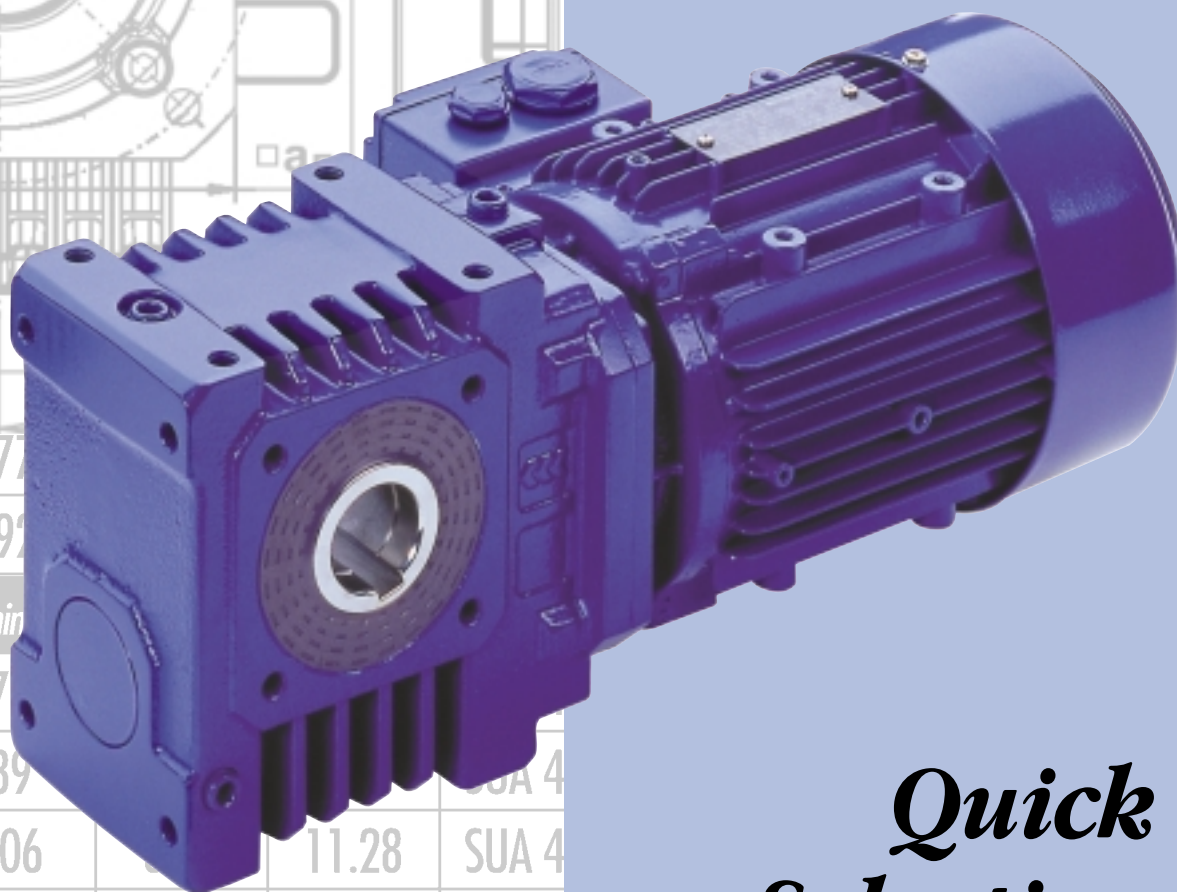


Helical Worm

Series S



Quick Selection Guide

1.3	4.77			
1.2	4.91			
1/4 HP nomin				
191	7			
166	89			SUA 4
144	106	11.28		SUA 4
129	115	3.35	12.53	SUA 4
106	142	2.85	15.23	SUA 4
96	159	2.65	16.81	SUA 4
88	159	2.65	18.50	SUA 4

Helical Worm Gearmotors and Speed Reducers

WATT Drive has been a global supplier of cutting edge drive technology for over 30 years. With manufacturing, assembly, warehousing, and tech center facilities throughout Europe, North America, and Asia, WATT Drive provides local personal service along with worldwide customer support.

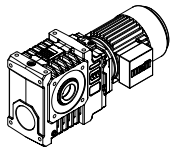
The WATT Drive philosophy is to provide the optimal drive solution for each unique application. By combining the most appropriate reducer, motor and drive, or just individual components, the result is maximum design versatility, outstanding operating performance, and extreme reliability.

This catalog has been designed merely as a quick selection guide, highlighting the available solutions for basic applications. A wide variety of features, options, speeds, and ratios are offered by WATT Drive. Please contact DieQua Corporation, WATT Drive's manufacturing, engineering, and marketing partner in North America, for additional technical information or capabilities not found in this selection guide.

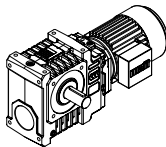
Program Benefits:

- Optimized gearing for high power density
- Multi Volts/Hz inverter duty integral motors
- NEMA, IEC, or servo motor adapters
- High efficiency and low backlash
- Multiple mounting configurations
- Inch or metric shafts and bores
- Special design options
- Complete drive packages

