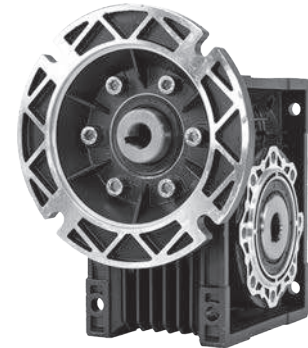


Aluminum Worm Gear Reducers: Product Overview

Product Specifications

- » 7.5:1 - 100:1 ratios
- » Box sizes (Center distances 30 mm - 90 mm)
- » Aluminum alloy housing for light weight design
- » Hardened worm shaft for increased durability
- » Two bearings on input and output shafts
- » NEMA motor input flanges
- » All units filled with synthetic oil (Mobil SHC634) for an "M1" position mounting
- » Adjust oil level for alternative mounting positions
- » Double lip oil seals prevent leakage
- » Multiple mounting holes for all angle mounts
- » Powder coat paint plan on external housing to resist corrosion
- » Hollow output bores with plug-in output shafts
- » 1 year warranty



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ALUMINUM WORM GEAR REDUCERS

Ratio	Output RPM @ 1750 RPM Input	WCD Center (mm)	HP	NEMA Motor Frame	Approx. Wt. (lbs.)	Model Number	List Price
7.5:1	233	30	0.70	56C	3	CALM30-7.5/1-56C	\$168.14
		40	1.50	56C	5	CALM40-7.5/1-56C	\$206.62
		50	2.72	56C	8	CALM50-7.5/1-56C	\$285.19
		63	4.46	56C	13	CALM63-7.5/1-56C	\$369.26
		63	4.46	145TC	13	CALM63-7.5/1-145TC	\$369.26
		75	6.44	56C	19	CALM75-7.5/1-56C	\$534.26
		75	6.44	145TC	19	CALM75-7.5/1-145TC	\$534.26
		75	6.44	182/4TC	19	CALM75-7.5/1-182/4TC	\$534.26
		90	10.98	56C	28	CALM90-7.5/1-56C	\$611.24
		90	10.98	145TC	28	CALM90-7.5/1-145TC	\$611.24
10:1	175	30	0.54	56C	3	CALM30-10/1-56C	\$168.14
		40	1.21	56C	5	CALM40-10/1-56C	\$206.62
		50	2.12	56C	8	CALM50-10/1-56C	\$285.19
		63	3.52	56C	13	CALM63-10/1-56C	\$369.26
		63	3.52	145TC	13	CALM63-10/1-145TC	\$369.26
		75	5.20	56C	19	CALM75-10/1-56C	\$534.26
		75	5.20	145TC	19	CALM75-10/1-145TC	\$534.26
		75	5.20	182/4TC	19	CALM75-10/1-182/4TC	\$534.26
		90	8.92	56C	28	CALM90-10/1-56C	\$611.24
		90	8.92	145TC	28	CALM90-10/1-145TC	\$611.24
15:1	117	30	0.38	56C	3	CALM30-15/1-56C	\$168.14
		40	0.83	56C	5	CALM40-15/1-56C	\$206.62
		50	1.52	56C	8	CALM50-15/1-56C	\$285.19
		63	2.70	56C	13	CALM63-15/1-56C	\$369.26
		63	2.70	145TC	13	CALM63-15/1-145TC	\$369.26
		75	4.07	56C	19	CALM75-15/1-56C	\$534.26
		75	4.07	145TC	19	CALM75-15/1-145TC	\$534.26
		75	4.07	182/4TC	19	CALM75-15/1-182/4TC	\$534.26
		90	7.05	56C	28	CALM90-15/1-56C	\$611.24
		90	7.05	145TC	28	CALM90-15/1-145TC	\$611.24
20:1	88	30	0.28	56C	3	CALM30-20/1-56C	\$168.14
		40	0.63	56C	5	CALM40-20/1-56C	\$206.62
		50	1.14	56C	8	CALM50-20/1-56C	\$285.19
		63	2.06	56C	13	CALM63-20/1-56C	\$369.26
		63	2.06	145TC	13	CALM63-20/1-145TC	\$369.26

