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TECHNOLOGY GROUP

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Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

Dayton® Speed Reducers

Description

Dayton right angle speed reducers are suitable for continuous, low speed, high torque applications in areas where space is limited. "C" face units will accommodate NEMA C-face motors (not included). Each reducer is an assembly consisting of a cast iron housing, steel input and output shaft with keys, tapered roller bearings on the output shaft, ball bearings on the input shaft, hardened steel worm and mating manganese bronze worm gear.

Drilled and tapped holes in the top and bottom of the reducer enable mounting to flat surfaces. Optional mounting bases provide additional mounting positions.



Figure 1

General Safety Information

1. Follow all local electrical and safety codes, as well as the United States National Electrical Code (NEC) and Occupational Safety and Health Act (OSHA).
2. Motor (not included with this unit) must be securely and adequately grounded. This can be accomplished by wiring with a grounded, metalclad raceway system, by using a separate ground wire connected to the bare metal of the motor frame, or other suitable means. Refer to NEC Article 250 (Grounding) for additional information.
3. Always disconnect power source before working on or near a motor or its connected load. If the power disconnect point is out of sight, lock it in the open position and tag it to prevent unexpected application of power. Do not depend on motor control devices, such as motor starters, to prevent unexpected motor starting.
4. Guard all moving parts.
5. Be careful when touching an operating motor/reducer: it may be hot enough to hurt or injure you. Modern-design units are hot when running at rated load.
6. Make certain that the power source conforms to the requirements of equipment.
7. When cleaning electrical or electronic equipment, always use an approved cleaning agent such as dry cleaning solvent.
8. Be sure the output shaft key is fully captive or is removed before running the reducer.
9. Prevent the power cable from touching sharp objects, oil, grease, hot surfaces, or chemicals.
10. Do not kink the power cable.

Installation

⚠WARNING When an installation involves a holding or overhauling application (such as a hoist or conveyer), a separate magnetic brake or other locking device should be used. Do not depend on gear friction to hold the load.

1. Locate the speed reducer in a clean and dry area with access to adequate motor cooling air supply. If installation is outdoors, make certain that the reducer is protected from the weather.
2. Mount the reducer directly to a rigid metallic surface or, if necessary, install one of the optional mounting bases on the reducer, then mount the base to the rigid surface with 7/16" diameter bolts, lock washers and nuts.

⚠CAUTION Horizontal or vertical mounting surfaces (i.e. floor, ceiling, or wall) are suitable for the reducer, which may be mounted in any position on the surface except with the input shaft or input flange (motor shaft pointing up), down.

3. The unit is shipped with pipe plugs in all (7) locations. Determine the mounting position of the reducer (See Figure 2) and replace the pipe plug in the highest position with the vent plug shipped with the unit.

⚠CAUTION Check the oil level (See Lubrication). Depending on mounting position used, too little or too much lubricant will diminish life of reducer.

ATTACHING (COUPLING) THE LOAD

1. To determine output torque capacity for operating conditions other than a normal eight hour day and shock-free operation, multiply the rated output torque (see "Specifications") by the applicable load factor listed in Load Factor Chart. Avoid shock loads.

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Dayton® Speed Reducers

Type of Load	Load Factor

Load Factor Chart

8-hour day service without shock loads 1.0
8 to 10-hour day service with moderate shock loads 0.8
24-hour service without shock loads 0.8
24-hour service with moderate shock loads 0.6

2. When connecting a load to the speed reducer output shaft, be careful to avoid excessive tension if using either belt or chains. Overhung load should not exceed limits shown in "Specifications and Performance" at midpoint of the output shaft.

Detailed Overhung Load Calculations

Sideward (radial) force on an output shaft is called overhung load. Driving a load through a sprocket, pulley, or gear which is mounted on the output shaft causes overhung load on the shaft. Too much overhung load can break the shaft or cause the bearings to fail prematurely. Locate the center line of the sprocket, pulley, or gear as close to the oil seal as practical to minimize overhung load and increase bearing life. Calculate the amount of overhung load in your installation as follows:

$$\text{OVERHUNG LOAD (LBS.)} = \frac{(2)x(T)x(D)x(L)}{(P)}$$

The terms of the above formula are defined as follows:
(T) = Full load torque of gearbox, in in-lbs, from "Specifications and Performance"
(D) = Drive factor from following chart, accounting for type of drive
(P) = Pitch diameter, in inches, of drive being mounted on gearbox output shaft
(L) = Leverage factor from following chart, accounting for position of drive along length of gearbox output shaft.

Drive Factors

Sprocket 1.00
Pulley (Timing belt) 1.10
(V belt) 1.50
Gear 1.25
Flat belt pulley 2.50

Leverage Factors

Coupling location . . . . . .Factor
End of shaft extension 1.20
Center of shaft extension 1.00
Next to shaft extension shoulder . . 0.80

After calculating the amount of overhung load expected in your installation, compare it to the overhung load rating (limit) listed for gearbox in "Specifications and Performance". If the expected amount of overhung load is higher than the specified limit, change a component or the location of a component in your installation to bring the overhung load within the limit. To increase the operating life of the gearbox bearings, design installation to reduce overhung load as much as possible.
On direct-coupled installations, carefully check shaft and coupling alignment as unit is being bolted down. Shim as required. Do not depend on a flexible coupling to compensate for misalignment.

Attaching Motor To Speed Reducer

⚠CAUTION **Do not exceed motor horsepower or torque loads indicated on nameplate or in specifications. Maximum motor momentary or starting torque is not to exceed 300% of maximum motor running torque. Unit is not recommended for more than ten starts per hour.**

"C" Face Mounting

1. Speed reducer is to be used with appropriate NEMA C-face motor without mounting base. Make sure motor shaft is clean and free of dirt. Wipe shaft with light oil. For performance specifications at input motor speeds other than those listed write to Dayton Electric Mfg. Co.
2. Lubricate input shaft bore with heavy grease or anti-seize compound provided with reducer or Stock No. 2A272. Install key in motor shaft keyway.
3. Line up key in motor shaft with keyway in input shaft bore.
4. Carefully insert motor shaft into reducer input bore, then move motor toward reducer until motor C-face meets reducer input flange. Rotate the motor housing to line up the tapped holes in the motor C-face with the holes in the reducer input flange.
5. Four screws with lock washers to fit tapped holes in motor face are provided. Insert two screws in two upper holes of motor face.
6. Insert lower two screws finger-tight, and then back them off 3/4 turn.
7. Tighten upper two screws and lower two screws.
8. Always check oil level and vent plug location for mounting to be used.

IMPORTANT: Run motor momentarily and then turn off power. Motor should coast freely without binding, indicating that motor shaft alignment is correct.

Indirect Mounting

1. Direct couple installations: Carefully check the shaft and coupling alignment between speed reducer and motor shaft. Shim as required. Do not depend on a flexible coupling to compensate for misalignment.
2. Chain/sprocket and belt/pulley installations: Locate the center line of the sprocket or pulley as close to the oil seal as practical to minimize overhung load

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Dayton® Speed Reducers

Indirect Mounting (Continued)

and increase bearing life. Input shafts on all speed reducers have enough overhung load capacity for full rated horsepower connected by a single V-belt, single strand roller chain or timing belt.

⚠CAUTION For applications where multiple strand chain, multiple V-belts or flat belts are used to couple the motor, refer application data to Dayton Electric Mfg. Co.

Changing Output Shaft Direction

To change a unit from left hand to right hand, or vice versa, the following instructions apply:

1. Remove drain plug and drain oil from unit.
2. Remove end cover and seal cage capscrews. Then, while supporting output shaft, remove end cover and shims from the unit.
3. Remove output shaft and seal cage together from extension side.
4. Remove end cover and shims from side opposite of extension side.

NOTE: Keep shims with their respective seal cage and end cover.

5. Insert sub-assembly, shims and seal cage into the housing from the side opposite from which they were removed. Insert seal cage capscrews and tighten with light pressure.
6. Assemble opposite side shims and end cover. Insert end cover capscrews and tighten with light pressure.
7. Turn high speed shaft in both directions to see that gear train is turning freely.
8. Cross tighten seal cage and end cover capscrews. Torque to 204 in. lbs. dry.

Operation

⚠WARNING Gear backlash should be checked at installation and again at regular intervals to prevent injury or damage that might be caused by gear tooth failure. This should be done by measuring the rotary movement of the output shaft (rotating alternately CW and CCW) at a suitable radius while holding the input shaft stationary. Gears should be replaced when the backlash equals four times the measurement taken at installation.

1. Before running a new reducer for the first time after it has been installed, check it for vent plug location and proper oil level. Figure 2 illustrates the correct vent, oil level, and drain plug locations. Interchange position of plugs on reducer, if necessary. Oil level in the reducer should be at oil level plug height. Add or drain off oil if necessary.

⚠CAUTION Reducer has been filled at the factory with enough oil for the "worm over" mounting position. Other mounting may require different levels of oil.

⚠CAUTION Do not operate the reducer the first time without making sure it contains the correct amount of oil. Doing so can damage the reducer. See Lubrication in "Maintenance" section for details.

