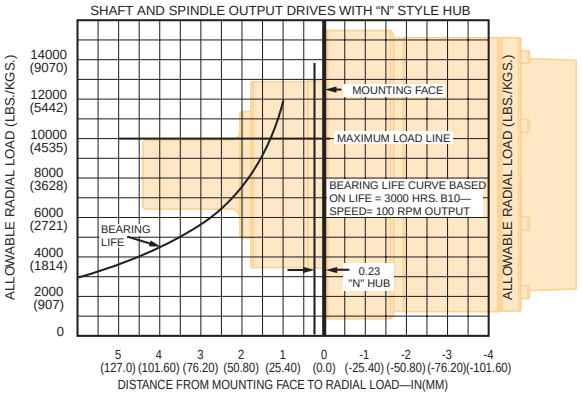
MOTOR MOUNTING CHART

	HOLE SIZE AND LOCATION	PILOT Ø
SAE A	(2) 1/2” -13 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter (2) 3/8” -16 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter **AND** (4) – 1/2” -13 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter **NOTE: Must specify SPECIAL FEATURE “09” for proper orientation.**	Ø 3.251 - 3.256 (82.58 - 82.70)
SAE B	(2) – 1/2” -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) – 1/2” -13 UNC - 2B Thd Holes on 6.375 (161.93) B. C. diameter **AND** (2) – 5/8” -11 UNC - 2B Thd Holes on 7.125 (180.97) B. C. diameter	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

FEATURE CHART: MODEL 40 SHAFT/SPINDLE OUTPUT DRIVES WITH "N" FLANGELESS STYLE HUBS - SINGLE AND DOUBLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN			ORDER CODES	USE OPTION ORDER CODES TO BUILD PART NUMBER
MOTOR MOUNT	SAE A	•	•	•	40S0A	
	SAE B		•		40S0B	
	SAE C	•			40S0C	40S0C
INPUT SPLINE	13T - 16/32		•		13	
	14T - 12/24	•		•	14	14
	15T - 16/32		•		15	
	1"- 6B		•		6B	
RATIO OPTIONS	SINGLE REDUCTION 4.08:1	•	•	•	003	
	SINGLE REDUCTION 4.50:1	•	•	•	004	
	SINGLE REDUCTION 5.05:1	•	•	•	005	
	SINGLE REDUCTION 5.81:1	•	•	•	006	
	DOUBLE REDUCTION 15.30.1	•	•	•	015	
	DOUBLE REDUCTION 16.88:1	•	•	•	016	
	DOUBLE REDUCTION 18.95:1	•	•	•	018	
	DOUBLE REDUCTION 21.80:1	•	•	•	021	
	DOUBLE REDUCTION 23.72:1	•	•	•	023	
	DOUBLE REDUCTION 26.16:1	•	•	•	026	
	DOUBLE REDUCTION 29.37:1	•	•	•	029	029
	DOUBLE REDUCTION 33.79:1	•	•	•	033	
	DOUBLE REDUCTION 38.55:1	•	•	•	038	
	DOUBLE REDUCTION 47.74:1	•	•	•	047	
	DOUBLE REDUCTION 52.65:1	•	•	•	052	
	DOUBLE REDUCTION 59.12:1	•	•	•	059	
	DOUBLE REDUCTION 68.01:1	•	•	•	068	
HUB	Flangeless	•	•	•	N	N
OUTPUT SHAFTS AND OUTPUT SPINDLES	Round 2.00"	•	•	•	A1	
	Round 2.56"	•	•	•	A2	
	Spindle-3.996" pilot (5) 0.61" thru on 5.50" BC	•	•	•	F1	F1
	Spindle-3.996" pilot (5) 1/2-20 on 5.50" BC	•	•	•	F2	
	Spindle-4.662" pilot (6) 1/2-20 on 6.00" BC	•	•	•	F3	
	Spindle-4.500" pilot (8) 5/8-11 on 6.50" BC	•	•	•	F4	
	Spindle-6.895" pilot (8) 0.66" thru on 8.50" BC	•	•	•	F5	
	Spindle-4.662" pilot (6) 0.61" thru on 6.00" BC	•	•	•	F6	
	Hex 2.00"	•	•	•	H1	
	1.75" Keyed	•	•	•	K1	
	2.00" Keyed	•	•	•	K2	
	2.00" Keyed - female	•	•	•	K3	
	1.75" Keyed - female	•	•	•	K4	
	17T 12/24	•	•	•	S1	
	23T 12/24	•	•	•	S2	
	23T 12/24 short	•	•	•	S3	
	1 3/4" SAE J501 Tapered	•	•	•	T1	
WHEEL STUDS IN SPINDLE	NONE	•	•	•	0	0
	1/2"	•	•	•	H	
	9/16"	•	•	•	J	
BRAKE	None	•	•	•	00	00
SPECIAL FEATURES	None	•	•	•	00	00
	Multi-Lip Cartridge Seal	•	•	•	01	
	SAE A Cover Orientation (2) 3/8", (4) 1/2"			•	09	
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:						40S0C 14 029 N F1 O 00 00



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.

NOTE:

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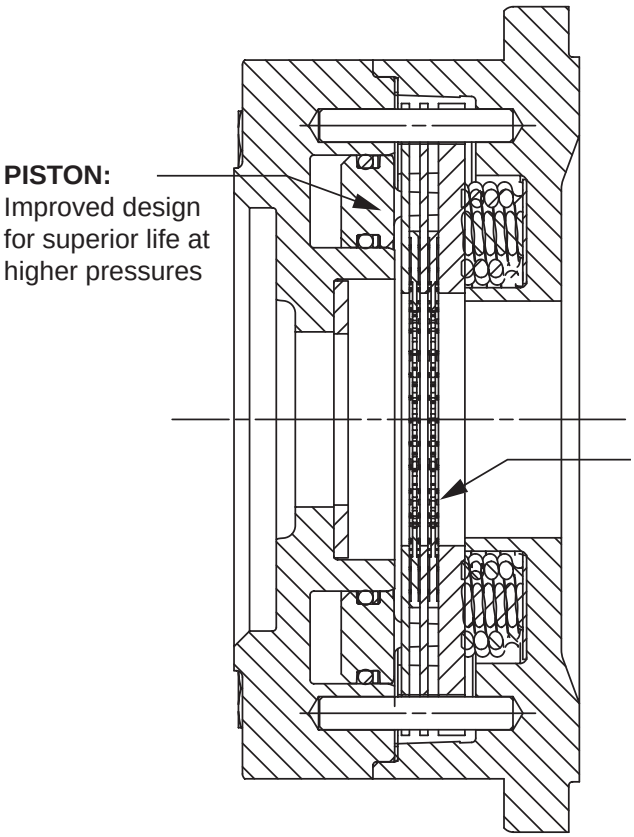
Power Wheel®

Model 40 Shaft and Spindle Output Drives with “N” Style Hub Single and Double Reduction

with A2 Series Integral Parking Brake



PISTON:
Improved design for superior life at higher pressures

FRICTION DISCS:
“Heavy Duty Graphitic Paper” for wet sump applications.
Characterisitics:
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 in^3 (16.4cc) for a new brake and 2.0 in^3 (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 40 Shaft and Spindle Output Drives with “N” Style Hub Single and Double Reduction

with A2 Series Integral Parking Brake[1]

GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES		DOUBLE REDUCTION DRIVES	
Max. intermittent output torque[2,3]	40,000 lb-in (4,520 Nm)	Max. intermittent output torque[2,3]	40,000 lb-in (4,520 Nm)
Max. input speed[4]	2,000 RPM	Max. input speed[4]	2,000 RPM
Approximate weight	70 lbs (31.8 kg)	Approximate weight	95 lbs (43.1 kg)
Approximate oil capacity	27 oz (798 cc)	Approximate oOil capacity	32 oz (946 cc)