Continued On Next Page

Aluminum Worm Gear Reducers: Product Overview

2

ALUMINUM WORM
GEAR REDUCERS

Ratio	Output RPM @ 1800 RPM Input	WCD Center (mm)	HP	NEMA Motor Frame	Approx. Wt. (lbs.)	Model Number	List Price
20:1	88	75	3.24	56C	19	CALM75-20/1-56C	\$534.26
		75	3.24	145TC	19	CALM75-20/1-145TC	\$534.26
		90	5.33	56C	28	CALM90-20/1-56C	\$611.24
		90	5.33	145TC	28	CALM90-20/1-145TC	\$611.24
		90	5.33	182/4TC	28	CALM90-20/1-182/4TC	\$611.24
25:1	70	30	0.30	56C	3	CALM30-25/1-56C	\$168.14
		40	0.48	56C	5	CALM40-25/1-56C	\$206.62
		50	0.86	56C	8	CALM50-25/1-56C	\$285.19
		63	1.56	56C	13	CALM63-25/1-56C	\$369.26
		75	2.43	56C	19	CALM75-25/1-56C	\$534.26
		75	2.43	145TC	19	CALM75-25/1-145TC	\$534.26
		90	4.18	56C	28	CALM90-25/1-56C	\$611.24
		90	4.18	145TC	28	CALM90-25/1-145TC	\$611.24
30:1	58	30	0.25	56C	3	CALM30-30/1-56C	\$168.14
		40	0.53	56C	5	CALM40-30/1-56C	\$206.62
		50	0.94	56C	8	CALM50-30/1-56C	\$285.19
		63	1.64	56C	13	CALM63-30/1-56C	\$369.26
		75	2.41	56C	19	CALM75-30/1-56C	\$534.26
		75	2.41	145TC	19	CALM75-30/1-145TC	\$534.26
		90	4.21	56C	28	CALM90-30/1-56C	\$611.24
		90	4.21	145TC	28	CALM90-30/1-145TC	\$611.24
40:1	44	30	0.19	56C	3	CALM30-40/1-56C	\$168.14
		40	0.40	56C	5	CALM40-40/1-56C	\$206.62
		50	0.70	56C	8	CALM50-40/1-56C	\$285.19
		63	1.21	56C	13	CALM63-40/1-56C	\$369.26
		75	1.90	56C	19	CALM75-40/1-56C	\$534.26
		90	3.01	56C	28	CALM90-40/1-56C	\$611.24
		90	3.01	145TC	28	CALM90-40/1-145TC	\$611.24
		50:1	35	30	0.15	56C	3
40	0.31			56C	5	CALM40-50/1-56C	\$206.62
50	0.56			56C	8	CALM50-50/1-56C	\$285.19
63	0.99			56C	13	CALM63-50/1-56C	\$369.26
75	1.47			56C	19	CALM75-50/1-56C	\$534.26
90	2.36			56C	28	CALM90-50/1-56C	\$611.24
90	2.36			145TC	28	CALM90-50/1-145TC	\$611.24
60:1	29	30	0.12	56C	3	CALM30-60/1-56C	\$168.14
		40	0.25	56C	5	CALM40-60/1-56C	\$206.62
		50	0.47	56C	8	CALM50-60/1-56C	\$285.19
		63	0.82	56C	13	CALM63-60/1-56C	\$369.26
		75	1.22	56C	19	CALM75-60/1-56C	\$534.26
		90	1.93	56C	28	CALM90-60/1-56C	\$611.24
80:1	22	40	0.18	56C	5	CALM40-80/1-56C	\$206.62
		50	0.35	56C	8	CALM50-80/1-56C	\$285.19
		63	0.60	56C	13	CALM63-80/1-56C	\$369.26
		75	0.91	56C	19	CALM75-80/1-56C	\$534.26
		90	1.27	56C	28	CALM90-80/1-56C	\$611.24
100:1	17.5	40	0.14	56C	5	CALM40-100/1-56C	\$206.62
		50	0.26	56C	8	CALM50-100/1-56C	\$285.19
		63	0.51	56C	13	CALM63-100/1-56C	\$369.26
		75	0.74	56C	19	CALM75-100/1-56C	\$534.26
		90	1.03	56C	28	CALM90-100/1-56C	\$611.24