2. Run the motor which drives the reducer and check the direction of reducer output rotation. If you want to reverse the reducer output direction, do so by reversing the motor leads. Refer to motor nameplate for proper lead connection.
3. Check the oil temperature after it stabilizes. Worm gear drives designed in accordance with AGMA Standards can encounter up to 100°F (38°C) temperature rise over ambient, with oil sump temperatures up to 200°F (93°C) and higher in localized areas. Since the unit will feel hot to the touch at temperatures over 120°F (49°C), a portable pyrometer should be used to measure temperatures.
4. For multi-speed operation, refer variable speed and multi-speed applications with speed ranges greater than 10:1 to Dayton Electric Mfg. Co. They may require special consideration to provide adequate lubrication at the slowest speed, but without excessive heating or churning at the highest speed.

Maintenance

⚠WARNING Make certain that the power supply is disconnected before attempting to service or remove any reducer components! If the power disconnect point is out-of-sight lock it in the open position and tag it to prevent unexpected application of power.

Lubrication

1. The speed reducer was filled with AGMA #8 gear oil at the factory. Check vent plug location and the oil level after installing the reducer, making sure it is correct for the reducer mounting position before running the reducer (See Figure 2). The oil level should be at oil level plug height. If the level is low, drain the remaining oil, then refill the reducer to the correct level - do not mix brands or types (hydro carbon vs. synthetic) of oil.

⚠CAUTION If oil level is too low, reducer bearings and gears will not get enough lubrication. Too much oil in the reducer may cause oil to leak from the air vent

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Dayton® Speed Reducers

Lubrication (Continued)

or may cause the oil to churn and foam, which may cause overheating. Either too much or too little oil can cause reducer bearing and gear damage.

2. For new reducers, change the oil 120 hours after the reducer starts operating. After the first change, change oil every 2000 operating hours, or every six months, whichever occurs first.
3. Use gear lubricant, AGMA #7 for ambient operating temperatures between 15° and 60°F, AGMA #8 for ambient operating temperatures between 50° and 125°F, or Dayton Stock No. 4ZF30 (synthetic AGMA #7) for ambient operating temperatures between -10° and 150°F.

Oil Seal Replacement

A new seal will leak if the seal lips and/or the seal rubbing surface on the shaft have been altered or roughed up. Protect the seal lips at all times. Clean the shaft but do not use any abrasives on the part of the shaft rubbed by the seal.

To prevent seal damage and gear misalignment when replacing the oil seal, proceed as follows.

Disassembly

1. Remove sprockets, pulleys, etc. that are mounted on the shaft where the seal is to be replaced.
2. Use punch to pierce two or more holes in steel casing of seal. (Casing may be rubber coated.)

⚠CAUTION **Do not drill holes in seal casing because metal chips may get inside reducer, damaging it.**

3. Insert sheet metal screws, leaving the heads sufficiently exposed so they can be pried or grasped with pliers.
4. Work seal loose. Be careful to keep all metal or dirt particles from entering reducer.
5. Remove old sealing compound from seal seat, if present.
6. Remove burrs and sharp edges from shaft.
7. Clean shaft with solvent-soaked rag.

⚠WARNING **Do not use abrasive material on shaft seal contacting surfaces.**

Reassembly

⚠CAUTION **Protect seal lips when handling seal. Protect seal lips when handling seal. Leakage will result if lips are damaged. If a seal with rubber coating on the outside diameter (O.D.) is used, no sealant is necessary. If no rubber coating is on seal O.D., coat cage with Permatex No. 3 or equivalent sealing compound. Coat seal lips with ball bearing grease and carefully work seal into position. Protect seal lips from shaft keyway edges by wrapping shaft with thin, strong paper coated with oil.**

1. Place seal, open side (with garter spring) facing reducer, on shaft or in recess in input flange.
2. Place the face of a pipe or tube (face must be flat, smooth, and square to the length of the pipe or tube) against the seal and drive or press seal until seated in the same position as the seal that was removed.

⚠CAUTION **Do not strike seal directly**.

Specifications and Performance

1750 RPM INPUT

Indirect Mount														
				Output Shaft		Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0) Service Factor)								
Double Output Shaft	Left Output Shaft	Nominal Output RPM	Nominal Gear Ratio	Overhung Load (Lbs.)	End Thrust (Lbs.)	1/10 HP	1/8 HP	1/6 HP	1/4 HP	1/3 HP	1/2 HP	3/4 HP	1 HP	1 ½ HP
-	6Z451	58	30	150	200	64	80	107	-	-	-	-	-	-
-	6Z431	115	15	150	200	40	50	67	100	-	-	-	-	-
-	6Z461	115	15	150	200	40	50	67	100	-	-	-	-	-
-	6Z434	173	10	150	200	29	36	48	73	97	-	-	-	-
-	6Z465	173	10	150	200	29	36	48	73	97	-	-	-	-
-	6Z436	345	5	150	200	16	20	26	40	53	79	-	-	-
-	6Z469	345	5	150	200	16	20	26	40	53	79	-	-	-
6Z419	6Z439A	29	60	275	1399	-	-	-	309	-	-	-	-	-
-	6Z452A	58	30	275	1399	-	-	-	195	233	-	-	-	-
-	6Z462A	117	15	275	1399	-	-	-	109	147	203	-	-	-
6Z435A	6Z466A	175	10	275	1241	-	-	-	75	102	155	182	-	-
6Z437A	6Z470A	350	5	275	1001	-	-	-	39	52	80	121	163	-
6Z420A	6Z440A	29	60	700	1399	-	-	-	314	415	-	-	-	-
-	6Z444A	35	50	700	1399	-	-	-	279	379	449	-	-	-

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Specifications and Performance

1750 RPM INPUT (Continued)

Indirect Mount														
				Output Shaft		Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0) Service Factor)								
Double Output Shaft	Left Output Shaft	Nominal Output RPM	Nominal Gear Ratio	Overhung Load (Lbs.)	End Thrust (Lbs.)	1/4 HP	1/3 HP	1/2 HP	3/4 HP	1 HP	1 ½ HP	2HP	3 HP	5 HP
-	6Z448A	44	40	700	1399	235	324	477	-	-	-	-	-	-
6Z426A	6Z453A	58	30	700	1399	189	260	401	-	-	-	-	-	-
6Z429A	6Z457A	88	20	700	1358	135	185	286	436	-	-	-	-	-
6Z432A	6Z463A	117	15	700	1253	-	-	221	338	430	-	-	-	-
6Z421A	6Z441A	29	60	875	2305	305	423	636	-	-	-	-	-	-
-	6Z445A	35	50	875	2305	-	372	581	-	-	-	-	-	-
6Z424A	6Z449A	44	40	875	2305	-	315	492	-	-	-	-	-	-
6Z426A	6Z454A	58	30	875	2300	-	-	397	610	-	-	-	-	-
6Z429A	6Z458A	88	20	875	1980	-	-	282	434	586		-	-	-
6Z430A	6Z464A	117	15	875	1820	-	-	-	338	456	614		-	-
-	6Z467A	175	10	875	1580	-	-	-	332	314	477	554	-	-
6Z422A	6Z442A	29	60	1200	3410	-	407	653	1021	-	-	-	-	-
-	6Z446A	35	50	1200	3336	-	356	572	895	-	-	-	-	-
6Z425A	6Z450A	44	40	1200	3096	-	300	482	755	1028	-	-	-	-
6Z428A	6Z455A	58	30	1200	2956	-	-	386	604	823	983	-	-	-
-	6Z459A	88	20	1200	2536	-	-	-	427	582	891	-	-	-
6Z423A	6Z443A	29	60	1500	3410	-	-	609	995	1371	-	-	-	-
-	6Z447A	35	50	1500	3410	-	-	-	870	1199	1857	-	-	-
-	6Z456A	58	30	1500	3410	-	-	-	-	805	1247	-	-	-
-	6Z460A	88	20	1500	3410	-	-	-	-	-	879	-	1816	-
-	6Z468A	175	10	1500	2964	-	-	-	-	-	466	-	964	1629

