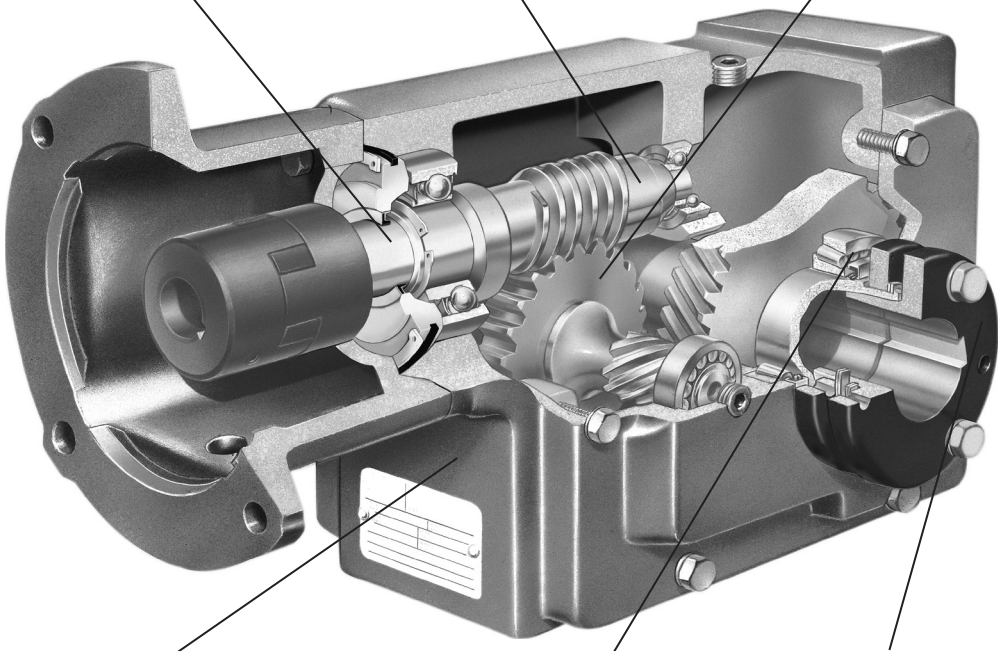
ComboGear

Updated 12/3/14

ComboGear

A WORM-HELICAL REDUCER DESIGNED WITH FLEXIBILITY AND MAINTENANCE IN MIND



ComboGear

1. External single lip seal. Runs on precision, plunge ground journal surface.
2. Motor adapter removal permits easy access to input worm shaft. Assures simple seal and/or bearing replacement.
3. Worm gears feature copper tin alloy for superior wear resistance, a computer designed gear geometry, and an optimized gear contact pattern for reduced break-in time and maximum thermal performance.
4. A rugged, cast iron housing ensures long years of service, even in corrosive environments. Each model has interchangeable, optional bolt-on feet, which allow industry-standard mounting dimensions.
5. Single lip seals reduce drag on the output shaft for improved efficiency. The plunge ground seal journal surface provides a smooth finish for optimum seal performance.
6. Exclusive twin tapered bushing system provides positive concentric grip on both sides of the reducer. It eliminates wobble, eccentricity, and assures easy installation and removal.

PROVEN LUBRICATION SYSTEM
REQUIRES NO PERIODIC MAINTENANCE

- Factory-filled, synthetic hydrocarbon lubricant
- Ambient operating temperature range (-10°F through 165°F)
- No open path to the environment
- No conventional vent plugs
- Minimized seepage and contamination paths
- Complete cast iron gearcase

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The speed reducer shall be a double reduction unit incorporating an input worm set and a helical output set. Motor coupling shall be provided by a 3 piece coupling configuration. The reducer shall be manufactured in the United States of America. Wormgear geometry shall be a single enveloping helicoid design. The gearcase, bearing housings, and motor adaptor shall be manufactured from Class 30 gray iron. A bolt on foot shall be available. Output configurations offered shall be solid shaft, hollow shaft straight bore, or hollow shaft with twin tapered bushings.

The reducer shall be sealed with no direct passage from the oil sump to the ambient atmosphere. Lubrication shall be a factory supplied synthetic hydrocarbon that requires no periodic changes and is filled to a level suitable for the mounting position specified on the order. If no mounting position is specified, the oil level is appropriate for K-1/L-1 only. USDA Class AA, Class H1 food grade, and low temperature lubricants shall be available to accommodate different applications.

The input worm set shall consist of a hardened steel worm shaft and a copper-tin bronze alloy wormgear for superior wear resistance. All units shall have the wormgear set properly centered during assembly to produce an optimum contact pattern. The contact pattern of each set shall be manually checked to ensure that the optimum pattern is present. The output gearset set shall be of an involute helical design with case carburized gear teeth. Output shafts shall incorporate tapered roller bearings shimmed for proper running clearances. Seals shall have a rubber coated O.D. and operate on plunge ground journals. Joints shall be sealed with a silicon rubber or anaerobic sealant. No gaskets or O-rings shall be used. All fasteners shall be minimum grade 8.8 metric. Motor mounting bolts and input/output keys shall be provided.

The standard construction shall be suitable for duty in ambient temperatures from -10°F to +165°F. When used without the bolt-on foot, the reducer shall be BISSC certified. Severe operating conditions shall be addressed with a Nylon 11 coated gearcase incorporating stainless steel hardware and nickel plated output shaft extensions or Teflon coated twin tapered bushings.

ComboGear
How To Order ComboGear Reducers

All ComboGear reducers and accessories have a part number. Reducer part numbers are found in the selection tables and the accessories are listed in the modification section of this catalog. Refer to the part numbers when ordering and specify the reducer part number along with the part numbers of the required accessories.

140C200T025S1A 140TC C-Face, Size C200, 25:1, Taper Hollow Shaft (Page CG-16)

6002503 Size C200 Tie Rod kit (Page CG-34)

MOTOR FRAME	SERIES		SIZE	OUTPUT TYPE		RATIO	SHAFT POSITION
056	C	COMBINATION	150	B	BASIC UNIT STD SHAFT	010	L1
						015	
140			200			018	K1
						020	
180			262	S	SHAFT MOUNT STRAIGHT BORE	025	LK
						030	
210			350			038	S1
						040	
						050	
				T	SHAFT MOUNT TWIN TAPERED	060	
						075	
						080	
						090	
						100	
						125	
						150	
						160	
						200	
						240	
						300	

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Easy Selection Tables

In the following tables, ComboGear reducers have been pre-selected for standard motor horsepowers at commonly applied service factors. All selections are for 1750 rpm motors. For selections at other motor speeds refer to the selection procedure using the rating tables. Each block in the selection table provides the following information:

- **Gearcase Size** — Worm set center distance. For example, a C150 has a 1.50" worm center distance.
- **Output Torque** — Torque that will be produced at the output shaft when the particular motor is loaded to its nameplate rated horsepower.
- **Output OHL** — The continuous overhung load that may be applied to the output shaft at one shaft diameter from the seal face.

Two methods are available to the designer using the selection tables. The horsepower method, applied in cases where motor horsepower is known, is useful when interchanging with a competitive unit or utilizing an available motor.

The torque method requires the knowledge of driven load requirement and provides the most economical reducer selection. Both methods assume the desired ratio or output rpm is known.

HORSEPOWER METHOD OF SELECTION

Step 1: Referring to the reducer service factor table, determine the appropriate service factor.
Step 2: Locate the selection table configured for the required service factor.
Step 3: Read down from motor horsepower and across from rpm/ratio to locate the appropriate selection block.

TORQUE METHOD OF SELECTION

Step 1: Referring to the reducer service factor table, determine the appropriate service factor.
Step 2: Locate the selection table configured for the required service factor.
Step 3: Find the row that represents the applicable output rpm/ratio and read across the torque line until the torque value equals or exceeds driven load requirements.
Step 4: Read up form the selection block to determine required motor horsepower.

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1.00 Reducer Service Factor
1750 RPM Input

RPM Out	Nom. Ratio*		Motor Horsepower										
			0.25	0.33	0.50	0.75	1	1.50	2	3	5	7.50	10
156	10	SIZE	150	150	150	150	150	150	200	200	262	350	350
		Torque	68 lb in	96 lb in	157 lb in	247 lb in	336 lb in	515 lb in	723 lb in	1096 lb in	1861 lb in	2767 lb in	3706 lb in
		OHL	896 lb	896 lb	896 lb	896 lb	896 lb	896 lb	1306 lb	1306 lb	2220 lb	4653 lb	4653 lb
125	15	SIZE	150	150	150	150	150	150	200	200	262	350	350
		Torque	85 lb in	121 lb in	198 lb in	310 lb in	423 lb in	648 lb in	893 lb in	1353 lb in	2285 lb in	3417 lb in	4576 lb in
		OHL	910 lb	910 lb	910 lb	910 lb	910 lb	910 lb	1325 lb	1325 lb	2283 lb	4726 lb	4726 lb
105	18	SIZE	150	150	150	150	150	150	200	200	262	350	350
		Torque	102 lb in	145 lb in	236 lb in	371 lb in	505 lb in	774 lb in	1066 lb in	1615 lb in	2729 lb in	4079 lb in	5463 lb in
		OHL	920 lb	920 lb	920 lb	920 lb	920 lb	920 lb	1339 lb	1339 lb	2371 lb	4785 lb	4785 lb
86	20	SIZE	150	150	150	150	150	150	200	200	262	350	350
		Torque	124 lb in	176 lb in	288 lb in	451 lb in	614 lb in	941 lb in	1297 lb in	1965 lb in	3320 lb in	4963 lb in	6647 lb in
		OHL	930 lb	930 lb	930 lb	930 lb	930 lb	930 lb	1352 lb	1352 lb	2436 lb	4800 lb	4800 lb
69	25	SIZE	150	150	150	150	150	150	200	200	262	350	350
		Torque	155 lb in	220 lb in	359 lb in	563 lb in	768 lb in	1176 lb in	1620 lb in	2455 lb in	4148 lb in	6201 lb in	8304 lb in
		OHL	938 lb	938 lb	938 lb	938 lb	938 lb	938 lb	1361 lb	1361 lb	2491 lb	4717 lb	4717 lb
58	30	SIZE	150	150	150	150	150	200	200	262	350	350	
		Torque	189 lb in	266 lb in	430 lb in	672 lb in	914 lb in	1411 lb in	1901 lb in	2902 lb in	4872 lb in	7368 lb in	
		OHL	970 lb	970 lb	970 lb	970 lb	970 lb	1410 lb	1410 lb	2751 lb	4925 lb	4925 lb	
46	38	SIZE	150	150	150	150	150	200	200	262	350	350	
		Torque	236 lb in	332 lb in	538 lb in	840 lb in	1142 lb in	1763 lb in	2376 lb in	3625 lb in	6087 lb in	9205 lb in	
		OHL	979 lb	979 lb	979 lb	979 lb	979 lb	1421 lb	1421 lb	2781 lb	4823 lb	4823 lb	
43	40	SIZE	150	150	150	150	150	200	200	262	350		
		Torque	246 lb in	346 lb in	560 lb in	875 lb in	1190 lb in	1849 lb in	2489 lb in	3804 lb in	6397 lb in		
		OHL	981 lb	981 lb	981 lb	981 lb	981 lb	1423 lb	1423 lb	2786 lb	5197 lb		
35	50	SIZE	150	150	150	150	150	200	200	262	350		
		Torque	307 lb in	433 lb in	700 lb in	1093 lb in	1487 lb in	2310 lb in	3109 lb in	4753 lb in	7992 lb in		
		OHL	985 lb	985 lb	985 lb	985 lb	985 lb	1425 lb	1425 lb	2805 lb	5154 lb		
29	60	SIZE	150	150	150	150	200	200	262	350	350		
		Torque	360 lb in	504 lb in	811 lb in	1261 lb in	1746 lb in	2665 lb in	3647 lb in	5504 lb in	9300 lb in		
		OHL	1013 lb	1013 lb	1013 lb	1013 lb	1472 lb	1472 lb	2910 lb	5064 lb	5064 lb		

Refer to page CG-47 for exact ratio

ComboGear

1.00 Reducer Service Factor
1750 RPM Input

RPM Out	Nom. Ratio*		Motor Horsepower										
			0.25	0.33	0.50	0.75	1	1.50	2	3	5	7.50	10
23	75	SIZE	150	150	150	150	200	200	262	350	350		
		Torque	450 lb in	630 lb in	1012 lb in	1575 lb in	2181 lb in	3329 lb in	4556 lb in	6876 lb in	11619 lb in		
		OHL	1020 lb	1020 lb	1020 lb	1020 lb	1470 lb	1470 lb	2933 lb	5501 lb	5501 lb		
22	80	SIZE	150	150	150	150	200	262	350	350			
		Torque	466 lb in	648 lb in	1034 lb in	1603 lb in	2231 lb in	3398 lb in	4642 lb in	7073 lb in			
		OHL	1023 lb	1023 lb	1023 lb	1023 lb	1537 lb	2932 lb	5542 lb	5542 lb			
19	90	SIZE	150	150	150	200	200	262	350	350			
		Torque	548 lb in	763 lb in	1222 lb in	1863 lb in	2529 lb in	3373 lb in	4646 lb in	7078 lb in			
		OHL	1063 lb	1063 lb	1063 lb	1542 lb	1542 lb	2937 lb	5481 lb	5481 lb			
17	100	SIZE	150	150	150	200	200	262	350	350			
		Torque	582 lb in	810 lb in	1292 lb in	2057 lb in	2787 lb in	4057 lb in	5800 lb in	8836 lb in			
		OHL	1070 lb	1070 lb	1070 lb	1544 lb	1544 lb	2937 lb	5462 lb	5462 lb			
14	125	SIZE	150	150	150	200	200	262	350	350			
		Torque	626 lb in	868 lb in	1383 lb in	2490 lb in	3372 lb in	4936 lb in	7062 lb in	10759 lb in			
		OHL	1081 lb	1081 lb	1081 lb	1545 lb	1545 lb	3039 lb	5339 lb	5339 lb			
12	150	SIZE	150	150	150	200	262	262	350	350			
		Torque	783 lb in	1085 lb in	1728 lb in	2792 lb in	4037 lb in	6151 lb in	8248 lb in	12567 lb in			
		OHL	1082 lb	1082 lb	1082 lb	1607 lb	3051 lb	3051 lb	5207 lb	5207 lb			
11	160	SIZE	150	150	200	200	262	262	350				
		Torque	796 lb in	1100 lb in	1823 lb in	2813 lb in	3946 lb in	6002 lb in	8146 lb in				
		OHL	1133 lb	1133 lb	1667 lb	1667 lb	3195 lb	3195 lb	5829 lb				
8.60	200	SIZE	150	150	200	200	262	350	350				
		Torque	995 lb in	1374 lb in	2277 lb in	3514 lb in	4930 lb in	7526 lb in	10177 lb in				
		OHL	1142 lb	1142 lb	1681 lb	1681 lb	3220 lb	5766 lb	5766 lb				
7.20	240	SIZE	150	200	262	262	350	350					
		Torque	1091 lb in	1576 lb in	2600 lb in	3998 lb in	5428 lb in	8331 lb in					
		OHL	1140 lb	1745 lb	3326 lb	3326 lb	5731 lb	5731 lb					
5.80	300	SIZE	150	200	262	262	350	350					
		Torque	1362 lb in	1969 lb in	3248 lb in	4994 lb in	6782 lb in	10408 lb in					
		OHL	1136 lb	1767 lb	3353 lb	3353 lb	5976 lb	5976 lb					

* Refer to page CG-47 for exact ratio

ComboGear

1.25 Reducer Service Factor
1750 RPM Input

RPM Out	Nom. Ratio*	Motor Horsepower											
			0.25	0.33	0.50	0.75	1	1.50	2	3	5	7.50	10
156	10	SIZE	150	150	150	150	150	200	200	262	350	350	
		Torque	68 lb in	96 lb in	157 lb in	247 lb in	336 lb in	537 lb in	723 lb in	1106 lb in	1828 lb in	2767 lb in	
		OHL	896 lb	896 lb	896 lb	896 lb	896 lb	1306 lb	1306 lb	2220 lb	4653 lb	4653 lb	
125	15	SIZE	150	150	150	150	150	200	200	262	350	350	
		Torque	85 lb in	121 lb in	198 lb in	310 lb in	423 lb in	663 lb in	893 lb in	1358 lb in	2258 lb in	3417 lb in	
		OHL	910 lb	910 lb	910 lb	910 lb	910 lb	1325 lb	1325 lb	2283 lb	4726 lb	4726 lb	
105	18	SIZE	150	150	150	150	150	200	200	262	350	350	
		Torque	102 lb in	145 lb in	236 lb in	371 lb in	505 lb in	791 lb in	1066 lb in	1622 lb in	2696 lb in	4079 lb in	
		OHL	920 lb	920 lb	920 lb	920 lb	920 lb	1339 lb	1339 lb	2371 lb	4785 lb	4785 lb	
86	20	SIZE	150	150	150	150	150	200	200	262	350	350	
		Torque	124 lb in	176 lb in	288 lb in	451 lb in	614 lb in	963 lb in	1297 lb in	1973 lb in	3280 lb in	4963 lb in	
		OHL	930 lb	930 lb	930 lb	930 lb	930 lb	1352 lb	1352 lb	2436 lb	4800 lb	4800 lb	
69	25	SIZE	150	150	150	150	150	200	200	262	350	350	
		Torque	155 lb in	220 lb in	359 lb in	563 lb in	768 lb in	1203 lb in	1620 lb in	2465 lb in	4097 lb in	6201 lb in	
		OHL	938 lb	938 lb	938 lb	938 lb	938 lb	1361 lb	1361 lb	2491 lb	4717 lb	4717 lb	
58	30	SIZE	150	150	150	150	200	200	262	262	350		
		Torque	189 lb in	266 lb in	430 lb in	672 lb in	921 lb in	1411 lb in	1913 lb in	2902 lb in	4872 lb in		
		OHL	970 lb	970 lb	970 lb	970 lb	1410 lb	1410 lb	2751 lb	2751 lb	4925 lb		
46	38	SIZE	150	150	150	150	200	200	262	262	350		
		Torque	236 lb in	332 lb in	538 lb in	840 lb in	1151 lb in	1763 lb in	2390 lb in	3625 lb in	6087 lb in		
		OHL	979 lb	979 lb	979 lb	979 lb	1421 lb	1421 lb	2781 lb	2781 lb	4823 lb		
43	40	SIZE	150	150	150	150	200	200	262	262	350		
		Torque	246 lb in	346 lb in	560 lb in	875 lb in	1209 lb in	1849 lb in	2510 lb in	3804 lb in	6397 lb in		
		OHL	981 lb	981 lb	981 lb	981 lb	1423 lb	1423 lb	2786 lb	2786 lb	5197 lb		
35	50	SIZE	150	150	150	150	200	200	262	262	350		
		Torque	307 lb in	433 lb in	700 lb in	1093 lb in	1511 lb in	2310 lb in	3136 lb in	4753 lb in	7992 lb in		
		OHL	985 lb	985 lb	985 lb	985 lb	1425 lb	1425 lb	2805 lb	2805 lb	5154 lb		
29	60	SIZE	150	150	150	200	200	262	262	350			
		Torque	360 lb in	504 lb in	811 lb in	1287 lb in	1746 lb in	2712 lb in	3647 lb in	5504 lb in			
		OHL	1013 lb	1013 lb	1013 lb	1472 lb	1472 lb	2910 lb	2910 lb	5064 lb			

* Refer to page CG-47 for exact ratio

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1.25 Reducer Service Factor
1750 RPM Input

RPM Out	Nom. Ratio*		Motor Horsepower										
			0.25	0.33	0.50	0.75	1	1.50	2	3	5	7.50	10
23	75	SIZE	150	150	150	200	200	262	350	350			
		Torque	450 lb in	630 lb in	1012 lb in	1607 lb in	2181 lb in	3388 lb in	4505 lb in	6876 lb in			
		OHL	1020 lb	1020 lb	1020 lb	1470 lb	1470 lb	2933 lb	2933 lb	5501 lb			
22	80	SIZE	150	150	150	200	262	350	350	350			
		Torque	466 lb in	648 lb in	1034 lb in	1647 lb in	2230 lb in	3427 lb in	4642 lb in	7073 lb in			
		OHL	1023 lb	1023 lb	1023 lb	1537 lb	2932 lb	5542 lb	5542 lb	5542 lb			
19	90	SIZE	150	150	200	200	200	350	350	350			
		Torque	548 lb in	763 lb in	1198 lb in	1863 lb in	2529 lb in	3430 lb in	4646 lb in	7078 lb in			
		OHL	1063 lb	1063 lb	1542 lb	1542 lb	1542 lb	5481 lb	5481 lb	5481 lb			
17	100	SIZE	150	150	150	200	262	350	350	350			
		Torque	582 lb in	810 lb in	1292 lb in	2057 lb in	2663 lb in	4281 lb in	5800 lb in	8836 lb in			
		OHL	1070 lb	1070 lb	1070 lb	1544 lb	2937 lb	5462 lb	5462 lb	5462 lb			
14	125	SIZE	150	150	200	200	262	350	350				
		Torque	626 lb in	868 lb in	1608 lb in	2490 lb in	3240 lb in	5213 lb in	7062 lb in				
		OHL	1081 lb	1081 lb	1545 lb	1545 lb	3039 lb	5339 lb	5339 lb				
12	150	SIZE	150	150	200	262	262	350	350				
		Torque	783 lb in	1085 lb in	1804 lb in	2980 lb in	4037 lb in	6089 lb in	8248 lb in				
		OHL	1082 lb	1082 lb	1607 lb	3051 lb	3051 lb	5207 lb	5207 lb				
11	160	SIZE	150	150	200	262	262	350	350				
		Torque	796 lb in	1100 lb in	1823 lb in	2919 lb in	3946 lb in	6024 lb in	8146 lb in				
		OHL	1133 lb	1133 lb	1667 lb	3195 lb	3195 lb	5829 lb	5829 lb				
8.60	200	SIZE	150	150	200	262	262	350	350				
		Torque	995 lb in	1374 lb in	2277 lb in	3646 lb in	4930 lb in	7526 lb in	10177 lb in				
		OHL	1142 lb	1142 lb	1681 lb	3220 lb	3220 lb	5766 lb	5766 lb				
7.20	240	SIZE	200	200	262	350	350	350					
		Torque	1150 lb in	1576 lb in	2600 lb in	4058 lb in	5428 lb in	8331 lb in					
		OHL	1745 lb	1745 lb	3326 lb	3326 lb	5731 lb	5731 lb					
5.80	300	SIZE	200	200	262	350	350	350					
		Torque	1437 lb in	1969 lb in	3248 lb in	5070 lb in	6782 lb in	10408 lb in					
		OHL	1767 lb	1767 lb	3353 lb	3353 lb	5976 lb	5976 lb					

* Refer to page CG-47 for exact ratio

ComboGear

1.50 Reducer Service Factor
1750 RPM Input

RPM Out	Nom. Ratio*		Motor Horsepower										
			0.25	0.33	0.50	0.75	1	1.50	2	3	5	7.50	10
156	10	SIZE	150	150	150	150	150	200	200	262	350		
		Torque	68 lb in	96 lb in	157 lb in	247 lb in	336 lb in	537 lb in	723 lb in	1106 lb in	1828 lb in		
		OHL	896 lb	896 lb	896 lb	896 lb	896 lb	1306 lb	1306 lb	2220 lb	4653 lb		
125	15	SIZE	150	150	150	150	150	200	200	262	350		
		Torque	85 lb in	121 lb in	198 lb in	310 lb in	423 lb in	663 lb in	893 lb in	1358 lb in	2258 lb in		
		OHL	910 lb	910 lb	910 lb	910 lb	910 lb	1325 lb	1325 lb	2283 lb	4726 lb		
105	18	SIZE	150	150	150	150	150	200	200	262	350		
		Torque	102 lb in	145 lb in	236 lb in	371 lb in	505 lb in	791 lb in	1066 lb in	1622 lb in	2696 lb in		
		OHL	920 lb	920 lb	920 lb	920 lb	920 lb	1339 lb	1339 lb	2371 lb	4785 lb		
86	20	SIZE	150	150	150	150	150	200	200	262	350		
		Torque	124 lb in	176 lb in	288 lb in	451 lb in	614 lb in	963 lb in	1297 lb in	1973 lb in	3280 lb in		
		OHL	930 lb	930 lb	930 lb	930 lb	930 lb	1352 lb	1352 lb	2436 lb	4800 lb		
69	25	SIZE	150	150	150	150	150	200	200	262	350		
		Torque	155 lb in	220 lb in	359 lb in	563 lb in	768 lb in	1203 lb in	1620 lb in	2465 lb in	4097 lb in		
		OHL	938 lb	938 lb	938 lb	938 lb	938 lb	1361 lb	1361 lb	2491 lb	4717 lb		
58	30	SIZE	150	150	150	150	200	262	262	262	350		
		Torque	189 lb in	266 lb in	430 lb in	672 lb in	921 lb in	1419 lb in	1913 lb in	2902 lb in	4872 lb in		
		OHL	970 lb	970 lb	970 lb	970 lb	1410 lb	2751 lb	2751 lb	2751 lb	4925 lb		
46	38	SIZE	150	150	150	150	200	262	262	262	350		
		Torque	236 lb in	332 lb in	538 lb in	840 lb in	1151 lb in	1773 lb in	2390 lb in	3625 lb in	6087 lb in		
		OHL	979 lb	979 lb	979 lb	979 lb	1421 lb	2781 lb	2781 lb	2781 lb	4823 lb		
43	40	SIZE	150	150	150	150	200	262	262	350			
		Torque	246 lb in	346 lb in	560 lb in	875 lb in	1209 lb in	1863 lb in	2510 lb in	3781 lb in			
		OHL	981 lb	981 lb	981 lb	981 lb	1423 lb	2786 lb	2786 lb	5197 lb			
35	50	SIZE	150	150	150	150	200	262	262	350			
		Torque	307 lb in	433 lb in	700 lb in	1093 lb in	1511 lb in	2328 lb in	3136 lb in	4724 lb in			
		OHL	985 lb	985 lb	985 lb	985 lb	1425 lb	2805 lb	2805 lb	5154 lb			
29	60	SIZE	150	150	150	200	200	262	350	350			
		Torque	360 lb in	504 lb in	811 lb in	1287 lb in	1746 lb in	2712 lb in	3606 lb in	5504 lb in			
		OHL	1013 lb	1013 lb	1013 lb	1472 lb	1472 lb	2910 lb	5064 lb	5064 lb			