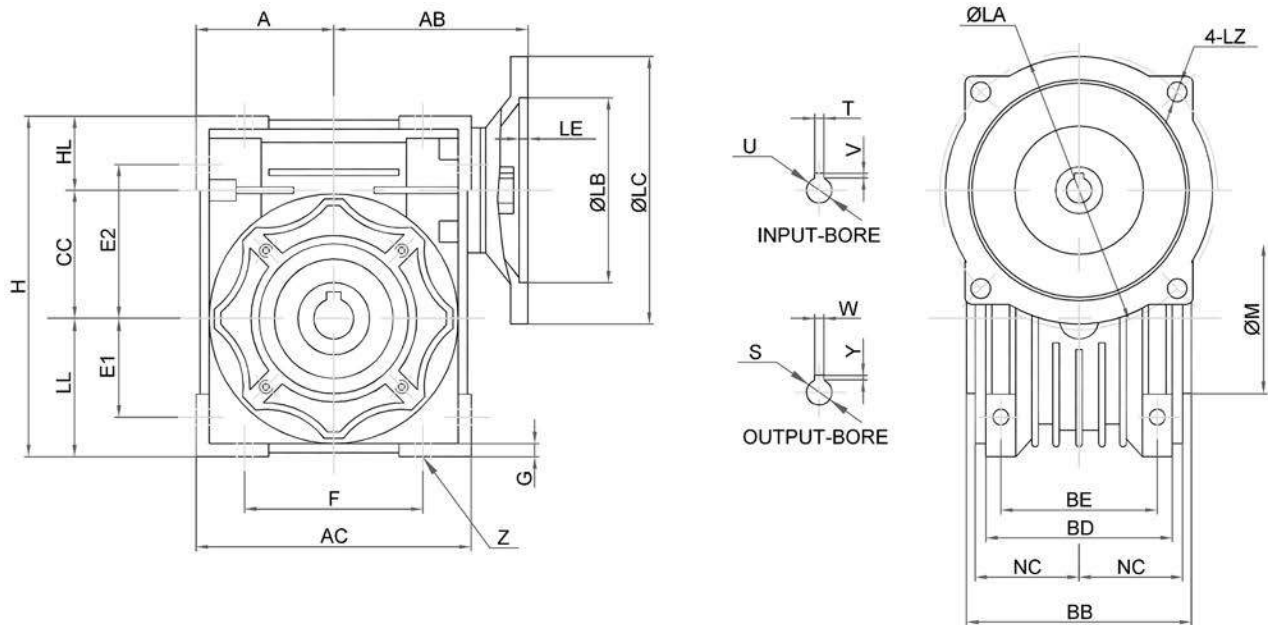
Aluminum Worm Gear Reducers: Mechanical Ratings