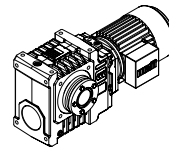
Designs Available



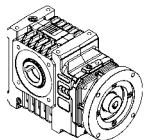
SUA
Shaft Mount



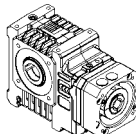
SU
Output Shaft



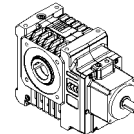
SUS
Shrink Disc



S. ... NA..
NEMA Adapter



S. ... SA..
Servo Adapter



S. ... WN
Input Shaft

Selection Guide Contents

Selection Information pg. 3
Gearmotor Data pg. 4-10
Speed Reducer Data pg. 11-13

Dimensions pg. 14-17
Technical Data pg. 18-20
Ordering Examples pg. 21

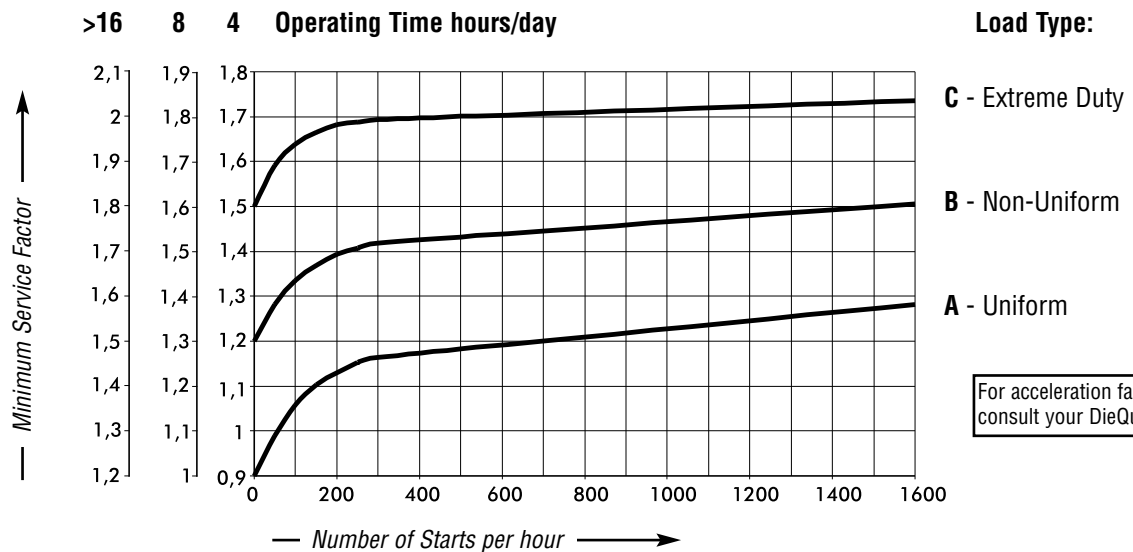
The ratings in this guide are based on 3 phase, 60 Hz, 230 or 460 volt operation. For additional technical data and design options, please contact your WAT Drive/DieQua Corporation representative or request the complete MAS 2000 engineering catalog.

1. Determine horsepower or torque required:

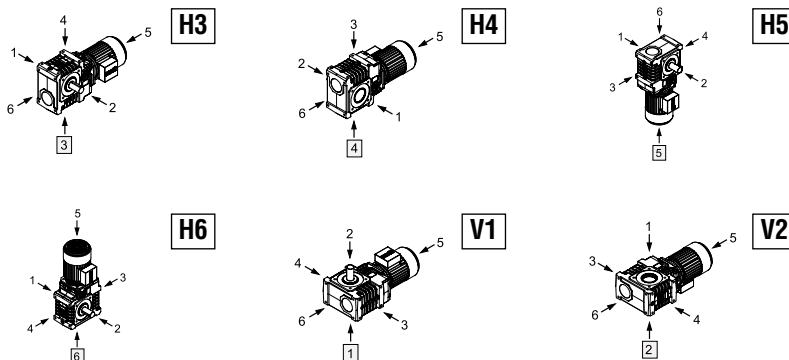
$$\text{Horsepower} = \frac{\text{Torque (in-lbs)} \times \text{Output Speed}}{63025 \times \text{Efficiency}}$$

$$\text{Output Torque (in-lbs)} = \frac{63025 \times \text{HP} \times \text{Ratio} \times \text{Efficiency}}{\text{Input Speed}}$$

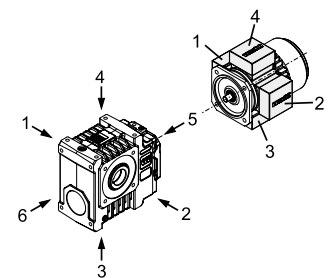
2. Determine service factor:



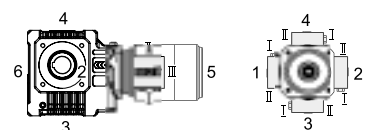
3. Determine: a) Mounting Position



b) Terminal Box Position



c) Cable Entry Position



4. Select appropriate drive and contact DieQua for complete ordering description.



WATT Drive gear motors are known the world over for offering superior performance and reliable operation in the most demanding applications. An optimized gear tooth design provides high power density, resulting in greater torque capacities in a smaller size. The inverter duty WATT Drive EUSAS motor can be connected to any volts/hertz combination for global usage and is available with a wide variety of options.

In the American market, the unique design of this motor generates up to 20% more power than competitive motors of similar frame sizes. Therefore, a

major benefit of the WATT Drive gear motor is the ability to generate higher torque in an overall smaller and more cost effective package.

Engineering Note:

The torque values and service factors in the selection charts have been calculated with the actual motor horsepower and efficiency. When considering nominal horse power ratings, please note that the torque generated will be lower while the service factor will increase by up to 20%. Contact your representative with any questions regarding proper selection.