* Refer to page CG-47 for exact ratio

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1.50 Reducer Service Factor
1750 RPM Input

RPM Out	Nom. Ratio*		Motor Horsepower										
			0.25	0.33	0.50	0.75	1	1.50	2	3	5	7.50	10
156	10	SIZE	150	150	150	150	150	200	200	262	350		
		Torque	68 lb in	96 lb in	157 lb in	247 lb in	336 lb in	537 lb in	723 lb in	1106 lb in	1828 lb in		
		OHL	896 lb	896 lb	896 lb	896 lb	896 lb	1306 lb	1306 lb	2220 lb	4653 lb		
125	15	SIZE	150	150	150	150	150	200	200	262	350		
		Torque	85 lb in	121 lb in	198 lb in	310 lb in	423 lb in	663 lb in	893 lb in	1358 lb in	2258 lb in		
		OHL	910 lb	910 lb	910 lb	910 lb	910 lb	1325 lb	1325 lb	2283 lb	4726 lb		
105	18	SIZE	150	150	150	150	150	200	200	262	350		
		Torque	102 lb in	145 lb in	236 lb in	371 lb in	505 lb in	791 lb in	1066 lb in	1622 lb in	2696 lb in		
		OHL	920 lb	920 lb	920 lb	920 lb	920 lb	1339 lb	1339 lb	2371 lb	4785 lb		
86	20	SIZE	150	150	150	150	150	200	200	262	350		
		Torque	124 lb in	176 lb in	288 lb in	451 lb in	614 lb in	963 lb in	1297 lb in	1973 lb in	3280 lb in		
		OHL	930 lb	930 lb	930 lb	930 lb	930 lb	1352 lb	1352 lb	2436 lb	4800 lb		
69	25	SIZE	150	150	150	150	150	200	200	262	350		
		Torque	155 lb in	220 lb in	359 lb in	563 lb in	768 lb in	1203 lb in	1620 lb in	2465 lb in	4097 lb in		
		OHL	938 lb	938 lb	938 lb	938 lb	938 lb	1361 lb	1361 lb	2491 lb	4717 lb		
58	30	SIZE	150	150	150	150	200	262	262	262	350		
		Torque	189 lb in	266 lb in	430 lb in	672 lb in	921 lb in	1419 lb in	1913 lb in	2902 lb in	4872 lb in		
		OHL	970 lb	970 lb	970 lb	970 lb	1410 lb	2751 lb	2751 lb	2751 lb	4925 lb		
46	38	SIZE	150	150	150	150	200	262	262	262	350		
		Torque	236 lb in	332 lb in	538 lb in	840 lb in	1151 lb in	1773 lb in	2390 lb in	3625 lb in	6087 lb in		
		OHL	979 lb	979 lb	979 lb	979 lb	1421 lb	2781 lb	2781 lb	2781 lb	4823 lb		
43	40	SIZE	150	150	150	150	200	262	262	350			
		Torque	246 lb in	346 lb in	560 lb in	875 lb in	1209 lb in	1863 lb in	2510 lb in	3781 lb in			
		OHL	981 lb	981 lb	981 lb	981 lb	1423 lb	2786 lb	2786 lb	5197 lb			
35	50	SIZE	150	150	150	150	200	262	262	350			
		Torque	307 lb in	433 lb in	700 lb in	1093 lb in	1511 lb in	2328 lb in	3136 lb in	4724 lb in			
		OHL	985 lb	985 lb	985 lb	985 lb	1425 lb	2805 lb	2805 lb	5154 lb			
29	60	SIZE	150	150	150	200	200	262	350	350			
		Torque	360 lb in	504 lb in	811 lb in	1287 lb in	1746 lb in	2712 lb in	3606 lb in	5504 lb in			
		OHL	1013 lb	1013 lb	1013 lb	1472 lb	1472 lb	2910 lb	5064 lb	5064 lb			

* Refer to page CG-47 for exact ratio

ComboGear

Selection Using Rating Tables

Because the efficiency of worm gear speed reducers varies from approximately 60 to 90%, it is important to consider the horsepower/torque conditions at both input and output in a given application. In a situation where motor horsepower is known (e.g., competitive interchange or when a particular motor is available), selection can be done based on input ratings. Where a gearbox is being selected by a designer who knows driven equipment loads, the reducer is selected from the output torque capacity.

Horsepower Method Of Selection

Step 1: Determine Service Factor by referring to the reducer service factor table. Read the appropriate service factor.

Step 2: To determine Equivalent Horsepower, multiply the motor horsepower by the service factor obtained in Step 1.

Step 3: To calculate the required Ratio, divide the motor shaft rpm by the reducer output shaft rpm.

Step 4: To determine the Unit Size, refer to the rating tables and read across from the ratio row and down from the motor rpm column to select a unit whose mechanical input horsepower rating meets or exceeds the equivalent horsepower.

Reducer Service Factors

Prime Mover	Duration of Service Per Day	Driven Machine Load Classification		
		Uniform	Medium Shock	Heavy Shock
Electric Motor	Occasional 1/2 hour	0.80	0.90	1.00
	Intermittent 2 hours	0.90	1.00	1.25
	10 hours	1.00	1.25	1.50
	24 hours	1.25	1.50	1.75
Electric Motor with frequent Starts and Stops	Occasional 1/2 hour	0.90	1.00	1.25
	Intermittent 2 hours	1.00	1.25	1.50
	10 hours	1.25	1.50	1.75
	24 hours	1.50	1.75	2.00

Overhung Load

To determine overhung load, divide the torque required by the pitch radius of the sprocket, sheave, etc. and multiply by the appropriate factor as follows:

Chain Drive	1.00
Synchronous Belt Drive	1.10
Spur or Helical Gear	1.25
V-Belt	1.50
Flat Belt	2.50

The calculated overhung load must not exceed the output overhung load rating.

For loads acting a more than one shaft diameter from the seal face, use the following conversion factors:

Distance in Shaft diameters from Output Seal Face	Multiply Overhung Load Capacity by this Factor
1D	1.00
2D	0.65
3D	0.45
4D	0.35
5D	0.30

ComboGear
Torque Method Of Selection

Step 1: **Determine Service Factor** Referring to the reducer service factor table (page CG-12), determine the appropriate service factor.

Step 2: **Determine Equivalent Torque** Multiply the torque required to drive the load at the output of the reducer by the service factor obtained in Step 1. (If drive components, e.g. chain or belt drives, are used between reducer and driven equipment be sure to account for them when calculating output torque at the reducer.)

Step 3: **Calculate Required Ratio** Divide the motor shaft rpm by the reducer output shaft rpm.

Step 4: **Determine Unit Size** Refer to the rating tables and read across from ratio row and down from motor rpm column to select a unit whose mechanical output torque rating meets or exceeds the equivalent torque.

Step 5: **Determine Required Motor Horsepower** First, calculate the output horsepower using the following equation, where output torque is the torque required to drive the load at the output of the reducer:

$$\text{Output HP} = \frac{\text{Output Speed} \times \text{Output Torque}}{63025}$$

Then calculate the required motor horsepower using the following equation to account for reducer efficiency:

$$\text{Required Motor Horsepower} = \frac{\text{Output Hp} \times \text{Rated Input Hp}}{\text{Rated Output Hp}}$$

Step 6: **Select Motor Hp** From available motors, select a horsepower that is equal to or greater than the value from Step 5: When the nearest motor horsepower is greater, check service factor at input by dividing rated input horsepower by actual motor horsepower. If the service factor is less than the value from Step 1, a larger reducer may be required.

ComboGear Size C150

Ratio	Rating Data	Input RPM					Part Numbers		Shaft Position
		2500	1750	1450	1170	870	56C	140TC	
	Output RPM	341	239	198	160	119	**056C150T007S1A**	**140C150T007S1A**	Taper Hollow
	Mechanical Input HP	1.99	1.52	1.32	1.12	0.85	**056C150S007S1A**	**140C150S007S1A**	Str. Hollow
7.50	Output Torque (lb. in.)	318	345	358	375	376	**056C150B007K1A**	**140C150B007K1A**	K1
	Output HP Rating	1.72	1.31	1.12	0.95	0.71	**056C150B007L1A**	**140C150B007L1A**	L1
	Output OHL (lbs.)	843	866	877	889	903	**056C150B007LKA**	**140C150B007LKA**	LK
	Output RPM	271	190	157	127	94	**056C150T009S1A**	**140C150T009S1A**	Taper Hollow
	Mechanical Input HP	1.99	1.52	1.32	1.12	0.85	**056C150S009S1A**	**140C150S009S1A**	Str. Hollow
9.40	Output Torque (lb. in.)	400	434	451	472	473	**056C150B009K1A**	**140C150B009K1A**	K1
	Output HP Rating	1.72	1.31	1.12	0.95	0.71	**056C150B009L1A**	**140C150B009L1A**	L1
	Output OHL (lbs.)	854	882	898	916	942	**056C150B009LKA**	**140C150B009LKA**	LK
	Output RPM	225.50	157.80	130.80	105.10	78.47	**056C150T010S1A**	**140C150T010S1A**	Taper Hollow
	Mechanical Input HP	2.01	1.52	1.32	1.12	0.85	**056C150S010S1A**	**140C150S010S1A**	Str. Hollow
10	Output Torque (lb. in.)	487	522	542	567	568	**056C150B010K1A**	**140C150B010K1A**	K1
	Output HP Rating	1.74	1.31	1.12	0.95	0.71	**056C150B010L1A**	**140C150B010L1A**	L1
	Output OHL (lbs.)	867	896	919	933	960	**056C150B010LKA**	**140C150B010LKA**	LK
	Output RPM	179.10	125.40	103.90	83.82	62.33	**056C150T015S1A**	**140C150T015S1A**	Taper Hollow
	Mechanical Input HP	2.01	1.52	1.32	1.12	0.85	**056C150S015S1A**	**140C150S015S1A**	Str. Hollow
15	Output Torque (lb. in.)	613	657	682	714	716	**056C150B015K1A**	**140C150B015K1A**	K1
	Output HP Rating	1.74	1.31	1.12	0.95	0.71	**056C150B015L1A**	**140C150B015L1A**	L1
	Output OHL (lbs.)	881	910	935	948	976	**056C150B015LKA**	**140C150B015LKA**	LK
	Output RPM	150.00	105.00	87.00	70.20	52.20	**056C150T018S1A**	**140C150T018S1A**	Taper Hollow
	Mechanical Input HP	2.01	1.52	1.32	1.12	0.85	**056C150S018S1A**	**140C150S018S1A**	Str. Hollow
18	Output Torque (lb. in.)	732	784	815	852	854	**056C150B018K1A**	**140C150B018K1A**	K1
	Output HP Rating	1.74	1.31	1.12	0.95	0.71	**056C150B018L1A**	**140C150B018L1A**	L1
	Output OHL (lbs.)	891	920	947	959	987	**056C150B018LKA**	**140C150B018LKA**	LK
	Output RPM	123.30	86.30	71.51	57.70	42.90	**056C150T020S1A**	**140C150T020S1A**	Taper Hollow
	Mechanical Input HP	2.01	1.52	1.32	1.12	0.85	**056C150S020S1A**	**140C150S020S1A**	Str. Hollow
20	Output Torque (lb. in.)	891	954	991	1037	1040	**056C150B020K1A**	**140C150B020K1A**	K1
	Output HP Rating	1.74	1.31	1.12	0.95	0.71	**056C150B020L1A**	**140C150B020L1A**	L1
	Output OHL (lbs.)	901	930	959	969	998	**056C150B020LKA**	**140C150B020LKA**	LK
	Output RPM	98.68	69.08	57.24	46.18	34.34	**056C150T025S1A**	**140C150T025S1A**	Taper Hollow
	Mechanical Input HP	2.01	1.52	1.32	1.12	0.85	**056C150S025S1A**	**140C150S025S1A**	Str. Hollow
25	Output Torque (lb. in.)	1113	1192	1238	1296	1299	**056C150B025K1A**	**140C150B025K1A**	K1
	Output HP Rating	1.74	1.31	1.12	0.95	0.71	**056C150B025L1A**	**140C150B025L1A**	L1
	Output OHL (lbs.)	909	938	971	978	1008	**056C150B025LKA**	**140C150B025LKA**	LK
	Output RPM	82.19	57.53	47.67	38.47	28.60	**056C150T030S1A**	**140C150T030S1A**	Taper Hollow
	Mechanical Input HP	1.69	1.11	1.01	0.87	0.75	**056C150S030S1A**	**140C150S030S1A**	Str. Hollow
30	Output Torque (lb. in.)	1106	1022	1113	1184	1361	**056C150B030K1A**	**140C150B030K1A**	K1
	Output HP Rating	1.44	0.93	0.84	0.72	0.62	**056C150B030L1A**	**140C150B030L1A**	L1
	Output OHL (lbs.)	932	970	977	1003	1041	**056C150B030LKA**	**140C150B030LKA**	LK
	Output RPM	65.79	46.05	38.16	30.79	22.89	**056C150T038S1A**	**140C150T038S1A**	Taper Hollow
	Mechanical Input HP	1.69	1.11	1.01	0.87	0.75	**056C150S038S1A**	**140C150S038S1A**	Str. Hollow
38	Output Torque (lb. in.)	1382	1277	1391	1479	1700	**056C150B038K1A**	**140C150B038K1A**	K1
	Output HP Rating	1.44	0.93	0.84	0.72	0.62	**056C150B038L1A**	**140C150B038L1A**	L1
	Output OHL (lbs.)	940	979	983	1012	1052	**056C150B038LKA**	**140C150B038LKA**	LK
	Output RPM	61.64	43.15	35.75	28.85	21.45	**056C150T040S1A**	**140C150T040S1A**	Taper Hollow
	Mechanical Input HP	1.50	1.13	1.01	0.83	0.66	**056C150S040S1A**	**140C150S040S1A**	Str. Hollow
40	Output Torque (lb. in.)	1277	1347	1452	1458	1548	**056C150B040K1A**	**140C150B040K1A**	K1
	Output HP Rating	1.25	0.92	0.82	0.67	0.53	**056C150B040L1A**	**140C150B040L1A**	L1
	Output OHL (lbs.)	940	981	983	1013	1054	**056C150B040LKA**	**140C150B040LKA**	LK
	Output RPM	49.34	34.54	28.62	23.09	17.17	**056C150T050S1A**	**140C150T050S1A**	Taper Hollow
	Mechanical Input HP	1.50	1.11	1.01	0.81	0.62	**056C150S050S1A**	**140C150S050S1A**	Str. Hollow
50	Output Torque (lb. in.)	1596	1663	1814	1776	1802	**056C150B050K1A**	**140C150B050K1A**	K1
	Output HP Rating	1.25	0.91	0.82	0.65	0.49	**056C150B050L1A**	**140C150B050L1A**	L1
	Output OHL (lbs.)	943	985	983	1016	1061	**056C150B050LKA**	**140C150B050LKA**	LK

NOTE: All units include drilled and tapped mounting holes on the top and bottom surfaces. If optional bolt-on foot is required order part number **6011246.**
OHL in pounds at one shaft diameter from shaft shoulder.

ComboGear Size C150 (continued)

Ratio	Rating Data	Input RPM					Part Numbers		Shaft Position
		2500	1750	1450	1170	870	56C	140TC	
60	Output RPM	41.10	28.77	23.84	19.23	14.30	**056C150T060S1A**	---	Taper Hollow
	Mechanical Input HP	1.08	0.87	0.77	0.64	0.50	**056C150S060S1A**	---	Str. Hollow
	Output Torque (lb. in.)	1299	1474	1556	1585	1658	**056C150B060K1A**	---	K1
	Output HP Rating	0.85	0.67	0.59	0.48	0.38	**056C150B060L1A**	---	L1
	Output OHL (lbs.)	985	1013	1019	1062	1063	**056C150B060LKA**	---	LK
75	Output RPM	32.89	23.03	19.08	15.39	11.45	**056C150T075S1A**	---	Taper Hollow
	Mechanical Input HP	1.08	0.80	0.75	0.59	0.45	**056C150S075S1A**	---	Str. Hollow
	Output Torque (lb. in.)	1623	1690	1898	1809	1834	**056C150B075K1A**	---	K1
	Output HP Rating	0.85	0.62	0.57	0.44	0.33	**056C150B075L1A**	---	L1
	Output OHL (lbs.)	990	1020	1064	1067	1113	**056C150B075LKA**	---	LK
80	Output RPM	30.82	21.58	17.88	14.42	10.73	**056C150T080S1A**	---	Taper Hollow
	Mechanical Input HP	0.85	0.75	0.64	0.53	0.42	**056C150S080S1A**	---	Str. Hollow
	Output Torque (lb. in.)	1293	1603	1619	1649	1699	**056C150B080K1A**	---	K1
	Output HP Rating	0.63	0.55	0.46	0.38	0.29	**056C150B080L1A**	---	L1
	Output OHL (lbs.)	1019	1023	1068	1070	1118	**056C150B080LKA**	---	LK
90	Output RPM	27.41	19.19	15.90	12.83	9.54	**056C150T090S1A**	---	Taper Hollow
	Mechanical Input HP	0.75	0.57	0.50	0.41	0.31	**056C150S090S1A**	---	Str. Hollow
	Output Torque (lb. in.)	1315	1416	1480	1475	1506	**056C150B090K1A**	---	K1
	Output HP Rating	0.57	0.43	0.37	0.30	0.23	**056C150B090L1A**	---	L1
	Output OHL (lbs.)	1020	1063	1068	1111	1115	**056C150B090LKA**	---	LK
100	Output RPM	24.67	17.27	14.31	11.55	8.59	**056C150T100S1A**	---	Taper Hollow
	Mechanical Input HP	0.85	0.65	0.57	0.50	0.36	**056C150S100S1A**	---	Str. Hollow
	Output Torque (lb. in.)	1616	1717	1813	1928	1849	**056C150B100K1A**	---	K1
	Output HP Rating	0.63	0.47	0.41	0.35	0.25	**056C150B100L1A**	---	L1
	Output OHL (lbs.)	1025	1070	1073	1069	1122	**056C150B100LKA**	---	LK
125	Output RPM	20.55	14.38	11.92	9.62	7.15	**056C150T125S1A**	---	Taper Hollow
	Mechanical Input HP	0.63	0.52	0.47	0.40	0.33	**056C150S125S1A**	---	Str. Hollow
	Output Torque (lb. in.)	1251	1453	1556	1616	1736	**056C150B125K1A**	---	K1
	Output HP Rating	0.41	0.33	0.29	0.25	0.20	**056C150B125L1A**	---	L1
	Output OHL (lbs.)	1071	1081	1125	1132	1134	**056C150B125LKA**	---	LK
150	Output RPM	16.45	11.51	9.54	7.70	5.72	**056C150T150S1A**	---	Taper Hollow
	Mechanical Input HP	0.63	0.50	0.44	0.37	0.29	**056C150S150S1A**	---	Str. Hollow
	Output Torque (lb. in.)	1562	1717	1813	1846	1857	**056C150B150K1A**	---	K1
	Output HP Rating	0.41	0.31	0.27	0.23	0.17	**056C150B150L1A**	---	L1
	Output OHL (lbs.)	1081	1082	1135	1136	1173	**056C150B150LKA**	---	LK
160	Output RPM	15.41	10.79	8.94	7.21	5.36	**056C150T160S1A**	---	Taper Hollow
	Mechanical Input HP	0.52	0.47	0.39	0.33	0.25	**056C150S160S1A**	---	Str. Hollow
	Output Torque (lb. in.)	1300	1631	1618	1643	1592	**056C150B160K1A**	---	K1
	Output HP Rating	0.32	0.28	0.23	0.19	0.14	**056C150B160L1A**	---	L1
	Output OHL (lbs.)	1084	1133	1139	1141	1178	**056C150B160LKA**	---	LK
200	Output RPM	12.34	8.63	7.15	5.77	4.29	**056C150T200S1A**	---	Taper Hollow
	Mechanical Input HP	0.52	0.42	0.36	0.30	0.23	**056C150S200S1A**	---	Str. Hollow
	Output Torque (lb. in.)	1624	1788	1857	1857	1857	**056C150B200K1A**	---	K1
	Output HP Rating	0.32	0.25	0.21	0.17	0.13	**056C150B200L1A**	---	L1
	Output OHL (lbs.)	1090	1142	1143	1179	1231	**056C150B200LKA**	---	LK
240	Output RPM	10.27	7.19	5.96	4.81	3.58	**056C150T240S1A**	---	Taper Hollow
	Mechanical Input HP	0.30	0.25	0.22	0.19	0.16	**056C150S240S1A**	---	Str. Hollow
	Output Torque (lb. in.)	926	1091	1140	1208	1288	**056C150B240K1A**	---	K1
	Output HP Rating	0.15	0.12	0.11	0.09	0.07	**056C150B240L1A**	---	L1
	Output OHL (lbs.)	1160	1140	1134	1232	1251	**056C150B240LKA**	---	LK
300	Output RPM	8.22	5.76	4.77	3.85	2.86	**056C150T300S1A**	---	Taper Hollow
	Mechanical Input HP	0.30	0.25	0.22	0.19	0.16	**056C150S300S1A**	---	Str. Hollow
	Output Torque (lb. in.)	1157	1362	1425	1509	1609	**056C150B300K1A**	---	K1
	Output HP Rating	0.15	0.12	0.11	0.09	0.07	**056C150B300L1A**	---	K1
	Output OHL (lbs.)	1176	1136	1120	1244	1258	**056C150B300LKA**	---	LK

NOTE: All units include drilled and tapped mounting holes on the top and bottom surfaces. If optional bolt-on foot is required order part number **6011246**.
OHL in pounds at one shaft diameter from shaft shoulder.