For Lubrication Data, see Page 26

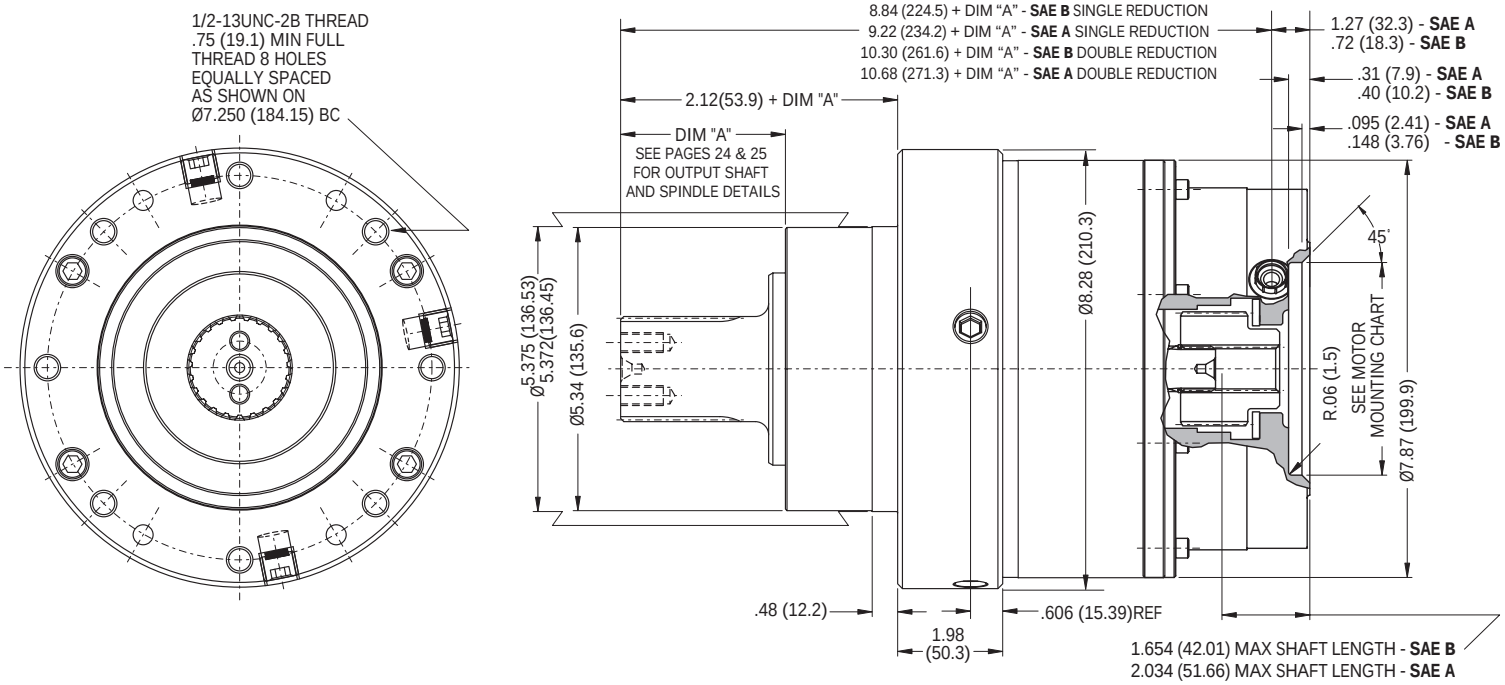
[1] For vertical application, shaft up or shaft down, contact Auburn Gear.

[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 2,000 and 3,600 rpm, please contact Auburn Gear for duty cycle analysis.

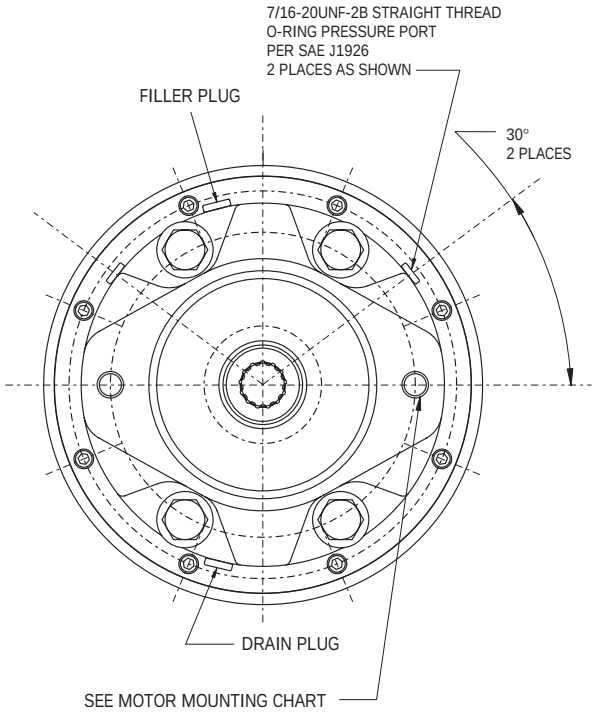
Dimensions given in: INCHES (mm)



MOTOR MOUNTING CHART

HOLE SIZE AND LOCATION	PILOT Ø
SAE A (2) 3/8" -16 UNC - 2B Thd Holes Equally Spaced on 4.188 (106.38) B. C.+ AND (4) – 1/2" -13 UNC - 2B Thd Holes on 4.188 (106.38) B. C.+	Ø 3.251 - 3.255 (82.58 - 82.68)
SAE B (2) 1/2" -13 UNC - 2B Thd Holes Equally Spaced on 5.750 (146.05) B. C.+	Ø 4.001 - 4.004 (101.62 - 101.70)

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



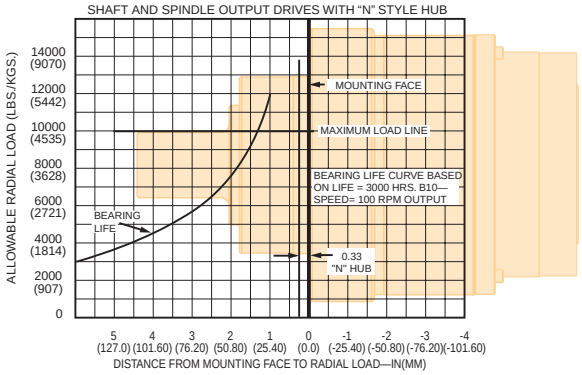
BRAKE RATINGS

MODEL	TORQUE	MINIMUM RELEASE PRESSURE
B4	2,400 lb-in (271 N-m)	160 PSI (11.0 Bar)
B6	3,600 lb-in (407 N-m)	230 PSI (15.8 Bar)
B7	4,200 lb-in (475 N-m)	260 PSI (17.9 Bar)

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

FEATURE CHART: MODEL 40 SHAFT/SPINDLE OUTPUT DRIVES WITH "N" FLANGELESS STYLE HUBS - SINGLE AND DOUBLE REDUCTION with BRAKE

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN		ORDER CODES	USE OPTION ORDER CODES TO BUILD PART NUMBER
MOTOR MOUNT	SAE A	•		40S0A	40S0A
	SAE B		•	40S0B	
INPUT SPLINE	13T - 16/32	•	•	13	
	14T - 12/24	•	•	14	
	15T - 16/32	•	•	15	
	1"- 6B	•	•	6B	6B
RATIO OPTIONS	SINGLE REDUCTION 4.08:1	•	•	003	
	SINGLE REDUCTION 4.50:1	•	•	004	
	SINGLE REDUCTION 5.05:1	•	•	005	
	SINGLE REDUCTION 5.81:1	•	•	006	
	DOUBLE REDUCTION 15.30.1	•	•	015	
	DOUBLE REDUCTION 16.88:1	•	•	016	016
	DOUBLE REDUCTION 18.95:1	•	•	018	
	DOUBLE REDUCTION 21.80:1	•	•	021	
	DOUBLE REDUCTION 23.72:1	•	•	023	
	DOUBLE REDUCTION 26.16:1	•	•	026	
	DOUBLE REDUCTION 29.37:1	•	•	029	
	DOUBLE REDUCTION 33.79:1	•	•	033	
	DOUBLE REDUCTION 38.55:1	•	•	038	
	DOUBLE REDUCTION 47.74:1	•	•	047	
	DOUBLE REDUCTION 52.65:1	•	•	052	
	DOUBLE REDUCTION 59.12:1	•	•	059	
	DOUBLE REDUCTION 68.01:1	•	•	068	
HUB	Flangeless	•	•	N	N
OUTPUT SHAFTS AND OUTPUT SPINDLES	Round 2.00"	•	•	A1	
	Round 2.56"	•	•	A2	
	Spindle-3.996" pilot (5) 0.61" thru on 5.50"BC	•	•	F1	
	Spindle-3.996" pilot (5) 1/2-20 on 5.50"BC	•	•	F2	
	Spindle-4.662" pilot (6) 1/2-20 on 6.00"BC	•	•	F3	
	Spindle-4.500" pilot (8) 5/8-11 on 6.50"BC	•	•	F4	
	Spindle-6.895" pilot (8) 0.66" thru on 8.50" BC	•	•	F5	
	Spindle-4.662" pilot (6) 0.61" thru on 6.00" BC	•	•	F6	
	Hex 2.00"	•	•	H1	
	1.75" Keyed	•	•	K1	
	2.00" Keyed	•	•	K2	
	2.00" Keyed - female	•	•	K3	
	1.75" Keyed - female	•	•	K4	
	17T 12/24	•	•	S1	
	23T 12/24	•	•	S2	S2
	23T 12/24 short	•	•	S3	
	1 3/4" SAE J501 Tapered	•	•	T1	
WHEEL STUDS	NONE	•	•	0	0
	1/2"	•	•	H	
	9/16"	•	•	J	
BRAKE	2,400 lb-in	•	•	B4	B4
	3,600 lb-in	•	•	B6	
	4,200 lb-in	•	•	B7	
SPECIAL FEATURES	None	•	•	00	00
	Multi-Lip Cartridge Seal	•	•	01	
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:					40S0A 6B 016 N S2 O B4 00



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.

