

## NEMA Aluminium Worm Gear Reducer

### E1-RV Mounting and Availability



E1-RV  
Motor Input Flange



E2-RV  
Input Shaft

### Type&Expressions

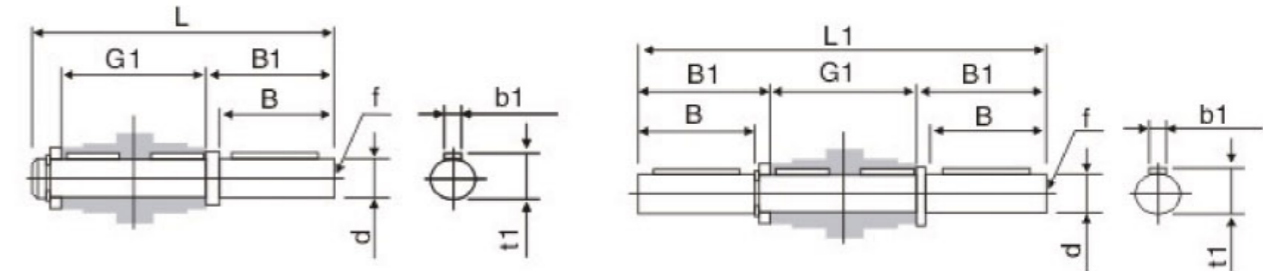
110	40	180TC	Foot Mount	B3	Protective Cover
Size	Ratio	Input Size	Output Design	Mounting Position	Accessories
Aluminum Housing	7.5 10 15 20 25 30 40 50 60 80 100	48C 56C 140TC 180TC 210TC 250TC	<b>Shaft Mounted</b> standard hollow output bore  <b>Foot Mounted</b> optional single or double plug-in output shaft  <b>Flange Mounted</b> optional F or FL mounting flange and hollow output bore	B3 B6 B7 B8 V5 V6	Torque Arm Accessories  Torque Arm  Double Extension Single Shaft Double Shaft Output Flange

Gearbox Size	Nema Flange	Input Bore Diameter	Available Ratios												
			5	7.5	10	15	20	25	30	40	50	60	80	100	
E1-RV 030	48C	0.500	•	•	•	•	•	•	•	•	•	•	•	•	•
E1-RV 040	56C	0.625	•	•	•	•	•	•	•	•	•	•	•	•	•
E1-RV 050	56C	0.625	•	•	•	•	•	•	•	•	•	•	•	•	•
E1-RV 063	56C	0.625													
	140TC	0.875													
E1-RV 075	56C	0.625													
	140TC	0.875													
E1-RV 090	56C	0.625													
	140TC	0.875													
E1-RV 110	180TC	1.125													
	210TC	1.375													
E1-RV 130	140TC	0.875													
	180TC	1.125													
E1-RV 150	180TC	1.125													
	210TC	1.375													
	250TC	1.625													