ComboGear Size C200

Ratio	Rating Data	Input RPM					Part Numbers			Shaft Position
		2500	1750	1450	1170	870	56C	140TC	180TC	
9.40	Output RPM	265	185	154	124	92	056C200T009S1A	140C200T009S1A	180C200T009S1A	Taper Hollow
	Mechanical Input HP	4.35	3.58	3.20	2.64	1.97	056C200S009S1A	140C200S009S1A	180C200S009S1A	Str. Hollow
	Output Torque (lb. in.)	936	1093	1175	1189	1181	056C200B009K1A	140C200B009K1A	180C200B009K1A	K1
	Output HP Rating	3.94	3.22	2.87	2.34	1.73	056C200B009L1A	140C200B009L1A	180C200B009L1A	L1
	Output OHL (lbs.)	1495	1473	1455	1425	1361	056C200B009LKA	140C200B009LKA	180C200B009LKA	LK
10	Output RPM	221.20	154.80	128.30	103.50	76.96	056C200T010S1A	140C200T010S1A	180C200T010S1A	Taper Hollow
	Mechanical Input HP	4.35	3.58	3.20	2.64	2.00	056C200S010S1A	140C200S010S1A	180C200S010S1A	Str. Hollow
	Output Torque (lb. in.)	1123	1312	1409	1426	1442	056C200B010K1A	140C200B010K1A	180C200B010K1A	K1
	Output HP Rating	3.94	3.22	2.87	2.34	1.76	056C200B010L1A	140C200B010L1A	180C200B010L1A	L1
	Output OHL (lbs.)	1255	1306	1320	1359	1383	056C200B010LKA	140C200B010LKA	180C200B010LKA	LK
15	Output RPM	179.10	125.40	103.90	83.82	62.33	056C200T015S1A	140C200T015S1A	180C200T015S1A	Taper Hollow
	Mechanical Input HP	4.35	3.58	3.20	2.64	2.00	056C200S015S1A	140C200S015S1A	180C200S015S1A	Str. Hollow
	Output Torque (lb. in.)	1386	1620	1740	1761	1780	056C200B015K1A	140C200B015K1A	180C200B015K1A	K1
	Output HP Rating	3.94	3.22	2.87	2.34	1.76	056C200B015L1A	140C200B015L1A	180C200B015L1A	L1
	Output OHL (lbs.)	1295	1325	1337	1379	1400	056C200B015LKA	140C200B015LKA	180C200B015LKA	LK
18	Output RPM	150.00	105.00	87.00	70.20	52.20	056C200T018S1A	140C200T018S1A	180C200T018S1A	Taper Hollow
	Mechanical Input HP	4.35	3.58	3.20	2.64	2.00	056C200S018S1A	140C200S018S1A	180C200S018S1A	Str. Hollow
	Output Torque (lb. in.)	1655	1934	2078	2103	2126	056C200B018K1A	140C200B018K1A	180C200B018K1A	K1
	Output HP Rating	3.94	3.22	2.87	2.34	1.76	056C200B018L1A	140C200B018L1A	180C200B018L1A	L1
	Output OHL (lbs.)	1312	1339	1349	1394	1410	056C200B018LKA	140C200B018LKA	180C200B018LKA	LK
20	Output RPM	123.30	86.30	71.51	57.70	42.90	056C200T020S1A	140C200T020S1A	180C200T020S1A	Taper Hollow
	Mechanical Input HP	4.35	3.58	3.20	2.64	2.00	056C200S020S1A	140C200S020S1A	180C200S020S1A	Str. Hollow
	Output Torque (lb. in.)	2014	2353	2528	2558	2586	056C200B020K1A	140C200B020K1A	180C200B020K1A	K1
	Output HP Rating	3.94	3.22	2.87	2.34	1.76	056C200B020L1A	140C200B020L1A	180C200B020L1A	L1
	Output OHL (lbs.)	1329	1352	1358	1408	1418	056C200B020LKA	140C200B020LKA	180C200B020LKA	LK
25	Output RPM	98.68	69.08	57.24	46.18	34.34	056C200T025S1A	140C200T025S1A	180C200T025S1A	Taper Hollow
	Mechanical Input HP	4.35	3.58	3.14	2.61	2.00	056C200S025S1A	140C200S025S1A	180C200S025S1A	Str. Hollow
	Output Torque (lb. in.)	2516	2940	3097	3170	3231	056C200B025K1A	140C200B025K1A	180C200B025K1A	K1
	Output HP Rating	3.94	3.22	2.81	2.32	1.76	056C200B025L1A	140C200B025L1A	180C200B025L1A	L1
	Output OHL (lbs.)	1346	1361	1361	1419	1418	056C200B025LKA	140C200B025LKA	180C200B025LKA	LK
30	Output RPM	82.19	57.53	47.67	38.47	28.60	056C200T030S1A	140C200T030S1A	---	Taper Hollow
	Mechanical Input HP	2.95	2.06	1.89	1.69	1.41	056C200S030S1A	140C200S030S1A	---	Str. Hollow
	Output Torque (lb. in.)	1989	1960	2157	2374	2634	056C200B030K1A	140C200B030K1A	---	K1
	Output HP Rating	2.59	1.79	1.63	1.45	1.20	056C200B030L1A	140C200B030L1A	---	L1
	Output OHL (lbs.)	1385	1410	1445	1457	1513	056C200B030LKA	140C200B030LKA	---	LK
38	Output RPM	65.79	46.05	38.16	30.79	22.89	056C200T038S1A	140C200T038S1A	---	Taper Hollow
	Mechanical Input HP	2.95	2.06	1.89	1.69	1.41	056C200S038S1A	140C200S038S1A	---	Str. Hollow
	Output Torque (lb. in.)	2484	2449	2695	2966	3291	056C200B038K1A	140C200B038K1A	---	K1
	Output HP Rating	2.59	1.79	1.63	1.45	1.20	056C200B038L1A	140C200B038L1A	---	L1
	Output OHL (lbs.)	1403	1421	1460	1467	1526	056C200B038LKA	140C200B038LKA	---	LK
40	Output RPM	61.64	43.15	35.75	28.85	21.45	056C200T040S1A	140C200T040S1A	---	Taper Hollow
	Mechanical Input HP	2.53	2.08	1.88	1.54	1.17	056C200S040S1A	140C200S040S1A	---	Str. Hollow
	Output Torque (lb. in.)	2226	2585	2798	2826	2826	056C200B040K1A	140C200B040K1A	---	K1
	Output HP Rating	2.18	1.77	1.59	1.29	0.96	056C200B040L1A	140C200B040L1A	---	L1
	Output OHL (lbs.)	1407	1423	1462	1467	1529	056C200B040LKA	140C200B040LKA	---	LK
50	Output RPM	49.34	34.54	28.62	23.09	17.17	056C200T050S1A	140C200T050S1A	---	Taper Hollow
	Mechanical Input HP	2.53	2.03	1.76	1.50	1.12	056C200S050S1A	140C200S050S1A	---	Str. Hollow
	Output Torque (lb. in.)	2782	3165	3280	3429	3381	056C200B050K1A	140C200B050K1A	---	K1
	Output HP Rating	2.18	1.73	1.49	1.26	0.92	056C200B050L1A	140C200B050L1A	---	L1
	Output OHL (lbs.)	1421	1425	1469	1465	1533	056C200B050LKA	140C200B050LKA	---	LK
60	Output RPM	41.10	28.77	23.84	19.23	14.30	056C200T060S1A	140C200T060S1A	---	Taper Hollow
	Mechanical Input HP	1.81	1.50	1.33	1.09	0.83	056C200S060S1A	140C200S060S1A	---	Str. Hollow
	Output Torque (lb. in.)	2278	2665	2826	2826	2826	056C200B060K1A	140C200B060K1A	---	K1
	Output HP Rating	1.49	1.22	1.07	0.86	0.64	056C200B060L1A	140C200B060L1A	---	L1
	Output OHL (lbs.)	1458	1472	1529	1537	1585	056C200B060LKA	140C200B060LKA	---	LK

NOTE: All units include drilled and tapped mounting holes on the top and bottom surfaces. If optional bolt-on foot is required order part number **6011253**.
OHL in pounds at one shaft diameter from shaft shoulder.

ComboGear Size C200 (continued)

Ratio	Rating Data	Input RPM					Part Numbers			Shaft Position
		2500	1750	1450	1170	870	56C	140TC	180TC	
	Output RPM	32.89	23.03	19.08	15.39	11.45	**056C200T075S1A**	**140C200T075S1A**	---	Taper Hollow
	Mechanical Input HP	1.81	1.50	1.27	1.05	0.81	**056C200S075S1A**	**140C200S075S1A**	---	Str. Hollow
75	Output Torque (lb. in.)	2846	3329	3367	3390	3453	**056C200B075K1A**	**140C200B075K1A**	---	K1
	Output HP Rating	1.49	1.22	1.02	0.83	0.63	**056C200B075L1A**	**140C200B075L1A**	---	L1
	Output OHL (lbs.)	1510	1470	1539	1538	1587	**056C200B075LKA**	**140C200B075LKA**	---	LK
	Output RPM	30.82	21.58	17.88	14.42	10.73	**056C200T080S1A**	**140C200T080S1A**	---	Taper Hollow
	Mechanical Input HP	1.48	1.18	1.06	0.87	0.66	**056C200S080S1A**	**140C200S080S1A**	---	Str. Hollow
80	Output Torque (lb. in.)	2325	2640	2826	2826	2826	**056C200B080K1A**	**140C200B080K1A**	---	K1
	Output HP Rating	1.14	0.90	0.80	0.65	0.48	**056C200B080L1A**	**140C200B080L1A**	---	L1
	Output OHL (lbs.)	1516	1537	1544	1590	1653	**056C200B080LKA**	**140C200B080LKA**	---	LK
	Output RPM	27.41	19.19	15.90	12.83	9.54	**056C200T090S1A**	**140C200T090S1A**	---	Taper Hollow
	Mechanical Input HP	1.53	1.27	1.11	0.92	0.75	**056C200S090S1A**	**140C200S090S1A**	---	Str. Hollow
90	Output Torque (lb. in.)	2794	3248	3384	3418	3666	**056C200B090K1A**	**140C200B090K1A**	---	K1
	Output HP Rating	1.22	0.99	0.85	0.70	0.55	**056C200B090L1A**	**140C200B090L1A**	---	L1
	Output OHL (lbs.)	1478	1542	1544	1594	1660	**056C200B090LKA**	**140C200B090LKA**	---	LK
	Output RPM	24.67	17.27	14.31	11.55	8.59	**056C200T100S1A**	**140C200T100S1A**	---	Taper Hollow
	Mechanical Input HP	1.48	1.17	1.02	0.85	0.65	**056C200S100S1A**	**140C200S100S1A**	---	Str. Hollow
100	Output Torque (lb. in.)	2969	3290	3401	3434	3468	**056C200B100K1A**	**140C200B100K1A**	---	K1
	Output HP Rating	1.16	0.90	0.77	0.63	0.47	**056C200B100L1A**	**140C200B100L1A**	---	L1
	Output OHL (lbs.)	1532	1544	1543	1595	1665	**056C200B100LKA**	**140C200B100LKA**	---	LK
	Output RPM	19.74	13.82	11.45	9.24	6.87	**056C200T125S1A**	---	---	Taper Hollow
	Mechanical Input HP	1.20	1.00	0.86	0.75	0.55	**056C200S125S1A**	---	---	Str. Hollow
125	Output Torque (lb. in.)	2896	3372	3432	3660	3498	**056C200B125K1A**	---	---	K1
	Output HP Rating	0.91	0.74	0.62	0.54	0.38	**056C200B125L1A**	---	---	L1
	Output OHL (lbs.)	1546	1545	1599	1666	1672	**056C200B125LKA**	---	---	LK
	Output RPM	16.45	11.51	9.54	7.70	5.72	**056C200T150S1A**	---	---	Taper Hollow
	Mechanical Input HP	1.02	0.85	0.78	0.65	0.51	**056C200S150S1A**	---	---	Str. Hollow
150	Output Torque (lb. in.)	2735	3198	3440	3482	3518	**056C200B150K1A**	---	---	K1
	Output HP Rating	0.71	0.58	0.52	0.43	0.32	**056C200B150L1A**	---	---	L1
	Output OHL (lbs.)	1558	1607	1616	1683	1683	**056C200B150LKA**	---	---	LK
	Output RPM	15.41	10.79	8.94	7.21	5.36	**056C200T160S1A**	---	---	Taper Hollow
	Mechanical Input HP	0.82	0.75	0.64	0.53	0.41	**056C200S160S1A**	---	---	Str. Hollow
160	Output Torque (lb. in.)	2211	2813	2826	2826	2826	**056C200B160K1A**	---	---	K1
	Output HP Rating	0.54	0.48	0.40	0.32	0.24	**056C200B160L1A**	---	---	L1
	Output OHL (lbs.)	1600	1667	1684	1690	1763	**056C200B160LKA**	---	---	LK
	Output RPM	12.34	8.63	7.15	5.77	4.29	**056C200T200S1A**	---	---	Taper Hollow
	Mechanical Input HP	0.82	0.75	0.63	0.53	0.41	**056C200S200S1A**	---	---	Str. Hollow
200	Output Torque (lb. in.)	2762	3514	3496	3520	3530	**056C200B200K1A**	---	---	K1
	Output HP Rating	0.54	0.48	0.40	0.32	0.24	**056C200B200L1A**	---	---	L1
	Output OHL (lbs.)	1613	1681	1703	1691	1774	**056C200B200LKA**	---	---	LK
	Output RPM	10.27	7.19	5.96	4.81	3.58	**056C200T240S1A**	---	---	Taper Hollow
	Mechanical Input HP	0.58	0.45	0.42	0.37	0.31	**056C200S240S1A**	---	---	Str. Hollow
240	Output Torque (lb. in.)	2100	2236	2450	2628	2826	**056C200B240K1A**	---	---	K1
	Output HP Rating	0.34	0.26	0.23	0.20	0.16	**056C200B240L1A**	---	---	L1
	Output OHL (lbs.)	1676	1745	1764	1780	1836	**056C200B240LKA**	---	---	LK
	Output RPM	8.22	5.76	4.77	3.85	2.86	**056C200T300S1A**	---	---	Taper Hollow
	Mechanical Input HP	0.58	0.45	0.42	0.37	0.31	**056C200S300S1A**	---	---	Str. Hollow
300	Output Torque (lb. in.)	2624	2794	3061	3284	3530	**056C200B300K1A**	---	---	K1
	Output HP Rating	0.34	0.26	0.23	0.20	0.16	**056C200B300L1A**	---	---	L1
	Output OHL (lbs.)	1694	1767	1781	1789	1848	**056C200B300LKA**	---	---	LK

NOTE: All units include drilled and tapped mounting holes on the top and bottom surfaces. If optional bolt-on foot is required order part number **6011253**.
OHL in pounds at one shaft diameter from shaft shoulder.

ComboGear Size C262

Ratio	Rating Data	Input RPM					Part Numbers			Shaft Position
		2500	1750	1450	1170	870	56C	140TC	180TC	
7.50	Output RPM	341	239	198	160	119	056C262T007S1A	140C262T007S1A	180C262T007S1A	Taper Hollow
	Mechanical Input HP	5.87	5.00	4.59	4.22	3.66	056C262S007S1A	140C262S007S1A	180C262S007S1A	Str. Hollow
	Output Torque (lb. in.)	993	1176	1317	1491	1722	056C262B007K1A	140C262B007K1A	180C262B007K1A	K1
	Output HP Rating	5.37	4.46	4.14	3.78	3.25	056C262B007L1A	140C262B007L1A	180C262B007L1A	L1
	Output OHL (lbs.)	2989	2969	2952	2930	2899	056C262B007LKA	140C262B007LKA	180C262B007LKA	LK
9.40	Output RPM	266	186	154	124	92	056C262T009S1A	140C262T009S1A	180C262T009S1A	Taper Hollow
	Mechanical Input HP	5.87	5.00	4.59	4.22	3.66	056C262S009S1A	140C262S009S1A	180C262S009S1A	Str. Hollow
	Output Torque (lb. in.)	1273	1511	1693	1924	2227	056C262B009K1A	140C262B009K1A	180C262B009K1A	K1
	Output HP Rating	5.37	4.46	4.14	3.78	3.25	056C262B009L1A	140C262B009L1A	180C262B009L1A	L1
	Output OHL (lbs.)	2375	2448	2485	2528	2589	056C262B009LKA	140C262B009LKA	180C262B009LKA	LK
10	Output RPM	220.00	154.00	127.60	103.00	76.56	056C262T010S1A	140C262T010S1A	180C262T010S1A	Taper Hollow
	Mechanical Input HP	6.52	5.43	5.07	4.65	4.03	056C262S010S1A	140C262S010S1A	180C262S010S1A	Str. Hollow
	Output Torque (lb. in.)	1710	2023	2257	2553	2946	056C262B010K1A	140C262B010K1A	180C262B010K1A	K1
	Output HP Rating	5.97	4.94	4.57	4.17	3.58	056C262B010L1A	140C262B010L1A	180C262B010L1A	L1
	Output OHL (lbs.)	2102	2220	2275	2637	2696	056C262B010LKA	140C262B010LKA	180C262B010LKA	LK
15	Output RPM	179.10	125.40	103.90	83.82	62.33	056C262T015S1A	140C262T015S1A	180C262T015S1A	Taper Hollow
	Mechanical Input HP	6.52	5.43	5.07	4.65	4.03	056C262S015S1A	140C262S015S1A	180C262S015S1A	Str. Hollow
	Output Torque (lb. in.)	2101	2485	2773	3135	3619	056C262B015K1A	140C262B015K1A	180C262B015K1A	K1
	Output HP Rating	5.97	4.94	4.57	4.17	3.58	056C262B015L1A	140C262B015L1A	180C262B015L1A	L1
	Output OHL (lbs.)	2181	2283	2326	2683	2727	056C262B015LKA	140C262B015LKA	180C262B015LKA	LK
18	Output RPM	150.00	105.00	87.00	70.20	52.20	056C262T018S1A	140C262T018S1A	180C262T018S1A	Taper Hollow
	Mechanical Input HP	6.52	5.43	5.07	4.65	4.03	056C262S018S1A	140C262S018S1A	180C262S018S1A	Str. Hollow
	Output Torque (lb. in.)	2509	2967	3311	3744	4321	056C262B018K1A	140C262B018K1A	180C262B018K1A	K1
	Output HP Rating	5.97	4.94	4.57	4.17	3.58	056C262B018L1A	140C262B018L1A	180C262B018L1A	L1
	Output OHL (lbs.)	2274	2371	2410	2717	2757	056C262B018LKA	140C262B018LKA	180C262B018LKA	LK
20	Output RPM	123.30	86.30	71.51	57.70	42.90	056C262T020S1A	140C262T020S1A	180C262T020S1A	Taper Hollow
	Mechanical Input HP	6.52	5.43	5.07	4.65	4.03	056C262S020S1A	140C262S020S1A	180C262S020S1A	Str. Hollow
	Output Torque (lb. in.)	3052	3610	4028	4555	5257	056C262B020K1A	140C262B020K1A	180C262B020K1A	K1
	Output HP Rating	5.97	4.94	4.57	4.17	3.58	056C262B020L1A	140C262B020L1A	180C262B020L1A	L1
	Output OHL (lbs.)	2357	2436	2461	2749	2781	056C262B020LKA	140C262B020LKA	180C262B020LKA	LK
25	Output RPM	98.68	69.08	57.24	46.18	34.34	056C262T025S1A	140C262T025S1A	180C262T025S1A	Taper Hollow
	Mechanical Input HP	6.52	5.37	5.07	4.62	3.60	056C262S025S1A	140C262S025S1A	180C262S025S1A	Str. Hollow
	Output Torque (lb. in.)	3813	4462	5032	5657	5863	056C262B025K1A	140C262B025K1A	180C262B025K1A	K1
	Output HP Rating	5.97	4.89	4.57	4.15	3.19	056C262B025L1A	140C262B025L1A	180C262B025L1A	L1
	Output OHL (lbs.)	2441	2491	2496	2779	2799	056C262B025LKA	140C262B025LKA	180C262B025LKA	LK
30	Output RPM	82.19	57.53	47.67	38.47	28.60	056C262T030S1A	140C262T030S1A	180C262T030S1A	Taper Hollow
	Mechanical Input HP	5.37	4.45	4.09	3.71	3.10	056C262S030S1A	140C262S030S1A	180C262S030S1A	Str. Hollow
	Output Torque (lb. in.)	3694	4331	4789	5345	5938	056C262B030K1A	140C262B030K1A	180C262B030K1A	K1
	Output HP Rating	4.82	3.95	3.62	3.26	2.70	056C262B030L1A	140C262B030L1A	180C262B030L1A	L1
	Output OHL (lbs.)	2455	2751	2773	2790	2795	056C262B030LKA	140C262B030LKA	180C262B030LKA	LK
38	Output RPM	65.79	46.05	38.16	30.79	22.89	056C262T038S1A	140C262T038S1A	180C262T038S1A	Taper Hollow
	Mechanical Input HP	5.37	4.45	4.03	3.29	2.52	056C262S038S1A	140C262S038S1A	180C262S038S1A	Str. Hollow
	Output Torque (lb. in.)	4616	5410	5893	5918	6016	056C262B038K1A	140C262B038K1A	180C262B038K1A	K1
	Output HP Rating	4.82	3.95	3.57	2.89	2.19	056C262B038L1A	140C262B038L1A	180C262B038L1A	L1
	Output OHL (lbs.)	2507	2781	2796	2802	2923	056C262B038LKA	140C262B038LKA	180C262B038LKA	LK
40	Output RPM	61.64	43.15	35.75	28.85	21.45	056C262T040S1A	140C262T040S1A	180C262T040S1A	Taper Hollow
	Mechanical Input HP	4.25	3.63	3.38	3.07	2.42	056C262S040S1A	140C262S040S1A	180C262S040S1A	Str. Hollow
	Output Torque (lb. in.)	3822	4619	5166	5760	6018	056C262B040K1A	140C262B040K1A	180C262B040K1A	K1
	Output HP Rating	3.74	3.16	2.93	2.64	2.05	056C262B040L1A	140C262B040L1A	180C262B040L1A	L1
	Output OHL (lbs.)	2743	2786	2797	2799	2924	056C262B040LKA	140C262B040LKA	180C262B040LKA	LK
50	Output RPM	49.34	34.54	28.62	23.09	17.17	056C262T050S1A	140C262T050S1A	180C262T050S1A	Taper Hollow
	Mechanical Input HP	4.25	3.63	3.11	2.57	2.00	056C262S050S1A	140C262S050S1A	180C262S050S1A	Str. Hollow
	Output Torque (lb. in.)	4775	5771	5935	6018	6200	056C262B050K1A	140C262B050K1A	180C262B050K1A	K1
	Output HP Rating	3.74	3.16	2.70	2.21	1.69	056C262B050L1A	140C262B050L1A	180C262B040L1A	L1
	Output OHL (lbs.)	2776	2805	2804	2926	2927	056C262B050LKA	140C262B050LKA	180C262B050LKA	LK

NOTE: All units include drilled and tapped mounting holes on the top and bottom surfaces. If optional bolt-on foot is required order part number **6011253.**
OHL in pounds at one shaft diameter from shaft shoulder.

ComboGear Size C262 (continued)

Ratio	Rating Data	Input RPM					Part Numbers			Shaft Position
		2500	1750	1450	1170	870	56C	140TC	180TC	
60	Output RPM	41.10	28.77	23.84	19.23	14.30	056C262T060S1A	140C262T060S1A	---	Taper Hollow
	Mechanical Input HP	3.15	2.73	2.53	2.26	1.73	056C262S060S1A	140C262S060S1A	---	Str. Hollow
	Output Torque (lb. in.)	4101	5012	5555	6070	6133	056C262B060K1A	140C262B060K1A	---	K1
	Output HP Rating	2.67	2.29	2.10	1.85	1.39	056C262B060L1A	140C262B060L1A	---	L1
	Output OHL (lbs.)	2794	2910	2926	2935	3028	056C262B060LKA	140C262B060LKA	---	LK
75	Output RPM	32.89	23.03	19.08	15.39	11.45	056C262T075S1A	140C262T075S1A	---	Taper Hollow
	Mechanical Input HP	3.15	2.59	2.23	1.84	1.41	056C262S075S1A	140C262S075S1A	---	Str. Hollow
	Output Torque (lb. in.)	5124	5928	6086	6138	6205	056C262B075K1A	140C262B075K1A	---	K1
	Output HP Rating	2.67	2.17	1.84	1.50	1.13	056C262B075L1A	140C262B075L1A	---	L1
	Output OHL (lbs.)	2812	2933	2939	3031	3157	056C262B075LKA	140C262B075LKA	---	LK
80	Output RPM	30.82	21.58	17.88	14.42	10.73	SEE NEXT PAGE		---	Taper Hollow
	Mechanical Input HP	2.44	2.13	1.81	1.51	1.17	SEE NEXT PAGE		---	Str. Hollow
	Output Torque (lb. in.)	4156	5109	5174	5285	5410	056C262B080K1A	140C262B080K1A	---	K1
	Output HP Rating	2.03	1.75	1.47	1.21	0.92	056C262B080L1A	140C262B080L1A	---	L1
	Output OHL (lbs.)	2903	2932	3018	3028	3159	056C262B080LKA	140C262B080LKA	---	LK
90	Output RPM	27.41	19.19	15.90	12.83	9.54	SEE NEXT PAGE		---	Taper Hollow
	Mechanical Input HP	2.69	2.20	1.88	1.56	1.19	SEE NEXT PAGE		---	Str. Hollow
	Output Torque (lb. in.)	5224	6003	6138	6211	6267	056C262B090K1A	140C262B090K1A	---	K1
	Output HP Rating	2.27	1.83	1.55	1.26	0.95	056C262B090L1A	140C262B090L1A	---	L1
	Output OHL (lbs.)	2918	2937	3027	3029	3166	056C262B090LKA	140C262B090LKA	---	LK
100	Output RPM	24.67	17.27	14.31	11.55	8.59	SEE NEXT PAGE		---	Taper Hollow
	Mechanical Input HP	2.44	2.02	1.73	1.42	1.09	SEE NEXT PAGE		---	Str. Hollow
	Output Torque (lb. in.)	5192	6041	6172	6205	6295	056C262B100K1A	140C262B100K1A	---	K1
	Output HP Rating	2.03	1.66	1.40	1.14	0.86	056C262B100L1A	140C262B100L1A	---	L1
	Output OHL (lbs.)	2929	2937	3034	3156	3172	056C262B100LKA	140C262B100LKA	---	LK
125	Output RPM	19.74	13.82	11.45	9.24	6.87	SEE NEXT PAGE		---	Taper Hollow
	Mechanical Input HP	2.07	1.70	1.48	1.20	0.92	SEE NEXT PAGE		---	Str. Hollow
	Output Torque (lb. in.)	5320	6125	6349	6272	6340	056C262B125K1A	140C262B125K1A	---	K1
	Output HP Rating	1.67	1.34	1.15	0.92	0.69	056C262B125L1A	140C262B125L1A	---	L1
	Output OHL (lbs.)	2947	3039	3164	3179	3280	056C262B125LKA	140C262B125LKA	---	LK
150	Output RPM	16.45	11.51	9.54	7.70	5.72	056C262T150S1A	140C262T150S1A	---	Taper Hollow
	Mechanical Input HP	1.91	1.50	1.29	1.07	0.83	056C262S150S1A	140C262S150S1A	---	Str. Hollow
	Output Torque (lb. in.)	5597	6169	6261	6315	6388	056C262B150K1A	140C262B150K1A	---	K1
	Output HP Rating	1.46	1.13	0.95	0.77	0.58	056C262B150L1A	140C262B150L1A	---	L1
	Output OHL (lbs.)	3044	3051	3190	3198	3305	056C262B150LKA	140C262B150LKA	---	LK
160	Output RPM	15.41	10.79	8.94	7.21	5.36	056C262T160S1A	140C262T160S1A	---	Taper Hollow
	Mechanical Input HP	1.72	1.50	1.32	1.11	0.87	056C262S160S1A	140C262S160S1A	---	Str. Hollow
	Output Torque (lb. in.)	5024	6002	6267	6297	6380	056C262B160K1A	140C262B160K1A	---	K1
	Output HP Rating	1.23	1.03	0.89	0.72	0.54	056C262B160L1A	140C262B160L1A	---	L1
	Output OHL (lbs.)	3057	3195	3211	3223	3335	056C262B160LKA	140C262B160LKA	---	LK
200	Output RPM	12.34	8.63	7.15	5.77	4.29	056C262T200S1A	140C262T200S1A	---	Taper Hollow
	Mechanical Input HP	1.70	1.25	1.08	0.90	0.75	056C262S200S1A	140C262S200S1A	---	Str. Hollow
	Output Torque (lb. in.)	6209	6223	6345	6387	6836	056C262B200K1A	140C262B200K1A	---	K1
	Output HP Rating	1.22	0.85	0.72	0.59	0.47	056C262B200L1A	140C262B200L1A	---	L1
	Output OHL (lbs.)	3072	3220	3223	3329	3476	056C262B200LKA	140C262B200LKA	---	LK
240	Output RPM	10.27	7.19	5.96	4.81	3.58	056C262T240S1A	---	---	Taper Hollow
	Mechanical Input HP	1.16	0.88	0.83	0.76	0.66	056C262S240S1A	---	---	Str. Hollow
	Output Torque (lb. in.)	4348	4730	5216	5751	6368	056C262B240K1A	---	---	K1
	Output HP Rating	0.71	0.54	0.49	0.44	0.36	056C262B240L1A	---	---	L1
	Output OHL (lbs.)	3220	3326	3344	3360	3514	056C262B240LKA	---	---	LK
300	Output RPM	8.22	5.76	4.77	3.85	2.86	056C262T300S1A	---	---	Taper Hollow
	Mechanical Input HP	1.01	0.88	0.82	0.68	0.53	056C262S300S1A	---	---	Str. Hollow
	Output Torque (lb. in.)	4694	5909	6436	6436	6436	056C262B300K1A	---	---	K1
	Output HP Rating	0.61	0.54	0.49	0.39	0.29	056C262B300L1A	---	---	L1
	Output OHL (lbs.)	3248	3353	3357	3504	3527	056C262B300LKA	---	---	LK