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
1/8 HP nominal (0.2 HP actual)				
106	89	4.45	15.23	SUA 404S 64K4
96	106	4.10	16.81	SUA 404S 64K4
87	115	3.75	18.67	SUA 404S 64K4
76	133	3.35	21.44	SUA 404S 64K4
69	150	3.10	23.53	SUA 404S 64K4
62	159	2.85	26.00	SUA 404S 64K4
56	186	2.65	28.97	SUA 404S 64K4
50	204	2.40	32.59	SUA 404S 64K4
49	186	2.45	33.23	SUA 404A 64K4
44	212	2.25	36.67	SUA 404A 64K4
40	239	2.10	40.73	SUA 404A 64K4
35	274	1.85	46.77	SUA 404A 64K4
32	301	1.70	51.33	SUA 404A 64K4
29	327	1.60	56.73	SUA 404A 64K4
26	363	1.45	63.20	SUA 404A 64K4
23	416	1.35	71.11	SUA 404A 64K4
21	301	1.80	77.33	SUA 404B 64K4
18	354	1.55	89.23	SUA 404B 64K4
18	381	2.55	89.23	SUA 454B 64K4
16	434	2.30	99.08	SUA 454B 64K4
16	398	1.40	99.08	SUA 404B 64K4
13	531	1.95	120.46	SUA 454B 64K4
13	496	1.20	120.46	SUA 404B 64K4
12	593	1.75	132.92	SUA 454B 64K4
12	549	1.10	132.92	SUA 404B 64K4
11	655	1.60	147.64	SUA 454B 64K4
11	611	1.00	147.64	SUA 404B 64K4
10	690	2.75	162.00	SUA 455B 64K4
10	699	0.90	169.54	SUA 404B 64K4
10	752	1.45	169.54	SUA 454B 64K4
9.1	770	2.50	178.75	SUA 455B 64K4
8.7	770	0.80	186.08	SUA 404B 64K4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
8.7	832	1.35	186.08	SUA 454B 64K4
8.2	858	2.25	198.55	SUA 455B 64K4
7.9	912	1.25	205.64	SUA 454B 64K4
7.1	1,009	1.15	229.10	SUA 454B 64K4
7.1	991	2.00	228.00	SUA 455B 64K4
6.5	1,089	1.85	250.25	SUA 455B 64K4
6.3	1,124	1.00	257.78	SUA 454B 64K4
5.9	1,204	1.70	276.55	SUA 455B 64K4
5.3	1,336	1.55	308.10	SUA 455B 64K4
4.7	1,496	1.40	346.67	SUA 455B 64K4
2.9	2,301	1.90	551.20	SUA 506C 64K4
2.5	2,620	1.70	636.00	SUA 506C 64K4
2.3	2,867	1.55	706.23	SUA 506C 64K4
2.2	3,071	1.85	750.15	SUA 507C 64K4
1.9	3,407	1.35	858.60	SUA 506C 64K4
1.9	3,372	1.70	832.98	SUA 507C 64K4
1.7	3,708	1.25	947.38	SUA 506C 64K4
1.6	4,000	1.45	1012.71	SUA 507C 64K4
1.5	4,053	1.15	1052.29	SUA 506C 64K4
1.4	4,354	1.30	1117.42	SUA 507C 64K4
1.3	4,558	1.00	1208.40	SUA 506C 64K4
1.3	4,770	1.20	1241.16	SUA 507C 64K4
1.2	4,929	0.95	1326.33	SUA 506C 64K4
1/4 HP nominal (0.3 HP actual)				
191	75	4.75	8.48	SUA 404S 64N4
166	89	4.15	9.78	SUA 404S 64N4
144	106	3.70	11.28	SUA 404S 64N4
129	115	3.35	12.53	SUA 404S 64N4
106	142	2.85	15.23	SUA 404S 64N4
96	159	2.65	16.81	SUA 404S 64N4
88	159	2.65	18.50	SUA 404A 64N4
87	177	2.45	18.67	SUA 404S 64N4
76	186	2.30	21.33	SUA 404A 64N4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
76	204	2.20	21.44	SUA 404S 64N4
69	221	2.05	23.53	SUA 404S 64N4
66	212	2.05	24.62	SUA 404A 64N4
62	248	1.90	26.00	SUA 404S 64N4
59	239	1.90	27.33	SUA 404A 64N4
56	274	1.75	28.97	SUA 404S 64N4
50	310	1.60	32.59	SUA 404S 64N4
49	292	1.60	33.23	SUA 404A 64N4
49	301	2.75	33.23	SUA 454A 64N4
44	327	1.50	36.67	SUA 404A 64N4
44	336	2.55	36.67	SUA 454A 64N4
40	221	2.15	40.39	SUA 404B 64N4
40	372	2.35	40.73	SUA 454A 64N4
35	425	2.10	46.77	SUA 454A 64N4
34	274	1.75	47.85	SUA 404B 64N4
32	469	1.95	51.33	SUA 454A 64N4
29	345	1.50	56.39	SUA 404B 64N4
29	522	1.80	56.73	SUA 454A 64N4
26	575	1.65	63.20	SUA 454A 64N4
25	593	2.85	64.31	SUA 455A 64N4
24	425	1.25	67.06	SUA 404B 64N4
23	646	1.50	71.11	SUA 454A 64N4
23	646	2.65	70.58	SUA 455A 64N4
21	496	1.10	77.33	SUA 404B 64N4
21	531	1.80	77.33	SUA 454B 64N4
21	717	2.45	78.00	SUA 455A 64N4
19	805	2.25	86.90	SUA 455A 64N4
18	575	0.95	89.23	SUA 404B 64N4
18	620	1.60	89.23	SUA 454B 64N4
17	903	2.05	97.78	SUA 455A 64N4
16	646	0.90	99.08	SUA 404B 64N4
16	690	1.45	99.08	SUA 454B 64N4
16	681	2.60	104.00	SUA 455B 64N4

* These units have thermal limitations. Please contact a DieQua representative for details.

⁽¹⁾ At nominal horsepower, the service factor (SF) will increase by up to 20%.