## NEMA Aluminium Worm Gear Reducer

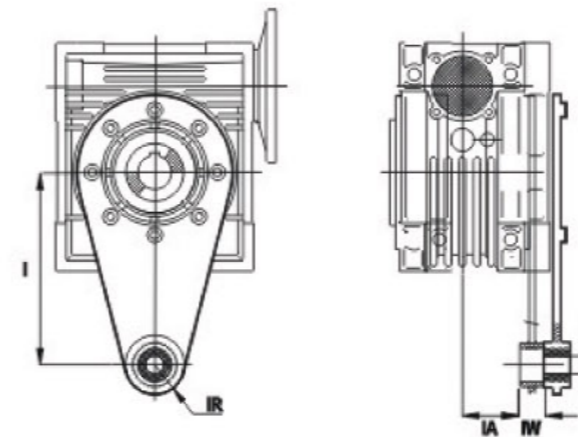
### E1-RV Accessories

#### Output Shafts



Gearbox Size	Output Shaft NEMA									
	Type	d	B	B1	G1	L	L1	f	b1	t1
E1-RV 040	Single	0.750	1.40	1.50	3.07	4.8	N/A	N/A	0.19	0.83
	Double	0.750	1.40	1.50	3.07	N/A	6.07	N/A	0.19	0.83
E1-RV 050	Single	1.000	1.90	2.00	3.62	5.87	N/A	N/A	0.25	1.11
	Double	1.000	1.90	2.00	3.62	N/A	7.64	N/A	0.25	1.11
E1-RV 063	Single	1.125	2.36	2.50	4.40	7.22	N/A	M8	0.31	1.26
	Double	1.125	2.36	2.50	4.40	N/A	9.41	M8	0.31	1.26
E1-RV 075	Single	1.25	2.76	2.90	4.72	7.93	N/A	M10	0.31	1.38
	Double	1.25	2.76	2.90	4.72	N/A	10.51	M10	0.31	1.38
E1-RV 090	Single	1.375	3.15	3.30	5.50	9.23	N/A	M12	0.38	1.53
	Double	1.375	3.15	3.30	5.50	N/A	12.17	M12	0.38	1.53
E1-RV 110	Single	1.625	3.54	3.70	6.10	10.22	N/A	N/A	0.44	1.81
	Double	1.625	3.54	3.70	6.09	N/A	13.54	N/A	0.44	1.81

#### Torque Arm



GEARBOX SIZE	I	IA	IL	IR	IW
030	3.35	0.94	0.31	0.59	0.55
040	3.94	1.24	0.39	0.71	0.55
050	3.94	1.52	0.39	0.71	0.55
063	5.91	1.93	0.39	0.71	0.55
075	7.87	1.87	0.79	1.18	0.98
090	7.87	2.26	0.79	1.18	0.98
110	9.84	2.44	0.98	1.38	1.18
130	9.84	2.72	0.98	1.38	1.18
150	9.84	3.31	0.98	1.38	1.18



**NEMA Aluminium Worm Gear Reducer**

**E1-RV Performance Parameter**

Model	Ratio	RPM	Torque (in-lbs)	Max HP	OHL (lbs)
E1-RV 030 E2-RV 030	7.5	233	159	0.69	129
	10	175	159	0.54	142
	15	117	159	0.38	163
	20	88	159	0.30	179
	25	70	186	0.30	193
	30	58	177	0.25	205
	40	44	159	0.19	225
	50	35	150	0.15	243
	80	29	142	0.13	259
	80	22	115	0.09	284
E1-RV 040 E2-RV 040	7.5	233	354	1.51	253
	10	175	354	1.16	279
	15	117	354	0.80	319
	20	88	345	0.61	350
	25	70	336	0.50	378
	30	58	398	0.53	403
	40	44	383	0.39	441
	50	35	345	0.31	476
	80	29	319	0.25	507
	80	22	292	0.19	556
100	18	257	0.15	595	
E1-RV 050 E2-RV 050	7.5	233	628	2.64	389
	10	175	637	2.06	406
	15	117	655	1.48	464
	20	88	646	1.14	510
	25	70	819	0.90	551
	30	58	743	0.96	586
	40	44	672	0.70	643
	50	35	646	0.57	694
	80	29	602	0.47	739
	80	22	575	0.38	810
100	18	487	0.28	886	
E1-RV 063 E2-RV 063	7.5	233	1133	4.77	463
	10	175	1150	3.67	510
	15	117	1239	2.76	583
	20	88	1194	2.05	641
	25	70	1150	1.64	682
	30	58	1416	1.77	736
	40	44	1283	1.27	807
	50	35	1194	1.01	871
	80	29	1150	0.86	928
	80	22	1079	0.66	1017
100	18	1044	0.57	1088	
E1-RV 075 E2-RV 075	7.5	233	1637	6.81	549
	10	175	1725	5.45	604
	15	117	1770	3.86	691
	20	88	1858	3.15	759
	25	70	1770	2.46	820
	30	58	2035	2.46	873
	40	44	1947	1.88	957
	50	35	1858	1.50	1033
	80	29	1770	1.26	1099
	80	22	1681	0.97	1205
100	18	1593	0.80	1289	