NOTE: All units include drilled and tapped mounting holes on the top and bottom surfaces. If optional bolt-on foot is required order part number **6011253**.
OHL in pounds at one shaft diameter from shaft shoulder

ComboGear Size C262
Hollow Output Shaft

NOTE: Ratings for the following ratios are different from Solid Shaft ratings.
This is only applicable to size C262

Ratio	Rating Data	Input RPM					Part Number			Shaft Position
		2500	1750	1450	1170	870	56C	140TC	180TC	
80	Output RPM	29.85	20.90	17.31	13.97	10.39	**056C262T080S1A**	**140C262T080S1A**	---	Taper Hollow
	Mechanical Input HP	1.91	1.60	1.50	1.35	1.14	**056C262S080S1A**	**140C262S080S1A**	---	Str. Hollow
	Output Torque (lb. in.)	3008	3620	4035	4400	4861				
	Output HP Rating	1.42	1.20	1.11	0.98	0.80				
	Output OHL (lbs.)	2903	2932	3018	3028	3159				
90	Output RPM	27.50	19.25	15.95	12.87	9.57	**056C262T090S1A**	**140C262T090S1A**	---	Taper Hollow
	Mechanical Input HP	1.75	1.50	1.33	1.13	1.00	**056C262S090S1A**	**140C262S090S1A**	---	Str. Hollow
	Output Torque (lb. in.)	2868	3373	3529	3607	4115				
	Output HP Rating	1.25	1.03	0.89	0.74	0.62				
	Output OHL (lbs.)	2918	2937	3027	3029	3166				
100	Output RPM	25.00	17.50	14.50	11.70	8.70	**056C262T100S1A**	**140C262T100S1A**	---	Taper Hollow
	Mechanical Input HP	1.91	1.60	1.34	1.35	1.14	**056C262S100S1A**	**140C262S100S1A**	---	Str. Hollow
	Output Torque (lb. in.)	3591	4322	4275	5254	5804				
	Output HP Rating	1.42	1.20	0.98	0.98	0.80				
	Output OHL (lbs.)	2929	2937	3034	3156	3172				
125	Output RPM	20.55	14.38	11.92	9.62	7.15	**056C262T125S1A**	**140C262T125S1A**	---	Taper Hollow
	Mechanical Input HP	1.91	1.60	1.50	1.31	1.02	**056C262S125S1A**	**140C262S125S1A**	---	Str. Hollow
	Output Torque (lb. in.)	4480	5258	5861	6243	6314				
	Output HP Rating	1.46	1.20	1.11	0.95	0.72				
	Output OHL (lbs.)	2947	3039	3164	3179	3280				

NOTE: All units include drilled and tapped mounting holes on the top and bottom surfaces. If optional bolt-on foot is required, order part number **6011260.**
OHL in pounds at one shaft diameter from shaft shoulder

ComboGear Size C350

Ratio	Rating Data	Input RPM					Part Numbers				Shaft Position
		2500	1750	1450	1170	870	56C	140TC	180TC	210TC	
	Output RPM	415	290	240	194	144	---	140C350T006S1A	180C350T006S1A	210C350T006S1A	Taper Hollow
	Mechanical Input HP	12.98	11.26	10.33	9.25	8.24	---	140C350S006S1A	180C350S006S1A	210C350S006S1A	Str. Hollow
6.10	Output Torque (lb. in.)	1811	2229	2459	2714	3225	---	140C350B006K1A	180C350B006K1A	210C350B006K1A	K1
	Output HP Rating	11.92	10.26	9.38	8.36	7.38	---	140C350B006L1A	180C350B006L1A	210C350B006L1A	L1
	Output OHL (lbs.)	4251	4377	4445	4524	4626	---	140C350B006LKA	180C350B006LKA	210C350B006LKA	LK
	Output RPM	333	233	193	156	116	---	140C350T007S1A	180C350T007S1A	210C350T007S1A	Taper Hollow
	Mechanical Input HP	12.98	11.26	10.33	9.25	8.24	---	140C350S007S1A	180C350S007S1A	210C350S007S1A	Str. Hollow
7.50	Output Torque (lb. in.)	2253	2772	3059	3376	4011	---	140C350B007K1A	180C350B007K1A	210C350B007K1A	K1
	Output HP Rating	11.92	10.26	9.38	8.36	7.38	---	140C350B007L1A	180C350B007L1A	210C350B007L1A	L1
	Output OHL (lbs.)	4302	4421	4484	4559	4604	---	140C350B007LKA	180C350B007LKA	210C350B007LKA	LK
	Output RPM	265	186	154	124	92	---	140C350T009S1A	180C350T009S1A	210C350T009S1A	Taper Hollow
	Mechanical Input HP	12.98	11.26	10.33	9.25	8.24	---	140C350S009S1A	180C350S009S1A	210C350S009S1A	Str. Hollow
9.40	Output Torque (lb. in.)	2831	3483	3843	4242	5040	---	140C350B009K1A	180C350B009K1A	210C350B009K1A	K1
	Output HP Rating	11.92	10.26	9.38	8.36	7.38	---	140C350B009L1A	180C350B009L1A	210C350B009L1A	L1
	Output OHL (lbs.)	4336	4407	4409	4412	4355	---	140C350B009LKA	180C350B009LKA	210C350B009LKA	LK
	Output RPM	221.20	154.80	128.30	103.50	76.96	---	---	180C350T010S1A	210C350T010S1A*	Taper Hollow
	Mechanical Input HP	12.98	11.26	10.33	9.25	8.24	---	---	180C350S010S1A	210C350S010S1A*	Str. Hollow
10	Output Torque (lb. in.)	3396	4179	4611	5089	6046	---	---	180C350B010K1A	210C350B010K1A*	K1
	Output HP Rating	11.92	10.26	9.38	8.36	7.38	---	---	180C350B010L1A	210C350B010L1A*	L1
	Output OHL (lbs.)	4533	4653	4713	4826	4917	---	---	180C350B010LKA	210C350B010LKA*	LK
	Output RPM	179.10	125.40	103.90	83.82	62.33	---	---	180C350T015S1A	210C350T015S1A*	Taper Hollow
	Mechanical Input HP	12.98	11.26	10.33	9.25	8.24	---	---	180C350S015S1A	210C350S015S1A*	Str. Hollow
15	Output Torque (lb. in.)	4193	5160	5693	6284	7466	---	---	180C350B015K1A	210C350B015K1A*	K1
	Output HP Rating	11.92	10.26	9.38	8.36	7.38	---	---	180C350B015L1A	210C350B015L1A*	L1
	Output OHL (lbs.)	4610	4726	4781	4899	4915	---	---	180C350B015LKA	210C350B015LKA*	LK
	Output RPM	150.00	105.00	87.00	70.20	52.20	---	---	180C350T018S1A	210C350T018S1A*	Taper Hollow
	Mechanical Input HP	12.98	11.26	10.33	9.25	8.11	---	---	180C350S018S1A	210C350S018S1A*	Str. Hollow
18	Output Torque (lb. in.)	5007	6161	6798	7503	8768	---	---	180C350B018K1A	210C350B018K1A*	K1
	Output HP Rating	11.92	10.26	9.38	8.36	7.26	---	---	180C350B018L1A	210C350B018L1A*	L1
	Output OHL (lbs.)	4674	4785	4784	4957	4853	---	---	180C350B018LKA	210C350B018LKA*	LK
	Output RPM	123.30	86.30	71.51	57.70	42.90	---	---	180C350T020S1A	210C350T020S1A*	Taper Hollow
	Mechanical Input HP	12.98	11.26	10.33	8.83	7.11	---	---	180C350S020S1A	210C350S020S1A*	Str. Hollow
20	Output Torque (lb. in.)	6092	7496	8271	8714	9343	---	---	180C350B020K1A	210C350B020K1A*	K1
	Output HP Rating	11.92	10.26	9.38	7.98	6.36	---	---	180C350B020L1A	210C350B020L1A*	L1
	Output OHL (lbs.)	4742	4800	4717	4919	5195	---	---	180C350B020LKA	210C350B020LKA*	LK
	Output RPM	98.68	69.08	57.24	46.18	34.34	---	---	180C350T025S1A	210C350T025S1A*	Taper Hollow
	Mechanical Input HP	12.98	10.13	8.82	7.53	6.06	---	---	180C350S025S1A	210C350S025S1A*	Str. Hollow
25	Output Torque (lb. in.)	7611	8414	8805	9268	9946	---	---	180C350B025K1A	210C350B025K1A*	K1
	Output HP Rating	11.92	9.22	8.00	6.79	5.42	---	---	180C350B025L1A	210C350B025L1A*	L1
	Output OHL (lbs.)	4814	4717	4595	4820	5131	---	---	180C350B025LKA	210C350B025KLA*	LK
	Output RPM	82.19	57.53	47.67	38.47	28.60	---	---	180C350T030S1A	210C350T030S1A	Taper Hollow
	Mechanical Input HP	10.10	8.51	7.71	6.62	5.37	---	---	180C350S030S1A	210C350S030S1A	Str. Hollow
30	Output Torque (lb. in.)	7014	8376	9110	9634	10408	---	---	180C350B030K1A	210C350B030K1A	K1
	Output HP Rating	9.15	7.65	6.89	5.88	4.72	---	---	180C350B030L1A	210C350B030L1A	L1
	Output OHL (lbs.)	4784	4925	4812	5170	5012	---	---	180C350B030LKA	210C350B030LKA	LK
	Output RPM	65.79	46.05	38.16	30.79	22.89	---	---	180C350T038S1A	210C350T038S1A	Taper Hollow
	Mechanical Input HP	10.10	7.56	6.59	5.65	4.58	---	---	180C350S038S1A	210C350S038S1A	Str. Hollow
38	Output Torque (lb. in.)	8763	9281	9712	10251	11061	---	---	180C350B038K1A	210C350B038K1A	K1
	Output HP Rating	9.15	6.78	5.88	5.01	4.02	---	---	180C350B038L1A	210C350B038L1A	L1
	Output OHL (lbs.)	4695	4823	5183	5079	5505	---	---	180C350B038LKA	210C350B038LKA	LK
	Output RPM	61.64	43.15	35.75	28.85	21.45	056C350T040S1A	140C350T040S1A	180C350T040S1A	--	Taper Hollow
	Mechanical Input HP	8.34	6.94	6.32	5.53	4.56	056C350S040S1A	140C350S040S1A	180C350S040S1A	--	Str. Hollow
40	Output Torque (lb. in.)	7491	8935	9778	10341	11286	056C350B040K1A	140C350B040K1A	180C350B040K1A	--	K1
	Output HP Rating	7.33	6.12	5.55	4.73	3.84	056C350B040L1A	140C350B040L1A	180C350B040L1A	--	L1
	Output OHL (lbs.)	4972	5197	5151	5056	5502	056C350B040LKA	140C350B040LKA	180C350B040LKA	--	LK
	Output RPM	49.34	34.54	28.62	23.09	17.17	056C350T050S1A	140C350T050S1A	180C350T050S1A	--	Taper Hollow
	Mechanical Input HP	8.14	6.19	5.40	4.72	3.89	056C350S050S1A	140C350S050S1A	180C350S050S1A	--	Str. Hollow
50	Output Torque (lb. in.)	9125	9943	10403	10993	12014	056C350B050K1A	140C350B050K1A	180C350B050K1A	--	K1
	Output HP Rating	7.14	5.45	4.72	4.03	3.27	056C350B050L1A	140C350B050L1A	180C350B050L1A	--	L1
	Output OHL (lbs.)	4893	5154	5046	5517	5414	056C350B050LKA	140C350B050LKA	180C350B050LKA	--	LK
	Output RPM	41.10	28.77	23.84	19.23	14.30	056C350T060S1A	140C350T060S1A	180C350T060S1A	--	Taper Hollow
	Mechanical Input HP	6.80	5.36	4.75	4.23	3.51	056C350S060S1A	140C350S060S1A	180C350S060S1A	--	Str. Hollow
60	Output Torque (lb. in.)	8995	9983	10883	11593	12654	056C350B060K1A	140C350B060K1A	180C350B060K1A	--	K1
	Output HP Rating	5.87	4.56	4.12	3.54	2.87	056C350B060L1A	140C350B060L1A	180C350B060L1A	--	L1
	Output OHL (lbs.)	5217	5064	5496	5461	5285	056C350B060LKA	140C350B060LKA	180C350B060LKA	--	LK

* Thermal limitations may apply. Consult MASTER Application Engineering

NOTE: All units include drilled and tapped mounting holes on the top and bottom surfaces. If optional bolt-on foot is required, order part number **6011277**
OHL in pounds at one shaft diameter from shaft shoulder.

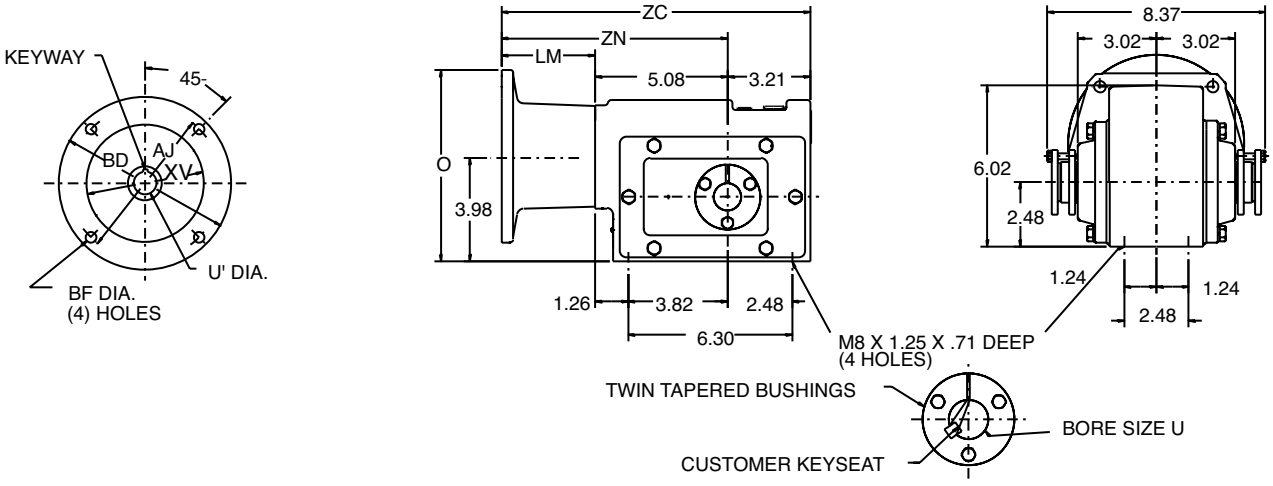
ComboGear Size C350 (continued)

Ratio	Rating Data	Input RPM					Part Numbers				Shaft Position
		2500	1750	1450	1170	870	56C	140TC	180TC	210TC	
	Output RPM	32.89	23.03	19.08	15.39	11.45	**056C350T075S1A**	**140C350T075S1A**	**180C350T075S1A**	--	Taper Hollow
	Mechanical Input HP	6.08	5.00	4.06	3.62	2.90	**056C350S075S1A**	**140C350S075S1A**	**180C350S075S1A**	--	Str. Hollow
75	Output Torque (lb. in.)	10027	11619	11590	12357	13057	**056C350B075K1A**	**140C350B075K1A**	**180C350B075K1A**	--	K1
	Output HP Rating	5.23	4.24	3.51	3.02	2.37	**056C350B075L1A**	**140C350B075L1A**	**180C350B075L1A**	--	L1
	Output OHL (lbs.)	4875	4875	4875	4875	4875	**056C350B075LKA**	**140C350B075LKA**	**180C350B075LKA**	--	LK
	Output RPM	30.82	21.58	17.88	14.42	10.73	**056C350T080S1A**	**140C350T080S1A**	**180C350T080S1A**	---	Taper Hollow
	Mechanical Input HP	5.58	4.63	4.12	3.57	2.85	**056C350S080S1A**	**140C350S080S1A**	**180C350S080S1A**	---	Str. Hollow
80	Output Torque (lb. in.)	9502	11034	11740	12444	13014	**056C350B080K1A**	**140C350B080K1A**	**180C350B080K1A**	---	K1
	Output HP Rating	4.65	3.78	3.33	2.85	2.21	**056C350B080L1A**	**140C350B080L1A**	**180C350B080L1A**	---	L1
	Output OHL (lbs.)	5131	5542	5465	5333	5712	**056C350B080LKA**	**140C350B080LKA**	**180C350B080LKA**	---	LK
	Output RPM	30.00	21.00	17.40	14.14	10.44	**056C350T086S1A**	**140C350T086S1A**	**180C350T086S1A**	---	Taper Hollow
	Mechanical Input HP	4.70	4.20	3.55	3.17	2.76	**056C350S086S1A**	**140C350S086S1A**	**180C350S086S1A**	---	Str. Hollow
86	Output Torque (lb. in.)	7988	9997	10055	10996	12478	**056C350B086K1A**	**140C350B086K1A**	**180C350B086K1A**	---	K1
	Output HP Rating	3.80	3.33	2.78	2.45	2.07	**056C350B086L1A**	**140C350B086L1A**	**180C350B086L1A**	---	L1
	Output OHL (lbs.)	5515	5515	5515	5515	5515	**056C350B086LKA**	**140C350B086LKA**	**180C350B086LKA**	---	LK
	Output RPM	24.67	17.27	14.31	11.55	8.59	**056C350T100S1A**	**140C350T100S1A**	**180C350T100S1A**	---	Taper Hollow
	Mechanical Input HP	5.02	3.99	3.53	3.01	2.30	**056C350S100S1A**	**140C350S100S1A**	**180C350S100S1A**	---	Str. Hollow
100	Output Torque (lb. in.)	10640	11838	12518	13053	13069	**056C350B100K1A**	**140C350B100K1A**	**180C350B100K1A**	---	K1
	Output HP Rating	4.17	3.24	2.84	2.39	1.78	**056C350B100L1A**	**140C350B100L1A**	**180C350B100L1A**	---	L1
	Output OHL (lbs.)	5003	5462	5343	5149	5577	**056C350B100LKA**	**140C350B100LKA**	**180C350B100LKA**	---	LK
	Output RPM	19.74	13.82	11.45	9.24	6.87	**056C350T125S1A**	**140C350T125S1A**	**180C350T125S1A**	---	Taper Hollow
	Mechanical Input HP	4.42	3.51	3.04	2.49	1.91	**056C350S125S1A**	**140C350S125S1A**	**180C350S125S1A**	---	Str. Hollow
125	Output Torque (lb. in.)	11391	12652	13057	13069	13069	**056C350B125K1A**	**140C350B125K1A**	**180C350B125K1A**	---	K1
	Output HP Rating	3.57	2.77	2.37	1.92	1.42	**056C350B125L1A**	**140C350B125L1A**	**180C350B125L1A**	---	L1
	Output OHL (lbs.)	5541	5339	5176	5651	5886	**056C350B125LKA**	**140C350B125LKA**	**180C350B125LKA**	---	LK
	Output RPM	16.45	11.51	9.54	7.70	5.72	**056C350T150S1A**	**140C350T150S1A**	**180C350T150S1A**	---	Taper Hollow
	Mechanical Input HP	4.03	3.08	2.62	2.15	1.65	**056C350S150S1A**	**140C350S150S1A**	**180C350S150S1A**	---	Str. Hollow
150	Output Torque (lb. in.)	12156	12891	13069	13069	13069	**056C350B150K1A**	**140C350B150K1A**	**180C350B150K1A**	---	K1
	Output HP Rating	3.17	2.35	1.98	1.60	1.19	**056C350B150L1A**	**140C350B150L1A**	**180C350B150L1A**	---	L1
	Output OHL (lbs.)	5478	5207	5702	5539	5780	**056C350B150LKA**	**140C350B150LKA**	**180C350B150LKA**	---	LK
	Output RPM	15.41	10.79	8.94	7.21	5.36	**056C350T160S1A**	**140C350T160S1A**	---	---	Taper Hollow
	Mechanical Input HP	3.20	2.70	2.46	2.20	1.63	**056C350S160S1A**	**140C350S160S1A**	---	---	Str. Hollow
160	Output Torque (lb. in.)	9561	11116	12025	13069	13069	**056C350B160K1A**	**140C350B160K1A**	---	---	K1
	Output HP Rating	2.34	1.90	1.71	1.50	1.11	**056C350B160L1A**	**140C350B160L1A**	---	---	L1
	Output OHL (lbs.)	5495	5829	4942	5590	5777	**056C350B160LKA**	**140C350B160LKA**	---	---	LK
	Output RPM	12.34	8.63	7.15	5.77	4.29	**056C350T200S1A**	**140C350T200S1A**	---	---	Taper Hollow
	Mechanical Input HP	3.20	2.55	2.15	1.77	1.31	**056C350S200S1A**	**140C350S200S1A**	---	---	Str. Hollow
200	Output Torque (lb. in.)	11944	13069	13069	13069	13069	**056C350B200K1A**	**140C350B200K1A**	---	---	K1
	Output HP Rating	2.34	1.79	1.48	1.20	0.89	**056C350B200L1A**	**140C350B200L1A**	---	---	L1
	Output OHL (lbs.)	5361	5766	4585	5891	6259	**056C350B200LKA**	**140C350B200LKA**	---	---	LK
	Output RPM	10.27	7.19	5.96	4.81	3.58	**056C350T240S1A**	**140C350T240S1A**	---	---	Taper Hollow
	Mechanical Input HP	2.39	1.85	1.73	1.57	1.28	**056C350S240S1A**	**140C350S240S1A**	---	---	Str. Hollow
240	Output Torque (lb. in.)	9831	10340	11475	12539	13069	**056C350B240K1A**	**140C350B240K1A**	---	---	K1
	Output HP Rating	1.60	1.18	1.08	0.96	0.74	**056C350B240L1A**	**140C350B240L1A**	---	---	L1
	Output OHL (lbs.)	5864	5731	5407	5856	6326	**056C350B240LKA**	**140C350B240LKA**	---	---	LK
	Output RPM	8.22	5.76	4.77	3.85	2.86	**056C350T300S1A**	**140C350T300S1A**	---	---	Taper Hollow
	Mechanical Input HP	2.39	1.85	1.58	1.32	1.03	**056C350S300S1A**	**140C350S300S1A**	---	---	Str. Hollow
300	Output Torque (lb. in.)	12282	12918	13069	13069	13069	**056C350B300K1A**	**140C350B300K1A**	---	---	K1
	Output HP Rating	1.60	1.18	0.99	0.80	0.59	**056C350B300L1A**	**140C350B300L1A**	---	---	L1
	Output OHL (lbs.)	5760	5976	5104	6341	6167	**056C350B300LKA**	**140C350B300LKA**	---	---	LK