Gearmotor Selection Tables

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
14	805	2.25	120.00	SUA 455B 64N4
13	841	1.25	120.46	SUA 454B 64N4
12	929	1.15	132.92	SUA 454B 64N4
12	903	2.05	133.25	SUA 455B 64N4
11	1027	1.05	147.64	SUA 454B 64N4
10	1106	1.70	162.00	SUA 455B 64N4
9.6	1168	0.95	169.54	SUA 454B 64N4
9.1	1221	1.60	178.75	SUA 455B 64N4
8.7	1274	0.85	186.08	SUA 454B 64N4
8.2	1354	1.45	198.55	SUA 455B 64N4
7.9	1398	0.80	205.64	SUA 454B 64N4
7.1	1549	1.30	228.00	SUA 455B 64N4
6.5	1690	1.20	250.25	SUA 455B 64N4
5.9	1859	1.10	276.55	SUA 455B 64N4
5.3	2859	1.00	308.10	SUA 455B 64N4
4.7	2310	1.85	347.45	SUA 506B 64N4
4.7	2292	0.90	346.67	SUA 455B 64N4
4.2	2540	1.70	386.10	SUA 506B 64N4
3.7	2823	1.55	433.33	SUA 506B 64N4
1.9	5151	0.90	858.60	SUA 506C 64N4
1.8	5310	1.8	884.00	SUA 608C 64N4
1.7	5602	0.80	947.38	SUA 506C 64N4
1.6	6062	0.95	1012.71	SUA 507C 64N4
1.6	6009	1.60	1020.00	SUA 608C 64N4
1.6	5930	1.90	1020.00	SUA 609C 64N4
1.4	6593	0.90	1117.42	SUA 507C 64N4
1.4	6567	1.50	1132.63	SUA 608C 64N4
1.4	6699	1.70	1176.92	SUA 609C 64N4
1.3	7213	0.80	1241.16	SUA 507C 64N4
1.2	7319	1.55	1306.88	SUA 609C 64N4
1/3 HP nominal (0.4 HP actual)				
268	74	4.45	6.05	SUA 404S 72K4
227	89	3.80	7.13	SUA 404S 72K4
191	106	3.30	8.48	SUA 404S 72K4
166	124	2.90	9.78	SUA 404S 72K4
145	124	2.95	11.14	SUA 404A 72K4
144	150	2.60	11.28	SUA 404S 72K4
129	168	2.35	12.53	SUA 404S 72K4
123	150	2.45	13.20	SUA 404A 72K4
106	204	2.05	15.23	SUA 404S 72K4
104	186	2.15	15.56	SUA 404A 72K4
96	221	1.90	16.81	SUA 404S 72K4
88	221	1.85	18.50	SUA 404A 72K4
87	248	1.75	18.67	SUA 404S 72K4
76	266	1.60	21.33	SUA 404A 72K4
76	283	1.55	21.44	SUA 404S 72K4
76	266	2.80	21.33	SUA 454A 72K4
69	319	1.45	23.53	SUA 404S 72K4
66	310	1.45	24.62	SUA 404A 72K4
66	310	2.50	24.62	SUA 454A 72K4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
62	345	1.35	26.00	SUA 404S 72K4
59	345	1.30	27.33	SUA 404A 72K4
59	354	2.25	27.33	SUA 454A 72K4
56	389	1.25	28.97	SUA 404S 72K4
50	434	1.15	32.59	SUA 404S 72K4
49	425	1.95	33.23	SUA 454A 72K4
48	266	1.70	33.68	SUA 404B 72K4
44	469	1.80	36.67	SUA 454A 72K4
40	345	1.40	40.39	SUA 404B 72K4
40	522	1.65	40.73	SUA 454A 72K4
35	602	1.50	46.77	SUA 454A 72K4
35	584	2.65	45.69	SUA 455A 72K4
34	425	1.15	47.85	SUA 404B 72K4
32	664	1.40	51.33	SUA 454A 72K4
32	646	2.45	50.42	SUA 455A 72K4
29	513	1.00	56.39	SUA 404B 72K4
29	726	1.30	56.73	SUA 454A 72K4
29	717	2.25	56.00	SUA 455A 72K4
26	805	1.20	63.20	SUA 454A 72K4
25	823	2.00	64.31	SUA 455A 72K4
24	620	0.85	67.06	SUA 404B 72K4
23	903	1.10	71.11	SUA 454A 72K4
23	903	1.90	70.58	SUA 455A 72K4
21	770	1.25	77.33	SUA 454B 72K4
21	991	1.75	78.00	SUA 455A 72K4
19	1106	1.60	86.90	SUA 455A 72K4
18	894	1.10	89.23	SUA 454B 72K4
17	1239	1.45	97.78	SUA 455A 72K4
16	991	1.00	99.08	SUA 454B 72K4
16	1009	1.75	104.00	SUA 455B 72K4
14	1168	1.55	120.00	SUA 455B 72K4
13	1195	0.90	120.46	SUA 454B 72K4
12	1310	0.80	132.92	SUA 454B 72K4
12	1301	1.40	133.25	SUA 455B 72K4
12	1319	2.85	136.50	SUA 506B 72K4
10	1584	1.20	162.00	SUA 455B 72K4
10	1513	2.55	156.00	SUA 506B 72K4
9.4	1673	2.35	172.25	SUA 506B 72K4
9.1	1743	1.10	178.75	SUA 455B 72K4
8.2	1929	1.00	198.55	SUA 455B 72K4
8.0	1947	2.80	203.17	SUA 507B 72K4
7.8	2000	2.00	207.00	SUA 506B 72K4
7.1	2195	0.90	228.00	SUA 455B 72K4
7.1	2195	1.85	227.50	SUA 506B 72K4
6.6	2336	2.35	244.15	SUA 507B 72K4
6.5	2390	0.85	250.25	SUA 455B 72K4
6.4	2416	1.70	251.73	SUA 506B 72K4
6.0	2567	2.20	268.33	SUA 507B 72K4
5.9	2628	0.80	276.55	SUA 455B 72K4
5.6	2744	1.50	288.00	SUA 506B 72K4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
5.5	2832	2.00	296.91	SUA 507B 72K4
5.1	2974	1.40	315.25	SUA 506B 72K4
4.8	3213	1.75	339.69	SUA 507B 72K4
4.7	3257	1.30	347.45	SUA 506B 72K4
4.4	3496	1.65	371.83	SUA 507B 72K4
4.2	3584	1.20	386.10	SUA 506B 72K4
4.0	3823	1.50	409.82	SUA 507B 72K4
3.7	3974	1.10	433.33	SUA 506B 72K4
3.6	4204	1.35	455.40	SUA 507B 72K4
3.4	4337	1.00	477.99	SUA 506C 72K4
3.2	4664	1.25	511.11	SUA 507B 72K4
2.9	4912	0.90	551.20	SUA 506C 72K4
2.5	5558	0.80	636.00	SUA 506C 72K4
2.1	6567	1.45	766.59	SUA 608C 72K4
1.8	7425	1.30	884.00	SUA 608C 72K4
1.8	7567	1.55	884.53	SUA 609C 72K4
1.6	8381	1.15	1020.00	SUA 608C 72K4
1.6	8549	1.35	1020.00	SUA 609C 72K4
1.4	9160	1.05	1132.63	SUA 608C 72K4
1.4	9655	1.20	1176.92	SUA 609C 72K4
1.2	10549	1.10	1306.88	SUA 609C 72K4
1/2 HP nominal (0.6 HP actual)				
462	62	4.80	3.56	SUA 404S 72N4
386	80	4.00	4.26	SUA 404S 72N4
322	97	3.35	5.11	SUA 404S 72N4
272	115	2.90	6.05	SUA 404S 72N4
231	133	2.50	7.13	SUA 404S 72N4
212	124	2.65	7.76	SUA 404A 72N4
194	168	2.20	8.48	SUA 404S 72N4
177	159	2.20	9.29	SUA 404A 72N4
168	195	1.95	9.78	SUA 404S 72N4
148	195	1.85	11.14	SUA 404A 72N4
146	221	1.75	11.28	SUA 404S 72N4
131	248	2.80	12.53	SUA 454S 72N4
131	248	1.60	12.53	SUA 404S 72N4
125	239	2.80	29.33	SUA 454A 72N4
125	239	1.60	13.20	SUA 404A 72N4
108	310	2.40	15.23	SUA 454S 72N4
108	301	1.40	15.23	SUA 404S 72N4
106	292	2.40	33.85	SUA 454A 72N4
106	283	1.40	15.56	SUA 404A 72N4
98	336	2.20	16.81	SUA 454S 72N4
98	336	1.30	16.81	SUA 404S 72N4
89	345	2.10	37.58	SUA 454A 72N4
89	336	1.20	18.50	SUA 404A 72N4
88	381	2.05	18.67	SUA 454S 72N4
88	372	1.20	18.67	SUA 404S 72N4
77	434	1.85	21.44	SUA 454S 72N4
77	407	1.85	45.69	SUA 454A 72N4
77	425	1.05	21.44	SUA 404S 72N4

* These units have thermal limitations. Please contact a DieQua representative for details.
⁽¹⁾ At nominal horsepower, the service factor (SF) will increase by up to 20%.