Model	Ratio	RPM	Torque (in-lbs)	Max HP	OHL (lbs)
E1-RV 090 E2-RV 090	10	175	2743	8.56	694
	15	117	3185	6.88	794
	20	88	3141	5.19	873
	25	70	3008	4.08	942
	30	58	3628	4.31	1003
	40	44	3185	2.95	1100
	50	35	3008	2.32	1187
	80	29	2831	1.90	1284
	80	22	2522	1.39	1386
	100	18	2389	1.12	1482
E1-RV 110 E2-RV 110	7.5	233	4247	17.48	776
	10	175	4691	14.36	853
	15	117	5043	10.86	976
	20	88	4955	8.10	1073
	25	70	5220	6.90	1158
	30	58	5574	6.53	1233
	40	44	5397	4.81	1352
	50	35	5309	3.93	1459
	80	29	4955	3.19	1553
	80	22	4336	2.25	1703
100	18	4070	1.79	1821	
E1-RV 130 E2-RV 130	7.5	233	6636	27.01	1017
	10	175	7255	22.64	1119
	15	117	8140	17.33	1279
	20	88	8052	13.00	1407
	25	70	8229	10.88	1518
	30	58	9202	10.65	1616
	40	44	9290	8.27	1772
	50	35	9671	6.42	1913
	80	29	7963	5.12	2036
	80	22	7432	3.79	2233
100	18	6548	2.84	2367	
E1-RV 150 E2-RV 150	7.5	233	10618	43.22	1425
	10	175	10972	33.86	1568
	15	117	11060	23.27	1793
	20	88	11502	18.58	1971
	25	70	10918	14.94	2127
	30	58	10618	11.85	2265
	40	44	13715	12.21	2484
	50	35	12387	9.05	2680
	80	29	11149	7.07	2854
	80	22	10175	5.20	3129
100	18	8848	3.84	3346	