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.

Model 40 Shaft Output Drives with “R” Style Hub - Single and Double Reduction

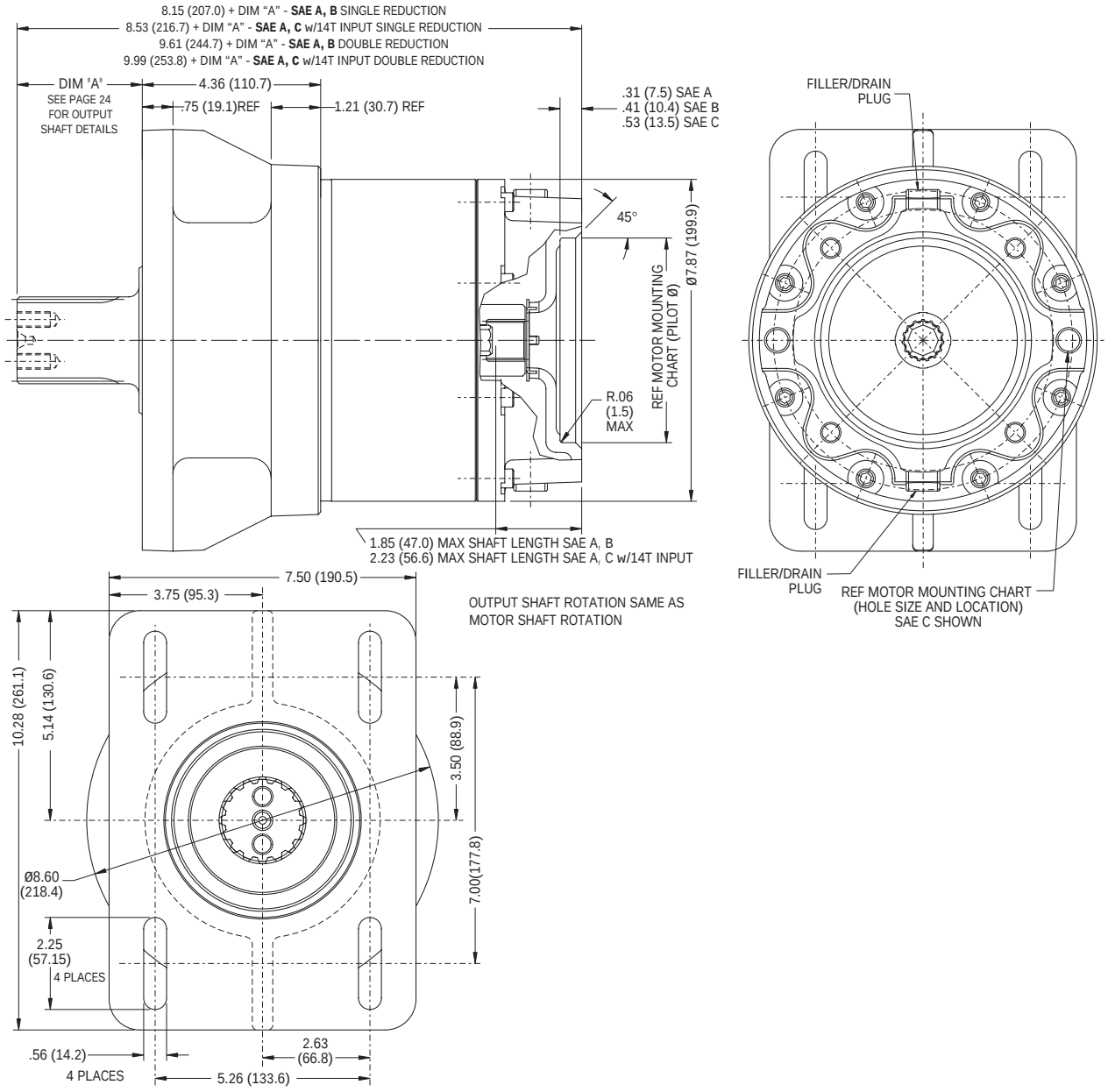
GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES	DOUBLE REDUCTION DRIVES
Max. intermittent output torque[1,2] 40,000 lb-in (4,520 Nm)	Max. intermittent output torque[1,2] 40,000 lb-in (4,520 Nm)
Max. input speed[2] ..... 3,500 RPM	Max. input speed[2] ..... 5,000 RPM
Approximate weight ..... 60 lbs (27.2 kg)	Approximate weight ..... 85 lbs (38.5 kg)
Approximate oil capacity ..... 22 oz (650 cc)	Approximate oil capacity ..... 27 oz (797 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.

Dimensions given in: INCHES (mm)



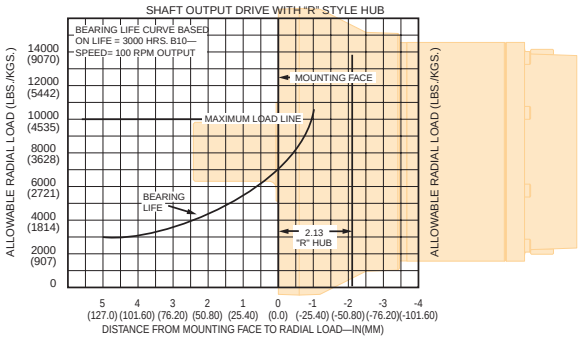
FEATURE CHART: MODEL 40 SHAFT OUTPUT DRIVES WITH "R" RECTANGULAR STYLE HUBS - SINGLE AND DOUBLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN			ORDER CODES	USE OPTION ORDER CODES TO BUILD PART NUMBER
MOTOR MOUNT	SAE A	•	•	•	40S0A	
	SAE B		•		40S0B	
	SAE C	•			40S0C	40S0C
INPUT SPLINE	13T - 16/32		•		13	
	14T - 12/24	•		•	14	14
	15T - 16/32		•		15	
	1"- 6B		•		6B	
RATIO OPTIONS	SINGLE REDUCTION 4.08:1	•	•	•	003	
	SINGLE REDUCTION 4.50:1	•	•	•	004	
	SINGLE REDUCTION 5.05:1	•	•	•	005	
	SINGLE REDUCTION 5.81:1	•	•	•	006	
	DOUBLE REDUCTION 15.30.1	•	•	•	015	
	DOUBLE REDUCTION 16.88:1	•	•	•	016	
	DOUBLE REDUCTION 18.95:1	•	•	•	018	
	DOUBLE REDUCTION 21.80:1	•	•	•	021	
	DOUBLE REDUCTION 23.72:1	•	•	•	023	
	DOUBLE REDUCTION 26.16:1	•	•	•	026	
	DOUBLE REDUCTION 29.37:1	•	•	•	029	
	DOUBLE REDUCTION 33.79:1	•	•	•	033	
	DOUBLE REDUCTION 38.55:1	•	•	•	038	
	DOUBLE REDUCTION 47.74:1	•	•	•	047	
	DOUBLE REDUCTION 52.65:1	•	•	•	052	052
	DOUBLE REDUCTION 59.12:1	•	•	•	059	
	DOUBLE REDUCTION 68.01:1	•	•	•	068	
HUB	Rectangular Flange	•	•	•	R	R
OUTPUT SHAFTS AND OUTPUT SPINDLES	Round 2.00"	•	•	•	A1	
	Round 2.56"	•	•	•	A2	
	Hex 2.00"	•	•	•	H1	
	1.75" Keyed	•	•	•	K1	
	2.00" Keyed	•	•	•	K2	K2
	2.00" Keyed - female	•	•	•	K3	
	1.75" Keyed - female	•	•	•	K4	
	17T 12/24	•	•	•	S1	
	23T 12/24	•	•	•	S2	
	23T 12/24 short	•	•	•	S3	
	1 3/4" SAE J501 Tapered	•	•	•	T1	
WHEEL STUDS	NONE	•	•	•	0	0
BRAKE	None	•	•	•	00	00
SPECIAL FEATURES	None	•	•	•	00	
	Multi-Lip Cartridge Seal	•	•	•	01	01
	SAE A Cover Orientation (2) 3/8", (4) 1/2"			•	09	
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:						40S0C 14 052 R K2 0 00 01

MOTOR MOUNTING CHART

	HOLE SIZE AND LOCATION	PILOT Ø
SAE A	(2) 1/2" -13 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter	Ø 3.251 - 3.256 (82.58 - 82.70)
	(2) 3/8" -16 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter	
AND	(4) – 1/2" -13 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter	
	NOTE: Must specify SPECIAL FEATURE "09" for proper orientation.	
SAE B	(2) – 1/2" -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) – 1/2" -13 UNC - 2B Thd Holes on 6.375 (161.93) B. C. diameter	Ø 5.001 - 5.006 (127.02 - 127.15)
AND	(2) – 5/8" -11 UNC - 2B Thd Holes on 7.125 (180.97) B. C. diameter	

"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 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.