1750 RPM INPUT

"C" Face Mount																
					Output Shaft		Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0) Service Factor)									
Left Output Shaft	Right Output Shaft	Double Output Shaft	Nominal Output RPM	Nominal Gear Ratio	Overhung Load (Lbs.)	End Thrust (Lbs.)	1/4 HP	1/3 HP	1/2 HP	3/4 HP	1 HP	1 ½ HP	2 HP	3 HP	5 HP	7 ½ HP
4Z284C	4RN71	4Z001D	29	60	275	1399	309	-	-	-	-	-	-	-	-	-
4Z285C	4RN72	4RN79	35	50	275	1399	225	-	-	-	-	-	-	-	-	-
4Z286C	4RN73	4Z002D	44	40	275	1399	220	-	-	-	-	-	-	-	-	-
4Z287C	4RN74	4Z003D	58	30	275	1399	195	233	-	-	-	-	-	-	-	-
4Z288C	4RN75	4Z004D	88	20	275	1241	139	189	212	-	-	-	-	-	-	-
4Z289C	4RN76	4Z005D	117	15	275	1156	109	147	203	-	-	-	-	-	-	-
4Z290C	4RN77	4Z006D	175	10	275	1001	75	102	155	182	-	-	-	-	-	-
4Z291C	4RN78	4Z007D	350	5	275	811	39	52	80	121	163	-	-	-	-	-
4RN80	4RN88	4RN96	29	60	388	1399	280	-	-	-	-	-	-	-	-	-
4RN81	4RN89	4RN97	35	50	388	1399	267	-	-	-	-	-	-	-	-	-
4RN82	4RN90	4RN98	44	40	388	1399	228	310	-	-	-	-	-	-	-	-
4RN83	4RN91	4RN99	58	30	388	1399	182	248	-	-	-	-	-	-	-	-
4RN84	4RN92	4RP01	88	20	388	1241	-	183	280	-	-	-	-	-	-	-
4RN85	4RN93	4RP02	117	15	388	1146	-	-	218	-	-	-	-	-	-	-
4RN86	4RN94	4RP03	175	10	388	1001	-	-	153	233	-	-	-	-	-	-
4RN87	4RN95	4RP04	350	5	388	806	-	-	-	121	163	-	-	-	-	-
4Z292C	3GD39	4RP05	29	60	700	1399	314	415	-	-	-	-	-	-		-
4Z293C	3GD40	4RP06	35	50	700	1399	279	379	449	-	-	-	-	-	-	-
4Z294C	3GD41	4RP07	44	40	700	1399	235	324	477	-	-	-	-	-	-	-
4Z295C	3GD42	4RP08	58	30	700	1399	189	260	401	-	-	-	-	-	-	-
4Z296C	3GD43	4RP09	88	20	700	1358	-	185	286	436	-	-	-	-	-	-
4Z297C	3GD44	4RP10	117	15	700	1253	-	-	221	338	430	-	-	-	-	-
4Z298C	3GD45	4RP11	175	10	700	1098	-	-	-	237	316	407	-	-	-	-
4Z299C	3GD46	4RP12	350	5	700	868	-	-	-	120	164	246	276	-	-	-
4Z300C	4RP13	4Z008D	29	60	875	2305	305	423	636	-	-	-	-	-	-	-
4Z301C	4RP14	-	35	50	875	2305	-	372	581	-	-	-	-	-	-	-
4Z302C	4RP15	4Z009D	44	40	875	2305	-	315	492	-	-	-	-	-	-	-
4Z303C	4RP16	4Z010D	58	30	875	2300	-	-	397	610	-	-	-	-	-	-
4Z304C	4RP17	4Z011D	88	20	875	1980	-	-	282	434	586	-	-	-	-	-
4Z305C	4RP18	4Z012D	117	15	875	1820	-	-	-	338	456	614	-	-	-	-
4Z306C	4RP19	4Z013D	175	10	875	1580	-	-	-	-	314	477	554	-	-	-
4Z307C	4RP20	4Z014D	350	5	875	1265	-	-	-	-	-	245	329	-	-	-
4RP21	4RP28	4RP35	29	60	843	2305	297	419	663	-	-	-	-	-	-	-
4RP22	4RP29	4RP36	35	50	843	2305	261	368	582	-	-	-	-	-	-	-

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Specifications and Performance

1750 RPM INPUT (Contintued)

Left Output Shaft	Right Output Shaft	Double Output Shaft	Nominal Output RPM	Nominal Gear Ratio	"C" Face Mount Output Shaft Overhung Load (Lbs.)	"C" Face Mount Output Shaft End Thrust (Lbs.)	Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0) Service Factor) 1/4	1/3	1/2	3/4	1	1 ½	2	3	5	7 ½
4RP23	4RP30	4RP37	44	40	843	2305	219	308	488	758	-	-	-	-	-	-
4RP24	4RP31	4RP38	58	30	843	2305	172	242	384	597	809	-	-	-	-	-
4RP25	4RP32	4RP39	88	20	843	2179	-	175	277	431	584	892	-	-	-	-
4RP26	4RP33	4RP40	117	15	843	1954	-	-	213	331	450	686	-	-	-	-
4RP27	4RP34	4RP41	175	10	843	1714	-	-	-	229	312	476	651	-	-	-
4Z730D	3GD47	4RP42	29	60	1200	3410	314	415	-	-	-	-	-	-	-	-
4Z731A	3GD48	4RP43	35	50	1200	3336	279	379	449	-	-	-	-	-	-	-
4Z732D	3GD49	4RP44	44	40	1200	3096	235	324	477	-	-	-	-	-	-	-
4Z733D	3GD50	4RP45	58	30	1200	2956	189	260	401	-	-	-	-	-	-	-
4Z734A	3GD51	4RP46	88	20	1200	2536	-	185	286	436	-	-	-	-	-	-
4Z735A	3GD52	4RP47	117	15	1200	2296	-	-	221	338	430	-	-	-	-	-
4Z736A	3GD53	4RP48	175	10	1200	1976	-	-	-	237	316	407	-	-	-	-
4Z737A	3GD54	4RP49	350	5	1200	1596	-	-	-	120	164	246	276	-	-	-
4RP50	4RP58	4RP66	29	60	987	3410	-	-	618	1034	-	-	-	-	-	-
4RP51	4RP59	4RP67	35	50	987	3410	-	-	515	900	1233	-	-	-	-	-
4RP52	4RP60	4RP68	44	40	987	3410	-	-	-	720	1011	-	-	-	-	-
4RP53	4RP61	4RP69	58	30	987	3410	-	-	-	589	808	1245	-	-	-	-
4RP54A	4RP62A	4RP70A	88	20	987	3410	-	-	-	-	577	886	1204	-	-	-
4RP55A	4RP63A	4RP71A	117	15	987	3364	-	-	-	-	-	683	924	1405	-	-
4RP56	4RP64	4RP72	175	10	987	2964	-	-	-	-	-	-	637	970	-	-
4RP57	4RP65	4RP73	350	5	987	2057	-	-	-	-	-	-	-	494	834	-
3GD55	4RP74	4Z015C	29	60	1500	3410	-	-	619	995	1371	-	-	-	-	-
3GD56	4RP75	6Z130A	35	50	1500	3410	-	-	-	870	1199	1857	-	-	-	-
3GD57	4RP76	4Z016C	44	40	1500	3410	-	-	-	732	1009	1563	-	-	-	-
3GD58	4RP77	4Z017C	58	30	1500	3410	-	-	-	-	805	1247	1689	-	-	-
3GD59	4RP78	4Z018C	88	20	1500	3410	-	-	-	-	-	-	1191	1816	-	-
3GD60	4RP79	4Z019C	117	15	1500	3364	-	-	-	-	-	-	923	1407	-	-
3GD61	4RP80	4Z020C	175	10	1500	2964	-	-	-	-	-	-	632	964	1629	-
3GD62	4RP81	4Z021C	350	5	1500	2057	-	-	-	-	-	-	-	-	-	1260

2500 RPM INPUT

Double Output Shaft	Left Output Shaft	Nominal Output RPM	Nominal Gear Ratio	Indirect Mount Output Shaft Overhung Load (Lbs.)	Indirect Mount Output Shaft End Thrust (Lbs.)	Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0) Service Factor) 1/4	1/3	1/2	3/4	1	1 ½	2	3	5
-	6Z452A	83	30	275	1287	137	-	-	-	-	-	-	-	-
-	6Z462A	167	15	275	1017	75	103	-	-	-	-	-	-	-
6Z435A	6Z466A	250	10	275	882	52	71	109	-	-	-	-	-	-
6Z437A	6Z470A	500	5	600	709	26	36	56	85	-	-	-	-	-
6Z420A	6Z440A	42	60	600	1399	221	306	-	-	-	-	-	-	-
-	6Z444A	50	50	600	1399	193	268	-	-	-	-	-	-	-
-	6Z448A	63	40	600	1399	163	226	354	-	-	-	-	-	-
6Z426A	6Z453A	83	30	600	1398	130	181	283	-	-	-	-	-	-
6Z429A	6Z457A	125	20	600	1211	-	128	200	308	-	-	-	-	-
6Z432A	6Z463A	167	15	600	1093	-	-	154	238	321	-	-	-	-
6Z421A	6Z441A	42	60	750	2305	209	297	472	-	-	-	-	-	-
-	6Z445A	50	50	750	2305	183	259	413	-	-	-	-	-	-
6Z424A	6Z449A	63	40	750	2262	-	218	347	-	-	-	-	-	-
6Z426A	6Z454A	83	30	750	2050	-	-	277	432	-	-	-	-	-
6Z429A	6Z458A	125	20	750	1784	-	-	-	304	413	-	-	-	-
6Z430A	6Z464A	167	15	750	1601	-	-	-	236	320	-	-	-	-
-	6Z467A	250	10	750	1378	-	-	-	-	219	335	-	-	-
6Z422A	6Z442A	42	60	1200	3285	-	273	454	726	-	-	-	-	-
-	6Z446A	50	50	1200	3099	-	238	396	633	-	-	-	-	-
6Z425A	6z450A	63	40	1200	2885	-	199	332	530	-	-	-	-	-
6Z428A	6Z455A	83	30	1200	2618	-	-	263	420	578	-	-	-	-
-	6Z459A	125	20	1200	2284	-	-	-	294	405	626	-	-	-
6Z423A	6Z443A	42	60	1500	3410	-	-	414	690	966	-	-	-	-
-	6Z447A	50	50	1500	3410	-	-	-	600	840	1321	-	-	-
-	6Z456A	83	30	1500	3410	-	-	-	-	556	874	1193	-	-
-	6Z460A	125	20	1500	3377	-	-	-	-	-	611	834	1281	-
-	6Z468A	250	10	1500	2617	-	-	-	-	-	-	438	673	1144

