



WORM GEAR SPEED REDUCERS

SPARTAN ALUMINUM WORM GEAR DRIVES LUBRICATION

APPROXIMATE OIL CAPACITIES - WORM GEAR SPEED REDUCERS				
SERIES	MOUNTING POSITION	QUANTITY (pints)		DROP BEARING MODELS
		SHAFT OUTPUT MODELS	HOLLOW BORE MODELS	
130	WORM TOP	0.53	N/A	N/A
	WORM BOTTOM	0.44	N/A	N/A
	VERTICAL INPUT ***	0.31	N/A	N/A
	VERTICAL OUTPUT ---	0.31	N/A	N/A
180	WORM TOP	1.00	0.81	N/A
	WORM BOTTOM	0.81	0.75	N/A
	VERTICAL INPUT ***	0.56	0.56	N/A
	VERTICAL OUTPUT ---	0.56	0.56	N/A
210	WORM TOP	1.38	1.50	N/A
	WORM BOTTOM	1.25	1.12	N/A
	VERTICAL INPUT ***	1.12	1.00	N/A
	VERTICAL OUTPUT ---	1.00	0.88	N/A
240	WORM TOP	2.25	1.88	N/A
	WORM BOTTOM	2.13	1.88	N/A
	VERTICAL INPUT ***	1.75	1.63	N/A
	VERTICAL OUTPUT ---	1.69	1.44	N/A
260	WORM TOP	2.75	2.50	N/A
	WORM BOTTOM	2.50	2.25	N/A
	VERTICAL INPUT ***	2.12	1.87	N/A
	VERTICAL OUTPUT ---	2.00	1.63	N/A
320	WORM TOP	5.00	4.00	7.50
	WORM BOTTOM	3.88	3.38	5.50
	VERTICAL INPUT ***	3.38	2.75	4.50
	VERTICAL OUTPUT ---	3.12	2.75	5.0 VERTICAL DOWN 3.0 VERTICAL UP
380	WORM TOP	5.38	5.50	8.50
	WORM BOTTOM	4.50	4.50	7.00
	VERTICAL INPUT ***	3.88	4.00	5.75
	VERTICAL OUTPUT ---	3.63	3.75	6.0 VERTICAL DOWN 4.0 VERTICAL UP
450	WORM TOP	7	5.2	9
	WORM BOTTOM	4.8	4	5.7
	VERTICAL OUTPUT	3.8	3	5.8 VERTICAL DOWN 3.8 VERTICAL UP
520	WORM TOP	10.6	7.3	14.5
	WORM BOTTOM	7.5	5.1	9.3
	VERTICAL OUTPUT	5.5	3.8	9.4 VERTICAL DOWN 5.5 VERTICAL UP
W300	WORM TOP		0.70	
	WORM BOTTOM	N/A	0.40	N/A
	VERTICAL OUTPUT		0.40	
W50B	WORM TOP		3.2	
	WORM BOTTOM	N/A	2	N/A
	VERTICAL OUTPUT		3.5	
W516	WORM TOP	5.25	5.25	
	WORM BOTTOM	2.75	2.75	N/A
	VERTICAL OUTPUT	2.6	2.6	

*** This quantity of oil will fill the unit to the centerline.
 Factory modifications required to provide sealed top bearing.
 No modifications needed if quill-type C-Flange is mounted up.
 --- This quantity of oil will fill the unit to the centerline.
 Factory modifications required to provide grease pack and Nilos ring at top bearing.

GW Series Lubricant Capacities (Pts)

Mounting Position	GW60	GW70	GW80	GW100
Single Reduction Units				
Worm Over	19 1/2	35	48	72
Worm Under	20 1/2	32 3/4	51 1/4	80
Vertical Output*	20	20 3/4	28 3/4	40
Vertical Input*	20 1/3	36 1/2	50	75
Extended Bearing	27	40	63	102
Double Reduction Primary Unit				
Worm Over	4 1/2	4 1/2	7	11 3/4
Worm Under	6 3/4	6 3/4	9 1/2	19
Vertical Output*	5 1/2	5 1/2	8	15 1/2
Vertical Input*	5 3/4	5 3/4	8	15 1/2
Extended Bearing	8	8	12	17
Sec.Unit Worm Over	30 1/3	50 1/3	71 1/2	107 1/4

* Factory modifications required.

Carefully follow lubrication instructions and installation manual furnished with the gear reducer. All standard Spartan reducers are properly filled at Factory with sufficient lubricant quantity for any mounting position. Change oil only when performing maintenance that requires gearbox disassembly or if the reducer is operated in a severe environment. If oil must be replaced, use only PAG 460. PAG 460 is H1 Food Grade approved lube. **NOTE: PAG SYNTHETIC LUBRICANTS ARE NOT COMPATIBLE WITH ANY OTHER LUBRICANTS, AND MUST NEVER BE MIXED. TOPPING OFF WITH THE WRONG LUBRICANT COULD CAUSE UNIT FAILURE.**

SPECIAL LUBRICATION REQUIREMENTS – Sizes AL450-AL850

- Reducer is mounted with input worm shaft vertical
- Input speed is sustained less than 900 RPM

NOTE: The reducer may require modifications to assure proper lubrication in these applications. Contact Factory for more detail.

For lubrication requirements of helical reducers (primaries of helical worm reducers and ratio multipliers), contact Factory.

Lubrication type	Series			
	AL450	AL500	AL630	AL850
Oil (pints)	0.2	0.3	0.8	2.6

Installation Instructions

The following instructions apply to standard Spartan Worm type reducers with base or flange mounting in motorized and non-motorized single and double reduction options.

1. Mount the unit to a rigid flat surface using grade 5 or higher fasteners. The mounting fasteners should be the largest standard size that will fit in the base mounting hole. Shim as required under flange or base feet which do not lie flat against the mounting surface.
 2. Carefully follow lubrication instructions and installation manual furnished with the gear reducer. All standard Spartan reducers are properly filled at Factory with sufficient lubricant quantity for nearly any mounting position.
- SPARTAN aluminum gear reducers:** Series AL450-AL850 utilize a vent-free design and are Factory filled with synthetic oil formulated for lifetime lubrication & wide operating temperature range (+5F to +220F). It is not necessary to change the lubricant unless the reducer is used in a severe environment. If these reducers will be used in severe environment or if lubricant must be replaced, contact Factory.
3. Connect motor to speed reducer.



DO NOT CHANGE MOUNTING POSITIONS WITHOUT CONTACTING FACTORY. Altering the mounting position may require special lubrication provisions which must be factory installed.