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.

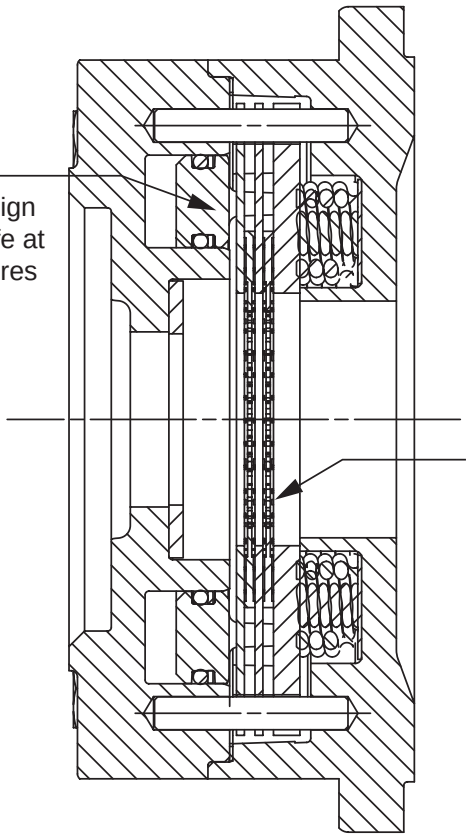
NOTE:

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.

Power Wheel®

Model 40 Shaft Output Drives with “R” Style Hub - Single and Double Reduction

with A2 Series Integral Parking Brake



PISTON:
Improved design for superior life at higher pressures

FRICTION DISCS:
“Heavy Duty Graphitic Paper” for wet sump applications.
Characterisitics:
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 in^3 (16.4cc) for a new brake and 2.0 in^3 (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 40 Shaft Output Drives with “R” Style Hub - Single and Double Reduction

with A2 Series Integral Parking Brake[1]

GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES		DOUBLE REDUCTION DRIVES	
Max. intermittent output torque[2,3]	40,000 lb-in (4,520 Nm)	Max. intermittent output torque[2,3]	40,000 lb-in (4,520 Nm)
Max. input speed[4]	2,000 RPM	Max. input speed[4]	2,000 RPM
Approximate weight	70 lbs (31.8 kg)	Approximate weight	95 lbs (43.1 kg)
Approximate oil capacity	27 oz (798 cc)	Approximate oil capacity	32 oz (946 cc)

For Lubrication Data, see Page 26

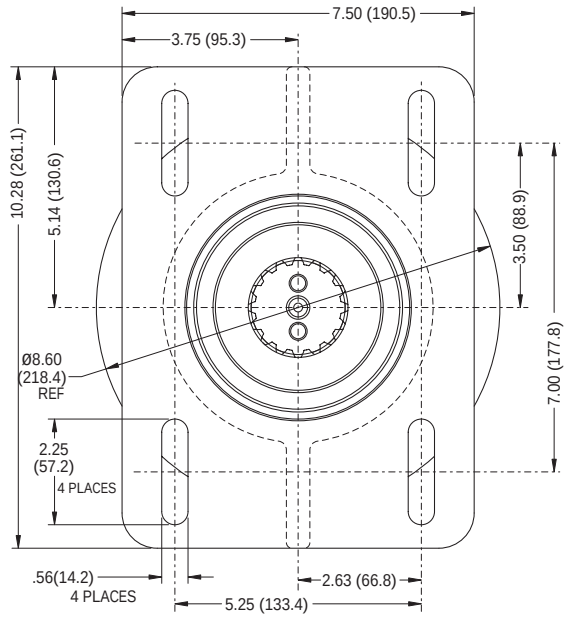
[1] For vertical application, shaft up or shaft down, contact Auburn Gear.

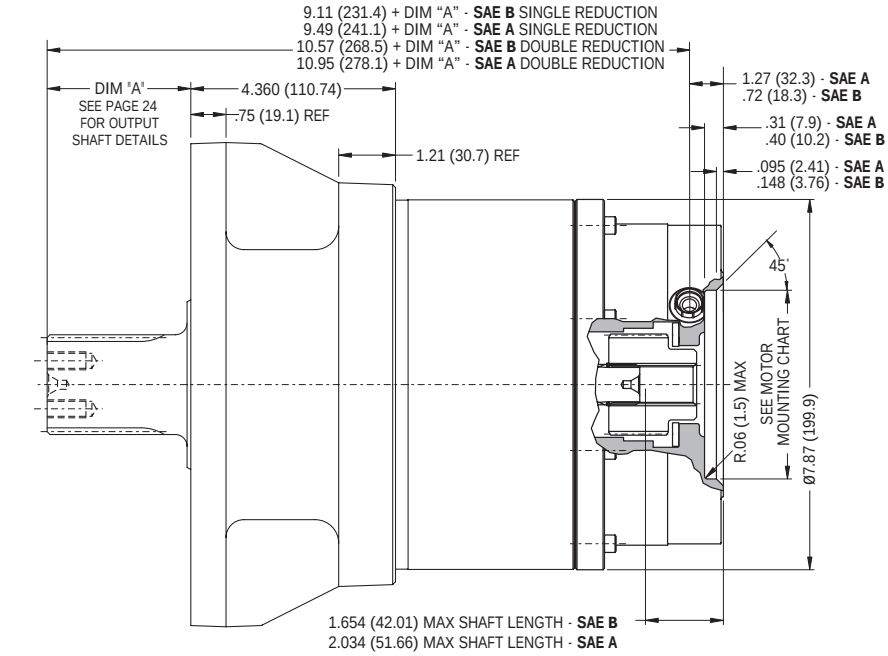
[2] Depending on the duty cycle and the nature of the application, a normal continuous output torque of 1/3 to 1/2 of the maximum Intermittent should yield satisfactory *Power Wheel* life. Customer testing and application analysis is strongly recommended.

[3] If application exceeds published limit, contact Auburn Gear.

[4] For input speeds between 2,000 and 3,600 rpm, please contact Auburn Gear for duty cycle analysis.

Dimensions given in: INCHES (mm)



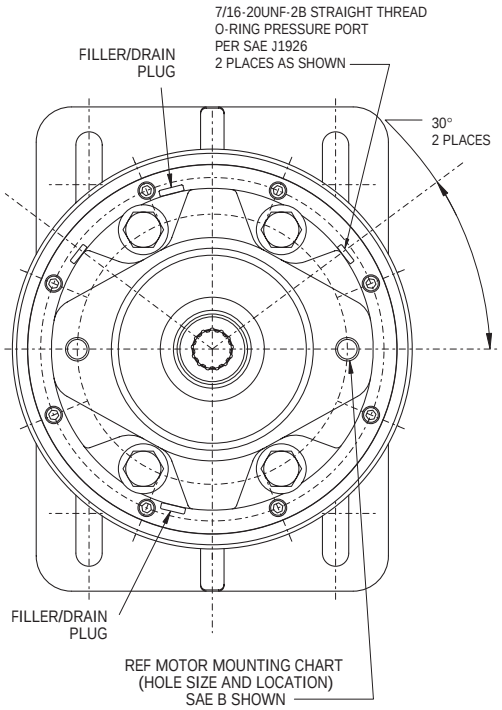


OUTPUT SHAFT ROTATION SAME AS MOTOR SHAFT ROTATION

BRAKE RATINGS

MODEL	TORQUE	MINIMUM RELEASE PRESSURE
B4	2,400 lb-in (271 N-m)	160 PSI (11.0 Bar)
B5	3,200 lb-in (362 N-m)	220 PSI (15.1 Bar)
B7	4,200 lb-in (475 N-m)	260 PSI (17.9 Bar)

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



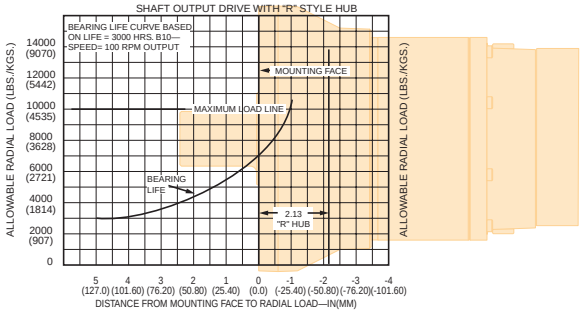
FEATURE CHART: MODEL 40 SHAFT OUTPUT DRIVES WITH "R" RECTANGULAR STYLE HUBS - SINGLE AND DOUBLE REDUCTION with BRAKE