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Specifications and Performance

2500 RPM INPUT (Continued)

Left Output Shaft	Right Output Shaft	Double Output Shaft	Nominal Output RPM	Nominal Gear Ratio	"C" Face Mount Output Shaft Overhung Load (Lbs.)	"C" Face Mount Output Shaft End Thrust (Lbs.)	Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0) Service Factor) 1/4	1/3	1/2	3/4	1	1 ½	2	3	5	7 ½
4Z287C	4RN74	4Z003D	83	30	275	1287	137	-	-	-	-	-	-	-	-	-
4Z288C	4RN75	4Z004D	125	20	275	1126	97	133	-	-	-	-	-	-	-	-
4Z289C	4RN76	4Z005D	167	15	275	1017	75	103	-	-	-	-	-	-	-	-
4Z290C	4RN77	4Z006D	250	10	275	882	52	71	109	-	-	-	-	-	-	-
4Z291C	4RN78	4Z007D	500	5	275	709	26	36	56	85	-	-	-	-	-	-
4RN80	4RN88	4RN96	42	60	388	1399	215	-	-	-	-	-	-	-	-	-
4RN81	4RN89	4RN97	50	50	388	1399	190	-	-	-	-	-	-	-	-	-
4RN82	4RN90	4RN98	63	40	388	1399	161	221	-	-	-	-	-	-	-	-
4RN83	4RN91	4RN99	83	30	388	1399	128	176	-	-	-	-	-	-	-	-
4RN84	4RN92	4RP01	125	20	388	1104	-	126	196	-	-	-	-	-	-	-
4RN85	4RN93	4RP02	167	15	388	1005	-	-	153	235	-	-	-	-	-	-
4RN86	4RN94	4RP03	250	10	388	847	-	-	107	164	-	-	-	-	-	-
4RN87	4RN95	4RP04	500	5	388	670	-	-	-	-	113	-	-	-	-	-
4Z292C	3GD39	4RP05	42	60	600	1399	221	306	-	-	-	-	-	-	-	-
4Z293C	3GD40	4RP06	50	50	600	1399	193	268	-	-	-	-	-	-	-	-
4Z294C	3GD41	4RP07	63	40	600	1399	163	226	354	-	-	-	-	-	-	-
4Z295C	3GD42	4RP08	83	30	600	1398	130	181	283	-	-	-	-	-	-	-
4Z296C	3GD43	4RP09	125	20	600	1211	-	128	200	308	-	-	-	-	-	-
4Z297C	3GD44	4RP10	167	15	600	1093	-	-	154	238	321	-	-	-	-	-
4Z298C	3GD45	4RP11	250	10	600	921	-	-	-	164	222	-	-	-	-	-
4Z299C	3GD46	4RP12	500	5	600	730	-	-	-	-	113	172	231	-	-	-
4Z300C	4RP13	4Z008D	42	60	750	2305	209	297	472	-	-	-	-	-	-	-
4Z301C	4RP14	-	50	50	750	2305	183	259	413	-	-	-	-	-	-	-
4Z302C	4RP15	4Z009D	63	40	750	2262	-	218	347	-	-	-	-	-	-	-
4Z303C	4RP16	4Z010D	83	30	750	2050	-	-	277	432	-	-	-	-	-	-
4Z304C	4RP17	4Z011D	125	20	750	1784	-	-	-	304	413	-	-			
4Z305C	4RP18	4Z012D	167	15	750	1601	-	-	-	236	320	-	-	-	-	-
4Z306C	4RP19	4Z013D	250	10	750	1378	-	-	-	-	219	335	-	-	-	-
4Z307C	4RP20	4Z014D	500	5	750	1099	-	-	-	-	111	172	230	-	-	-
4RP21	4RP28	4RP35	42	60	843	2305	197	287	467	-	-	-	-	-	-	-
4RP22	4RP29	4RP36	50	50	843	2305	172	250	408	653	-	-	-	-	-	-
4RP23	4RP30	4RP37	63	40	843	2300	143	209	340	536	733	-	-	-	-	-
4RP24	4RP31	4RP38	83	30	843	2100	112	163	266	419	573	-	-	-	-	-
4RP25	4RP32	4RP39	125	20	843	1820	-	116	189	299	409	630	-	-	-	-
4RP26	4RP33	4RP40	167	15	843	1633	-	-	145	229	314	483	652	-	-	-
4RP27	4RP34	4RP41	250	10	843	1405	-	-	-	158	216	333	449	-	-	-
4Z730D	3GD47	4RP42	42	60	1200	3285	-	273	454	726	-	-	-	-	-	-
4Z731A	3GD48	4RP43	50	50	1200	3099	-	238	396	633	-	-	-	-	-	-
4Z732D	3GD49	4RP44	63	40	1200	2885	-	199	332	530	-	-	-	-	-	-
4Z733D	3GD50	4RP45	83	30	1200	2618	-	263	263	420	578	-	-	-	-	-
4Z734A	3GD51	4RP46	125	20	1200	2284	-	-	-	294	405	626	-	-	-	-
4Z735A	3GD52	4RP47	167	15	1200	2055	-	-	-	-	312	484	655	-	-	-
4Z736A	3GD53	4RP48	250	10	1200	1773	-	-	-	-	-	330	447	-	-	-
4Z737A	3GD54	4RP49	500	5	1200	1420	-	-	-	-	-	-167	227	347	-	-
4RP50C	4RP58	4RP66	42	60	987	3410	-	-	442	722	1003	-	-	-		-
4RP51	4RP59	4RP67	50	50	987	3410	-	-	382	625	869	-	-	-	-	-
4RP52	4RP60	4RP68	63	40	987	3410	-	-	-	520	723	1128	-	-	-	-
4RP53	4RP61	4RP69	83	30	987	3410	-	-	-	404	562	878	-	-	-	-
4RP54A	4RP62A	4RP70A	125	20	987	3377	-	-	-	--	398	622	846	-	-	-
4RP55A	4RP63A	4RP71A	167	15	987	3037	-	-	-	--	-	475	646	989	-	-
4RP56	4RP64	4RP72	250	10	987	2617	-	-	-	--	-	-	443	679	-	-
4RP57	4RP65	4RP73	500	5	987	2072	-	-	-	--	-	-	-	344	584	-
3GD55	4RP74	4Z015C	42	60	1500	3410	-	-	414	690	966	-	-	-	-	-
3GD56	4RP75	6Z130A	50	50	1500	3410	-	-	-	600	840	1321	-	-	-	-
3GD57	4RP76	4Z016D	63	40	1500	3410	-	-	-	502	703	1105	-	-	-	-
3GD58	4RP77	4Z017C	83	30	1500	3410	-	-	-	-	556	874	1193	-	-	-
3GD59	4RP78	4Z018C	125	20	1500	3377	-	-	-	-	-	611	834	1281	-	-
3GD60	4RP79	4Z019C	167	15	1500	3037	-	-	-	-	-	471	643	987	-	-
3GD61	4RP80	4Z020C	250	10	1500	2617	-	-	-	-	-	-	438	673	1144	-
3GD62	4RP81	4Z021C	500	5	1500	2072	-	-	-	-	-	-	-	342	582	851

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Specifications and Performance

1160 RPM INPUT

Indirect Mount												
				Output Shaft		Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0) Service Factor)						
Double Output Shaft	Left Output Shaft	Nominal Output RPM	Nominal Gear Ratio	Overhung Load (Lbs.)	End Thrust (Lbs.)	1/4 HP	1/3 HP	1/2 HP	3/4 HP	1 HP	1 ½ HP	2 HP
-	6Z462A	77	15	275	1311	164	220	-	-	-		-
6Z435A	6Z466A	116	10	275	1151	114	153	-	-	-	-	-
6Z437A	6Z470A	232	5	275	916	-	79	120	-	-	-	-
6Z420A	6Z440A	19	60	700	1399	460	-	-	-	-	-	-
-	6Z444A	23	50	700	1399	416	-	-	-	-	-	-
-	6Z448A	29	40	700	1399	354	481	-	-	-	-	-
6Z426A	6Z453A	39	30	700	1399	289	392	-	-	-	-	-
6Z429A	6Z457A	58	20	700	1399	207	281	429	-	-	-	-
6Z432A	6Z463A	77	15	700	1399	-	217	332	-	-	-	-
6Z421A	6Z440A	19	60	875	2305	462	632	-	-	-	-	-
-	6Z445A	23	50	875	2305	409	559	-	-	-	-	-
6Z424A	6Z449A	29	40	875	2305	348	476	733	-	-	-	-
6Z427A	6Z454A	39	30	875	2305	283	387	596	-	-	-	-
6Z430A	6Z458A	58	20	875	2220	-	277	426	650	-	-	-
6Z433A	6Z464A	77	15	875	2060	-	-	332	507	682	-	-
-	6Z467A	116	10	875	1740	-	-	229	351	472	-	-
6Z422A	6Z442A	19	60	1200	3410	-	624	978	-	-	-	-
-	6Z446A	23	50	1200	3410	-	550	861	-	-	-	-
6Z425A	6Z450A	29	40	1200	3176	-	466	731	1124	-	-	-
6Z428A	6Z455A	39	30	1200	3176	-	376	590	910	-	-	-
-	6Z459A	58	20	1200	2776	-	-	420	648	876	-	-
6Z423A	6Z443A	19	60	1500	3410	-	-	952	1490	-	-	-
-	6Z447A	23	50	1500	3410	-	-	837	1131	-	-	-
-	6Z456A	39	30	1500	3410	-	-	-	893	1217	-	-
-	6Z460A	58	20	1500	3410	-	-	-	-	864	1325	1785
-	6Z468A	116	10	1500	3284	-	-	-	-	-	707	954