NOTE: All units include drilled and tapped mounting holes on the top and bottom surfaces. If optional bolt-on foot is required, order part number **6011277**
OHL in pounds at one shaft diameter from shaft shoulder

ComboGear Size C150

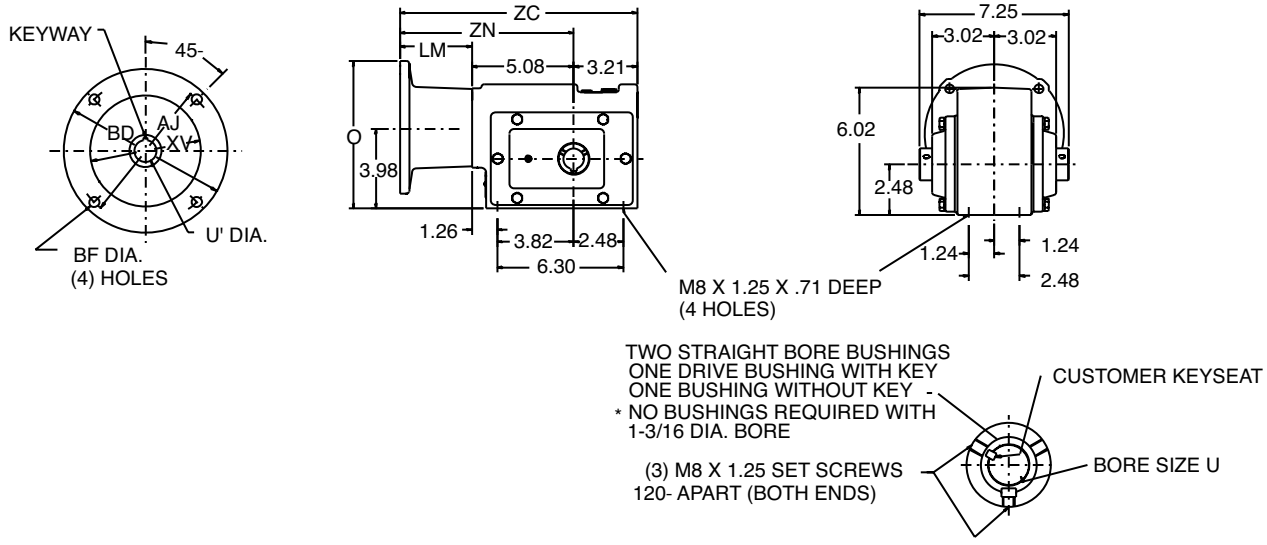
HOLLOW SHAFT - TAPERED BUSHING



Frame Size	AJ	BD	BF	U'		Keyway	XV (TENON)	ZC	O	LM	ZN
				Min.	Max.						
56C	5.88	6.72	0.44	0.626	0.627	3/16 X 3/32	4.501/4.503	11.89	7.34	3.60	8.68
140TC	5.88	6.72	0.44	0.876	0.877	3/16 X 3/32	4.501/4.503	11.89	7.34	3.60	8.68

U	Customer Keyseat Req'd
1-1/8 1-1/16 1-3/16 1"	1/4 X 1/8 X 7.66
25MM 30MM	8MM X 4MM

HOLLOW SHAFT - STRAIGHT BORE



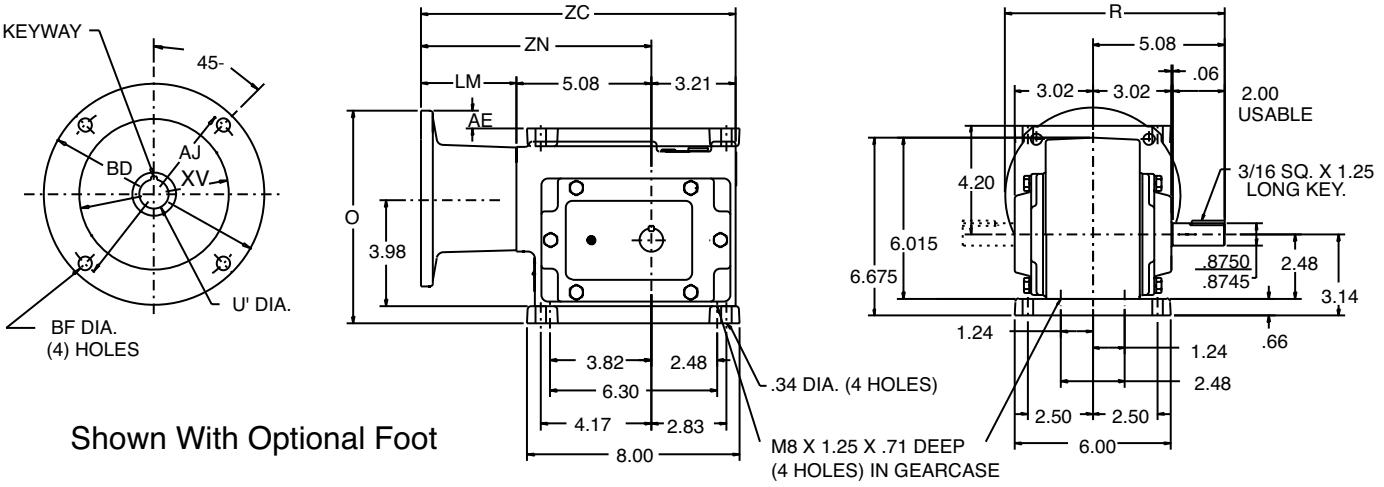
Frame Size	AJ	BD	BF	U'		Keyway	XV (TENON)	ZC	O	LM	ZN
				Min.	Max.						
56C	5.88	6.72	0.44	0.626	0.627	3/16 X 3/32	4.501/4.503	11.89	7.34	3.60	8.68
140TC	5.88	6.72	0.44	0.876	0.877	3/16 X 3/32	4.501/4.503	11.89	7.34	3.60	8.68

U	Customer Keyseat Req'd
1-3/16* 1-1/8 1-1/16 1	1/4 X 1/8 X 1

DIMENSIONS / MOUNTING POSITIONS

ComboGear Size C150

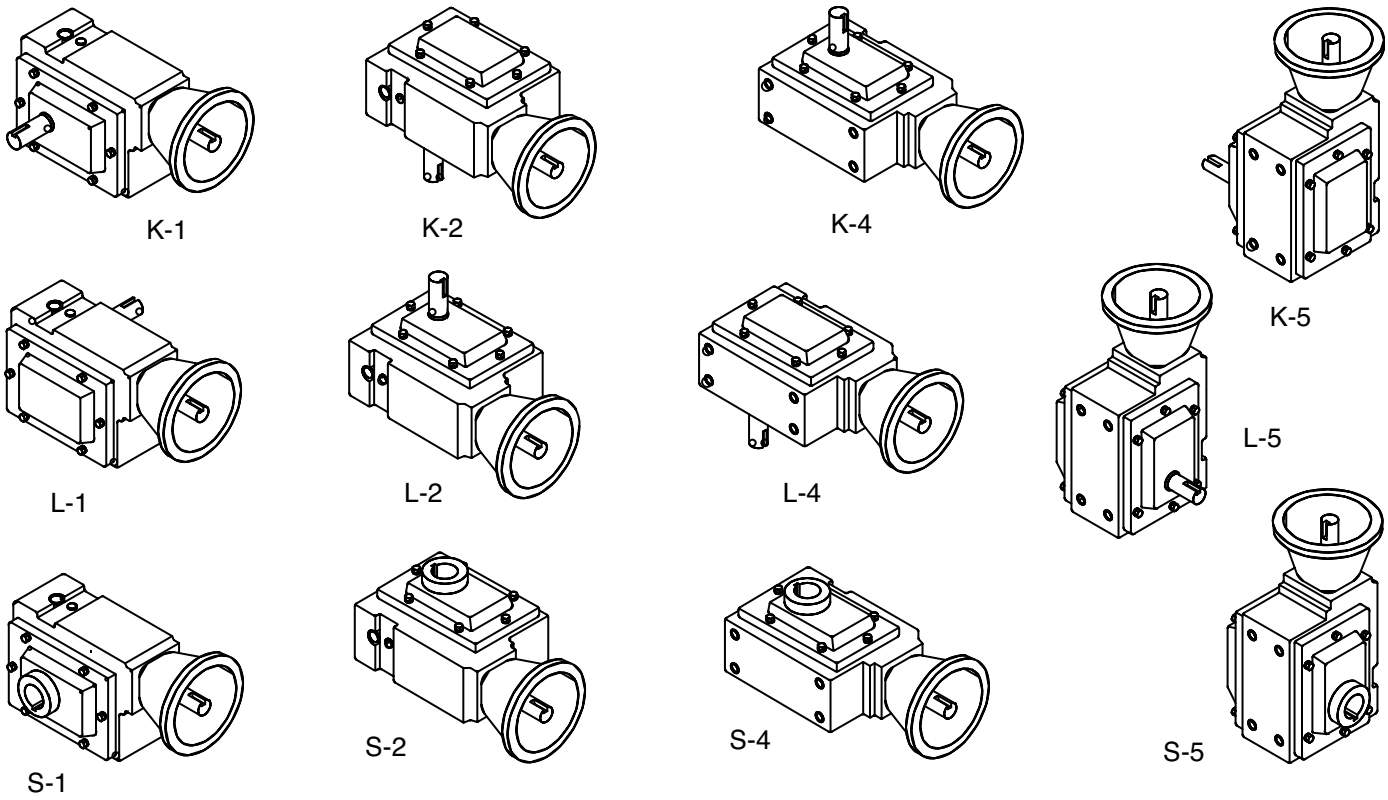
SOLID SHAFT



Shown With Optional Foot

Frame Size	AJ	BD	BF	U'		Keyway	XV (TENON)	ZC	O	LM	ZN	AE	R
				Min.	Max.								
56C	5.88	6.72	0.44	0.626	0.627	3/16 X 3/32	4.501/4.503	11.86	8.00	3.60	8.68	0.66	8.44
140TC	5.88	6.72	0.44	0.876	0.877	3/16 X 3/32	4.501/4.503	11.86	8.00	3.60	8.68	0.66	8.44

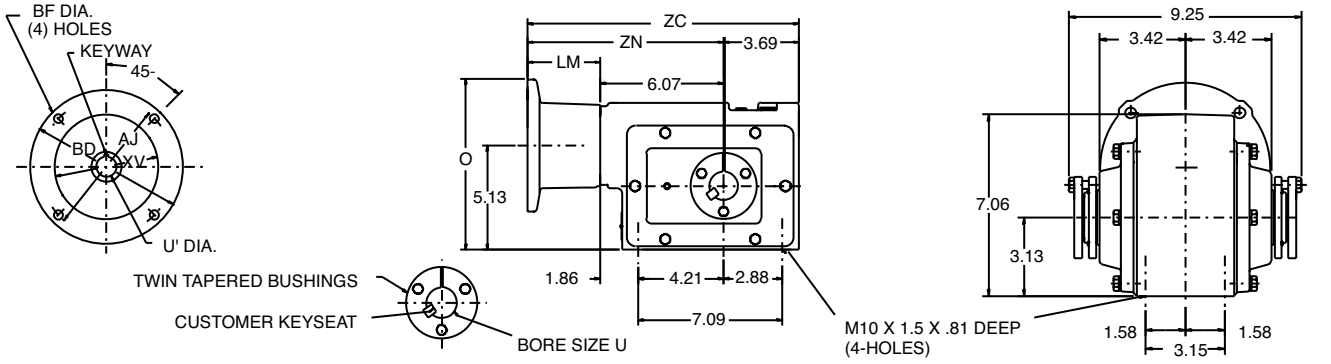
NOTE: All units include drilled and tapped mounting holes on the bottom of the reducer. If optional bolt-on foot is required, order part number **6011246.**



For Additional Mounting Positions, Refer To Pages CG-31 and CG-32

ComboGear Size C200

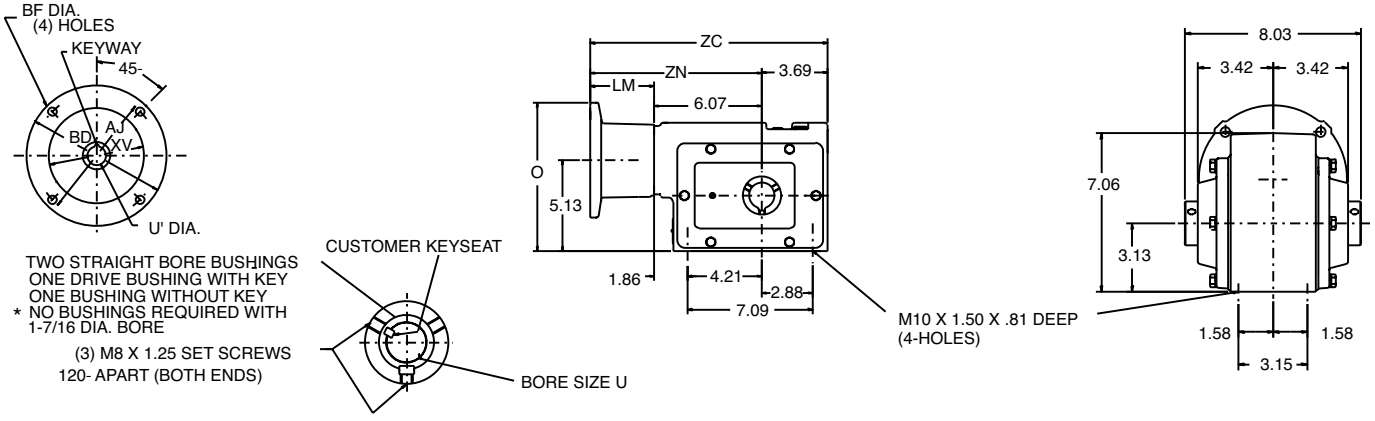
HOLLOW SHAFT - TAPERED BUSHING



Frame Size	AJ	BD	BF	U' Min.	U' Max.	Keyway	XV (TENON)	ZC	O	LM	ZN
56C	5.88	6.72	0.44	0.626	0.627	3/16 X 3/32	4.501/4.503	13.37	8.38	3.60	9.67
140TC	5.88	6.72	0.44	0.876	0.877	3/16 X 3/32	4.501/4.503	13.37	8.38	3.60	9.67
180TC	7.25	9.00	0.53	1.126	1.127	1/4 X 1/8	8.500/8.502	14.41	9.66	4.64	10.71

U	Customer Keyseat Req'd
1-7/16	3/8 X 3/16 X 8.82
1-3/8 1-5/16	5/16 X 5/32 X 8.82
1-1/4 1-3/16 1-1/8 1-1/16 1	1/4 X 1/8 X 8.82
35MM 32MM 30MM	10MM X 5MM X 225MM
25MM	8MM X 4MM X 225MM

HOLLOW SHAFT - STRAIGHT BORE



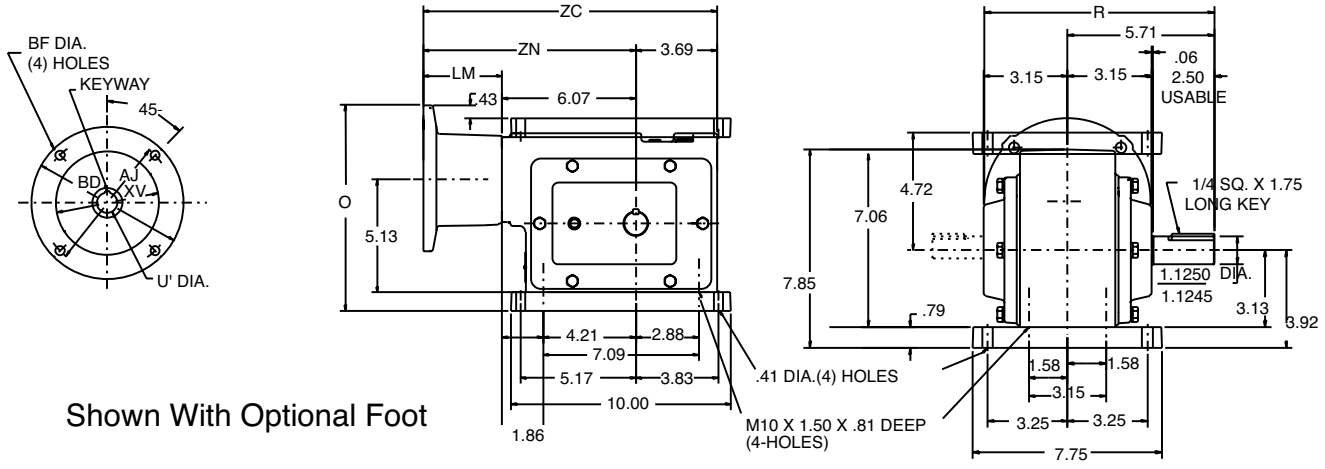
Frame Size	AJ	BD	BF	U' Min.	U' Max.	Keyway	XV (TENON)	ZC	O	LM	ZN
56C	5.88	6.72	0.44	0.626	0.627	3/16X3/32	4.501/4.503	13.37	8.38	3.60	9.67
140TC	5.88	6.72	0.44	0.876	0.877	3/16 X 3/32	4.501/4.503	13.37	8.38	3.60	9.67
180TC	7.25	9.00	0.53	1.126	1.127	1/4X 1/8	8.500/8.502	14.41	9.66	4.64	10.71

U	Customer Keyseat Req'd
1-7/16*	3/8 X 3/16 X 2
1-5/16	5/16 X 5/32 X 2
1-1/4 1-3/16	1/4X1/8X2
1-1/8 1-1/16 1	1/4 X 1/8 X 1-3/4

DIMENSIONS / MOUNTING POSITIONS

ComboGear Size C200

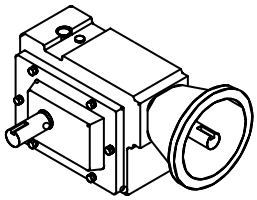
SOLID SHAFT

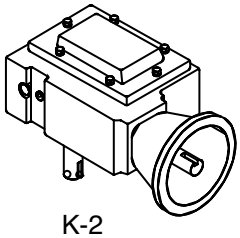


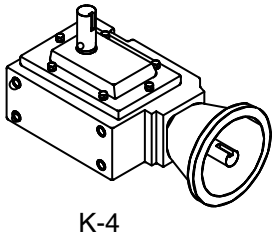
Shown With Optional Foot

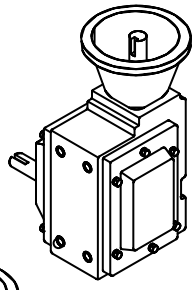
Frame Size	AJ	BD	BF	U'		Keyway	XV (TENON)	ZC	O	R	LM	ZN
				Min.	Max.							
56C	5.88	6.72	0.44	0.626	0.627	3/16 X 3/32	4.501/4.503	13.37	9.17	8.86	3.60	9.67
140TC	5.88	6.72	0.44	0.876	0.877	3/16 X 3/32	4.501/4.503	13.37	9.17	8.86	3.60	9.67
180TC	7.25	9.00	0.53	1.126	1.127	1/4 X 1/8	8.500/8.502	14.41	10.45	10.21	4.64	10.71

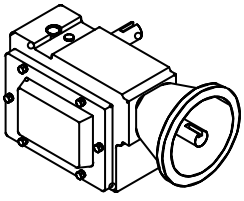
NOTE: All units include drilled and tapped mounting holes on the top and bottom of the reducer. If optional bolt-on foot is required, order part number **6011253**.

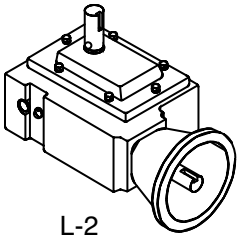

K-1

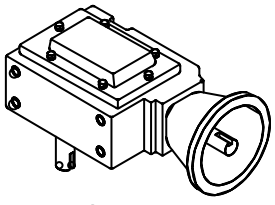

K-2

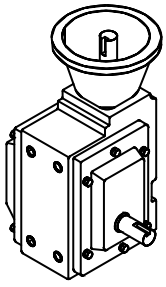

K-4

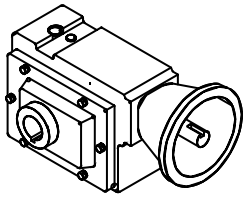

K-5

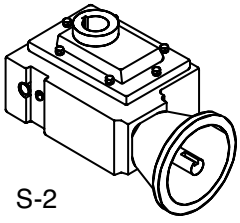

L-1

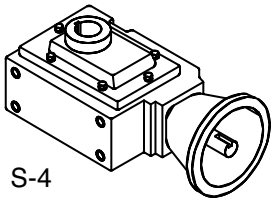

L-2

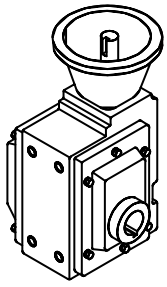

L-4


L-5


S-1


S-2

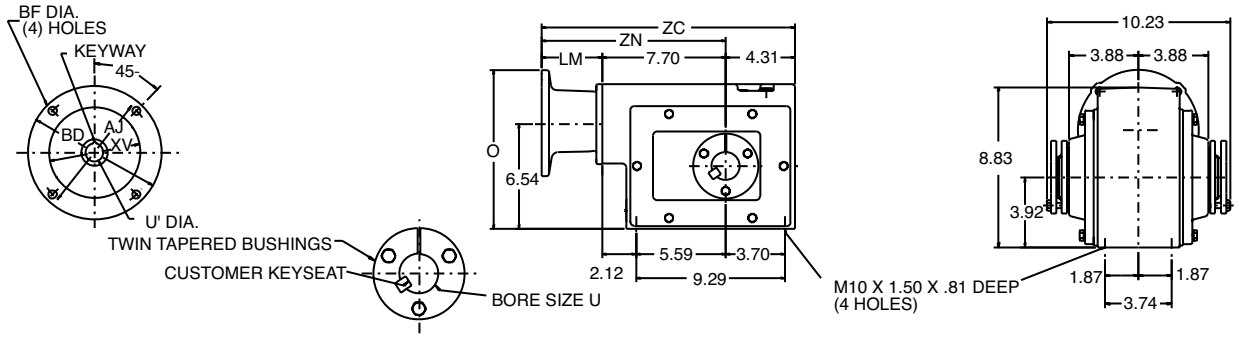

S-4


S-5

For Additional Mounting Positions, Refer To Pages CG-31 and CG-32

ComboGear Size C262

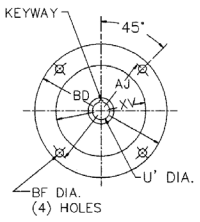
HOLLOW SHAFT - TAPERED BUSHING



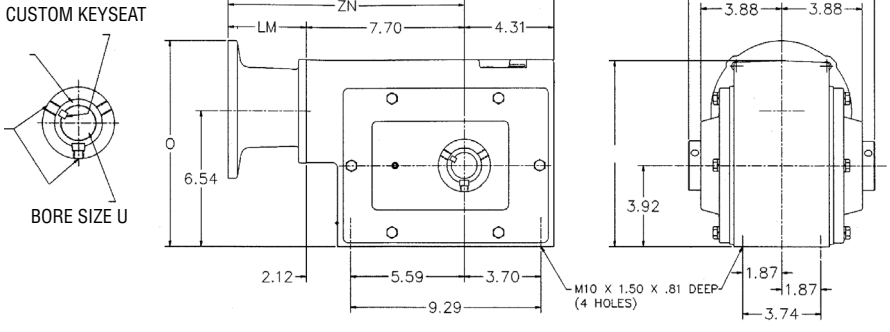
Frame Size	AJ	BD	BF	U'		Keyway	XV (TENON)	ZC	O	LM	ZN
				Min.	Max.						
56C	5.88	6.72	0.44	0.626	0.627	3116 X 3/32	4.501/4.503	15.81	9.90	3.80	11.50
140TC	5.88	6.72	0.44	0.876	0.877	3/16 X 3/32	4.501/4.503	15.81	9.90	3.80	11.50
180TC	7.25	9.00	0.53	1.126	1.127	1/4 X 1/8	8.500/8.502	16.81	11.04	4.80	12.50