Input Speed		1750 RPM					Output Shaft Thrust Load (lbs.)	Backlash (Angular Minutes) (')	
Box Size	Ratio	Mechanical (1.0 SF)			Efficiency (%)	O.H.L. (lbs.)		Min	Max
		Input HP	Output Torque (lbs. in.)	Output Speed					
30	7.5:1	0.70	160	233	85	143	29	13.8	28.8
	10:1	0.54	160	175	83	157	31	13.8	28.8
	15:1	0.38	160	117	78	180	36	13.8	28.8
	20:1	0.28	151	88	74	198	40	13.2	28.2
	25:1	0.30	185	70	69	213	43	13.2	27.0
	30:1	0.25	177	58	66	226	45	13.8	28.8
	40:1	0.19	160	44	60	249	50	13.2	28.2
	50:1	0.15	151	35	56	268	54	13.2	27.0
	60:1	0.12	134	29	52	285	57	12.6	25.8
40	7.5:1	1.50	353	233	87	274	55	11.4	24.0
	10:1	1.21	370	175	85	302	60	11.4	24.0
	15:1	0.83	370	117	83	346	69	11.4	24.0
	20:1	0.63	361	88	79	381	76	11.4	24.0
	25:1	0.48	328	70	76	410	82	10.8	21.0
	30:1	0.53	403	58	71	436	87	11.4	24.0
	40:1	0.40	378	44	66	479	96	11.4	24.0
	50:1	0.31	353	35	63	517	103	10.8	21.0
	60:1	0.25	319	29	59	549	110	11.4	21.6
	80:1	0.18	277	22	53	604	121	11.4	21.6
100:1	0.14	244	18	48	651	130	11.4	21.6	
50	7.5:1	2.72	647	233	88	377	75	8.4	19.2
	10:1	2.12	664	175	87	415	83	8.4	19.2
	15:1	1.52	681	117	83	475	95	8.4	19.2
	20:1	1.14	656	88	80	522	104	6.6	17.4
	25:1	0.86	597	70	77	563	113	7.2	17.4
	30:1	0.94	740	58	73	598	120	8.4	19.2
	40:1	0.70	689	44	68	658	132	6.6	17.4
	50:1	0.56	647	35	64	709	142	7.2	17.4
	60:1	0.47	605	29	60	753	151	6.6	16.2
	80:1	0.35	546	22	54	829	166	6.6	16.2
100:1	0.26	462	18	50	893	179	6.6	16.2	
63	7.5:1	4.46	1076	233	89	492	98	7.8	17.4
	10:1	3.52	1108	175	87	542	108	7.8	17.4
	15:1	2.70	1236	117	85	620	124	7.8	17.4
	20:1	2.06	1225	88	83	683	137	6.6	16.2
	25:1	1.56	1124	70	80	736	147	6.6	13.8
	30:1	1.64	1345	58	76	782	156	7.8	17.4
	40:1	1.21	1261	44	72	860	172	6.6	16.2
	50:1	0.99	1208	35	68	927	185	6.6	13.8
	60:1	0.82	1135	29	64	985	197	6.0	13.8
	80:1	0.60	1027	22	59	1084	217	6.0	13.8
100:1	0.51	992	18	54	1168	234	6.0	13.8	
75	7.5:1	6.44	1555	233	89	581	116	7.8	16.2
	10:1	5.20	1656	175	88	640	128	7.8	16.2
	15:1	4.07	1900	117	86	732	146	7.8	16.2
	20:1	3.24	1953	88	84	806	161	6.6	14.4
	25:1	2.43	1784	70	82	868	174	6.6	13.2
	30:1	2.41	2028	58	78	923	185	7.8	16.2
	40:1	1.90	2029	44	74	1015	203	6.6	14.4
	50:1	1.47	1881	35	71	1094	219	6.6	13.2
	60:1	1.22	1778	29	67	1162	232	6.0	12.6
	80:1	0.91	1632	22	62	1279	256	6.0	12.6
100:1	0.74	1517	18	57	1378	276	6.0	12.6	
90	7.5:1	10.98	2682	233	90	643	129	7.2	14.4
	10:1	8.92	2867	175	89	708	142	7.2	14.4
	15:1	7.05	3330	117	87	810	162	7.2	14.4
	20:1	5.33	3288	88	86	892	178	6.6	12.0
	25:1	4.18	3145	70	84	961	192	6.0	11.4
	30:1	4.21	3632	58	80	1021	204	7.2	14.4
	40:1	3.01	3330	44	77	1123	225	6.6	12.0
	50:1	2.36	3145	35	74	1210	242	6.0	11.4
	60:1	1.93	2960	29	71	1286	257	5.4	10.8
	80:1	1.27	2397	22	65	1416	283	5.4	10.8
100:1	1.03	2271	18	61	1525	305	5.4	10.8	