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN		ORDER CODES	USE OPTION ORDER CODES TO BUILD PART NUMBER
MOTOR MOUNT	SAE A	•		40S0A	
	SAE B		•	40S0B	40S0B
INPUT SPLINE	13T - 16/32	•	•	13	13
	14T - 12/24	•	•	14	
	15T - 16/32	•	•	15	
	1"- 6B	•	•	6B	
RATIO OPTIONS	SINGLE REDUCTION 4.08:1	•	•	003	
	SINGLE REDUCTION 4.50:1	•	•	004	
	SINGLE REDUCTION 5.05:1	•	•	005	
	SINGLE REDUCTION 5.81:1	•	•	006	
	DOUBLE REDUCTION 15.30.1	•	•	015	
	DOUBLE REDUCTION 16.88:1	•	•	016	016
	DOUBLE REDUCTION 18.95:1	•	•	018	
	DOUBLE REDUCTION 21.80:1	•	•	021	
	DOUBLE REDUCTION 23.72:1	•	•	023	
	DOUBLE REDUCTION 26.16:1	•	•	026	
	DOUBLE REDUCTION 29.37:1	•	•	029	
	DOUBLE REDUCTION 33.79:1	•	•	033	
	DOUBLE REDUCTION 38.55:1	•	•	038	
	DOUBLE REDUCTION 47.74:1	•	•	047	
	DOUBLE REDUCTION 52.65:1	•	•	052	
	DOUBLE REDUCTION 59.12:1	•	•	059	
	DOUBLE REDUCTION 68.01:1	•	•	068	
HUB	Rectangular Flange	•	•	R	R
OUTPUT SHAFTS AND OUTPUT SPINDLES	Round 2.00"	•	•	A1	
	Round 2.56"	•	•	A2	
	Hex 2.00"	•	•	H1	
	1.75" Keyed	•	•	K1	
	2.00" Keyed	•	•	K2	
	2.00" Keyed - female	•	•	K3	
	1.75" Keyed - female	•	•	K4	
	17T 12/24	•	•	S1	S1
	23T 12/24	•	•	S2	
	23T 12/24 short	•	•	S3	
	1 3/4" SAE J501 Tapered	•	•	T1	
WHEEL STUDS	NONE	•	•	0	0
BRAKE	2,400 lb-in	•	•	B4	
	3,600 lb-in	•	•	B6	B6
	4,200 lb-in	•	•	B7	
SPECIAL FEATURES	NONE	•	•	00	00
	Multi-Lip Cartridge Seal	•	•	01	
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:					40S0B 13 016 S S1 O B6 00

MOTOR MOUNTING CHART

HOLE SIZE AND LOCATION	PILOT Ø
SAE A (2) – 3/8" -16 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter✚ **OR** (4) – 1/2" -13 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter✚	Ø 3.251 - 3.255 (82.58 - 82.70)
SAE B (2) – 1/2" -13 UNC - 2B Thd Holes on 5.750 (146.05) B. C. diameter✚	Ø 4.001 - 4.004 (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.

NOTE:

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Model 40 Shaft Output Drives with “S” Style Hub - Single and Double Reduction

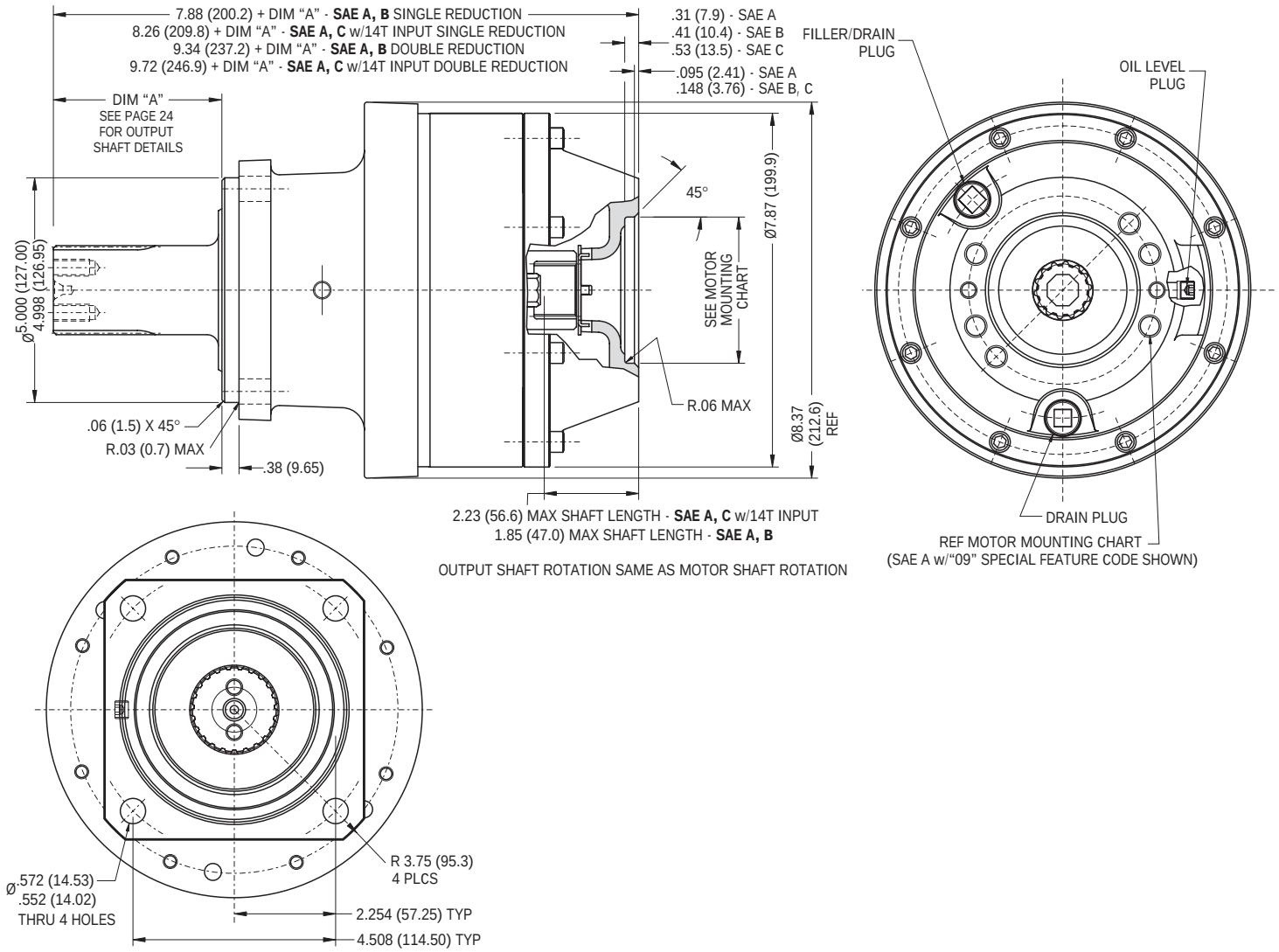
GENERAL SPECIFICATIONS

SINGLE REDUCTION DRIVES	DOUBLE REDUCTION DRIVES
Max. intermittent output torque[1,2] 40,000 lb-in (4,520 Nm)	Max. intermittent output torque[1,2] 40,000 lb-in (4,520 Nm)
Max. input speed[2] ..... 3,500 RPM	Max. input speed[2] ..... 5,000 RPM
Approximate weight ..... 60 lbs (27.2 kg)	Approximate weight ..... 85 lbs (38.5 kg)
Approximate oil capacity ..... 22 oz (650 cc)	Approximate oil capacity ..... 27 oz (797 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.

Dimensions given in: INCHES (mm)



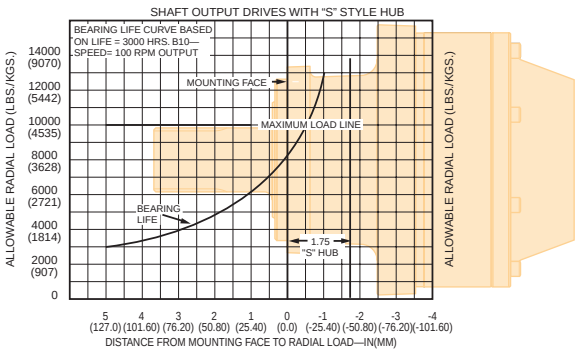
FEATURE CHART: MODEL 40 SHAFT OUTPUT DRIVES WITH "S" SQUARE STYLE HUBS - SINGLE AND DOUBLE REDUCTION