1160 RPM INPUT

"C" Face Mount													
					Output Shaft		Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0) Service Factor)						
Left Output Shaft	Right Output Shaft	Double Output Shaft	Nominal Output RPM	Nominal Gear Ratio	Overhung Load (Lbs.)	End Thrust (Lbs.)	1/4 HP	1/3 HP	1/2 HP	3/4HP	1 HP	1 ½HP	2HP	3HP
4Z288C	4RN75	4Z004D	58	20	275	1399	209	-	-	-	-	-	-	-
4Z289C	4RN76	4Z005D	77	15	275	1311	164	220	-	-	-	-	-	-
4Z290C	4RN77	4Z006D	116	10	275	1151	114	153	-	-	-	-	-	-
4Z291C	4RN78	4Z007D	232	5	275	916	-	79	120	-	-	-	-	-
4RN81	4RN89	4RN97	23	50	388	1399	362	-	-	-	-	-	-	-
4RN82	4RN90	4RN98	29	40	388	1399	335	-	-	-	-	-	-	-
4RN83	4RN91	4RN99	39	30	388	1399	269	364	-	-	-	-	-	-
4RN84	4RN92	4RP01	58	20	388	1399	201	272	-	-	-	-	-	-
4RN85	4RN93	4RP02	77	15	388	1296	-	213	324	-	-	-	-	-
4RN86	4RN94	4RP03	116	10	388	1141	-	-	230	-	-	-	-	-
4RN87	4RN95	4RP04	232	5	388	911	-	-	-	181	243	-	-	-
4Z292C	3GD39	4RP05	19	60	700	1399	460	-	-	-	-	-	-	-
4Z293C	3GD40	4RP06	23	50	700	1399	416	-	-	-	-	-	-	-
4Z294C	3GD41	4RP07	29	40	700	1399	354	481	-	-	-	-	-	-
4Z295C	3GD42	4RP08	39	30	700	1399	289	392	-	-	-	-	-	-
4Z296C	3GD43	4RP09	58	20	700	1399	207	281	429	-	-	-	-	-
4Z297C	3GD44	4RP10	77	15	700	1399	-	217	332	-	-	-	-	-
4Z298C	3GD45	4RP11	116	10	700	1238	-	-	232	352	-	-	-	-
4Z299C	3GD46	4RP12	232	5	700	973	-	-	-	181	243	-	-	-
4Z300C	4RP13	4Z008D	19	60	875	2305	460	632	-	--	--	-	-	-
4Z301C	4RP14	-	23	50	875	2305	416	559	-	-	-	-	-	-
4Z302C	4RP15	4Z009D	29	40	875	2305	354	481	733	-	-	-	-	-
4Z303C	4RP16	4Z010D	39	30	875	2305	289	392	596	-	-	-	-	-
4Z304C	4RP17	4Z011D	58	20	875	2220	207	281	429	650	-	-	-	-
4Z305C	4RP18	4Z012D	77	15	875	2060	-	217	332	507	682	-	-	-
4Z306C	4RP19	4Z013D	116	10	875	1740	-	-	232	352	472	-	-	-
4Z307C	4RP20	4Z014D	232	5	875	1415	-	-	-	181	243	-	-	-

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Specifications and Performance

1160 RPM INPUT (Continued)

Left Output Shaft	Right Output Shaft	Double Output Shaft	Nominal Output RPM	Nominal Gear Ratio	"C" Face Mount Output Shaft Overhung Load (Lbs.)	"C" Face Mount Output Shaft End Thrust (Lbs.)	Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0) Service Factor) 1/4 HP	1/3 HP	1/2 HP	3/4 HP	1 HP	1 ½ HP	2HP	3HP
4RP21	4RP28	4RP35	19	60	843	2305	454	626	973	-	-	-	-	-
4RP22	4RP29	4RP36	23	50	843	2305	401	554	860	-	-	-	-	-
4RP23	4RP30	4RP37	29	40	843	2305	339	467	726	-	-	-	-	-
4RP24	4RP31	4RP38	39	30	843	2305	268	370	575	882	-	-	-	-
4RP25	4RP32	4RP39	58	20	843	2305	196	270	421	646	871	-	-	-
4RP26	4RP33	4RP40	77	15	843	2194	151	209	325	499	673	-	-	-
4RP27	4RP34	4RP41	116	10	843	1944	105	145	227	349	471	714	-	-
4Z730D	3GD47	4RP42	19	60	1200	3410	-	624	978	-	-	-	-	-
4Z731A	3GD48	4RP43	23	50	1200	3410	-	550	861	-	-	-	-	-
4Z732D	3GD49	4RP44	29	40	1200	3176	-	466	731	1124	-	-	-	-
4Z733D	3GD50	4RP45	39	30	1200	3176	-	376	590	910	-	-	-	-
4Z734A	3GD51	4RP46	58	20	1200	2776	-	-	420	648	876	-	-	-
4Z735A	3GD52	4RP47	77	15	1200	2536	-	-	-	503	680	-	-	-
4Z736A	3GD53	4RP48	116	10	1200	2216	-	-	-	-	469	714	959	-
4Z737A	3GD54	4RP49	232	5	1200	1776	-	-	-	-	-	366	493	745
4RP50	4RP58	4RP66	19	60	987	3410	-	-	981	1526	-	-	-	-
4RP51	4RP59	4RP67	23	50	987	3410	-	-	859	1336	-	-	-	-
4RP52	4RP60	4RP68	29	40	987	3410	-	-	723	1125	1527	-	-	-
4RP53	4RP61	4RP69	39	30	987	3410	-	-	-	887	1204	-	-	-
4RP54A	4RP62A	4RP70A	58	20	987	3410	-	-	-	-	872	1332	-	-
4RP55A	4RP63A	4RP71A	77	15	987	3410	-	-	-	-	672	1027	1381	-
4RP56	4RP64	4RP72	116	10	987	3284	-	-	-	-	-	713	960	-
4RP57	4RP65	4RP73	232	5	987	2594	-	-	-	-	-	-	491	-
3GD55	4RP74	4Z015C	19	60	1500	3410	-	-	952	1490	-	-	-	-
3GD56	4RP75	6Z130A	23	50	1500	3410	-	-	837	1311	-	-	-	-
3GD57	4RP76	4Z016C	29	40	1500	3410	-	-	709	1111	1513	-	-	-
3GD58	4RP77	4Z017C	39	30	1500	3410	-	-	-	893	1217	1864	-	-
3GD59	4RP78	4Z018C	58	20	1500	3410	-	-	-	-	864	1325	1785	-
3GD60	4RP79	4Z019C	77	15	1500	3410	-	-	-	-	670	1027	1384	-
3GD61	4RP80	4Z020C	116	10	1500	3284	-	-	-	-	-	707	954	-

870 RPM INPUT

Double Output Shaft	Left Output Shaft	Nominal Output RPM	Nominal Gear Ratio	Indirect Mount Output Shaft Overhung Load (Lbs.)	Indirect Mount Output Shaft End Thrust (Lbs.)	Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0) Service Factor) 1/4HP	1/3 HP	1/2 HP	3/4 HP	1 HP	1 ½ HP	2 HP	3 HP
-	6Z462A	58	15	275	1399	217	-	-	-	-	-	-	-
6Z435A	6Z466A	87	10	275	1399	151	203	-	-	-	-	-	-
6Z437A	6Z470A	174	5	275	977	-	105	-	-	-	-	-	-
-	6Z444A	17	50	800	1399	531	-	-	-	-	-	-	-
-	6Z448A	22	40	800	1399	461	-	-	-	-	-	-	-
6Z426A	6Z453A	29	30	800	1399	379	512	-	-	-	-	-	-
6Z429A	6Z457A	44	20	800	1399	274	370	-	-	-	-	-	-
6Z432A	6Z463A	58	15	800	1399	214	289	-	-	-	-	-	-
6Z421A	6Z441A	15	60	1100	2305	598	-	-	-	-	-	-	-
-	6Z445A	17	50	1100	2305	532	722	-	-	-	-	-	-
6Z424A	6Z449A	22	40	1100	2305	455	618	-	-	-	-	-	-
6Z426A	6Z454A	29	30	1100	2305	374	507	766	-	-	-	-	-
6Z429A	6Z458A	44	20	1100	2305	-	366	560	851	-	-	-	-
6Z430A	6Z464A	58	15	1100	2305	-	-	441	671	-	-	-	-
-	6Z467A	87	10	1100	1914	-	-	306	466	625	-	-	-
6Z422A	6Z442A	15	60	1200	3410	-	812	1257	-	-	-	-	-
-	6Z446A	17	50	1200	3410	-	719	1114	-	-	-	-	-
6Z425A	6Z450A	22	40	1200	3410	-	614	951	1456	-	-	-	-
6Z428A	6Z455A	29	30	1200	3410	-	500	775	1187	1599	-	-	-
-	6Z459A	44	20	1200	3245	-	-	557	852	1148	-	-	-
6Z423A	6Z443A	15	60	1500	3410	-	-	1236	1913	2591	-	-	-
-	6Z447A	17	50	1500	3410	-	-	1094	1694	2294	-	-	-
-	6Z456A	29	30	1500	3410	-	-	-	1174	1590	2422	-	-
-	6Z460A	44	20	1500	3410	-	-	-	-	-	1737	2335	-
-	6Z468A	87	10	1500	3410	-	-	-	-	-	-	1266	1915