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ALUMINUM WORM GEAR REDUCERS

Aluminum Worm Gear Reducers: Dimensions



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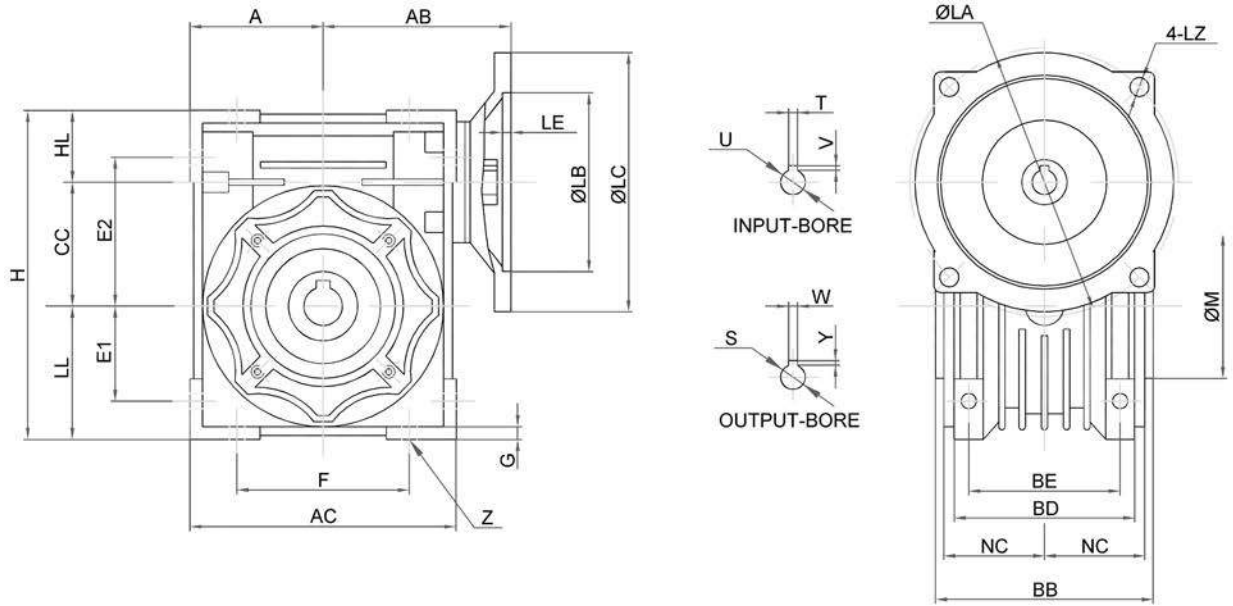
ALUMINUM WORM GEAR REDUCERS

All listed dimensions in millimeters																
Box Size	NEMA Frame	A	AB	AC	BB	BD	BE	CC	E1	E2	F	G	H	HL	LL	M
30	56C	40	70	80	63	56	44	30	27	44	54	5.5	97	27	40	55
40	56C	50	86	101	78	71	60	40	35	55	70	6.6	121	31.5	50	60
50	56C	60	94	121	92	85	70	50	40	64	80	7	144	34	60	70
63	56C	72	105	146	112	103	85	63	50	80	100	8	174	39	72	80
	145TC	72	105	146	112	103	85	63	50	80	100	8	174	39	72	80
75	56C	86	126	174	120	112	90	75	60	93	120	10	205	45	86	95
	145TC	86	126	174	120	112	90	75	60	93	120	10	205	45	86	95
	182/4TC	86	126	174	120	112	90	75	60	93	120	10	205	45	86	95
90	56C	103	143	208	140	130	100	90	70	102	140	11	238	45	103	110
	145TC	103	143	208	140	130	100	90	70	102	140	11	238	45	103	110
	182/4TC	103	143	208	140	130	100	90	70	102	140	11	238	45	103	110