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN			ORDER CODES	USE OPTION ORDER CODES TO BUILD PART NUMBER						
MOTOR MOUNT	SAE A	•	•	•	40S0A							
	SAE B		•		40S0B							
	SAE C	•			40S0C	40S0C						
INPUT SPLINE	13T - 16/32		•		13							
	14T - 12/24	•		•	14		14					
	15T - 16/32		•		15							
	1"- 6B		•		6B							
RATIO OPTIONS	SINGLE REDUCTION 4.08:1	•	•	•	003							
	SINGLE REDUCTION 4.50:1	•	•	•	004							
	SINGLE REDUCTION 5.05:1	•	•	•	005							
	SINGLE REDUCTION 5.81:1	•	•	•	006							
	SINGLE REDUCTION 15.30.1	•	•	•	015							
	DOUBLE REDUCTION 16.88:1	•	•	•	016							
	DOUBLE REDUCTION 18.95:1	•	•	•	018							
	DOUBLE REDUCTION 21.80:1	•	•	•	021							
	DOUBLE REDUCTION 23.72:1	•	•	•	023							
	DOUBLE REDUCTION 26.16:1	•	•	•	026							
	DOUBLE REDUCTION 29.37:1	•	•	•	029							
	DOUBLE REDUCTION 33.79:1	•	•	•	033							
	DOUBLE REDUCTION 38.55:1	•	•	•	038							
	DOUBLE REDUCTION 47.74:1	•	•	•	047							
	DOUBLE REDUCTION 52.65:1	•	•	•	052			052				
	DOUBLE REDUCTION 59.12:1	•	•	•	059							
	DOUBLE REDUCTION 68.01:1	•	•	•	068							
HUB	Square Flange	•	•	•	S				S			
OUTPUT SHAFTS AND OUTPUT SPINDLES	Round 2.00"	•	•	•	A1							
	Round 2.56"	•	•	•	A2							
	Hex 2.00"	•	•	•	H1							
	1.75" Keyed	•	•	•	K1							
	2.00" Keyed	•	•	•	K2					K2		
	2.00" Keyed - female	•	•	•	K3							
	1.75" Keyed - female	•	•	•	K4							
	17T 12/24	•	•	•	S1							
	23T 12/24	•	•	•	S2							
	23T 12/24 short	•	•	•	S3							
	1 3/4" SAE J501 Tapered	•	•	•	T1							
WHEEL STUDS	NONE	•	•	•	0						0	
	NONE	•	•	•	00						00	
BRAKE	NONE	•	•	•	00							00
SPECIAL FEATURES	Multi-Lip Cartridge Seal	•	•	•	01							
	SAE A Cover Orientation (2) 3/8", (4) 1/2"			•	09							
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:						40S0C	14	052	S	K2	0	00

MOTOR MOUNTING CHART

	HOLE SIZE AND LOCATION	PILOT Ø
SAE A	(2) 1/2" -13 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter	Ø 3.251 - 3.256 (82.58 - 82.70)
	(2) 3/8" -16 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter	
AND	(4) – 1/2" -13 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter	
	NOTE: Must specify SPECIAL FEATURE "09" for proper orientation.	
SAE B	(2) – 1/2" -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) – 1/2" -13 UNC - 2B Thd Holes on 6.375 (161.93) B. C. diameter	Ø 5.001 - 5.006 (127.02 - 127.15)
AND	(2) – 5/8" -11 UNC - 2B Thd Holes on 7.125 (180.97) B. C. diameter	

"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 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.

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.

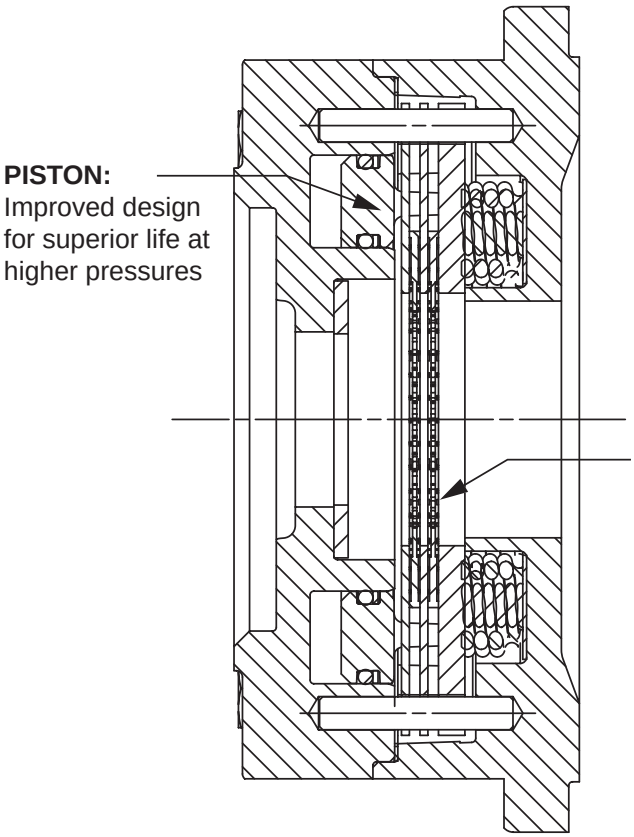
NOTE:

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.

Power Wheel®

Model 40 Shaft Output Drives with “S” Style Hub - Single and Double Reduction

with A2 Series Integral Parking Brake



PISTON:
Improved design for superior life at higher pressures

FRICTION DISCS:
“Heavy Duty Graphitic Paper” for wet sump applications.
Characterisitics:
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 in^3 (16.4cc) for a new brake and 2.0 in^3 (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 40 Shaft Output Drives with “S” Style Hub - Single and Double Reduction

with A2 Series Integral Parking Brake[1]

GENERAL SPECIFICATIONS

Max. intermittent output torque[2,3]	40,000 lb-in (4,520 Nm)
Max. input speed[4]	2,000 RPM
Approximate weight	70 lbs (31.8 kg)
Approximate oil capacity	27 oz (798 cc)

Max. intermittent output torque[2,3]	40,000 lb-in (4,520 Nm)
Max. input speed[4]	2,000 RPM
Approximate weight	95 lbs (43.1 kg)
Approximate oil capacity	32 oz (946 cc)

For Lubrication Data, see Page 26

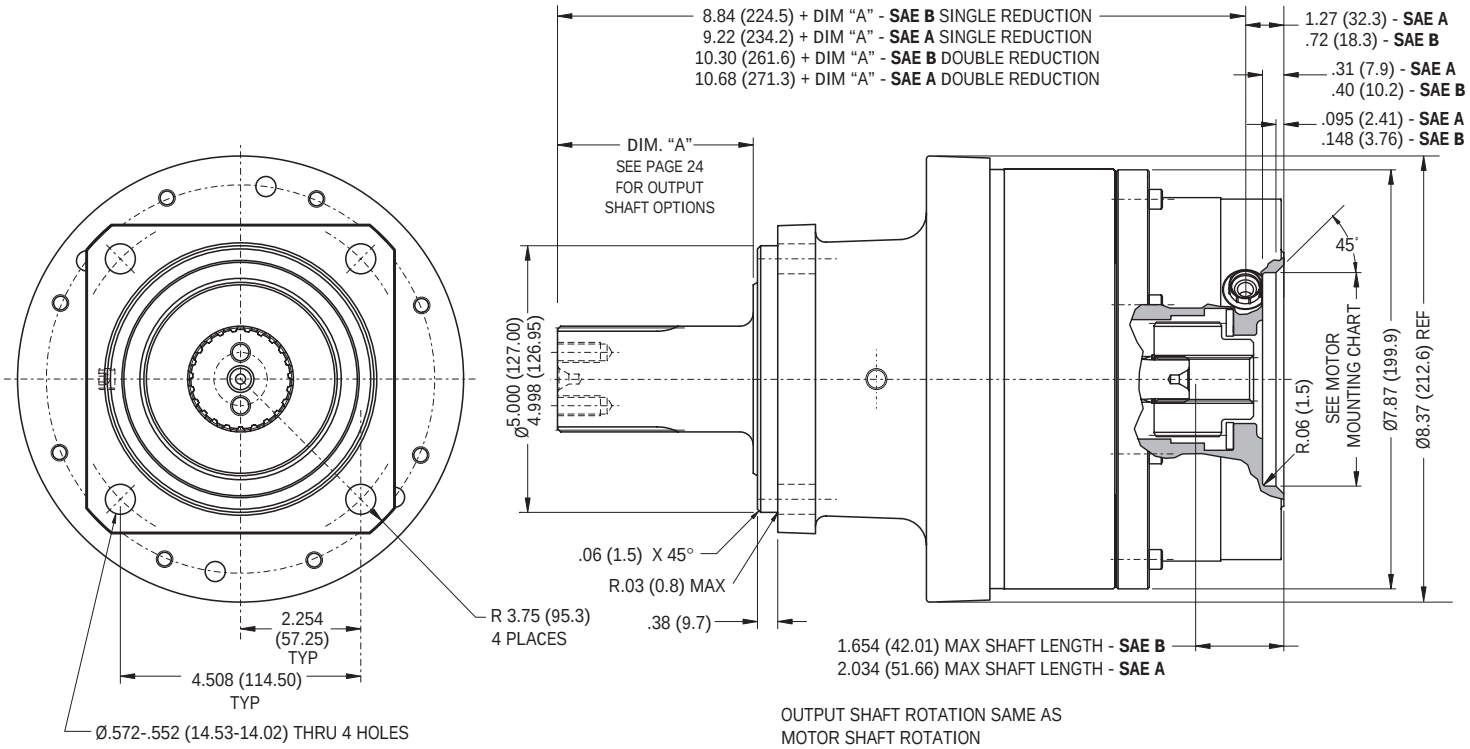
[1] For vertical application, shaft up or shaft down, contact Auburn Gear.