Gearmotor Selection Tables



RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
77	398	1.10	21.33	SUA 404A 72N4
70	478	1.70	23.53	SUA 454S 72N4
*70	460	1.00	23.53	SUA 404S 72N4
70	274	1.55	23.51	SUA 404B 72N4
67	469	1.65	50.42	SUA 454A 72N4
67	460	0.95	24.62	SUA 404A 72N4
63	522	1.60	26.00	SUA 454S 72N4
63	513	0.90	26.00	SUA 404S 72N4
60	522	1.55	56.00	SUA 454A 72N4
60	504	0.90	27.33	SUA 404A 72N4
*58	354	1.25	28.15	SUA 404B 72N4
57	584	1.45	28.97	SUA 454S 72N4
57	566	0.85	28.97	SUA 404S 72N4
56	549	2.55	29.33	SUA 455A 72N4
50	655	1.25	32.59	SUA 454S 72N4
50	637	0.80	32.59	SUA 404S 72N4
49	637	2.30	33.85	SUA 455A 72N4
49	637	1.30	64.31	SUA 454A 72N4
*49	443	1.05	33.68	SUA 404B 72N4
45	699	1.20	70.58	SUA 454A 72N4
44	708	2.10	37.58	SUA 455A 72N4
*41	558	0.85	40.39	SUA 404B 72N4
40	779	1.15	78.00	SUA 454A 72N4
36	867	1.80	45.69	SUA 455A 72N4
35	885	1.00	86.90	SUA 454A 72N4
33	956	1.65	50.42	SUA 455A 72N4
32	974	0.95	97.78	SUA 454A 72N4
29	1062	1.55	56.00	SUA 455A 72N4
29	841	1.10	56.39	SUA 454B 72N4
26	1212	1.35	64.31	SUA 455A 72N4
25	1009	0.95	67.06	SUA 454B 72N4
23	1389	2.50	72.75	SUA 506A 72N4
23	1328	1.30	70.58	SUA 455A 72N4
21	1531	2.35	80.18	SUA 506A 72N4
21	1469	1.20	78.00	SUA 455A 72N4
21	1168	0.85	77.33	SUA 454B 72N4
19	1628	1.10	86.90	SUA 455A 72N4
18	1699	2.00	89.10	SUA 506A 72N4
17	1823	1.00	97.78	SUA 455A 72N4
16	1487	2.40	101.83	SUA 506B 72N4
16	1894	1.50	100.00	SUA 506A 72N4
16	1531	1.15	104.00	SUA 455B 72N4
14	1752	2.10	119.44	SUA 506B 72N4
14	1770	1.05	120.00	SUA 455B 72N4
12	2000	1.90	136.50	SUA 506B 72N4
12	1965	0.95	133.25	SUA 455B 72N4
11	2283	1.70	156.00	SUA 506B 72N4
10	2513	1.55	172.25	SUA 506B 72N4
9.5	2372	0.80	162.00	SUA 455B 72N4
8.9	2673	2.00	184.00	SUA 507B 72N4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
8.1	2938	1.85	203.17	SUA 507B 72N4
7.9	2991	1.35	207.00	SUA 506B 72N4
7.7	3062	2.80	213.00	SUA 608B 72N4
7.2	3275	1.25	227.50	SUA 506B 72N4
7.0	3345	2.55	234.00	SUA 608B 72N4
6.7	3513	1.60	244.15	SUA 507B 72N4
6.5	3593	1.15	251.73	SUA 506B 72N4
6.1	3841	1.45	268.33	SUA 507B 72N4
6.0	3903	2.25	276.00	SUA 608B 72N4
5.7	4062	1.05	288.00	SUA 506B 72N4
5.5	4213	1.35	296.91	SUA 507B 72N4
5.4	4248	2.10	302.25	SUA 608B 72N4
5.2	4407	0.95	315.25	SUA 506B 72N4
4.9	4637	1.95	333.27	SUA 608B 72N4
4.8	4770	1.20	339.69	SUA 507B 72N4
4.7	4814	0.90	347.45	SUA 506B 72N4
4.4	5186	1.10	371.83	SUA 507B 72N4
4.3	5239	1.75	381.00	SUA 608B 72N4
4.3	5292	0.80	386.10	SUA 506B 72N4
4.0	5664	1.60	416.00	SUA 608B 72N4
4.0	5655	1.00	409.82	SUA 507B 72N4
3.6	6160	1.50	457.36	SUA 608B 72N4
3.6	6222	0.95	455.40	SUA 507B 72N4
3.2	6894	0.85	511.11	SUA 507B 72N4
2.1	9655	1.00	766.59	SUA 608C 72N4
1.9	11214	1.05	884.53	SUA 609C 72N4
1.9	10903	0.90	884.00	SUA 608C 72N4
1.6	12567	0.95	1020.00	SUA 609C 72N4
1.6	12310	0.80	1020.00	SUA 608C 72N4
1.4	14187	0.85	1176.92	SUA 609C 72N4
3/4 HP nominal (0.8 HP actual)				
563	80	3.60	2.97	SUA 404S 81K4
470	97	3.05	3.56	SUA 404S 81K4
393	115	2.60	4.26	SUA 404S 81K4
328	142	2.20	5.11	SUA 404S 81K4
277	177	1.90	6.05	SUA 404S 81K4
258	159	2.00	6.49	SUA 404A 81K4
235	204	1.65	7.13	SUA 404S 81K4
216	195	1.70	7.76	SUA 404A 81K4
197	248	2.55	8.48	SUA 454S 81K4
197	248	1.45	8.48	SUA 404S 81K4
180	248	2.45	9.29	SUA 454A 81K4
180	248	1.45	9.29	SUA 404A 81K4
171	292	2.25	9.78	SUA 454S 81K4
171	283	1.30	9.78	SUA 404S 81K4
150	301	2.10	11.14	SUA 454A 81K4
150	301	1.20	11.14	SUA 404A 81K4
148	336	2.05	11.28	SUA 454S 81K4
148	327	1.15	11.28	SUA 404S 81K4
134	372	1.90	12.53	SUA 454S 81K4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
134	363	1.10	12.53	SUA 404S 81K4
127	363	1.85	13.20	SUA 454A 81K4
127	363	1.05	13.20	SUA 404A 81K4
110	451	1.60	15.23	SUA 454S 81K4
110	443	0.95	15.23	SUA 404S 81K4
109	451	2.80	15.38	SUA 455S 81K4
108	434	1.60	15.56	SUA 454A 81K4
108	425	0.95	15.56	SUA 404A 81K4
100	496	1.50	16.81	SUA 454S 81K4
100	487	0.85	16.81	SUA 404S 81K4
98	504	2.55	17.08	SUA 455S 81K4
92	496	2.55	18.15	SUA 455A 81K4
90	558	1.40	18.67	SUA 454S 81K4
90	522	1.40	18.50	SUA 454A 81K4
90	540	0.80	18.67	SUA 404S 81K4
90	513	0.80	18.50	SUA 404A 81K4
81	611	2.20	20.77	SUA 455S 81K4
78	593	2.20	21.39	SUA 455A 81K4
78	637	1.25	21.44	SUA 454S 81K4
78	602	1.25	21.33	SUA 454A 81K4
73	681	2.05	22.92	SUA 455S 81K4
71	699	1.15	23.53	SUA 454S 81K4
*71	1080	1.55	23.51	SUA 454B 81K4
68	699	1.10	24.62	SUA 454A 81K4
66	752	1.90	25.45	SUA 455S 81K4
66	708	1.95	25.44	SUA 455A 81K4
64	770	1.10	26.00	SUA 454S 81K4
61	770	1.05	27.33	SUA 454A 81K4
*59	903	1.30	28.15	SUA 454B 81K4
58	850	1.00	28.97	SUA 454S 81K4
57	858	1.70	29.23	SUA 455S 81K4
57	823	1.70	29.33	SUA 455A 81K4
52	947	1.60	32.08	SUA 455S 81K4
51	956	0.85	32.59	SUA 454S 81K4
*50	743	1.10	33.68	SUA 454B 81K4
50	938	0.90	33.23	SUA 454A 81K4
49	947	1.55	33.85	SUA 455A 81K4
47	1044	1.45	35.45	SUA 455S 81K4
46	1035	0.85	36.67	SUA 454A 81K4
45	1053	1.40	37.58	SUA 455A 81K4
42	1133	2.75	39.75	SUA 506A 81K4
42	1159	1.10	39.50	SUA 455S 81K4
*41	602	0.95	40.39	SUA 454B 81K4
38	1301	0.85	44.44	SUA 455S 81K4
37	1283	1.20	45.69	SUA 455A 81K4
35	1354	2.40	47.77	SUA 506A 81K4
*35	487	0.80	47.85	SUA 454B 81K4
33	1407	1.15	50.42	SUA 455A 81K4
32	1487	2.20	52.50	SUA 506A 81K4
30	1602	2.80	56.62	SUA 507A 81K4