Box Size	NEMA Frame	NC	Z	INPUT BORE (inches)		OUTPUT BORE (inches)		FLANGE (inches)				
				U	T x V	S	W x Y	LA	LB	LC	LE	LZ
30	56C	29	6.5	0.625	3/16 x 3/32	0.625	3/16 x 3/32	5.875	4.5	5.787	0.177	0.413
40	56C	36.5	6.5	0.625	3/16 x 3/32	0.75	3/16 x 3/32	5.875	4.5	5.787	0.157	0.413
50	56C	43.5	8.4	0.625	3/16 x 3/32	1	1/4 x 7/64	5.875	4.5	5.787	0.157	0.413
63	56C	53	8.5	0.625	3/16 x 3/32	1.125	1/4 x 1/8	5.875	4.5	5.787	0.177	0.413
	145TC	53	8.5	0.875	3/16 x 3/32	1.125	1/4 x 1/8	5.875	4.5	5.787	0.177	0.413
75	56C	57	11	0.625	3/16 x 3/32	1.25	1/4 x 1/8	5.875	4.5	5.787	0.157	0.413
	145TC	57	11	0.875	3/16 x 3/32	1.25	1/4 x 1/8	5.875	4.5	5.787	0.157	0.413
	182/4TC	57	11	1.125	1/4 x 1/8	1.25	1/4 x 1/8	7.25	8.5	9	0.217	0.413
90	56C	67	13	0.625	3/16 x 3/32	1.375	5/16 x 9/64	5.875	4.5	5.787	0.157	0.413
	145TC	67	13	0.875	3/16 x 3/32	1.375	5/16 x 9/64	5.875	4.5	5.787	0.157	0.413
	182/4TC	67	13	1.125	1/4 x 1/8	1.375	5/16 x 9/64	7.25	8.5	9	0.217	0.413

Dimensions shown in this catalog are for general use only.
For an exact drawing on a specific rating, please contact our sales office.

Aluminum Worm Gear Reducers: Competitor Dimensional Comparison - Motovario



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ALUMINUM WORM
GEAR REDUCERS

All listed dimensions in millimeters																
Box Size	NEMA Frame	A	AB	AC	BB	BD	BE	CC	E1	E2	F	G	H	HL	LL	M
30	56C	40	67	80	63	56	44	30	27	44	54	5.5	97	27	40	55
40	56C	50	80	100	78	71	60	40	35	55	70	6.5	121.5	31.5	50	60
50	56C	60	90	120	92	85	70	50	40	64	80	7	144	34	60	70
63	56C	72	122	144	112	103	85	63	50	80	100	8	179	44	72	80
	145TC	72	122	144	112	103	85	63	50	80	100	8	179	44	72	80
75	56C	89	140	178	120	112	90	75	60	93	120	10	209	48	86	95
	145TC	89	140	178	120	112	90	75	60	93	120	10	209	48	86	95
	182/4TC	89	150	178	120	112	90	75	60	93	120	10	209	48	86	95
90	56C	103	158	206	140	130	100	90	70	102	140	11	247	54	103	110
	145TC	103	158	206	140	130	100	90	70	102	140	11	247	54	103	110
	182/4TC	103	168	206	140	130	100	90	70	102	140	11	247	54	103	110