[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 2,000 and 3,600 rpm, please contact Auburn Gear for duty cycle analysis.

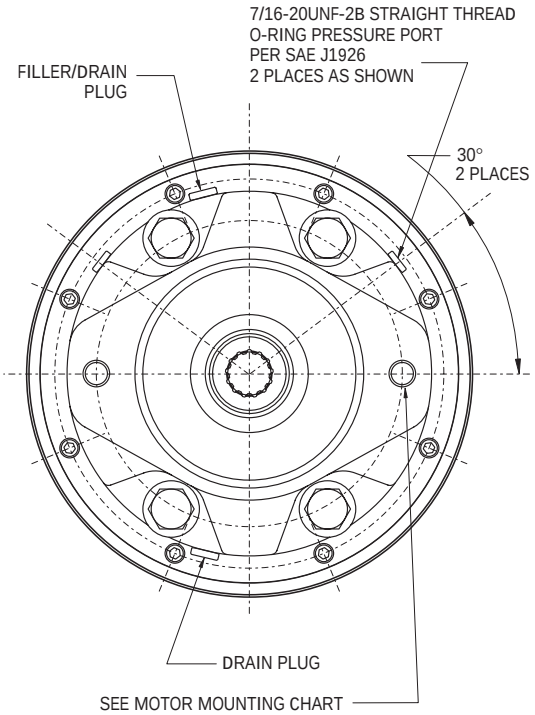
Dimensions given in: INCHES (mm)



BRAKE RATINGS

MODEL	TORQUE	MINIMUM RELEASE PRESSURE
B4	2,400 lb-in (271 N-m)	160 PSI (11.0 Bar)
B6	3,600 lb-in (407 N-m)	230 PSI (15.8 Bar)
B7	4,200 lb-in (475 N-m)	260 PSI (17.9 Bar)

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



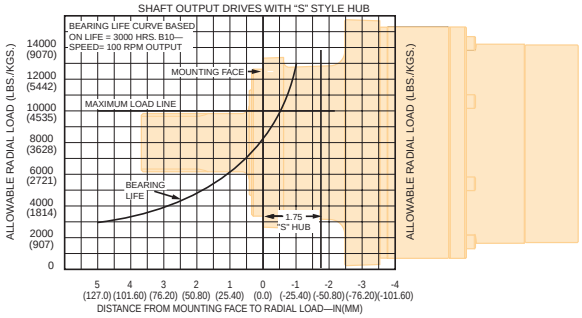
FEATURE CHART: MODEL 40 SHAFT OUTPUT DRIVES WITH "S" SQUARE STYLE HUBS - SINGLE AND DOUBLE REDUCTION with BRAKE

OPTIONS	DESCRIPTION	MAKE ALL SELECTIONS WITHIN ONE COLUMN		ORDER CODES	USE OPTION ORDER CODES TO BUILD PART NUMBER
MOTOR MOUNT	SAE A	•		40S0A	
	SAE B		•	40S0B	40S0B
INPUT SPLINE	13T - 16/32	•	•	13	13
	14T - 12/24	•	•	14	
	15T - 16/32	•	•	15	
	1"- 6B	•	•	6B	
RATIO OPTIONS	SINGLE REDUCTION 4.08:1	•	•	003	
	SINGLE REDUCTION 4.50:1	•	•	004	
	SINGLE REDUCTION 5.05:1	•	•	005	
	SINGLE REDUCTION 5.81:1	•	•	006	
	DOUBLE REDUCTION 15.30.1	•	•	015	
	DOUBLE REDUCTION 16.88:1	•	•	016	016
	DOUBLE REDUCTION 18.95:1	•	•	018	
	DOUBLE REDUCTION 21.80:1	•	•	021	
	DOUBLE REDUCTION 23.72:1	•	•	023	
	DOUBLE REDUCTION 26.16:1	•	•	026	
	DOUBLE REDUCTION 29.37:1	•	•	029	
	DOUBLE REDUCTION 33.79:1	•	•	033	
	DOUBLE REDUCTION 38.55:1	•	•	038	
	DOUBLE REDUCTION 47.74:1	•	•	047	
	DOUBLE REDUCTION 52.65:1	•	•	052	
	DOUBLE REDUCTION 59.12:1	•	•	059	
	DOUBLE REDUCTION 68.01:1	•	•	068	
HUB	Square Flange	•	•	S	S
OUTPUT SHAFTS AND OUTPUT SPINDLES	Round 2.00"	•	•	A1	
	Round 2.56"	•	•	A2	
	Hex 2.00"	•	•	H1	
	1.75" Keyed	•	•	K1	
	2.00" Keyed	•	•	K2	
	2.00" Keyed - female	•	•	K3	
	1.75" Keyed - female	•	•	K4	
	17T 12/24	•	•	S1	S1
	23T 12/24	•	•	S2	
	23T 12/24 short	•	•	S3	
	1 3/4" SAE J501 Tapered	•	•	T1	
WHEEL STUDS	NONE	•	•	0	0
BRAKE	2,400 lb-in	•	•	B4	
	3,600 lb-in	•	•	B6	B6
	4,200 lb-in	•	•	B7	
SPECIAL FEATURES	NONE	•	•	00	00
	Multi-Lip Cartridge Seal	•	•	01	
Select desired characteristics from chart, note correct order codes, and order using sample format shown at right:					40S0B 13 016 S S1 0 B6 00

MOTOR MOUNTING CHART

HOLE SIZE AND LOCATION	PILOT Ø
SAE A (2) – 3/8" -16 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter✚ **OR** (4) – 1/2" -13 UNC - 2B Thd Holes on 4.187 (106.35) B. C. diameter✚	Ø 3.251 - 3.255 (82.58 - 82.70)
SAE B (2) – 1/2" -13 UNC - 2B Thd Holes on 5.750 (146.05) B. C. diameter✚	Ø 4.001 - 4.004 (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)*

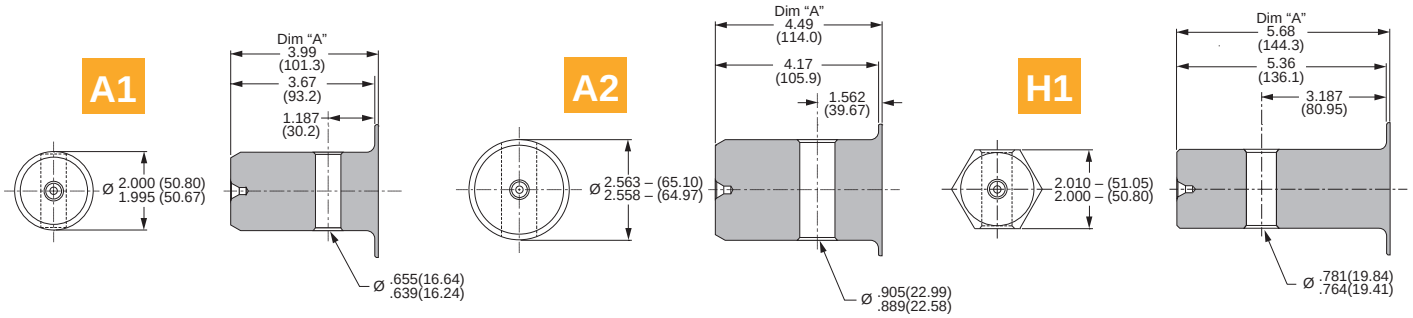
OUTPUT SPEED (RPM)	SF	LF	BEARING HOURS B-10 LIFE
5	2.456	.584	500
10	1.994	.719	1000
20	1.620	.812	1500
30	1.435	.886	2000
40	1.316	.947	2500
50	1.231	1.000	3000
60	1.165	1.047	3500
70	1.113	1.090	4000
80	1.069	1.130	4500
90	1.032	1.166	5000
100	1.000	1.231	6000
200	.812	1.289	7000
300	.719	1.342	8000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

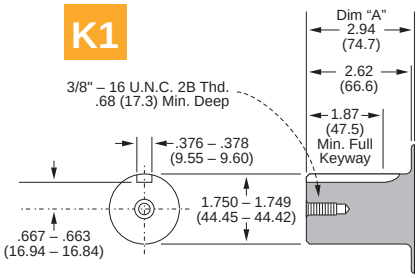
CAUTION: The same torsional loading constraints used in the driving mode must be used in the braking mode when braking through the Power Wheel drive gear set.