**NEMA Aluminium Worm Gear Reducer**

**E1-RV Performance Parameter**

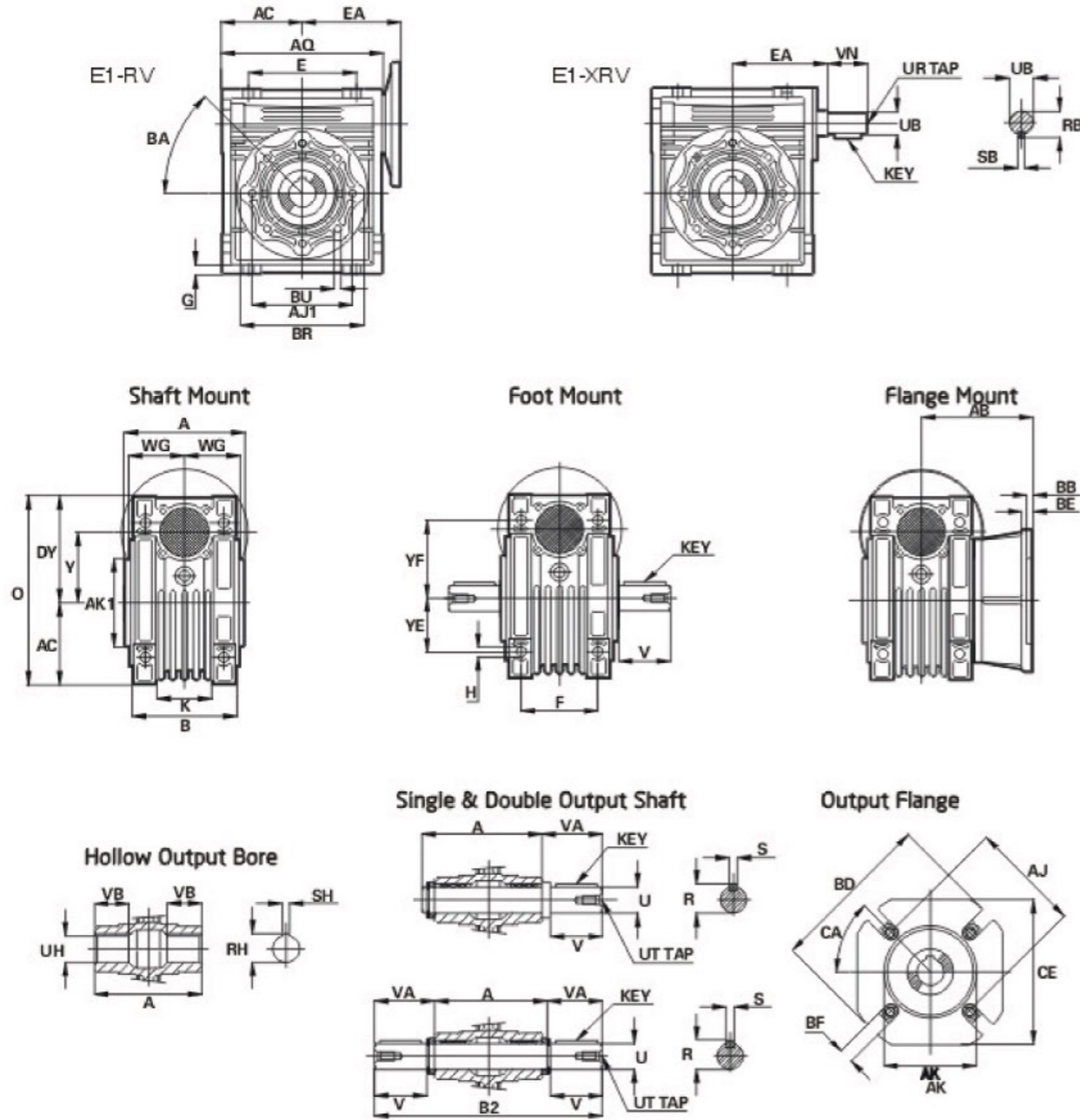
Input HP	Input RPM	Output RPM	Output Torque (in-lbs)	Service Factor	Ratio	Gearbox Size
0.16	1750	350	25	12.9	5	E1-RV 040
		233	37	9.4	7.5	
		175	48	7.4	10	
		117	70	5.1	15	
		88	80	3.5	20	
		70	107	2.8	25	
		58	121	3.2	30	
		44	150	2.2	40	
		35	173	1.8	50	
		29	201	1.4	60	
0.26	1750	350	40	8.2	5	E1-RV 040
		233	58	6	7.5	
		175	76	4.7	10	
		117	108	3.3	15	
		88	141	2.3	20	
		70	167	1.8	25	
		58	188	2.0	30	
		44	234	1.4	40	
		35	270	1.1	50	
		29	314	0.9	60	
0.33	1750	350	52	6.2	5	E1-RV 040
		233	77	4.6	7.5	
		175	100	3.6	10	
		117	145	2.5	15	
		88	186	1.7	20	
		70	220	1.4	25	
		58	250	1.5	30	
		44	309	1.1	40	
		35	357	0.9	50	
		29	414	0.7	60	
0.5	1750	350	79	4.1	5	E1-RV 040
		233	116	3.0	7.5	
		175	151	2.4	10	
		117	219	1.6	15	
		88	281	1.1	20	
		70	333	0.9	25	
		55	378	1	30	
		44	454	0.8	40	
		35	505	0.6	50	
		29	574	0.5	60	
0.75	1750	350	122	2.7	5	E1-RV 083
		233	176	3.6	7.5	
		175	230	2.8	10	
		117	333	2.0	15	
		88	427	1.3	20	
		70	514	1.1	25	
		58	554	1.2	30	
		44	724	0.8	40	
		35	839	0.6	50	
		29	957	0.5	60	
1	1750	350	176	3.6	7.5	E1-RV 050
		233	230	2.8	10	
		175	333	2.0	15	
		117	427	1.3	20	
		88	514	1.1	25	
		70	554	1.2	30	
		58	724	0.8	40	
		44	839	0.6	50	
		35	957	0.5	60	
		29	1071	0.4	75	
1	1750	350	235	2.7	7.5	E1-RV 050
		233	308	2.1	10	
		175	443	1.5	15	
		117	570	1.0	20	
		88	680	0.8	25	
		70	779	0.9	30	
		58	1022	0.6	40	
		44	1171	0.5	50	
		35	1384	0.4	60	
		29	1514	0.3	75	