* These units have thermal limitations. Please contact a DieQua representative for details.
⁽¹⁾ At nominal horsepower, the service factor (SF) will increase by up to 20%.



Gearmotor Selection Tables

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
30	1566	1.05	56.00	SUA 455A 81K4
29	1646	2.05	58.09	SUA 506A 81K4
27	1761	2.60	62.22	SUA 507A 81K4
26	1788	0.95	64.31	SUA 455A 81K4
25	1876	1.85	66.46	SUA 506A 81K4
24	1947	2.40	68.85	SUA 507A 81K4
23	2053	1.70	72.75	SUA 506A 81K4
22	1690	1.00	75.83	SUA 455B 81K4
21	2221	2.20	78.77	SUA 507A 81K4
21	2248	1.60	80.18	SUA 506A 81K4
19	2425	2.05	86.22	SUA 507A 81K4
19	2496	1.40	89.10	SUA 506A 81K4
19	2009	0.85	90.19	SUA 455B 81K4
18	2664	1.80	95.03	SUA 507A 81K4
17	2788	1.05	100.00	SUA 506A 81K4
16	2947	1.40	105.60	SUA 507A 81K4
16	2310	0.80	104.00	SUA 455B 81K4
14	3292	1.05	118.52	SUA 507A 81K4
14	2637	1.40	119.44	SUA 506B 81K4
12	3009	1.25	136.50	SUA 506B 81K4
11	3416	1.15	156.00	SUA 506B 81K4
10	3602	2.30	165.75	SUA 608B 81K4
9.7	3752	1.05	172.25	SUA 506B 81K4
9.1	4009	1.35	184.00	SUA 507B 81K4
8.9	4071	2.05	188.50	SUA 608B 81K4
8.2	4398	1.25	203.17	SUA 507B 81K4
8.1	4452	0.90	207.00	SUA 506B 81K4
7.9	4558	1.85	213.00	SUA 608B 81K4
7.7	4664	2.45	217.50	SUA 609B 81K4
7.4	4850	0.85	227.50	SUA 506B 81K4
7.2	4974	1.75	234.00	SUA 608B 81K4
6.9	5222	1.05	244.15	SUA 507B 81K4
6.8	5239	2.20	245.77	SUA 609B 81K4
6.7	5319	0.80	251.73	SUA 506B 81K4
6.2	5717	2.05	270.00	SUA 609B 81K4
6.2	5699	1.00	268.33	SUA 507B 81K4
6.1	5788	1.50	276.00	SUA 608B 81K4
5.6	6257	0.90	296.91	SUA 507B 81K4
5.5	6284	1.40	302.25	SUA 608B 81K4
5.3	6655	1.75	318.46	SUA 609B 81K4
5.0	6868	1.30	333.27	SUA 608B 81K4
4.9	7062	0.80	339.69	SUA 507B 81K4
4.8	7230	1.60	348.75	SUA 609B 81K4
4.4	7894	1.50	384.55	SUA 609B 81K4
4.4	7735	1.20	381.00	SUA 608B 81K4
4.0	8363	1.10	416.00	SUA 608B 81K4
3.8	8903	1.30	439.62	SUA 609B 81K4
3.7	9089	1.00	457.36	SUA 608B 81K4
3.5	9629	1.20	480.00	SUA 609B 81K4
3.2	10470	1.10	527.73	SUA 609B 81K4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
1 HP nominal (1.2 HP actual)				
563	106	2.50	2.97	SUA 404S 81N4
470	133	2.15	3.56	SUA 404S 81N4
393	168	1.85	4.26	SUA 404S 81N4
328	204	2.75	5.11	SUA 454S 81N4
328	204	1.60	5.11	SUA 404S 81N4
277	248	2.40	6.05	SUA 454S 81N4
277	239	1.40	6.05	SUA 404S 81N4
258	230	2.40	6.49	SUA 454A 81N4
235	283	2.10	7.13	SUA 454S 81N4
235	283	1.20	7.13	SUA 404S 81N4
216	292	2.05	7.76	SUA 454A 81N4
197	336	1.85	8.48	SUA 454S 81N4
197	336	1.05	8.48	SUA 404S 81N4
180	354	1.75	9.29	SUA 454A 81N4
171	389	1.65	9.78	SUA 454S 81N4
171	389	0.95	9.78	SUA 404S 81N4
150	425	1.50	11.14	SUA 454A 81N4
148	451	1.50	11.28	SUA 454S 81N4
148	451	0.85	11.28	SUA 404S 81N4
145	469	2.55	11.56	SUA 455S 81N4
134	504	1.35	12.53	SUA 454S 81N4
134	504	0.80	12.53	SUA 404S 81N4
131	469	2.45	12.77	SUA 455A 81N4
127	513	1.30	13.20	SUA 454A 81N4
126	540	2.25	13.33	SUA 455S 81N4
110	620	1.20	15.23	SUA 454S 81N4
109	628	2.05	15.38	SUA 455S 81N4
109	575	2.10	15.32	SUA 455A 81N4
108	602	1.15	15.56	SUA 454A 81N4
100	681	1.10	16.81	SUA 454S 81N4
98	690	1.85	17.08	SUA 455S 81N4
92	690	1.85	18.15	SUA 455A 81N4
90	761	1.00	18.67	SUA 454S 81N4
90	717	1.00	19	SUA 454A 81N4
81	841	1.60	20.77	SUA 455S 81N4
78	823	1.60	21.39	SUA 455A 81N4
78	867	0.90	21.44	SUA 454S 81N4
78	832	0.90	21.33	SUA 454A 81N4
73	929	1.50	22.92	SUA 455S 81N4
71	955	0.85	23.53	SUA 454S 81N4
66	1035	1.40	25.45	SUA 455S 81N4
66	982	1.40	25.44	SUA 455A 81N4
65	1027	2.70	25.60	SUA 506S 81N4
64	1053	0.80	26.00	SUA 454S 81N4
61	1080	2.65	27.56	SUA 506A 81N4
59	1142	2.50	28.27	SUA 506S 81N4
57	1186	1.25	29.23	SUA 455S 81N4
57	1133	1.25	29.33	SUA 455A 81N4
53	1230	2.40	31.50	SUA 506A 81N4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
53	2000	1.55	31.62	SUA 455B 81N4
52	1292	1.15	32.08	SUA 455S 81N4
49	1363	2.15	33.97	SUA 506S 81N4
49	1310	1.10	33.85	SUA 455A 81N4
47	1407	2.15	36.00	SUA 506A 81N4
47	1425	1.05	35.45	SUA 455S 81N4
45	1460	2.85	37.33	SUA 507A 81N4
45	1496	2.00	37.33	SUA 506S 81N4
45	1451	1.05	37.58	SUA 455A 81N4
44	1682	1.30	37.85	SUA 455B 81N4
42	1558	2.00	39.75	SUA 506A 81N4
42	1584	0.85	39.50	SUA 455S 81N4
41	1655	1.85	41.31	SUA 506S 81N4
39	1664	2.55	42.67	SUA 507A 81N4
37	1381	1.10	45.29	SUA 455B 81N4
37	1761	0.90	45.69	SUA 455A 81N4
36	1841	2.40	47.11	SUA 507A 81N4
35	1885	1.70	47.26	SUA 506S 81N4
35	1867	1.75	47.77	SUA 506A 81N4
33	1938	0.85	50.42	SUA 455A 81N4
32	2062	1.55	51.73	SUA 506S 81N4
32	2044	1.60	52.50	SUA 506A 81N4
31	1133	0.95	54.32	SUA 455B 81N4
30	2204	2.05	56.62	SUA 507A 81N4
29	2266	1.25	57.02	SUA 506S 81N4
29	2257	1.50	58.09	SUA 506A 81N4
27	2416	1.90	62.22	SUA 507A 81N4
26	2487	2.80	63.69	SUA 608A 81N4
26	2513	1.00	63.36	SUA 506S 81N4
26	912	0.80	64.35	SUA 455B 81N4
25	2575	1.35	66.46	SUA 506A 81N4
24	2717	2.60	69.75	SUA 608A 81N4
24	2673	1.75	68.85	SUA 507A 81N4
23	2805	1.25	72.75	SUA 506A 81N4
22	2991	2.40	76.91	SUA 608A 81N4
21	3044	1.60	78.77	SUA 507A 81N4
21	3080	1.15	80.18	SUA 506A 81N4
19	4655	2.65	88.30	SUA 609A 81N4
19	3407	2.05	87.92	SUA 608A 81N4
19	3319	1.50	86.22	SUA 507A 81N4
19	3407	1.00	89.10	SUA 506A 81N4
18	3646	1.30	95.03	SUA 507A 81N4
17	3903	2.05	100.95	SUA 609A 81N4
17	3708	1.75	96.00	SUA 608A 81N4
16	4062	1.40	105.55	SUA 608A 81N4
16	4036	1.00	105.60	SUA 507A 81N4
16	3142	1.15	101.83	SUA 506B 81N4
15	4248	1.75	110.22	SUA 609A 81N4
14	4655	1.40	121.18	SUA 609A 81N4
14	3682	1.35	120.11	SUA 507B 81N4