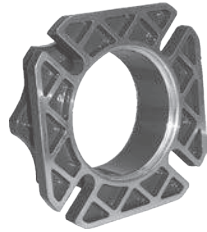
Box Size	NEMA Frame	NC	Z	INPUT BORE (inches)		OUTPUT BORE (inches)		FLANGE (inches)				
				U	T x V	S	W x Y	LA	LB	LC	LE	LZ
30	56C	29	6.5	0.625	3/16 x 3/32	0.625	3/16 x 3/32	5.875	3	5.625	NL	0.413
40	56C	36.5	6.5	0.625	3/16 x 3/32	0.75	3/16 x 3/32	5.875	4.5	6.5	NL	0.413
50	56C	43.5	8.4	0.625	3/16 x 3/32	1	1/4 x 7/64	5.875	4.5	6.5	NL	0.413
63	56C	53	8.5	0.625	3/16 x 3/32	1.125	1/4 x 1/8	5.875	4.5	6.5	NL	0.413
	145TC	53	8.5	0.875	3/16 x 3/32	1.125	1/4 x 1/8	5.875	4.5	6.5	NL	0.413
75	56C	57	11	0.625	3/16 x 3/32	1.25	1/4 x 1/8	5.875	4.5	6.5	NL	0.413
	145TC	57	11	0.875	3/16 x 3/32	1.25	1/4 x 1/8	5.875	4.5	6.5	NL	0.413
	182/4TC	57	11	1.125	1/4 x 1/8	1.25	1/4 x 1/8	7.25	8.5	9	NL	0.413
90	56C	67	13	0.625	3/16 x 3/32	1.375	5/16 x 9/64	5.875	4.5	6.5	NL	0.413
	145TC	67	13	0.875	3/16 x 3/32	1.375	5/16 x 9/64	5.875	4.5	6.5	NL	0.413
	182/4TC	67	13	1.125	1/4 x 1/8	1.375	5/16 x 9/64	7.25	8.5	9	NL	0.413

Motovario® dimensional data was derived from their Catalog_VSF_Nema_WEB_3012012111322.
Dark gray shaded cells indicate a dimensional difference. NL denotes ratings not listed.
All dimensions are in millimeters unless denoted in inches.

Aluminum Worm Gear Reducers: Accessories and Parts

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ALUMINUM WORM
GEAR REDUCERS



Output Flanges

Box Size	Model Number	List Price
30	CALM30-OPF	\$21.49
40	CALM40-OPF	\$30.09
50	CALM50-OPF	\$35.38
63	CALM63-OPF	\$41.39
75	CALM75-OPF	\$54.04
90	CALM90-OPF	\$67.65

Output Flanges are FA style.
FB and FC style output flanges are available for order as non-stock items.



Output Covers

Box Size	Model Number	List Price
30	CALM30-OPC	\$8.30
40	CALM40-OPC	\$8.30
50	CALM50-OPC	\$13.83
63	CALM63-OPC	\$13.83
75	CALM75-OPC	\$13.83
90	CALM90-OPC	\$13.83



Drain Plugs

Box Size	Model Number	List Price
30	PJK10W	\$4.15
40	PJK10W	\$4.15
50	PJK10W	\$4.15
63	PJK16W	\$4.15
75	PJK16W	\$4.15
90	PJK16W	\$4.15



Torque Arms

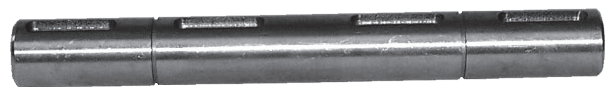
Box Size	Model Number	List Price
30	CALM30-TA	\$29.73
40	CALM40-TA	\$31.68
50	CALM50-TA	\$40.29
63	CALM63-TA	\$49.49
75	CALM75-TA	\$60.88
90	CALM90-TA	\$76.05

Single Output Shafts



Box Size	Model Number	List Price
30	CALM30-S	\$18.66
40	CALM40-S	\$21.60
50	CALM50-S	\$30.14
63	CALM63-S	\$34.37
75	CALM75-S	\$44.19
90	CALM90-S	\$57.04

Double Output Shafts



Box Size	Model Number	List Price
30	CALM30-DS	\$24.55
40	CALM40-DS	\$29.46
50	CALM50-DS	\$42.28
63	CALM63-DS	\$49.46
75	CALM75-DS	\$62.40
90	CALM90-DS	\$79.03