Input HP	Input RPM	Output RPM	Output Torque (in-lbs)	Service Factor	Ratio	Gearbox Size
1	1750	177	454	2.7	15	E1-RV 063
		88	584	1.9	20	
		70	703	1.5	25	
		58	811	1.8	30	
		44	1009	1.1	40	
		35	1189	0.9	50	
		29	1321	0.7	60	
		22	1427	0.6	75	
		18	1514	0.5	90	
		15	1579	0.4	100	
2	1750	177	454	2.7	15	E1-RV 075
		88	584	1.9	20	
		70	703	1.5	25	
		58	811	1.8	30	
		44	1009	1.1	40	
		35	1189	0.9	50	
		29	1321	0.7	60	
		22	1427	0.6	75	
		18	1514	0.5	90	
		15	1579	0.4	100	
3	1750	177	454	2.7	15	E1-RV 090
		88	584	1.9	20	
		70	703	1.5	25	
		58	811	1.8	30	
		44	1009	1.1	40	
		35	1189	0.9	50	
		29	1321	0.7	60	
		22	1427	0.6	75	
		18	1514	0.5	90	
		15	1579	0.4	100	
5	1750	177	454	2.7	15	E1-RV 110
		88	584	1.9	20	
		70	703	1.5	25	
		58	811	1.8	30	
		44	1009	1.1	40	
		35	1189	0.9	50	
		29	1321	0.7	60	
		22	1427	0.6	75	
		18	1514	0.5	90	
		15	1579	0.4	100	
7.5	1750	177	454	2.7	15	E1-RV 110
		88	584	1.9	20	
		70	703	1.5	25	
		58	811	1.8	30	
		44	1009	1.1	40	
		35	1189	0.9	50	
		29	1321	0.7	60	
		22	1427	0.6	75	
		18	1514	0.5	90	
		15	1579	0.4	100	
10	1750	177	454	2.7	15	E1-RV 110
		88	584	1.9	20	
		70	703	1.5	25	
		58	811	1.8	30	
		44	1009	1.1	40	
		35	1189	0.9	50	
		29	1321	0.7	60	
		22	1427	0.6	75	
		18	1514	0.5	90	
		15	1579	0.4	100	



# NEMA Aluminium Worm Gear Reducer

## E1-RV Outline Dimension Sheet



	030	040	050	063	075	090	110	130	150
A	2.48	3.07	3.62	4.41	4.72	5.51	6.10	6.69	7.87
AB	2.15	2.64(3.82)	3.54(4.72)	3.23(4.41)	4.37	4.37	5.16	5.51	6.10
AC	1.57	1.97	2.36	2.83	3.39	4.06	5.02	5.81	6.69
AJ	2.68	2.95(3.43)	3.35(3.54)	5.91(5.91)	6.40	6.89	9.06	10.03	10.03
AJ1	2.56	2.95	3.35	3.74	4.53	5.12	6.50	8.46	8.46
AK	1.97 <sup>+0.007</sup>	2.36 <sup>+0.007</sup>	2.76 <sup>+0.007</sup>	4.53 <sup>+0.007</sup>	5.12 <sup>+0.007</sup>	5.98 <sup>+0.007</sup>	6.69 <sup>+0.007</sup>	7.09 <sup>+0.007</sup>	7.09 <sup>+0.007</sup>
AK1	2.17 <sup>+0.007</sup>	2.36 <sup>+0.007</sup>	2.76 <sup>+0.007</sup>	3.15 <sup>+0.007</sup>	3.74 <sup>+0.007</sup>	4.33 <sup>+0.007</sup>	5.12 <sup>+0.007</sup>	7.09 <sup>+0.007</sup>	7.09 <sup>+0.007</sup>
AQ	3.15	3.94	4.72	5.67	6.77	8.11	9.94	11.52	13.39