U	Customer Keyseat Req'd
1-15/16	1/2 X 1/4 X 9.81 MAX
1-3/4 1-11/16 1-5/8 1-1/2 1-7/16	3/8 X 3/16 X 9.81
1-3/8 1-5/16 1-1/4	5/16 X 5/32 X 9.81
1-3/16 1-1/8	1/4 X 1/8 X 9.81
45MM 42MM 40MM 38MM	12MM X 5MM X 250MM
35MM 32MM	10MM X 5MM X 250MM

HOLLOW SHAFT - STRAIGHT BORE



TWO STRAIGHT BORE BUSHINGS
ONE DRIVE BUSHING WITH KEY
ONE BUSHING WITHOUT KEY
* NO BUSHINGS REQUIRED WITH
1-5/16 DIA. BORE
(3) M8 X 1.25 SET SCREWS
120 - APART (BOTH ENDS)



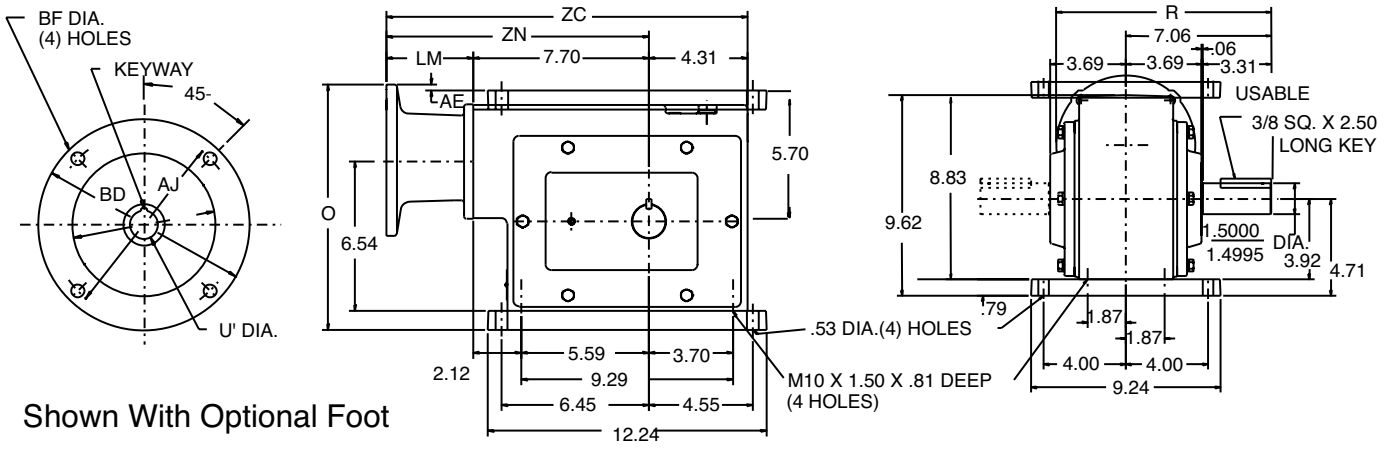
Frame Size	AJ	BD	BF	U'		Keyway	XV (TENON)	ZC	O	LM	ZN
				Min.	Max.						
56C	5.88	6.72	0.44	0.626	0.627	3/16 X 3/32	4.501/4.503	15.81	9.90	3.80	11.50
140TC	5.88	6.72	0.44	0.876	0.877	3/16 X 3/32	4.501/4.503	15.81	9.90	3.80	11.50
180TC	7.25	9.00	0.53	1.126	1.127	1/4 X 1/8	8.500/8.502	16.81	11.04	4.80	12.50

U	Customer Keyseat Req'd
1-15/16*	1/2 X 1/4 X 2-1/2
1-3/4 1-11/16 1-5/8	3/8 X 3/16 X 2-7/8
1-1/2 1-7/16	3/8 X 3/16 X 2-1/2
1-3/8 1-5/16	5/16 X 5/32 X 2
1-1/4 1-3/16	1/4 X 1/8 X 2

DIMENSIONS / MOUNTING POSITIONS

ComboGear Size C262

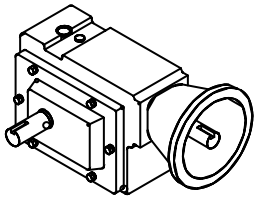
SOLID SHAFT

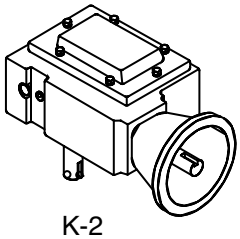


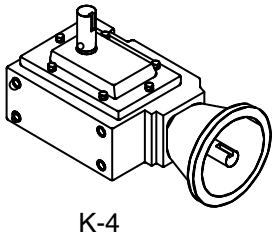
Shown With Optional Foot

Frame Size	AJ	BD	BF	U'		Keyway	XV (TENON)	ZC	O	R	LM	ZN	AE
				Min.	Max.								
56C	5.88	6.72	0.44	0.626	0.627	3/16 X 3/32	4.501/4.503	15.81	10.69	10.63	3.80	11.50	0.28
140TC	5.88	6.72	0.44	0.876	0.877	3/16 X 3/32	4.501/4.503	15.81	10.69	10.63	3.80	11.50	0.28
180TC	7.25	9.00	0.53	1.126	1.127	1/4 X 1/8	8.500/8.502	16.81	11.83	11.78	4.80	12.50	1.42

NOTE: All units include drilled and tapped mounting holes on the top and bottom of the reducer. If optional bolt-on foot is required, order part number **6011260**.


K-1


K-2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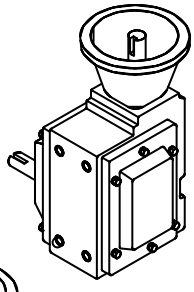
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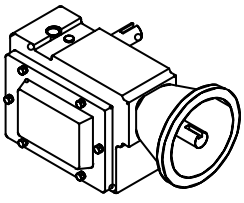
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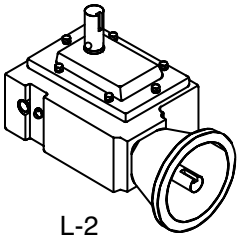
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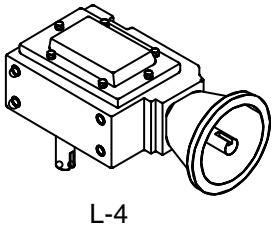
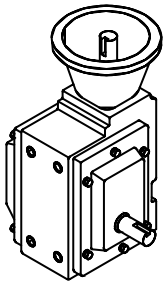

L-4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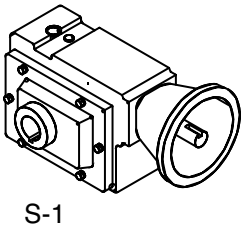
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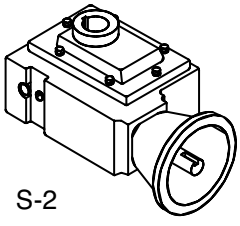
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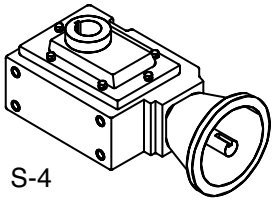
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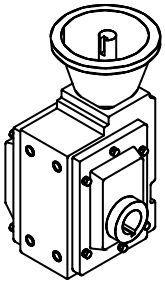
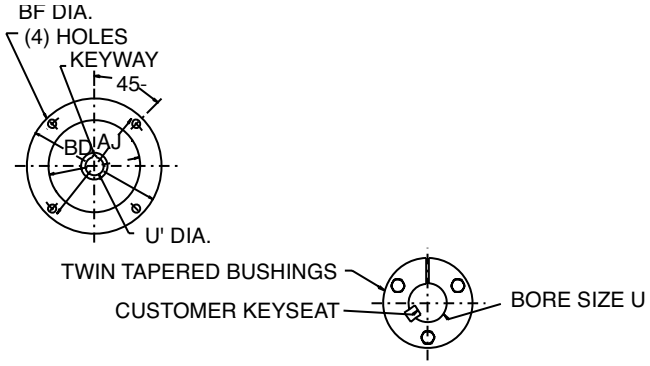

S-5

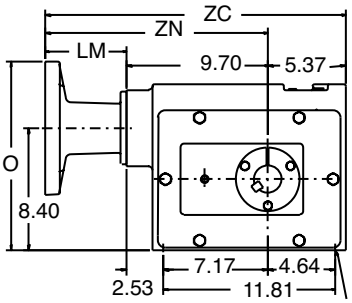
For Additional Mounting Positions, Refer To Pages CG-31 and CG-32

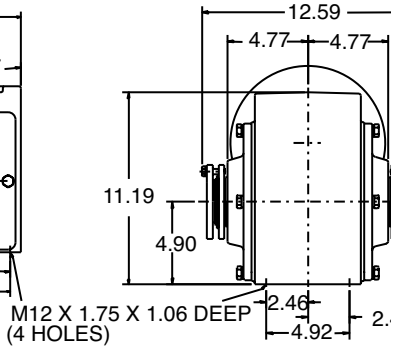
MASTER POWER TRANSMISSION

ComboGear Size C350

HOLLOW SHAFT - TAPERED BUSHING



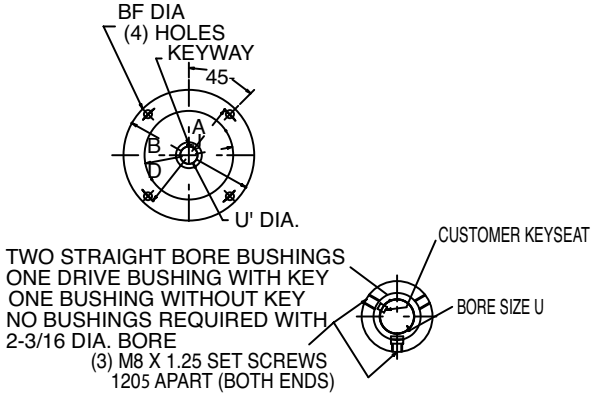


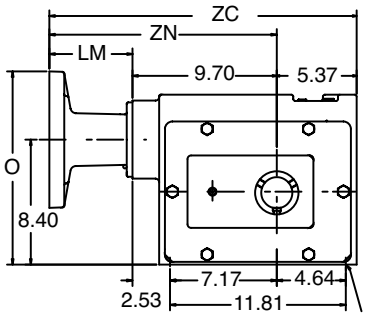


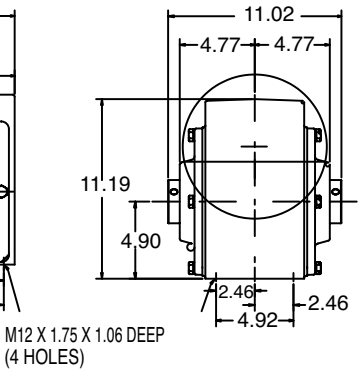
Frame Size	AJ	BD	BF	U' Min.	U' Max.	Keyway	XV (TENON)	ZC	O	LM	ZN
56C	5.88	6.72	0.44	0.626	0.627	3/16 X 3/32	4.501/4.503	18.87	11.76	3.80	13.50
140TC	5.88	6.72	0.44	0.876	0.877	3/16 X 3/32	4.501/4.503	18.87	11.76	3.80	13.50
180TC	7.25	9.00	0.53	1.126	1.127	1/4 X 1/8	8.500/8.502	19.87	12.90	4.80	14.50
210TC	7.25	9.00	0.53	1.376	1.377	5/16 X 5/32	8.500/8.502	20.37	12.90	5.30	15.00

U	Customer Keyseat Req'd
2-3/16 MAX 2 1-15/16 1-7/8	1/2 X 1/4 X 12.09
1-3/4 1-11/16 1-5/8 1-1/2 1-7/16	3/8 X 3/16 X 12.09
1-3/8 1-5/16	5/16 X 5/32 X 9.81
55MM	16MM X 6MM X 307MM
50MM 45MM 42MM	14MM X 6MM X 307MM
40MM 38MM	12MM X 5MM X 307MM

HOLLOW SHAFT - STRAIGHT BORE





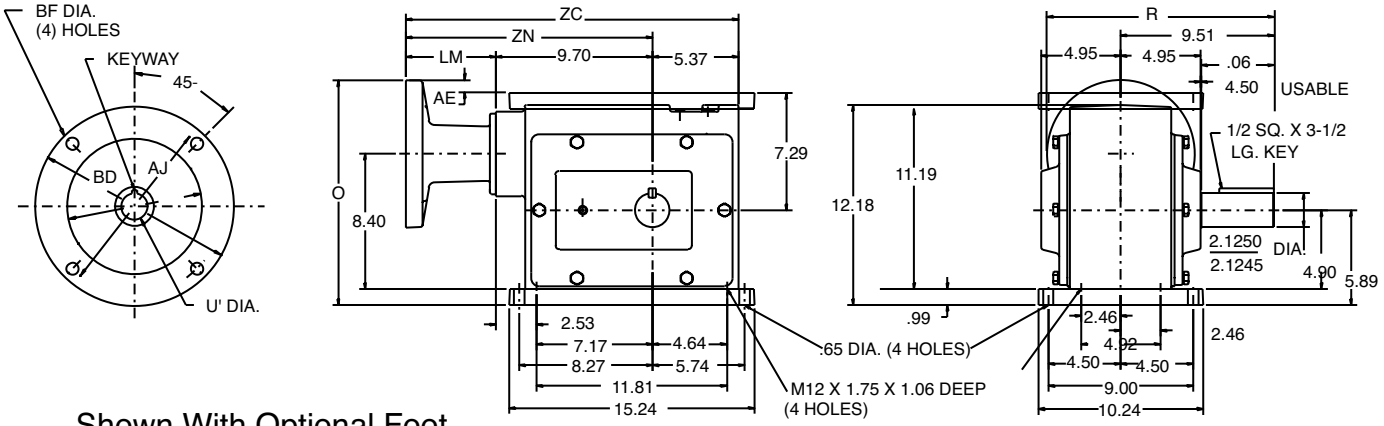


Frame Size	AJ	BD	BF	U' Min.	U' Max.	Keyway	XV (TENON)	ZC	O	LM	ZN
56C	5.88	6.72	0.44	0.626	0.627	3/16 X 3/32	4.501/4.503	18.87	11.76	3.80	13.50
140TC	5.88	6.72	0.44	0.876	0.877	3/16 X 3/32	4.501/4.503	18.87	11.76	3.80	13.50
180TC	7.25	9.00	0.53	1.126	1.127	1/4 X 1/8	8.500/8.502	19.87	12.90	4.80	14.50
210TC	7.25	9.00	0.53	1.376	1.377	5/16 X 5/32	8.500/8.502	20.37	12.90	5.30	15.00

U	Customer Keyseat Req'd
2-3/16* 2 1-15/16 1-7/8	1/2 X 1/4 X 3-5/8
1-3/4 1-11/16	3/8 X 3/16 X 3-1/4
1-5/8 1-1/2 1-7/16	3/8 X 3/16 X 2-1/4
1-3/8 1-5/16	5/16 X 5/32 X 2-1/4

DIMENSIONS / MOUNTING POSITIONS

ComboGear Size C350

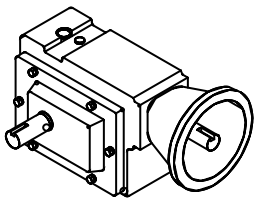


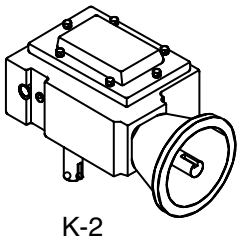
Shown With Optional Foot

Frame Size	AJ	BD	BF	U'		Keyway	XV (TENON)	ZC	O	R	LM	ZN	AE
				Min.	Max.								
56C	5.88	6.72	0.44	0.626	0.627	3/16 X 3/32	4.501/4.503	18.87	12.75	12.97	3.80	13.50	-0.43
140TC	5.88	6.72	0.44	0.876	0.877	3/16 X 3/32	4.501/4.503	18.87	12.75	12.97	3.80	13.50	-0.43
180TC	7.25	9.00	0.53	1.126	1.127	1/4 X 1/8	8.500/8.502	19.87	13.89	14.18	4.80	14.50	0.71
210TC	7.25	9.00	0.53	1.376	1.377	5/16 X 5/32	8.500/8.502	20.37	13.89	14.18	5.65*	15.00	0.71

NOTE: All units include drilled and tapped mounting holes on the top and bottom of the reducer. If optional bolt-on foot is required, order part number **6011277**.

* Required adapter plate is included with unit to obtain this dimension.


K-1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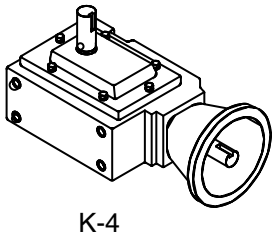
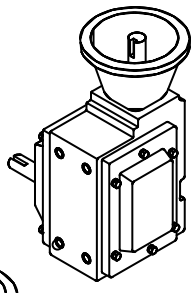
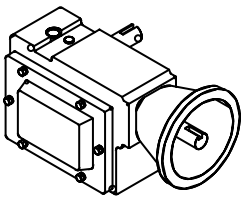
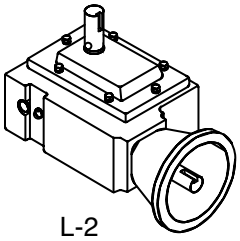
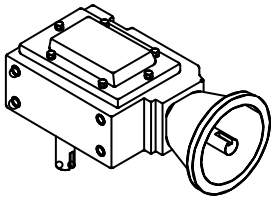
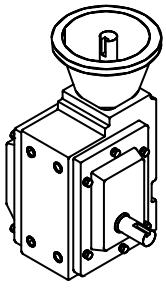

K-4


K-5


L-1


L-2


L-4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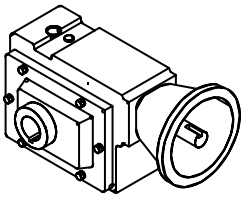
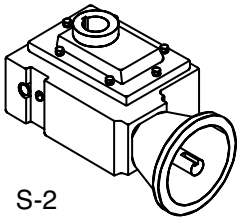
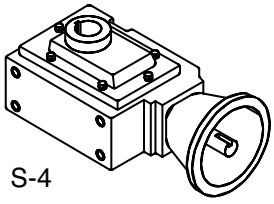
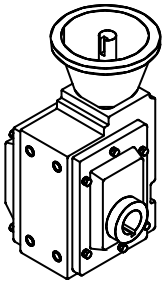

S-1


S-2


S-4

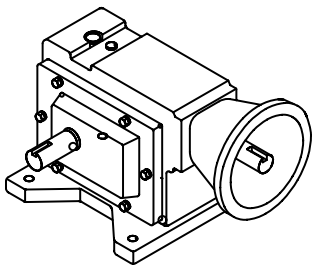

S-5

For Additional Mounting Positions, Refer To Pages CG-31 and CG-32

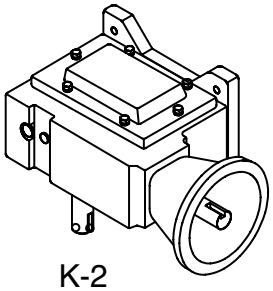
ComboGear

(SHOWN WITH OPTIONAL BOLT-ON FOOT)

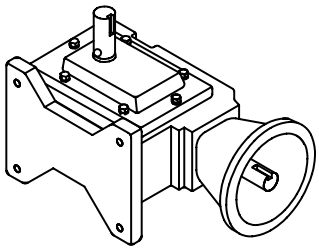
Foot On Bottom



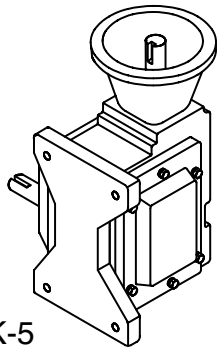
K-1



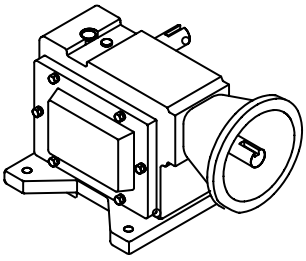
K-2



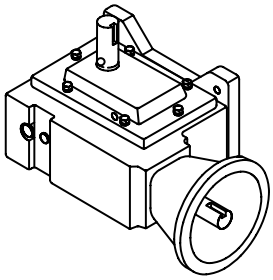
K-4



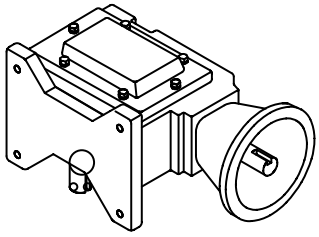
K-5



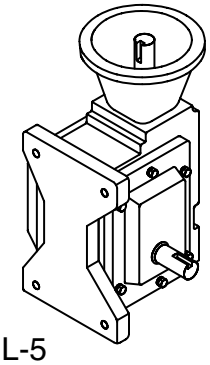
L-1



L-2

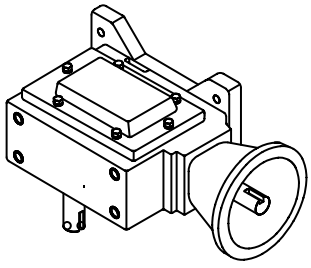


L-4

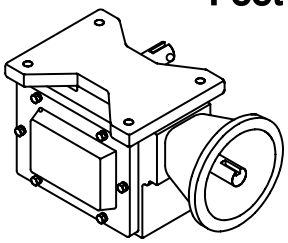


L-5

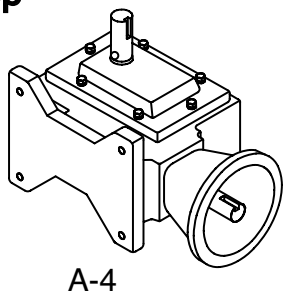
Foot On Top



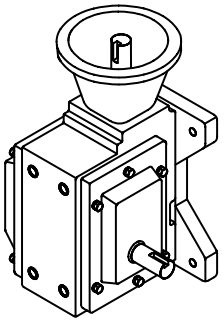
A-1



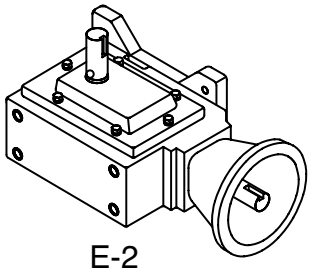
A-3



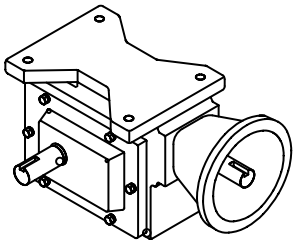
A-4



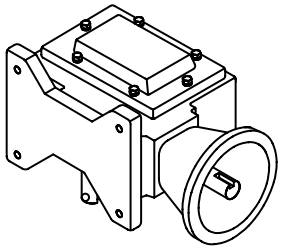
A-5



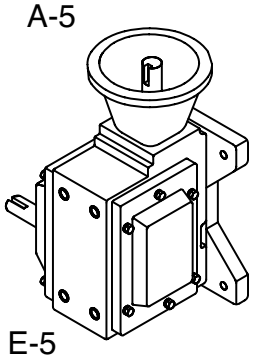
E-2



E-3



E-4



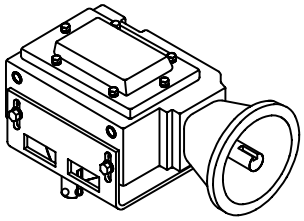
E-5

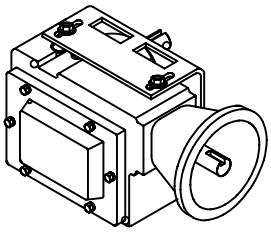
MOUNTING POSITIONS

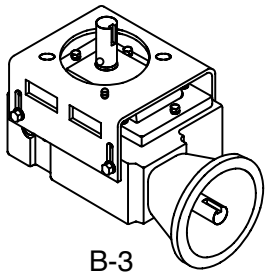
ComboGear

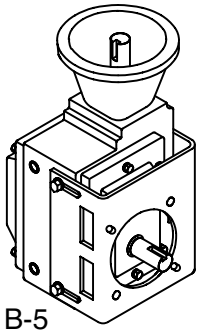
(SHOWN WITH OPTIONAL OUTPUT FLANGE)

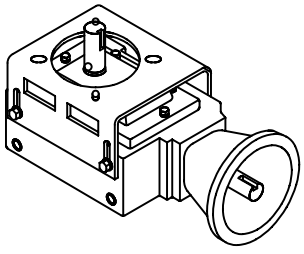
Solid Output Shaft

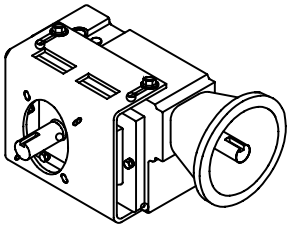

B-1


B-2


B-3


B-5


H-3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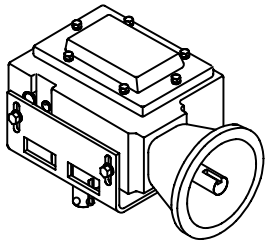
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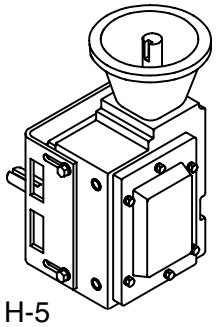
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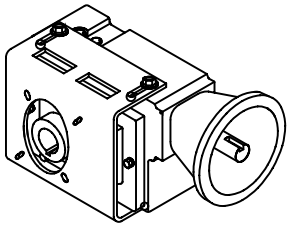
Hollow Output Shaft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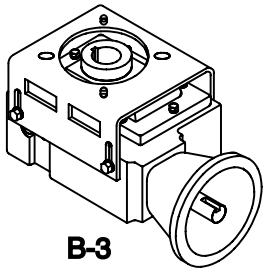
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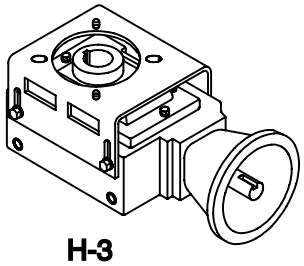
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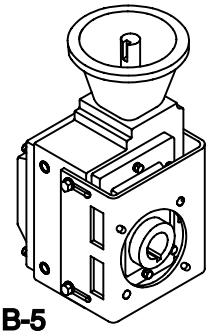
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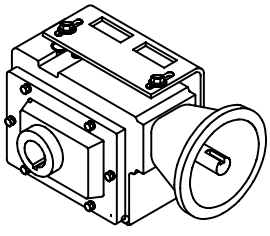
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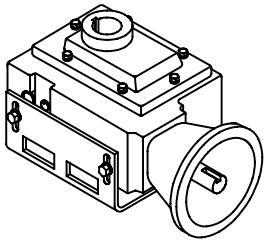
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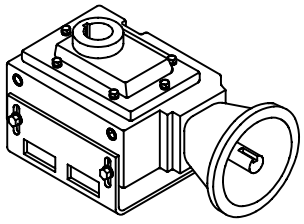
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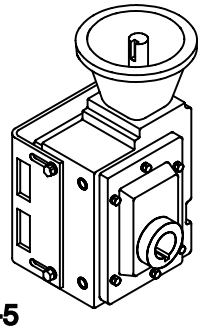

H-5

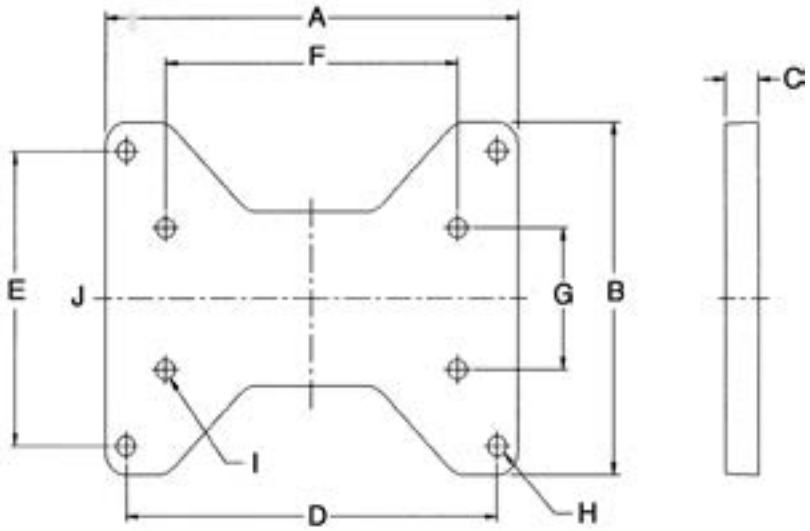
MASTER POWER TRANSMISSION

ComboGear Modifications / Accessories

BOLT-ON FOOT

All ComboGear units include drilled and tapped mounting holes on the bottom of the reducer, but do not include the base. Kits listed below include a cast iron bolt-on-foot and the required mounting hardware.