* These units have thermal limitations. Please contact a DieQua representative for details.
⁽¹⁾ At nominal horsepower, the service factor (SF) will increase by up to 20%.

Gearmotor Selection Tables



RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
14	3575	1.00	119.44	SUA 506B 81N4
12	4301	1.20	140.88	SUA 507B 81N4
12	4160	0.90	136.50	SUA 506B 81N4
11	4717	0.85	156.00	SUA 506B 81N4
10	4965	2.25	165.00	SUA 609B 81N4
10	4983	1.65	165.75	SUA 608B 81N4
10	4885	1.10	161.00	SUA 507B 81N4
9.1	5540	1.00	184.00	SUA 507B 81N4
8.9	5620	1.50	188.50	SUA 608B 81N4
8.8	5717	2.00	191.25	SUA 609B 81N4
8.2	6080	0.90	203.17	SUA 507B 81N4
7.9	6292	1.35	213.00	SUA 608B 81N4
7.7	6452	1.80	217.50	SUA 609B 81N4
7.2	6850	1.25	234.00	SUA 608B 81N4
6.9	7195	0.80	244.15	SUA 507B 81N4
6.8	7230	1.60	245.77	SUA 609B 81N4
6.2	7885	1.50	270.00	SUA 609B 81N4
6.1	7956	1.10	276.00	SUA 608B 81N4
5.5	8638	1.05	302.25	SUA 608B 81N4
5.3	9160	1.30	318.46	SUA 609B 81N4
5.0	9416	0.95	333.27	SUA 608B 81N4
4.8	9939	1.20	348.75	SUA 609B 81N4
4.4	10850	1.10	384.55	SUA 609B 81N4
4.4	10602	0.85	381.00	SUA 608B 81N4
4.0	11461	0.80	416.00	SUA 608B 81N4
3.8	12213	0.95	439.62	SUA 609B 81N4
3.5	13195	0.90	480.00	SUA 609B 81N4
3.2	14337	0.85	527.73	SUA 609B 81N4
1.5 HP nominal (1.7 HP actual)				
569	168	2.90	2.97	SUA 454S 91S4
475	204	2.50	3.56	SUA 454S 91S4
397	248	2.15	4.26	SUA 454S 91S4
331	301	1.85	5.11	SUA 454S 91S4
280	363	1.65	6.05	SUA 454S 91S4
243	407	2.55	6.96	SUA 455S 91S4
237	425	1.45	7.13	SUA 454S 91S4
205	487	2.25	8.25	SUA 455S 91S4
200	504	1.25	8.48	SUA 454S 91S4
190	478	2.25	8.92	SUA 455A 91S4
174	575	1.95	9.72	SUA 455S 91S4
173	584	1.15	9.78	SUA 454S 91S4
158	584	1.90	10.68	SUA 455A 91S4
150	673	1.00	11.28	SUA 454S 91S4
146	690	1.70	11.56	SUA 455S 91S4
135	743	0.95	12.53	SUA 454S 91S4
132	708	1.65	12.77	SUA 455A 91S4
127	797	1.55	13.33	SUA 455S 91S4
118	841	2.85	14.40	SUA 506S 91S4
111	903	0.80	15.23	SUA 454S 91S4
110	912	1.40	15.38	SUA 455S 91S4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
110	858	1.40	15.32	SUA 455A 91S4
101	982	2.55	16.71	SUA 506S 91S4
99	1018	1.30	17.08	SUA 455S 91S4
97	991	2.60	17.36	SUA 506A 91S4
93	1027	1.25	18.15	SUA 455A 91S4
86	1159	2.25	19.60	SUA 506S 91S4
84	1159	2.30	20.25	SUA 506A 91S4
81	1230	1.10	20.77	SUA 455S 91S4
79	1212	1.10	21.39	SUA 455A 91S4
76	1319	2.05	22.40	SUA 506S 91S4
74	1354	1.05	22.92	SUA 455S 91S4
73	1,363	2.70	23.28	SUA 507S 91S4
72	1354	2.05	23.50	SUA 506A 91S4
71	1,372	2.75	24.00	SUA 507A 91S4
67	1443	0.95	25.44	SUA 455A 91S4
66	1505	1.85	25.60	SUA 506S 91S4
66	1505	0.95	25.45	SUA 455S 91S4
64	1,566	2.45	26.60	SUA 507S 91S4
61	1,593	2.45	27.85	SUA 507A 91S4
61	1584	1.80	27.56	SUA 506A 91S4
60	1664	1.70	28.27	SUA 506S 91S4
58	1726	0.85	29.23	SUA 455S 91S4
58	1664	0.85	29.33	SUA 455A 91S4
56	1,788	2.20	30.40	SUA 507S 91S4
54	1805	1.65	31.50	SUA 506A 91S4
53	1885	0.80	32.08	SUA 455S 91S4
52	1,867	2.15	32.67	SUA 507A 91S4