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Specifications and Performance

870 RPM INPUT

Left Output Shaft	Right Output Shaft	Double Output Shaft	Nominal Output RPM	Nominal Gear Ratio	"C" Face Mount Output Shaft Overhung Load (Lbs.)	"C" Face Mount Output Shaft End Thrust (Lbs.)	Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0) Service Factor) 1/4 HP	1/3 HP	1/2 HP	3/4 HP	1 HP	1 ½ HP	2 HP
4Z288C	4RN75	4Z004D	44	20	275	1399	276	-	-	-	-	-	-
4Z289C	4RN76	4Z005D	58	15	275	1399	214	-	-	-	-	-	-
4Z290C	4RN77	4Z006D	87	10	275	1269	151	203	-	-	-	-	-
4Z291C	4RN78	4Z007D	174	5	275	977	-	105	159	-	-	-	-
4RN82	4RN90	4RN98	22	40	388	1399	400	-	-	-	-	-	-
4RN83	4RN91	4RN99	29	30	388	1399	352	-	-	-	-	-	-
4RN84	4RN92	4RP01	44	20	388	1399	266	359	-	-	-	-	-
4RN85	4RN93	4RP02	58	15	388	1287	209	281	-	-	-	-	-
4RN86	4RN94	4RP03	87	10	388	1224	-	200	304	-	-	-	-
4RN87	4RN95	4RP04	174	5	388	980	-	-	159	241	314	-	-
4Z293C	3GD40	4RP06	17	50	800	1399	531	-	-	-	-	-	-
4Z294C	3GD41	4RP07	22	40	800	1399	461	-	-	-	-	-	-
4Z295C	3GD42	4RP08	29	30	800	1399	379	512	-	-	-	-	-
4Z296C	3GD43	4RP09	44	20	800	1399	274	370	563	-	-	-	-
4Z297C	3GD44	4RP10	58	15	800	1399	214	289	440	-	-	-	-
4Z298C	3GD45	4RP11	87	10	800	1330	-	-	308	467	-	-	-
4Z299C	3GD46	4RP12	174	5	800	1062	-	-	-	241	323	-	-
4Z300C	4RP13	4Z008D	15	60	1100	2305	598	-	-	-	-	-	-
4Z301C	4RP14	-	17	50	1100	2305	532	722	-	-	-	-	-
4Z302C	4RP15	4Z009D	22	40	1100	2305	455	618	-	-	-	-	-
4Z303C	4RP16	4Z010D	29	30	1100	2305	374	507	766	-	-	-	-
4Z304C	4RP17	4Z011D	44	20	1100	2305	-	366	560	851	-	-	-
4Z305C	4RP18	4Z012D	58	15	1100	2305	-	-	441	671	-	-	-
4Z306C	4RP19	4Z013D	87	10	1100	1914	-	-	306	466	625	-	-
4Z307C	4RP20	4Z014D	174	5	1100	1454	-	-	-	240	323	488	-
4RP21	4RP28	4RP35	15	60	843	2305	601	821	-	-	-	-	-
4RP22	4RP29	4RP36	17	50	843	2305	534	729	1123	-	-	-	-
4RP23	4RP30	4RP37	22	40	843	2305	452	617	951	-	-	-	-
4RP24	4RP31	4RP38	29	30	843	2305	359	491	756	1153	-	-	-
4RP25	4RP32	4RP39	44	20	843	2305	265	363	559	853	1147	-	-
4RP26	4RP33	4RP40	58	15	843	2305	205	281	433	661	889	1345	-
4RP27	4RP34	4RP41	87	10	843	1952	-	197	304	465	625	946	1267
4Z730S	3GD47	4RP42	15	60	1200	3410	812	1257	-	-	-	-	-
4Z731D	3GD48	4RP43	17	50	1200	3410	719	1114	-	-	-	-	-
4Z732D	3GD49	4RP44	22	40	1200	3410	614	951	1456	-	-	-	-
4Z733D	3GD50	4RP45	29	30	1200	3410	500	775	1187	1599	-	-	-
4Z734D	3GD51	4RP46	44	20	1200	3245	-	557	852	1148	-	-	-
4Z735D	3GD52	4RP47	58	15	1200	2869	-	-	669	902	1367	-	-
4Z736D	3GD53	4RP48	87	10	1200	2416	-	-	-	624	946	1269	-
4Z737D	3GD54	4RP49	174	5	1200	1894	-	-	-	321	488	654	-
4RP50	4RP58	4RP66	15	60	987	3410	-	1236	1986	-	-	-	-
4RP51	4RP59	4RP67	17	50	987	3410	-	1094	1746	2358	-	-	-
4RP52	4RP60	4RP68	22	40	987	3410	-	933	1477	1995	-	-	-
4RP53	4RP61	4RP69	29	30	987	3410	-	-	1169	1580	2401	-	-
4RP54A	4RP62A	4RP70A	44	20	987	3410	-	-	-	1155	1757	2358	-
4RP55A	4RP63A	4RP71A	58	15	987	3410	-	-	-	-	1358	1823	-
4RP56	4RP64	4RP72	87	10	987	3410	-	-	-	-	-	1273	-
4RP57	4RP65	4RP73	174	5	987	3410	-	-	-	-	-	-	-
3GD55	4RP74	4Z015C	15	60	1500	3410	-	1236	1913	2591	-	-	-
3GD56	4RP75	6Z130A	17	50	1500	3410	-	1094	1694	2294	-	-	-
3GD57	4RP76	4Z016C	22	40	1500	3410	-	933	1445	1957	-	-	-
3GD58	4RP77	4Z017C	29	30	1500	3410	-	-	1174	1590	2422	-	-
3GD59	4RP78	4Z018C	44	20	1500	3410	-	-	-	-	1737	2335	-
3GD60	4RP79	4Z019C	58	15	1500	3410	-	-	-	-	1361	1830	-
3GD61	4RP80	4Z020C	87	10	1500	3410	-	-	-	-	-	1266	1915

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Specifications and Performance

690 RPM INPUT

Indirect Mount													
				Output Shaft		Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0) Service Factor)							
Double Output Shaft	Left Output Shaft	Nominal Output RPM	Nominal Gear Ratio	Overhung Load (Lbs.)	End Thrust (Lbs.)	1/4HP	1/3 HP	1/2 HP	3/4 HP	1 HP	1 ½ HP	2 HP	3 HP
6Z435A	6Z466A	69	10	275	1321	191	256	-	-	-	-	-	-
6Z437A	6Z470A	138	5	275	1071	98	132	200	-	-	-	-	-
-	6Z448A	17	40	800	1399	582	-	-	-	-	-	-	-
6Z426A	6Z453A	23	30	800	1399	479	-	-	-	-	-	-	-
6Z429A	6Z457A	35	20	800	1399	346	467	-	-	-	-	-	-
6Z432A	6Z463A	46	15	800	1399	269	363	551	-	-	-	-	-
6Z421A	6Z441A	12	60	1100	2305	742	-	--	-	-	-	-	-
-	6Z445A	14	50	1100	2305	662	-	--	-	-	-	-	-
6Z424A	6Z449A	17	40	1100	2305	568	769	--	-	--	-	-	-
6Z426A	6Z454A	23	30	1100	2305	469	634	--	-	--	-	-	-
6Z429A	6Z458A	35	20	1100	2305	340	460	701	-	--	-	-	-
6Z430A	6Z464A	46	15	1100	2305	-	363	554	840	--	-	-	-
-	6Z467A	69	10	1100	2060	-	-	385	584	783	-	-	-
6Z422A	6Z422A	12	60	1200	3410	-	1008	-	-	-	-	-	-
-	6Z446A	14	50	1200	3410	-	896	1378	-	-	-	-	-
6Z425A	6Z450A	17	40	1200	3410	-	768	1181	-	-	-	-	-
6Z428A	6Z455A	23	30	1200	3410	-	630	969	1477	-	-	-	-
-	6Z459A	35	20	1200	3256	-	-	699	1066	1433	-	-	-
6Z423A	6Z443A	12	60	1500	3410	-	-	1532	2355	-	-	-	-
-	6Z447A	14	50	1500	3410	-	-	1378	2119	-	-	-	-
-	6Z456A	23	30	1500	3410	-	-	-	1465	1978	2893	-	-
-	6Z460A	35	20	1500	3410	-	-	-	-	1426	2116	2906	-
-	6Z468A	69	10	1500	3410	-	-	-	-	-	1183	1588	2397