Reducer Case Size	Kit Number
150	**6011246**
200	**6011253**
262	**6011260**
350	**6011277**



Size	A	B	C	D	E	F	G	H	I	J
150	8.00	6.00	0.66	7.00	5.00	6.30	2.48	0.34	0.38	3.29
200	10.00	7.76	0.79	9.00	6.50	7.09	3.15	0.41	0.41	3.55
262	12.24	9.24	0.79	11.00	8.00	9.29	3.74	0.53	0.41	4.53
350	15.24	10.24	0.99	14.00	9.00	11.81	4.92	0.65	0.50	5.94

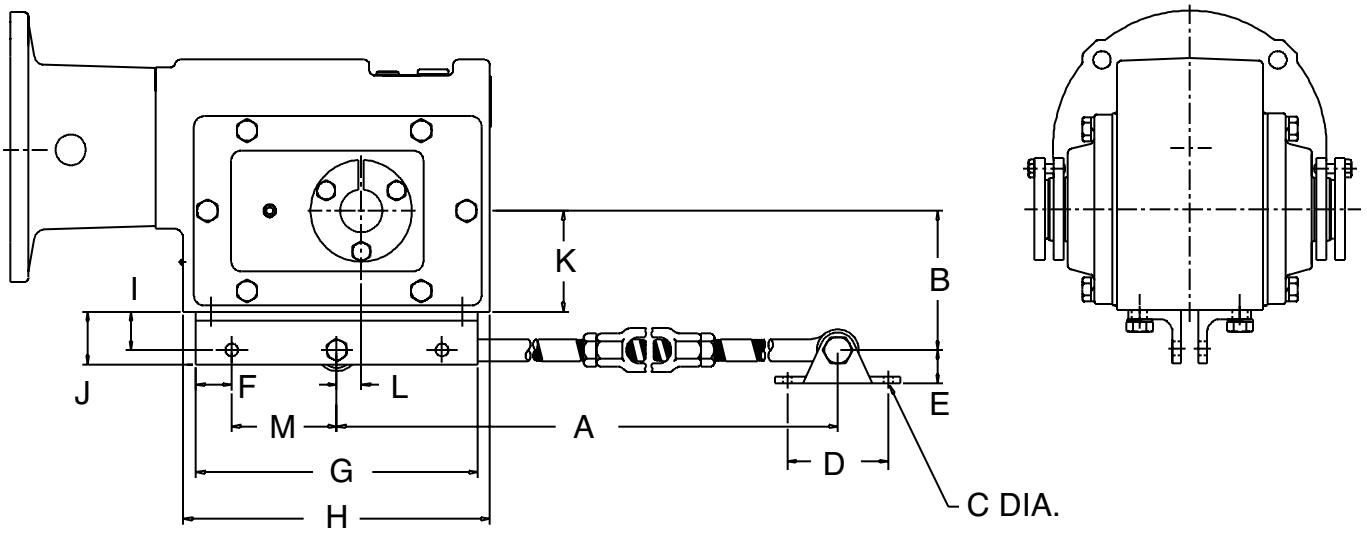
ComboGear
TIE ROD KIT

The Tie Rod Kit is available for restraining Straight Bore and Tapered Bore Hollow Shaft Reducers. Each kit includes reducer mounting brackets, tie rods, turnbuckle, fulcrum and mounting hardware.

Reducer Case Size	Tie Rod Kit	Mounting Brackets Only Includes Hardware
150	**6009878**	**6009861**
200	**6002503**	**6009885**
262	**6009915**	**6009908**
350	**6009953**	**6009922**

	A Min. - Max.	B	C	D	E	F
C150	14.75 - 17.75	3.57	0.39	2.50	0.94	1.13
C200	14.75 - 17.75	4.22	0.39	2.50	0.94	1.37
C262	14.75 - 17.75	5.01	0.39	2.50	0.94	0.95
C350	19.50 - 25.50	5.83	0.45	3.00	1.06	1.50

	G	H	I	J	K	L
C150	7.25	7.58	1.09	1.25	2.48	0.60
C200	8.00	8.70	1.09	1.50	3.13	0.68
C262	9.75	10.52	1.09	1.50	3.92	0.94
C350	13.00	13.27	0.93	1.50	4.90	1.26



ComboGear
OUTPUT FLANGE

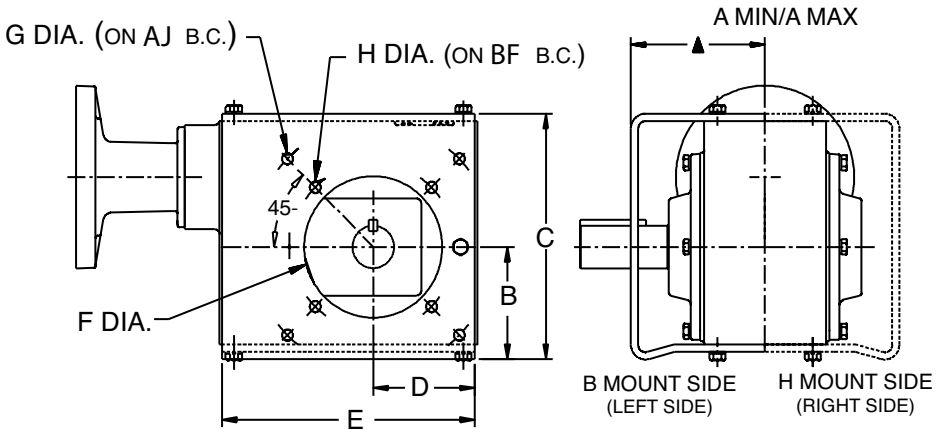
The Output Flange Kit is used to mount the reducer to a flat surface perpendicular to the output shaft. Each kit consists of a fabricated steel flange and required mounting hardware. Specify B-side or H-side mount.

Also available in stainless steel in a universal (B or H) mount.

Case Size	B-side Mtg.	H-side Mtg.	Stainless Steel
C150	**6011710**	**6011673**	**6031084**
C200	**6011727**	**6011680**	**6031091**
C262	**6011734**	**6011697**	**6031107**
C350	**6011741**	**6011703**	**6031114**

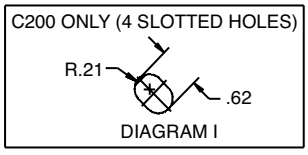
Case Size	A Min.	A Max.	BF	AJ
C150	3.27	5.50	4.00	5.12
C200	3.60	6.21	*6.31	N/A
C262	4.26	6.93	6.51	8.51
C350	5.40	8.21	8.46	12.50

Case Size	B	C	D	E	F Dia.	G Dia. (Typ.)	H Dia. (Typ.)
C150	2.68	6.42	2.98	7.30	3.12	0.36	0.41
C200	3.41	7.59	3.63	8.50	5.12	SEE DIAGRAM 1	
C262	4.24	9.47	4.18	10.25	5.12	0.54	0.41
C350	5.28	11.95	5.23	13.00	7.09	0.56	0.56



* BOLT CIRCLE TO CENTER OF SLOT

NOTE: 1) FLANGE DIMENSIONS THE SAME FOR ALL SHAFT CONFIGURATIONS

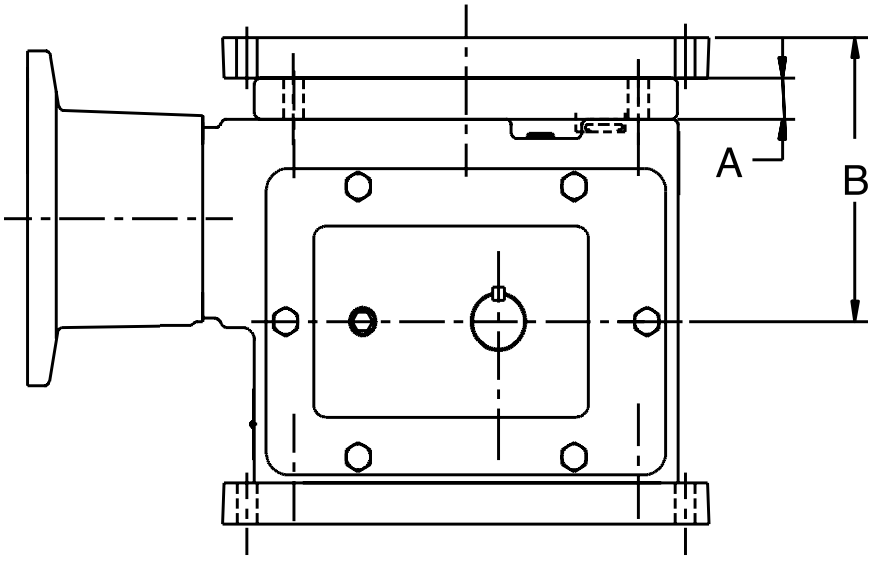


ComboGear
RISER BLOCK KITS

Riser blocks allow clearance over the motor eliminating the need to invert the reducer (worm under) when the application calls for a "ceiling" mount such as under a conveyor or other equipment. Riser blocks permit the reducer to be mounted in the most desirable position keeping the high speed shaft seal above the oil level. Experience shows that this results in increased seal life and durability. Each kit includes the riser block and required mounting hardware.

Case Size	Motor Frame Size	Kit Model Number	"B" (MM)	"B" (In) +.00/-.02 .02 .02	"A" Riser Block (In)
C150	56/140	**6011789**	140	5.51	1.29
C200	56/140	**6011796**	140	5.51	0.77
	180	**6011987**	180	7.09	2.35
C262	56/140	**6011802**	160	6.30	0.58
	180	**6011994**	200	7.87	2.15
C350	56/140	**6011819**	200	7.87	0.57
	180/210	**6012007**	225	8.86	1.56

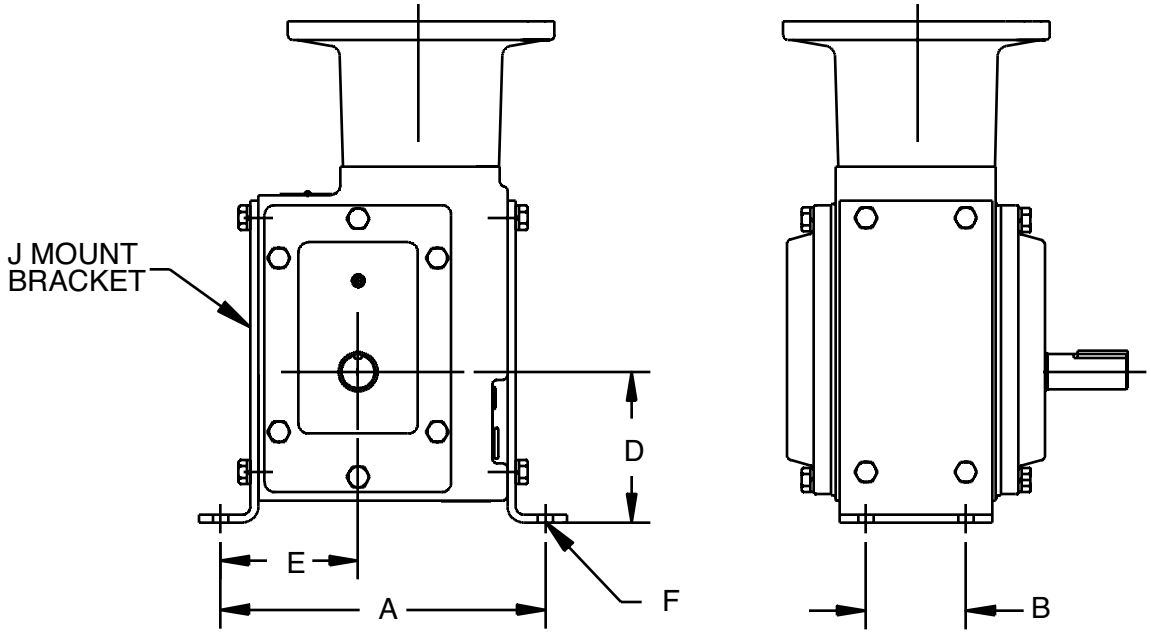
Note: Dimension B includes optional Bolt-On Foot



ComboGear
J-MOUNT KITS

J-mount kits allow the reducer to be “floor” mounted with the motor in a vertical (up) position. In this configuration, the output shaft(s) is horizontal. Each kit includes two brackets and the required mounting hardware.

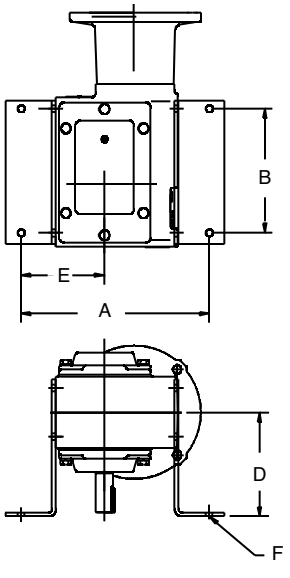
Case Size	Kit No.	A	B	D	E	F (Bolt)
C150	**6011826**	200MM 8	63MM 2	90MM 4	86.4MM 3	8MM 5/16”
C200	**6011833**	250MM 10	80MM 3	100MM 4	114.8MM 5	10MM 3/8”
C262	**6011840**	315MM 12	100MM 4	125MM 5	144MM 6	10MM 3/8”
C350	**6011857**	400MM 16	125MM 5	160MM 6	182.4MM 7	12MM 1/2”



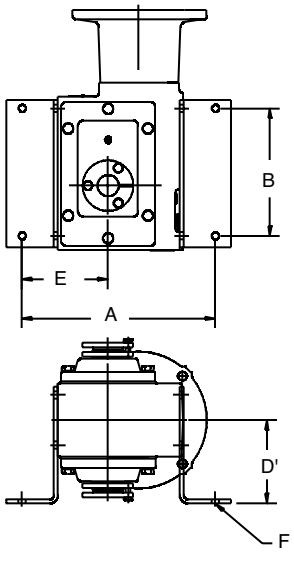
ComboGear
HI-LOW BRACKET KITS

Case Size	Description	Kit Number	A	B	D	D'	D"	E	F (Bolt)
C150	"Hi" Mount Solid Shaft	**6011864**	200MM 7.87"	160MM 6.30"	140MM 5.51"	N/A	N/A	86.4MM 3.40"	8MM 5/16"
	"Hi" Mount Hollow Shaft	**6011871**			N/A	112MM 4.41"	N/A		
	"Low" Mount Hollow & Solid Shaft	**6011888**			N/A	N/A	90MM 3.54"		
C200	"Hi" Mount Solid Shaft	**6011895**	250MM 9.84"	180MM 7.09"	160MM 6.30"	N/A	N/A	114.8MM 4.52"	10MM 3/8"
	"Hi" Mount Hollow Shaft	**6011901**			N/A	125MM 4.92"	N/A		
	"Low" Mount Hollow & Solid Shaft	**6011918**			N/A	N/A	90MM 3.54"		
C262	"Hi" Mount Solid Shaft	**6011925**	315MM 12.40"	236MM 9.29"	200MM 7.87"	N/A	N/A	145MM 5.71"	10MM 3/8"
	"Hi" Mount Hollow Shaft	**6011932**			N/A	140MM 5.51"	N/A		
	"Low" Mount Hollow & Solid Shaft	**6011949**			N/A	N/A	112MM 4.41"		
C350	"Hi" Mount Solid Shaft	**6011956**	400MM 15.75"	300MM 11.81"	250MM 9.84"	N/A	N/A	182.4MM 7.18"	12MM 1/2"
	"Hi" Mount Hollow Shaft	**6011963**			N/A	180MM 7.09"	N/A		
	"Low" Mount Hollow & Solid Shaft	**6011970**			N/A	N/A	140MM 5.51"		

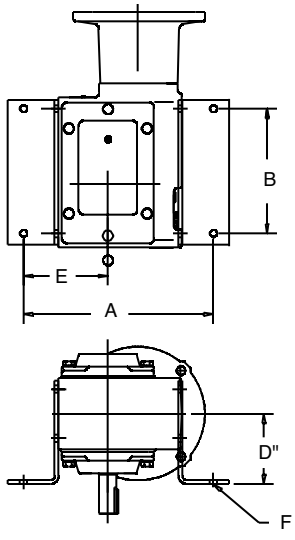
"Hi" Bracket - Solid Shaft



"Hi" Bracket - Hollow Shaft (Straight & Tapered)



"Low" Bracket Hollow & Solid Shaft



ComboGear
STRAIGHT BORE BUSHING KITS

Bushing kits are not included with reducers. They must be ordered separately by indicating the bore size or the kit number from the table. Each kit includes two bushings and the required mounting hardware.

Straight Bore Bushing Kits

Reducer Size	Bore Size	Kit Number
C150	1	**6011475**
	1 1/16	**6011772**
	1 1/8	**6011758**
	1 3/16	*
C200	1	**6002602**
	1 1/16	**6002619**
	1 1/8	**6002626**
	1 3/16	**6002633**
	1 1/4	**6002640**
	1 5/16	**6002657**
	1 7/16	*
C262	1 3/16	**6011482**
	1 1/4	**6011499**
	1 5/16	**6011505**
	1 3/8	**6011512**
	1 7/16	**6011529**
	1 1/2	**6011536**
C262	1 5/8	**6011543**
	1 11/16	**6011550**
	1 3/4	**6011567**
	1 15/16	*
C350	1 5/16	**6011574**
	1 3/8	**6011581**
	1 7/16	**6011598**
	1 1/2	**6011604**
	1 5/8	**6011611**
	1 11/16	**6011628**
	1 3/4	**6011635**
	1 7/8	**6011642**
	1 15/16	**6011659**
	2	**6011666**
	2 3/16	*

* Reducers are shipped from the factory as maximum bore. For other bore sizes, order the appropriate kit from the above chart.

ComboGear
TAPERED BUSHING KITS

Bushing kits are not included with reducers. They must be ordered separately by indicating the bore size or the kit number from the table. Each kit includes two bushings and the required mounting hardware. Optional Non-Stick Coated bushings are available for those applications requiring extra protection in corrosive and wet environments. For ease of ordering, refer to the table below.

TAPERED BUSHING KITS

Reducer Size	Bore Size	Kit Number
C150	1	**6011000**
	1 1/16	**6011765**
	1 1/8	**6010997**
	1 3/16	**6011284**
	25 MM	**6011291**
	30 MM	**6011307**
C200	1	**6002510**
	1 1/16	**6002527**
	1 1/8	**6002534**
	1 3/16	**6002541**
	1 1/4	**6002558**
	1 5/16	**6002565**
	1 3/8	**6002572**
	1 7/16	**6002589**
	25 MM	**6011314**
	30 MM	**6011321**
	32 MM	**6011338**
	35 MM	**6011345**
C262	1 1/8	**6011116**
	1 3/16	**6011109**
	1 1/4	**6011093**
	1 5/16	**6011086**
	1 3/8	**6011079**
	1 7/16	**6011062**
	1 1/2	**6011055**
	1 5/8	**6011048**

Reducer Size	Bore Size	Kit Number
C262	1 11/16	**6011031**
	1 3/4	**6011024**
	1 15/16	**6011017**
	32 MM	**6011352**
	35 MM	**6011369**
	38 MM	**6011376**
	40 MM	**6011383**
	42 MM	**6011390**
	45 MM	**6011406**
C350	1 5/16	**6011222**
	1 3/8	**6011215**
	1 7/16	**6011208**
	1 1/2	**6011192**
	1 5/8	**6011185**
	1 11/16	**6011178**
	1 3/4	**6011161**
	1 7/8	**6011154**
	1 15/16	**6011147**
	2	**6011130**
	2 3/16	**6011123**
	38 MM	**6011413**
	40 MM	**6011420**
	42 MM	**6011437**
	45 MM	**6011444**
	50 MM	**6011451**
	55 MM	**6011468**

NON-STICK COATED TAPERED BUSHING KITS

Reducer Size	Bore Size	Kit Number
C150	1	**6031121**
	1 1/16	**6031138**
	1 1/8	**6031145**
	1 3/16	**6031152**
	25 MM	**6031169**
	30 MM	**6031176**
C200	1	**6031183**
	1 1/16	**6031190**
	1 1/8	**6031206**
	1 3/16	**6031213**
	1 1/4	**6031220**
	1 5/16	**6031237**
	1 3/8	**6031244**
	1 7/16	**6031251**
	25 MM	**6031268**
	30 MM	**6031275**
	32 MM	**6031282**
	35 MM	**6031299**
C262	1 1/8	**6031305**
	1 3/16	**6031312**
	1 1/4	**6031329**
	1 5/16	**6031336**
	1 3/8	**6031343**
	1 7/16	**6031350**
	1 1/2	**6031367**
	1 5/8	**6031374**

Reducer Size	Bore Size	Kit Number
C262	1 11/16	**6031381**
	1 3/4	**6031398**
	1 15/16	**6031404**
	32 MM	**6031411**
	35 MM	**6031428**
	38 MM	**6031435**
	40 MM	**6031442**
	42 MM	**6031459**
	45 MM	**6031466**
C350	1 5/16	**6031473**
	1 3/8	**6031480**
	1 7/16	**6031497**
	1 1/2	**6031503**
	1 5/8	**6031510**
	1 11/16	**6031527**
	1 3/4	**6031534**
	1 7/8	---
	1 15/16	**6031541**
	2	**6031558**
	2 3/16	**6031565**
	38 MM	**6031572**
	40 MM	**6031589**
	42 MM	**6031596**
	45 MM	**6031602**
	50 MM	**6031619**
	55 MM	**6031626**

ComboGear
PLUG-IN OUTPUT SHAFT KITS

Plug-In Output Shaft Kits are available to easily convert tapered bored ComboGear reducers to a solid shaft reducer. Output shafts are available in both standard CRS and stainless steel materials. Kits include shaft and key.