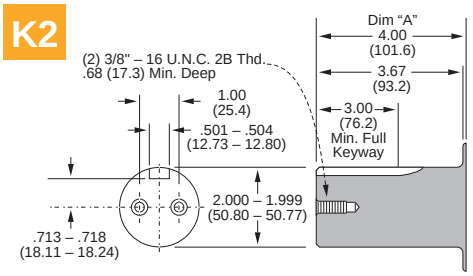
NOTE:

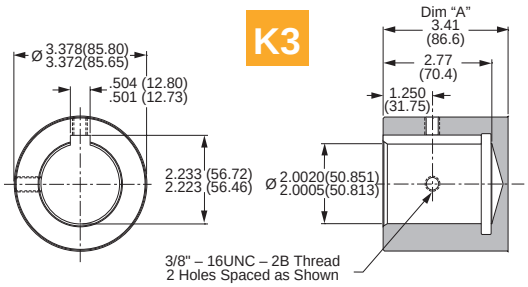
The data presented in this catalog is for general information and preliminary layout purposes only. Auburn Gear, through its policy of continual improvement, reserves the right to update its products; therefore, the information presented is subject to change. For specific application and/or dimensional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

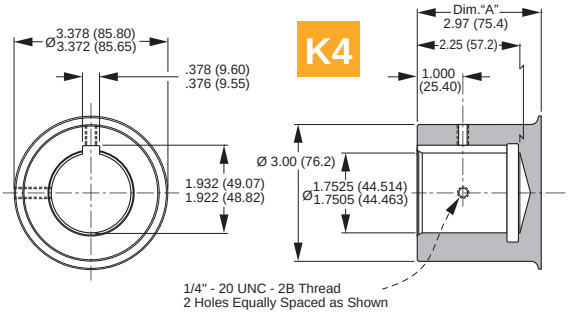
MODEL 40 OUTPUT SHAFT OPTIONS

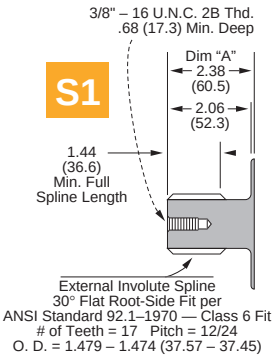


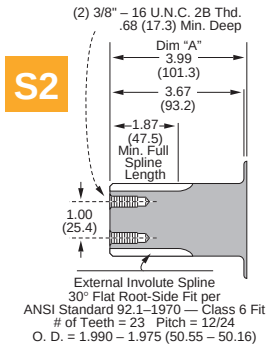


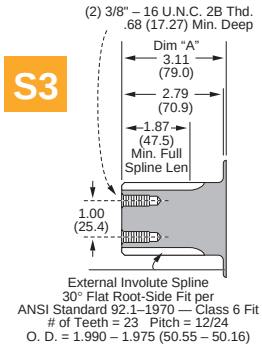


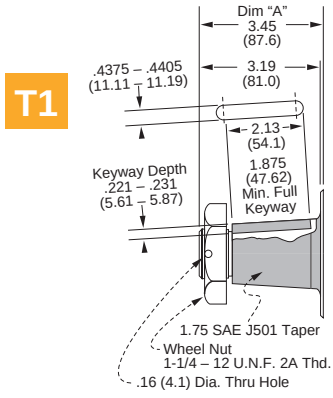








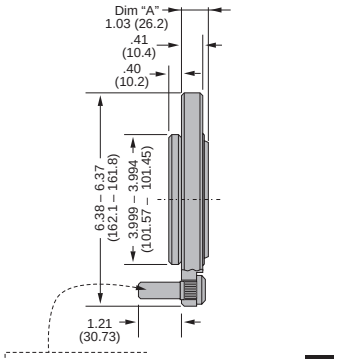




NOTE: All specifications and descriptive data contained herein are nominal and subject to change without notice. Specific applications should be referred to Auburn Gear for current applicable data.

MODEL 40 SPINDLE OUTPUT OPTIONS

F1



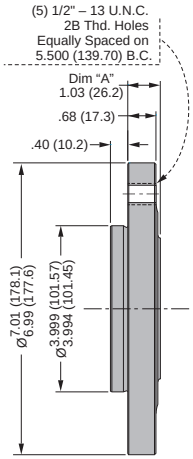
STANDARD: 5 HOLES - F1 F10
Ø.611 – .604 (15.52 – 15.34) Holes
Equally Spaced on 5.500 (139.70) B.C.

OPTIONAL: 5 BOLTS - WHEEL STUD CODE H F1H
1/2" – 20 UNF-3A RH Thd. Bolts

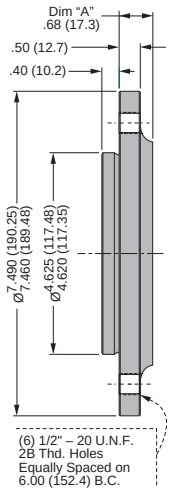
OPTIONAL: 5 BOLTS - WHEEL STUD CODE J F1J
9/16" – 18 UNF-3A RH Thd. Bolts

F2

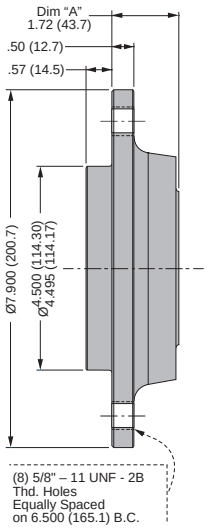
See Model 40
Other Options
Page 26



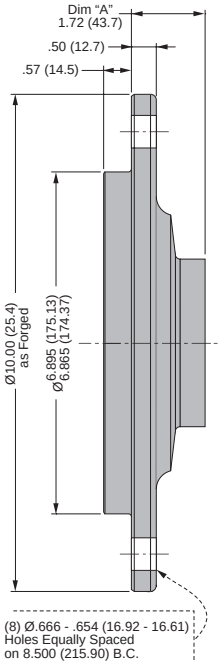
F3



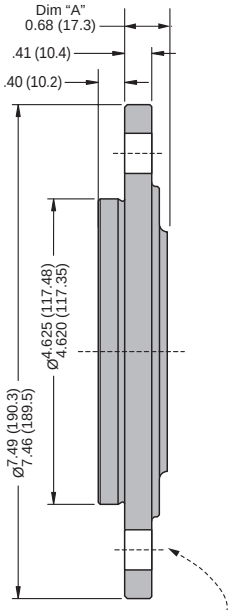
F4



F5



F6

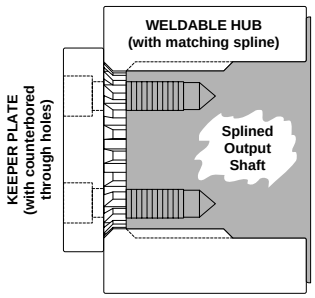


(6) Ø 0.611 - 0.604 (15.52 - 15.34)
Holes Equally Spaced
on a 6.000 (152.40) B.C. F60

Optional: 6 Bolts - Wheel Stud Code H
1/2" - 20 UNF-3A RH Thd. Bolts F6H

Optional: 6 Bolts - Wheel Stud Code J
9/16" - 18 UNF-3A RH Thd. Bolts F6J

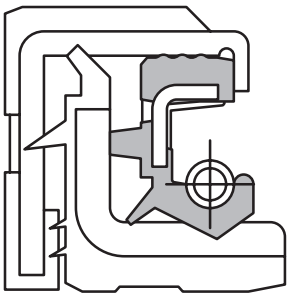
ADDITIONAL OPTIONS



WELDABLE HUB

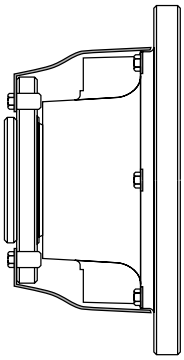
The hubs are 4140H steel and can be turned down and/or welded for mounting sprockets, pulleys, or other devices. A circular keeper plate secures the hub to the splined output shaft with two bolts (keeper plate and bolts included).

KIT NUMBER	SPLINE	FITS MODELS
6420105	23T–12/24	40, 60, 5, 6, & 8
6420106	23T–8/16	75, 6B, 7, 8, 9, & 10
6420107	20T–8/16	8, & 9



MULTI-LIP CARTRIDGE SEAL

This special robust seal provides additional sealing elements as compared to the standard seal. It replaces the previous boot seal option and will provide additional life in extremely muddy or dirty conditions.



METAL GUARD AND MULTI-LIP CARTRIDGE SEAL SYSTEM

A metal guard is available with F2 spindle output units only. The guard and seal system are utilized in extremely high grit applications.

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 Viscosity[1] 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.

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.

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QS-9000
ISO-9001 CERTIFIED

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