690 RPM INPUT

"C" Face Mount													
					Output Shaft		Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0) Service Factor)						
Left Output Shaft	Right Output Shaft	Double Output Shaft	Nominal Output RPM	Nominal Gear Ratio	Overhung Load (Lbs.)	End Thrust (Lbs.)	1/4 HP	1/3 HP	1/2 HP	3/4HP	1 HP	1 ½ HP	2HP	3HP
4Z290C	4RN77	4Z006D	69	10	275	1321	191	256	-	-	-	-	-	-
4Z291C	4RN78	4Z007D	138	5	275	1071	98	132	200	-	-	-	-	-
4RN83	4RN91	4RN99	23	30	388	1399	414	-	-	-	-	-	-	-
4RN84	4RN92	4RP01	35	20	388	1399	333	415	-	-	-	-	-	-
4RN85	4RN93	4RP02	46	15	388	1399	261	351	-	-	-	-	-	-
4RN86	4RN94	4RP03	69	10	388	1287	-	252	380	-	-	-	-	-
4RN87	4RN95	4RP04	138	5	388	1028	-	-	200	302	-	-	-	-
4Z294C	3GD41	4RP07	17	40	800	1399	582	-	-	-	-	-	-	-
4Z295C	3GD42	4RP08	23	30	800	1399	479	-	-	-	-	-	-	-
4Z296C	3GD43	4RP09	35	20	800	1399	346	467	-	-	-	-	-	-
4Z297C	3GD44	4RP10	46	15	800	1399	269	363	551	-	-	-	-	-
4Z298C	3GD45	4RP11	69	10	800	1399	-	255	387	-	-	-	-	-
4Z299C	3GD46	4RP12	138	5	800	1118	-	-	200	302	405	-	-	-
4Z300C	4RP13	4Z008D	12	60	1100	2305	742	-	-	-	-	-	-	-
4Z301C	4RP14	-	14	50	1100	2305	662	-	-	-	-	-	-	-
4Z302C	4RP15	4Z009D	17	40	1100	2305	568	769	-	-	-	-	-	-
4Z303C	4RP16	4Z010D	23	30	1100	2305	469	634	-	-	-	-	-	-
4Z304C	4RP17	4Z011D	35	20	1100	2305	340	460	701	-	-	-	-	-
4Z305C	4RP18	4Z012D	46	15	1100	2305	-	363	554	840	-	-	-	-
4Z306C	4RP19	4Z013D	69	10	1100	2060	-	-	385	584	783	-	-	-
4Z307C	4RP20	4Z014D	138	5	1100	1650	-	-	-	302	405	612	-	-
4RP21	4RP28	4RP35	12	60	843	2305	749	1018	-	-	-	-	-	-
4RP22	4RP29	4RP36	14	50	843	2305	667	907	-	-	-	-	-	-
4RP23	4RP30	4RP37	17	40	843	2305	566	770	1179	-	-	-	-	-
4RP24	4RP31	4RP38	23	30	843	2305	452	614	940	1429	-	-	-	-
4RP25	4RP32	4RP39	35	20	843	2305	336	457	701	1065	1427	-	-	-
4RP26	4RP33	4RP40	46	15	843	2305	261	355	544	827	1111	-	-	-
4RP27	4RP34	4RP41	69	10	843	2100	-	250	384	584	784	1185	-	-

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Specifications and Performance

690 RPM INPUT (Continued)

Left Output Shaft	Right Output Shaft	Double Output Shaft	Nominal Output RPM	Nominal Gear Ratio	"C" Face Mount Output Shaft Overhung Load (Lbs.)	"C" Face Mount Output Shaft End Thrust (Lbs.)	Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0) Service Factor) 1/4 HP	1/3 HP	1/2 HP	3/4HP	1 HP	1 ½ HP	2HP	3HP
4Z730D	3GD47	4RP42	12	60	1200	3410	-	1008	-	-	-	-	-	-
4Z731A	3GD48	4RP43	14	50	1200	3410	-	896	1378	-	-	-	-	-
4Z732D	3GD49	4RP44	17	40	1200	3410	-	768	1181	-	-	-	-	-
4Z733D	3GD50	4RP45	23	30	1200	3410	-	630	969	1477	-	-	-	-
4Z734D	3GD51	4RP46	35	20	1200	3256	-	-	699	1066	1433	-	-	-
4Z735A	3GD52	4RP47	46	15	1200	2936	-	-	-	840	1129	-	-	-
4Z736A	3GD53	4RP48	69	10	1200	2616	-	-	-	-	784	1186	1588	-
4Z737A	3GD54	4RP49	138	5	1200	2056	-	-	-	-	404	613	821	-
4RP52	4RP60	4RP68	17	40	987	3410	-	-	1165	1792	2469	-	-	-
4RP53	4RP61	4RP69	23	30	987	3410	-	-	-	1465	1961	-	-	-
4RP54A	4RP62A	4RP70A	35	20	987	3256	-	-	-	-	1446	2191	-	-
4RP55A	4RP63A	4RP71A	46	15	987	2936	-	-	-	-	1119	1697	2275	-
4RP56	4RP64	4RP72	69	10	987	2616	-	-	-	-	-	1190	1596	-
4RP57	4RP65	4RP73	138	5	987	2040	-	-	-	-	-	-	-	1240
3GD55	4RP74	4Z015C	12	60	1500	3410	-	-	1532	2355	-	-	-	-
3GD56	4RP75	6Z130A	14	50	1500	3410	-	-	1378	2119	-	-	-	-
3GD57	4RP76	4Z016C	17	40	1500	3410	-	-	1165	1792	-	-	-	-
3GD58	4RP77	4Z017C	23	30	1500	3410	-	-	-	1465	2893	2893	-	-
3GD59	4RP78	4Z018C	35	20	1500	3256	-	-	-	-	2116	2116	2906	-
3GD60	4RP79	4Z019C	46	15	1500	2936	-	-	-	-	1704	1704	2287	-
3GD61	4RP80	4Z020C	69	10	1500	2616	-	-	-	-	1183	1183	1588	2397

100 RPM INPUT

Double Output Shaft	Left Output Shaft	Nominal Output RPM	Nominal Gear Ratio	Indirect Mount Output Shaft Overhung Load (Lbs.)	Indirect Mount Output Shaft End Thrust (Lbs.)	Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0 Service Factor) 1/4 HP	1/3 HP
-	6Z459A	5	20	1200	3410	2144	-
-	6Z447A	2	50	1500	3410	3880	-
-	6Z456A	3	30	1500	3410	-	3880

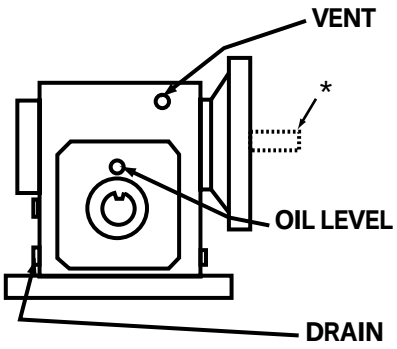
100 RPM INPUT

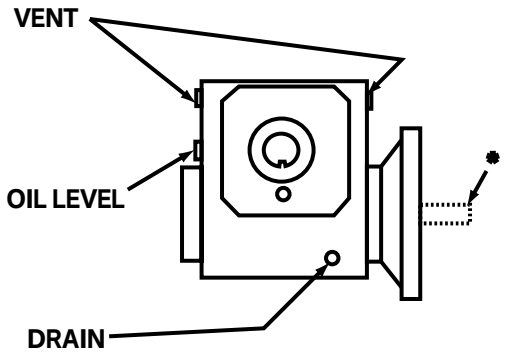
Left Output Shaft	Right Output Shaft	Double Output Shaft	Nominal Output RPM	Nominal Gear Ratio	"C" Face Mount Output Shaft Overhung Load (Lbs.)	"C" Face Mount Output Shaft End Thrust (Lbs.)	Continuous Duty Output Torque (In-Lbs.) @ Input Motor HP Shown (1.0 Service Factor) 1/4 HP	1/3 HP	1/2 HP
4Z299C	3GD46	4RP12	20	5	800	1399	596	-	-
4Z307C	4RP20	4Z014D	20	5	1100	2305	-	931	-
4RP28	4RP33	4RP40	7.0	15	843	2305	1696	-	-
4RP27	4RP34	4RP41	10	10	843	2305	-	1542	-
4Z734A	3GD51	4RP46	5.0	20	1200	3410	2144	-	-
4Z735A	3GD52	4RP47	7.0	15	1200	3410	2039	-	-
4Z736A	3GD53	4RP48	10	10	1200	3410	-	1981	-
4Z737A	3GD54	4RP49	20	5	1200	3410	-	-	1898
4RP52	4RP60	4RP68	2.5	40	1000	3410	3384	-	-
4RP53	4RP61	4RP69	3.0	30	1000	3410	-	3552	-
3GD56	4RP75	6Z130A	2.0	50	1500	3410	3880	-	-
3GD57	4RP76	4Z016A	2.5	40	1500	3410	3880	-	-
3GD58	4RP77	4Z017A	3.0	30	1500	3410	-	3880	-

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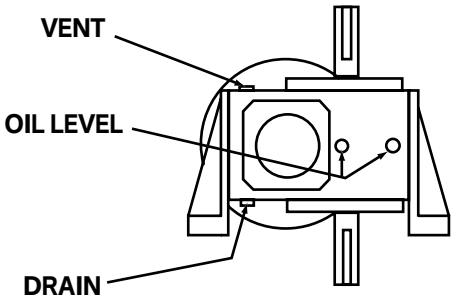
Dayton® Speed Reducers

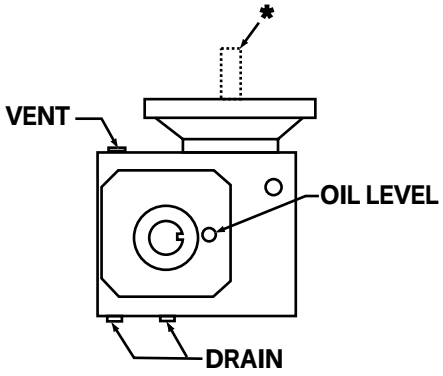
Oil Fill Recommendations





WORM OVER
Approximate oil capacity 22 ounces, fill to oil level plug.