Standard CRS Material

Case Size	Kit Number	*U Dimensions
C150	**6031725**	1-3/16
C200	**6031732**	1-7/16
C262	**6031749**	1-15/16
C350	**6031756**	2-3/16

Stainless Steel Material

Case Size	Kit Number	*U Dimensions
C150	**6031763**	1-3/16
C200	**6031770**	1-7/16
C262	**6031787**	1-15/16
C350	**6031794**	2-3/16

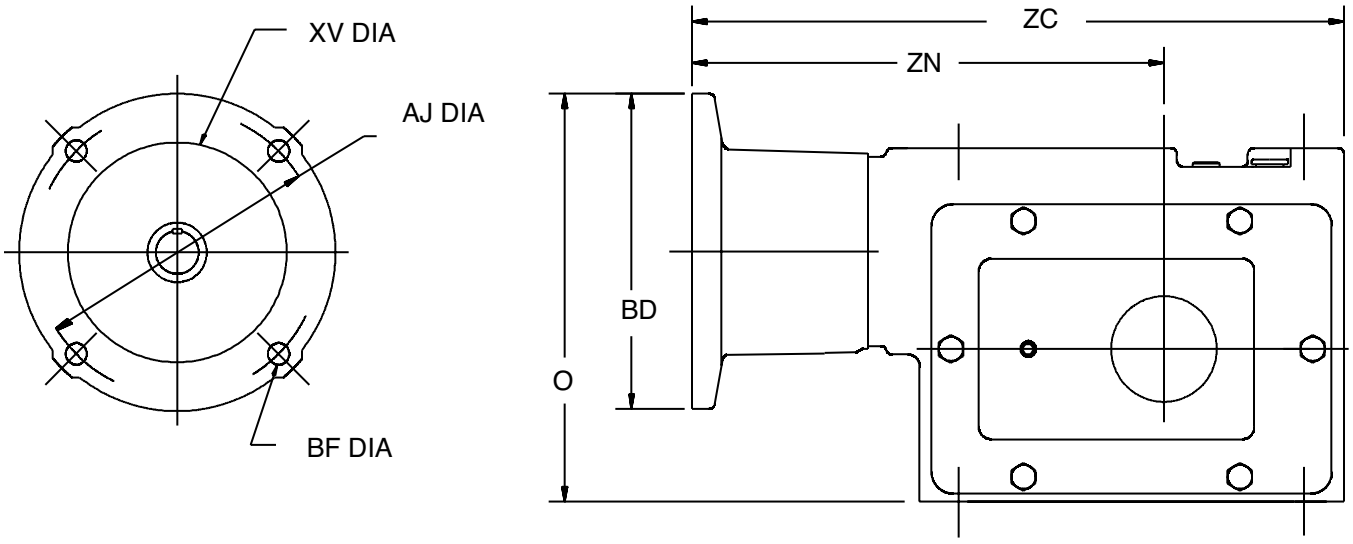
* Maximum Bore Bushing

NOTE: Output shaft dimensions same as on solid output shaft reducers

ComboGear
IEC METRIC MOTOR ADAPTERS

IEC Metric motor adapters are available with B5 flanges. To order reducer with metric motor adapter use same part number format found on selection pages and substitute the Nema frame size with a three position IEC frame size. Example: 071C200B030K1A. A flexible 3-piece coupling and motor mounting bolts are also included.

Reducer Size	IEC Frame
C150-C200	IEC71
C150-C200	IEC80
C150-C200	IEC90
C262-C350	IEC71
C262-C350	IEC80
C262-C350	IEC90
C262-C350	IEC100/112
C262-C350	IEC132



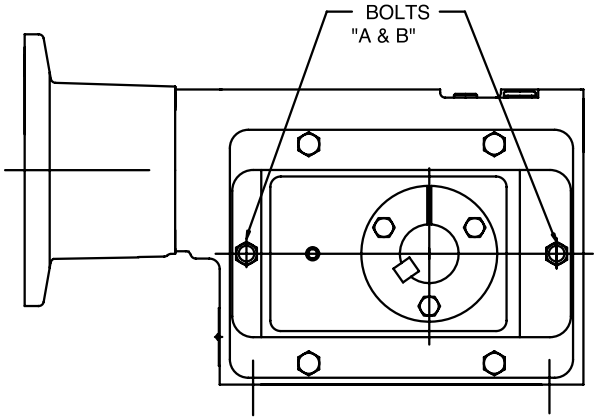
Size	Frame	ZN	ZC	BD	O	AJ	BF	XV
C150	71	7.86	11.07	6.30	7.13	130 MM	M8 TAP	110 MM
	80	8.25	11.46	7.87	7.92	165 MM	11 MM HOLE	130 MM
	90	8.64	11.85	7.87	7.92	165 MM	11 MM HOLE	130 MM
C200	71	8.85	12.54	6.30	7.13	130 MM	M8 TAP	110 MM
	80	9.24	12.93	7.87	9.07	165 MM	11 MM HOLE	130 MM
	90	9.63	13.32	7.87	7.92	165 MM	11 MM HOLE	130 MM
C262	71	10.63	14.94	6.30	7.13	130 MM	M8 TAP	110 MM
	80	11.03	15.34	7.87	7.92	165 MM	11 MM HOLE	130 MM
	90	11.42	15.73	7.87	7.92	165 MM	11 MM HOLE	130 MM
	100/112	13.50	17.81	9.85	8.91	215 MM	14 MM HOLE	180 MM
C350	71	12.63	18.00	6.30	7.13	130 MM	M8 TAP	110 MM
	80	13.03	18.40	7.87	7.92	165 MM	11 MM HOLE	130 MM
	90	13.42	18.79	7.87	7.92	165 MM	11 MM HOLE	130 MM
	110/112	15.50	20.87	9.85	8.91	215 MM	14 MM HOLE	180 MM

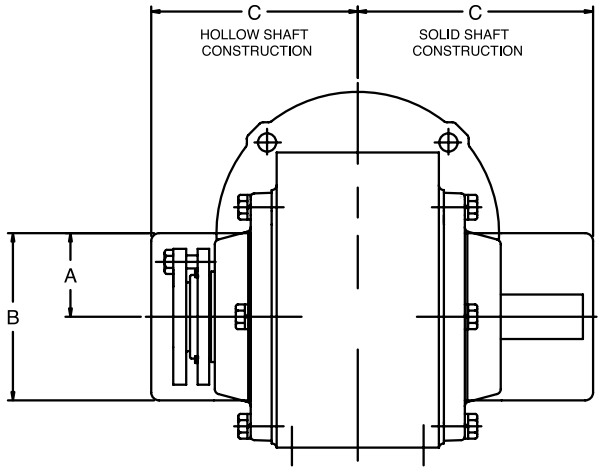
ComboGear
STAINLESS STEEL SHAFT GUARDS

Shaft guards are available for both the solid and hollow shaft gear units and provide protection from the rotating solid output shaft and bushings on the hollow shaft reducers. They are installed by removing the two (2) existing bearing housing bolts (A & B) located on the horizontal centerline of the gearcase and placing the same (2) bolts through the shaft guard and reinstalling to the proper tightening torque.

(Bolt torques are listed in Installation Manual)

One (1) piece guards and a two (2) piece guards are available depending on output shaft configuration. **Each kit contains one shaft guard.**





Hollow Shaft Closed Shaft Guard Kits	
Case Size	Model No.
C150	**6012052**
C200	**6012069**
C262	**6012076**
C350	**6012083**

Hollow Shaft			
Case Size	A	B	C
C150	1.44	2.88	4.48
C200	2.00	4.00	4.94
C262	2.22	4.44	5.49
C350	2.37	4.75	6.58

Hollow Shaft Open Shaft Guard Kits	
Case Size	Model No.
C150	**6031046**
C200	**6031053**
C262	**6031060**
C350	**6031077**

Solid Shaft Closed Shaft Guard Kits	
Case Size	Model No.
C150	**6031633**
C200	**6031640**
C262	**6031657**
C350	**6031664**

Solid Shaft			
Case Size	A	B	C
C150	1.44	2.88	5.23
C200	2.00	4.00	5.94
C262	2.22	4.44	7.24
C350	2.37	4.75	9.83

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CLUTCH/BRAKE MODULE

Where frequent starting and stopping is required or where it is desirable to disconnect the motor from the reducer, clutch/brake modules are available in double C-face offerings. Modules require electrical power to actuate both the clutch and the brake and therefore, are not considered as being fail safe. Open enclosure.

Note: reducer must have a minimum 1.5 service factor to compensate for impact forces on gear train caused by clutch/brake operation.

RING TACHOMETER ASSEMBLY

Kits consists of Ring Tachometer and special 3-piece coupling with mounting hardware. Mounts between C-face motor and the standard ComboGear motor input adapter.

SPECIAL LUBRICANT

Following lubricants are available upon request:

LUBRICANT	AMBIENT TEMPERATURE
SHC-634 (STANDARD)	**0 TO +165F**
SHC-629	**-30 TO +80F**
SHC-626	**-40 TO +60F**
CHEVRON FM460X (FOOD)	**+15 TO +110F**

SPECIAL OUTPUT SHAFTS

On special output shafts, the following conditions apply:

- Shafts no larger than standard diameters
- Shaft extensions no longer than 10 inches
- Shafts can be produced within manufacturing capabilities and with manufacturer's standard materials.
- Manufacturer reserves the right to approve final configuration.

GEARCASE ENCLOSURES

LEVEL 1 (XT)

Level 1 modifiaction makes the gearcase suitable for use outdoors or in chemical, dairy, food processing plants or other locations where high humidity, steam or chemical fumes are present or where the gear unit is washed frequently.
Motor must have proper enclosure.

Features include:

- Standard paint
- Stainless steel nameplate
- Double lip output seals

LEVEL 2 (WHITE EPOXY PAINT)

Level 2 modifications will meet requirements for food processors, canneries, meat packers, bakeries, drug and cosmetic manufacturers. Units with Level 2 modification may be used in either wet or dry areas and may be cleaned by either dry methods or by washdown with hose stream. Resistant to the corrosive action of food acids, detergents and sanitizers.
Motor must have proper enclosure.

Features include:

- White Epoxy paint
- Stainless steel nameplate
- Double lip output seals

LEVEL 3 (WASHDOWN NYLON 11 COATING)

Level 3 modification is for the most severe washdown applications. It resists the effects of cleaning with steam, high pressure water, detergents and sanitizing foams.
Motor must have proper enclosure.

Features include:

- Cast iron housings coated with corrosion, chemical and abrasion resistant Nylon 11 (white) material.
- Stainless steel nameplate and hardware.
- Double lip output seals.
- Electroless nickle-plated output shafts (solid and tapered-bore output shafts only)
- Use non-stick coated bushings (available separately) with tapered bore output shaft

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INSTALLATION

ComboGear reducers can be installed by either using the drilled and tapped holes in the bottom of the gearcase or by attaching a bolt-on foot kit. The mounting surface must be flat or breakage may result when mounting bolts are tightened. Use steel shims as required to assure that the gearbox is sitting solidly on all four bolting points and is properly aligned.

On hollow shaft units the ideal position of the tie rod arm is at right angles to a line between the point of attachment of the torque arm to the reducer and the centerline of the output shaft. This angle may vary up to 30 degrees in either direction. CAUTION: Exceeding the 30 degree variance of the tie rod could result in excessive reaction load and equipment damage. It is good practice to position the rod assembly such that it will be loaded in tension during operation of the reducer. Viewing the output shaft from the K-1 mounting position, a clockwise rotation of the input shaft will cause a clockwise rotation of the reducer about the output shaft. Proper positioning of the tie rod assembly will prevent the components from being loaded in compression.

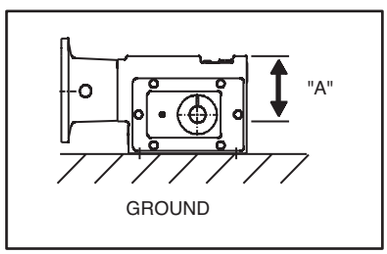
ComboGear reducers are factory filled with Mobil SHC634 for S-1, K-1, and L-1 mounting positions. Any approved mounting position may be specified upon order entry and additional lube, if required, will be added at no additional charge. S2, S4, K2, K4, L2 and L4 mounting positions also require the addition of grease fittings for upper bearing lubrication and will be included at no additional charge if ordered through factory. **Note:** Failure to follow these instructions will void warranty.

The chart below provides two methods for verifying the reducer has the correct amount of oil. The oil can be measured by volume or by checking dimension “A”. Dimension “A” is measured with a dipstick inserted into the tapped fill hole from the machined top of the gearcase to the oil level with the gearbox set level on the ground.

LUBRICATION

Hollow (Tapered Or Straight Bore) Output Shaft								
Size	Assm.							
	S1 H4 B2	Dist. “A” Inches	S2 H1 B3	“A”	S4 H3 B1	A	S5 H5 B5	“A”
C150	21 oz.	3-1/4”	27 oz.	2-1/4”	27 oz.	2-1/4”	43 oz.	1-1/2”
C200	32 oz.	4-1/4”	44 oz.	3-1/4”	44 oz.	3-1/4”	60 oz.	2-1/8”
C262	52 oz.	6-1/8”	112 oz.	2-3/4”	112 oz.	2-3/4”	112 oz.	2-3/4”
C350	136 oz.	7-1/2”	235 oz.	4”	235 oz.	4”	256 oz.	3-3/8”

Solid Output Shaft								
Size	Assm							
	L1 K1 B2 H4	Dist. “A” Inches	L4 K2 B1 H1	“A”	K4 L2 B3 H3	“A”	L5 K5 B5 H5	“A”
C150	21 oz.	3-1/4”	32 oz.	1-3/4”	44 oz.	3/4”-1/2”	44 oz.	3/4”
C200	32 oz.	4-1/4”	44 oz.	3”	68 oz.	1-3/4”	68 oz.	1-1/2”
C262	52 oz.	6-1/8”	96 oz.	3-3/8”	128 oz.	1-1/2”	128 oz.	1-3/4”
C350	136 oz.	7-1/2”	235 oz.	4-1/2”	312 oz.		256 oz.	4”



ComboGear
LUBRICATION OPTIONS

FOOD GRADE LUBRICANT
Chevron FM460X lubricant serves the needs of food processing applications which need a non-contaminating gear oil. Chevron FM460X carries USDA Class AA and H1 approvals. Use of this lubricant can reduce the potential damage to food caused by oil seeping through worn-out shaft seals.

LOW TEMPERATURE LUBRICANT
The standard lubricant provided with ComboGear reducers covers an operating ambient temperature range from -10°F to +100°F. For ambient operating conditions above +100° F contact MASTER Application Engineering. To apply ComboGear reducers in applications from -10°F to -30°F, specify Mobil SHC-629 lubricant.

Standard	
Volume	**Part Number (SHC-634)**
12 oz.	41170966AB
1 qt.	41170966AE
1 gal.	41170966AF

USDA H1 Food Grade	
Volume	**Part Number (USDA H1 ISO 460)**
1 qt.	41170966BA
1 gal.	41170966BB

Low Temperature	
Volume	**Part Number (SHC-629)**
1 qt.	41170966AG
1 gal.	41170966AH

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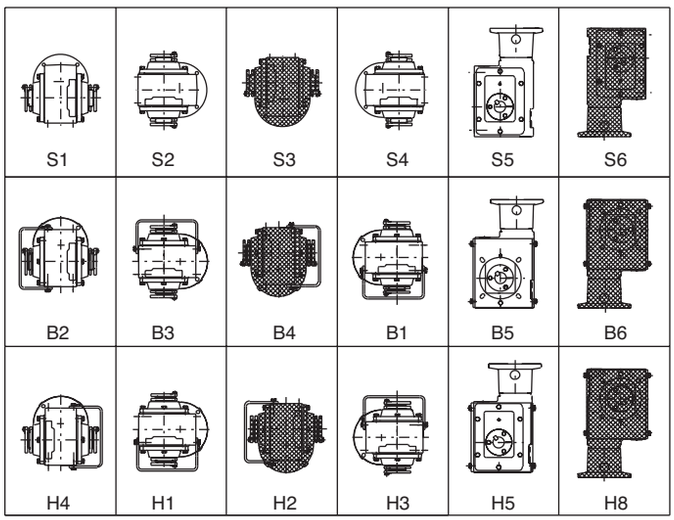
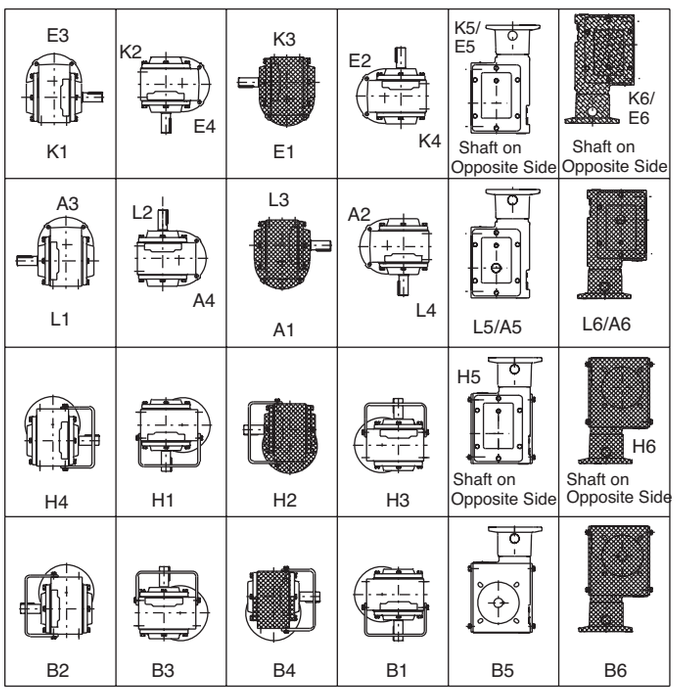
MOUNTING POSITIONS - HOLLOW OUTPUT SHAFT



Mounting Positions - Solid Output Shaft



For applications requiring the addition of lubricant, Mobil SHC 634 is available. See CG-45.

MAINTENANCE

The ComboGear reducer requires no periodic maintenance. However, MASTER recommends occasional visual inspections to check for hardware security, leakage, and general overall condition. In extremely dirty environments, heavy accumulation of dirt can cause overheating. An occasional wash down or wipe-off will assure the long life of the equipment.

APPLICATION

The ComboGear reducer is designed to operate within the following temperature limits:

Ambient	-10° to 165°F
Oil Sump	-10° to 200°F

When ambient temperatures exceed 100°F, care should be taken not to exceed a 200°F sump temperature during unit operation. These conditions could require the application of a larger reducer. Units which operate in ambient temperatures below -10°F may be accommodated on factory orders by lower viscosity Mobil SHC 600 series products.

The continuous rated input horsepower shown on the reducer nameplate is for a service factor of 1.0 at an input speed of 1750 rpm. Before placing the reducer into service, check the nameplate to confirm that its horsepower rating is consistent with the motor horsepower and desired service factor.

On hollow shaft units, consideration should be given to the design of the driven shaft on which the reducer is mounted. Shafting material and size should be capable of carrying loads from the reducer weight, transmitted torque, and tie rod reaction force.

INSTALLATION, OPERATION & MAINTENANCE MANUALS

See WWW.MASTER-PT.COM

ComboGear

EXACT RATIOS SOLID SHAFT REDUCERS

Nominal Ratio	Gearcase Size			
	C150	C200	C262	C350
6.1	-	-	-	6.030
7.5	7.335	-	7.414	7.500
9.4	9.231	9.423	9.400	9.423
10	11.087	11.304	11.304	11.304
15	13.958	13.958	13.958	13.958
18	16.667	16.667	16.667	16.667
20	20.278	20.278	20.278	20.278
25	25.333	25.333	25.333	25.333
30	30.417	30.417	30.417	30.417
38	38.000	38.000	38.000	38.000
40	40.556	40.556	40.556	40.556
50	50.667	50.667	50.667	50.667
60	60.833	60.833	60.833	60.833
75	76.000	76.000	76.000	76.000
80	81.111	81.111	81.111	81.111
86	-	-	-	83.333
90	91.200	91.200	91.200	-
100	101.333	101.333	101.333	101.333
125	121.667	126.667	126.667	126.667
150	152.000	152.000	152.000	152.000
160	162.222	162.222	162.222	162.222
200	202.667	202.667	202.667	202.667
240	243.333	243.333	243.333	243.333
300	304.000	304.000	304.000	304.000

EXACT RATIO HOLLOW SHAFT REDUCERS

Nominal Ratio	Gearcase Size			
	C150	C200	C262	C350
6.1	-	-	-	6.030
7.5	7.335	-	7.414	7.500
9.4	9.231	9.423	9.400	9.423
10	11.087	11.304	11.364	11.304
15	13.958	13.958	13.958	13.958
18	16.667	16.667	16.667	16.667
20	20.278	20.278	20.278	20.278
25	25.333	25.333	25.333	25.333
30	30.417	30.417	30.417	30.417
38	38.000	38.000	38.000	38.000
40	40.556	40.556	40.556	40.556
50	50.667	50.667	50.667	50.667
60	60.833	60.833	60.833	60.833
75	76.000	76.000	76.000	76.000
80	81.111	81.111	83.751	81.111
86	-	-	-	83.333
90	91.200	91.200	90.908	-
100	101.333	101.333	99.999	101.333
125	121.667	126.667	121.667	126.667
150	152.000	152.000	152.000	152.000
160	162.222	162.222	162.222	162.222
200	202.667	202.667	202.667	202.667
240	243.333	243.333	243.333	243.333
300	304.000	304.000	304.000	304.000

ComboGear

ROTATIONAL INERTIA SUMMARY
All values are lb-in² referred to input shaft

Solid Output Units

Nominal	C150	C200		C262		C350	
Ratio	56/140 Fr.	56/140 Fr.	180 Fr.	56/140 Fr.	180 Fr.	56/140 Fr.	180 Fr.
10	0.605	0.953	1.460	2.510	4.170	10.190	11.850
15	0.599	0.938	1.440	2.460	4.120	10.040	11.700
18	0.598	0.928	1.430	2.440	4.100	9.960	11.620
20	0.591	0.920	1.420	2.410	4.070	9.880	11.540
25	0.588	0.912	1.410	2.390	4.050	9.810	11.470
30	0.529	0.761	1.260	1.960	3.620	7.170	8.830
38	0.528	0.757	1.260	1.950	3.610	7.140	8.800
40	0.520	0.740	1.240	1.870	3.530	6.630	8.290
50	0.520	0.739	1.240	1.870	3.530	6.610	8.270
60	0.512	0.718	1.220	1.770	3.430	5.300	6.960
75	0.512	0.718	1.220	1.770	3.430	5.370	7.030
80	0.512	0.720	1.220	1.610	3.270	5.270	6.930
90	0.501	0.795	1.300	1.610	3.270	5.360	7.020
100	0.511	0.719	1.220	1.600	3.260	5.270	6.930
125	0.518	0.705	1.210	1.600	3.260	5.040	6.700
150	0.518	0.744	1.250	1.680	3.340	4.910	6.570
160	0.509	0.713	1.220	1.740	3.400	5.130	6.790
200	0.509	0.713	1.220	1.740	3.400	5.130	6.790
240	0.505	0.694	1.200	1.670	3.330	4.850	6.510
300	0.505	0.694	1.200	1.670	3.330	4.850	6.510

Hollow Output Units

Nominal	C150	C200		C262		C350	
Ratio	56/140 Fr.	56/140 Fr.	180 Fr.	56/140 Fr.	180 Fr.	56/140 Fr.	180 Fr.
10	0.611	0.984	1.490	2.540	4.200	10.220	11.880
15	0.602	0.958	1.460	2.480	4.140	10.060	11.720
18	0.600	0.942	1.440	2.450	4.110	9.970	11.630
20	0.593	0.929	1.430	2.420	4.080	9.890	11.550
25	0.590	0.918	1.420	2.400	4.060	9.820	11.480
30	0.530	0.765	1.270	1.960	3.620	7.180	8.840
38	0.528	0.760	1.260	1.950	3.610	7.140	8.800
40	0.521	0.743	1.240	1.870	3.530	6.630	8.290
50	0.520	0.740	1.240	1.870	3.530	6.610	8.270
60	0.512	0.720	1.220	1.770	3.430	5.300	6.960
75	0.512	0.718	1.220	1.770	3.430	5.370	7.030
80	0.512	0.720	1.220	1.610	3.270	5.270	6.930
90	0.501	0.795	1.300	1.610	3.270	5.360	7.020
100	0.511	0.720	1.220	1.600	3.260	5.270	6.930
125	0.518	0.706	1.210	1.600	3.260	5.040	6.700
150	0.518	0.744	1.250	1.680	3.340	4.910	6.570
160	0.509	0.713	1.220	1.740	3.400	5.130	6.790
200	0.509	0.713	1.220	1.740	3.400	5.130	6.790
240	0.505	0.694	1.200	1.670	3.330	4.850	6.510
300	0.505	0.694	1.200	1.670	3.330	4.850	6.510