# NEMA Aluminium Worm Gear Reducer

## E1-RV Outline Dimension Sheet

	030	040	050	063	075	090	110	130	150
B	2.20	2.80	3.35	4.06	4.41	5.12	5.67	6.10	7.28
B2	5.83	7.24	7.83	9.41	10.51	12.13	16.14	14.17	16.14
BA	0	45	45	45	45	45	45	45	45
BB	0.16	0.16	0.20	0.24	0.24	0.24	0.24	0.28	0.28
BD	3.15	4.33	4.92	7.09	7.87	8.27	11.02	12.60	12.60
BE	0.24	0.28	0.35	0.39	0.51	0.51	0.59	0.59	0.59
BF	26.4 pl.	35.4 pl.	43.4 pl.	43.4 pl.	55.4 pl.	55.4 pl.	55.8 pl.	63.8 pl.	63.8 pl.
BR	2.95	3.43	3.94	4.33	5.51	6.30	7.87	9.84	9.84
BU	M6 Tap 0.43 deep, 4 pl.	M6 Tap 0.32 deep, 4 pl.	M8 Tap 0.39 deep, 4 pl.	M8 Tap 0.55 deep, 8 pl.	M8 Tap 0.55 deep, 8 pl.	M10 Tap 0.71 deep, 8 pl.	M10 Tap 0.71 deep, 8 pl.	M12 Tap 0.83 deep, 8 pl.	M12 Tap 0.83 deep, 8 pl.
CA	45°	45°	45°	45°	45°	45°	45°	22.5°	22.5°
CE	2.76	3.74	4.33	5.60	6.69	7.87	10.24	11.42	11.42
DY	2.24	2.81	3.31	4.02	4.69	5.32	6.59	7.38	9.06
E	2.13	2.76	3.15	3.94	4.72	5.51	6.69	7.87	9.45
EA	2.64	3.15	3.54	4.13	4.96	5.63	6.81	7.60	8.27
F	1.73	2.36	2.76	3.35	3.54	3.94	4.53	4.72	5.71
G	0.22	0.26	0.28	0.32	0.39	0.43	0.57	0.61	0.71
H	0.26	0.26	0.34	0.33	0.45	0.51	0.55	0.63	0.71
K	1.26	1.69	1.93	2.64	2.83	2.91	-	-	-
O	3.82	4.78	5.67	6.85	8.07	9.37	11.61	13.19	15.75
R	0.70	0.83	1.11	1.23	1.36	1.51	1.79	1.92	2.50
RB	0.42	0.55	0.70	0.83	0.96	0.96	1.24	1.36	1.38
RH	0.71	0.84	1.12	1.24	1.37	1.52	1.80	1.93	2.20
S	0.188	0.188	0.250	0.250	0.250	0.313	0.375	0.375	0.500
SB	0.094	0.125	0.188	0.188	0.188	0.188	0.250	0.250	0.313
SH	0.188	0.188	0.250	0.250	0.250	0.313	0.375	0.375	0.710
U	0.625 <sup>+0.005</sup>	0.750 <sup>+0.005</sup>	1.000 <sup>+0.005</sup>	1.125 <sup>+0.005</sup>	1.250 <sup>+0.005</sup>	1.375 <sup>+0.005</sup>	1.625 <sup>+0.005</sup>	1.750 <sup>+0.005</sup>	2.000 <sup>+0.005</sup>
UH	0.625 <sup>+0.001</sup>	0.750 <sup>+0.001</sup>	1.000 <sup>+0.001</sup>	1.125 <sup>+0.001</sup>	1.250 <sup>+0.001</sup>	1.375 <sup>+0.001</sup>	1.625 <sup>+0.001</sup>	1.750 <sup>+0.001</sup>	2.000 <sup>+0.001</sup>
UT	1/4-20	1/4-20	3/8-16	3/8-16	1/2-13	1/2-13	5/8-11	5/8-11	3/4-10
V	1.58	1.97	1.97	2.36	2.76	3.15	3.54	3.54	4.02
VA	1.67	2.09	2.11	2.50	2.89	3.33	4.13	3.74	4.57
VB	0.827	1.024	1.181	1.417	1.575	1.772	1.969	2.362	2.850
VN	1.18	1.18	1.58	1.97	2.36	2.36	2.76	3.15	3.15
WG	1.14	1.44	1.71	2.09	2.24	2.64	2.91	3.19	3.78
UB	0.375 <sup>+0.005</sup>	0.500 <sup>+0.005</sup>	0.625 <sup>+0.005</sup>	0.750 <sup>+0.005</sup>	0.875 <sup>+0.005</sup>	0.875 <sup>+0.005</sup>	1.125 <sup>+0.005</sup>	1.250 <sup>+0.005</sup>	1.375 <sup>+0.005</sup>
UR	-	1/4-20	1/4-20	1/4-20	1/4-20	1/4-20	3/8-16	1/2-13	1/2-13
Y	1.18	1.58	1.97	2.48	2.95	3.54	4.33	5.12	5.91
YE	1.06	1.38	1.58	1.97	2.36	2.76	3.35	3.94	4.72
YF	1.73	2.17	2.52	3.15	3.66	4.02	4.92	5.51	7.09
Input Key									
Length	0.875	0.875	1.125	1.500	1.875	1.875	2.250	2.500	2.875
Square	0.094	0.125	0.188	0.188	0.188	0.188	0.250	0.250	0.315
Output Key									
Length	1.125	1.500	1.500	1.875	2.250	2.500	0.750	2.750	3.563
Square	0.188	1.188	0.250	0.250	0.250	0.313	0.375	0.375	0.500
Weight (lbs)	3	5	8	4	20	29	77	106	185