VERTICAL OUTPUT
Approximate oil capacity 20 ounces, fill to oil level plug.

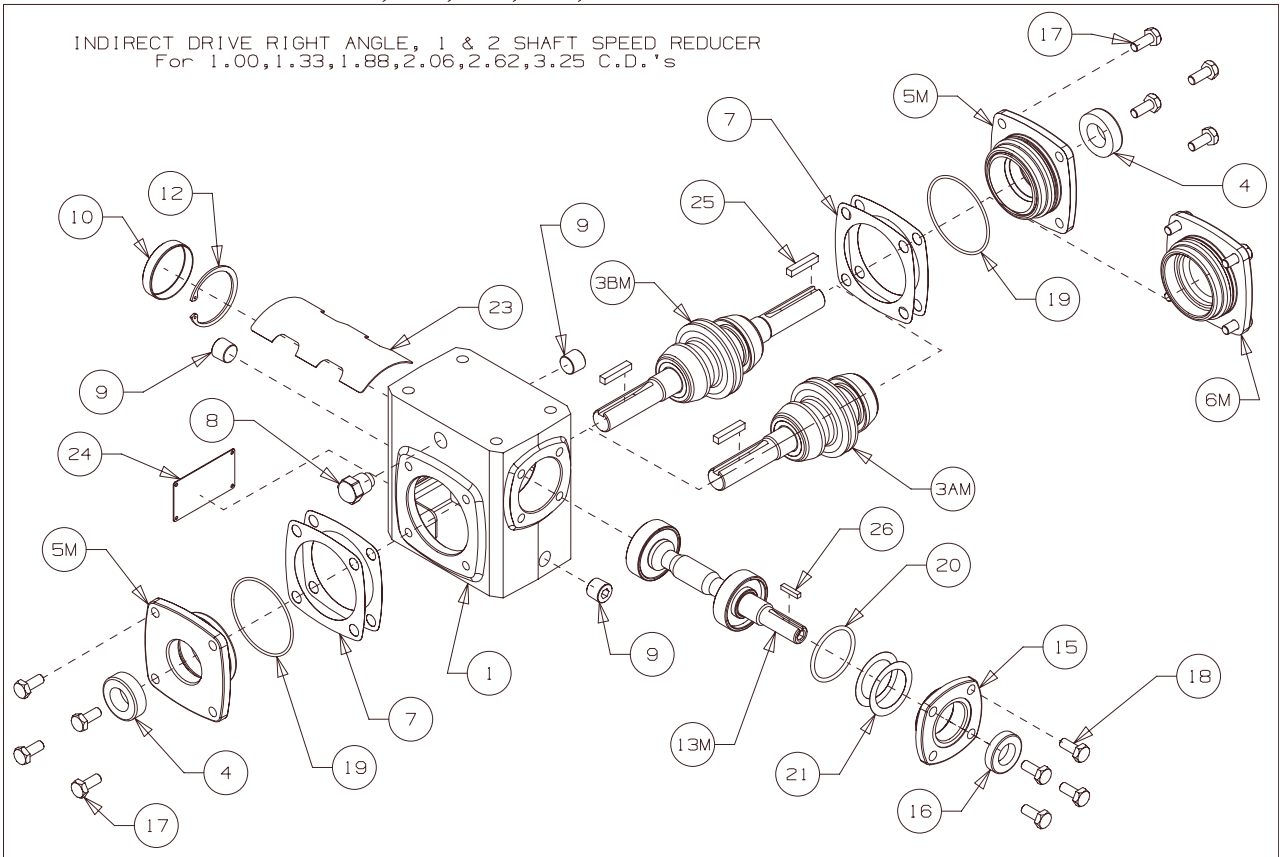
VERTICAL INPUT
Approximate oil capacity 17 ounces, fill to oil

Figure 2 - Location of Vent, Oil Level, and Drain Plugs for each Reducer Mounting Position (For Indirect and Direct Mount Units)
***Input Shaft for Indirect Mounting, No Flange**

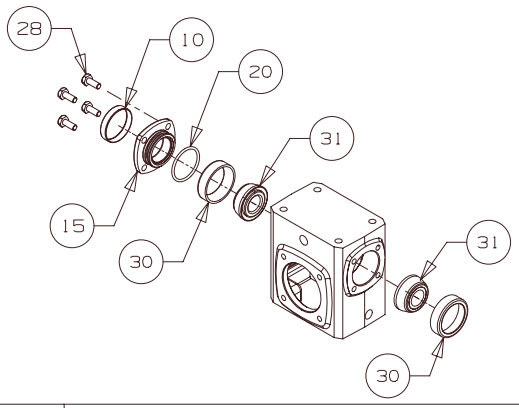
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Dayton Operating Instructions and Parts Manual
For - 1.00,1.33,1.88,2.06,2.62 and 3.25 Center Distances.

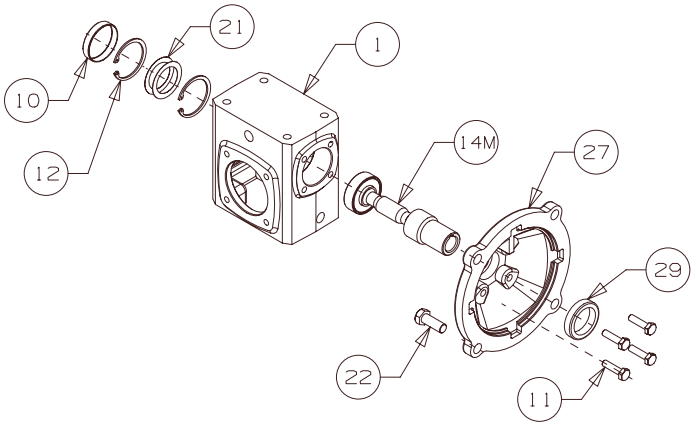
INDIRECT DRIVE RIGHT ANGLE, 1 & 2 SHAFT SPEED REDUCER
For 1.00,1.33,1.88,2.06,2.62,3.25 C.D.'s



INDIRECT DRIVE RIGHT ANGLE,
1 & 2 SHAFT SPEED REDUCER
For 3.25 C.D.



C - FACE RIGHT ANGLE SPEED REDUCER
For 1.33,1.54,1.88,2.06,2.38,2.62,3.00 and 3.25 C.D.'s



PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
1	HOUSING	18	HEX HEAD CAP SCREW (RET/HSG)
3AM	OUTPUT SHAFT SINGLE PROJECTION SUB-ASSY	19	OUTPUT "O" RING
3BM	OUTPUT SHAFT DOUBLE PROJECTION SUB-ASSY	20	INPUT "O" RING
4	OUTPUT OIL SEAL	21	INPUT SHIM (.003 THK)
5M	OUTPUT BEARING CARRIER SUB-ASSY - OPEN	22	HEX HEAD CAPSCREWS (FLG/MTR)
6M	OUTPUT BEARING CARRIER SUB-ASSY - CLOSED	23	INTERNAL BAFFLE (713-732)
7	ADJUSTMENT SHIMS	24	NAMEPLATE
8	VENT PLUG	25	OUTPUT KEY
9	PIPE PLUG	26	INPUT KEY
10	BORE PLUG	27	MOTOR FLANGE
11	HEX HEAD CAP SCREW (FLG/HSG)	28	HEX HEAD CAP SCREW (RET/HSG 732)
12	RETAINING RING	29	INPUT OIL SEAL (732)
13M	REDUCTOR WORM SHAFT SUB-ASSY	30	INPUT BEARING (CUP) (732)
14M	MOTORIZED WORM SHAFT SUB-ASSY	31	INPUT BEARING (CONE) (732)
15	INPUT BEARING RETAINER		
16	INPUT OIL SEAL		
17	HEX HEAD CAP SCREW (CARR/HSG)		

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Service Record

Dayton® Speed Reducers

Date	Maintenance performed	Replacement components required

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Dayton® Speed Reducers

LIMITED WARRANTY

DAYTON ONE-YEAR LIMITED WARRANTY. *Dayton Speed Reducers, Models covered in this manual, are warranted by Dayton Electric Mfg. Co. (Dayton) to the original user against defects in workmanship or materials under normal use for one year after date of purchase. Any part which is determined to be defective in material or workmanship and returned to an authorized service location, as Dayton designates, shipping costs prepaid, will be, as the exclusive remedy, repaired or replaced at Dayton's option. For limited warranty claim procedures, see PROMPT DISPOSITION below. This limited warranty gives purchasers specific legal rights which vary from jurisdiction to jurisdiction.*

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Manufactured for Dayton Electric Mfg. Co., 5959 W. Howard St., Niles, Illinois 60714 U.S.A.

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