50	1,974	2.05	33.57	SUA 507S 91S4
50	1991	1.50	33.97	SUA 506S 91S4
47	2062	1.50	36.00	SUA 506A 91S4
45	2,142	1.95	37.33	SUA 507A 91S4
45	2186	1.40	37.33	SUA 506S 91S4
44	2204	2.85	38.25	SUA 608A 91S4
43	2274	1.35	39.75	SUA 506A 91S4
42	2,363	1.75	40.34	SUA 507S 91S4
41	2416	1.30	41.31	SUA 506S 91S4
40	2,443	1.75	42.67	SUA 507A 91S4
39	2505	2.60	43.50	SUA 608A 91S4
38	2,593	1.65	44.33	SUA 507S 91S4
36	2,690	1.65	47.11	SUA 507A 91S4
36	2752	1.15	47.26	SUA 506S 91S4
35	2726	1.20	47.77	SUA 506A 91S4
34	2823	2.35	49.15	SUA 608A 91S4
34	2,859	1.50	49.05	SUA 507S 91S4
33	3000	1.10	51.73	SUA 506S 91S4
32	2982	1.10	52.50	SUA 506A 91S4
31	3098	2.20	54.00	SUA 608A 91S4
30	3230	2.85	56.44	SUA 609A 91S4
30	3,266	1.30	56.12	SUA 507S 91S4
30	3,221	1.40	56.62	SUA 507A 91S4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
30	3301	0.90	57.02	SUA 506S 91S4
29	3292	1.05	58.09	SUA 506A 91S4
28	3,567	1.10	61.43	SUA 507S 91S4
27	3549	2.65	62.00	SUA 609A 91S4
27	3637	1.90	63.69	SUA 608A 91S4
27	3,531	1.30	62.22	SUA 507A 91S4
25	3,921	0.90	67.71	SUA 507S 91S4
25	3,894	1.20	68.85	SUA 507A 91S4
25	3744	0.95	66.46	SUA 506A 91S4
24	3965	1.80	69.75	SUA 608A 91S4
23	4168	2.30	73.13	SUA 609A 91S4
22	4363	1.65	76.91	SUA 608A 91S4
22	3469	1.00	75.21	SUA 506B 91S4
21	4549	2.15	80.08	SUA 609A 91S4
21	4,434	1.10	78.77	SUA 507A 91S4
20	4,841	1.05	86.22	SUA 507A 91S4
19	5000	1.80	88.30	SUA 609A 91S4
19	4956	1.40	87.92	SUA 608A 91S4
19	4036	0.90	87.75	SUA 506B 91S4
18	5399	1.20	96.00	SUA 608A 91S4
18	5,310	0.90	95.03	SUA 507A 91S4
17	5691	1.40	100.95	SUA 609A 91S4
17	4655	0.80	101.83	SUA 506B 91S4
16	5912	0.95	105.55	SUA 608A 91S4
16	4,726	1.05	103.50	SUA 507B 91S4
15	6186	1.20	110.22	SUA 609A 91S4
14	6779	0.95	121.18	SUA 609A 91S4
14	5620	1.40	124.80	SUA 608B 91S4
14	5,460	0.95	120.11	SUA 507B 91S4
12	6461	1.70	144.00	SUA 609B 91S4
12	6390	1.25	143.00	SUA 608B 91S4
12	6,354	0.80	140.88	SUA 507B 91S4
10	7346	1.50	165.00	SUA 609B 91S4
10	7328	1.15	165.75	SUA 608B 91S4
9	8248	1.05	188.50	SUA 608B 91S4
8.8	8434	1.35	191.25	SUA 609B 91S4
7.9	9222	0.95	213.00	SUA 608B 91S4
7.8	9496	1.20	217.50	SUA 609B 91S4
7.2	10045	0.85	234.00	SUA 608B 91S4
6.9	10611	1.10	245.77	SUA 609B 91S4
6.3	11558	1.00	270.00	SUA 609B 91S4
5.3	13408	0.90	318.46	SUA 609B 91S4
4.9	14541	0.80	348.75	SUA 609B 91S4
2 HP nominal (2.3 HP actual)				
573	230	2.10	2.97	SUA 454S 91L4
479	283	1.80	3.56	SUA 454S 91L4
400	345	1.55	4.26	SUA 454S 91L4
351	381	2.50	4.85	SUA 455S 91L4
334	416	1.35	5.11	SUA 454S 91L4
293	460	2.15	5.81	SUA 455S 91L4

* These units have thermal limitations. Please contact a DieQua representative for details.
⁽¹⁾ At nominal horsepower, the service factor (SF) will increase by up to 20%.



Gearmotor Selection Tables

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
282	487	1.20	6.05	SUA 454S 91L4
245	558	1.85	6.96	SUA 455S 91L4
239	575	1.05	7.13	SUA 454S 91L4
207	664	1.65	8.25	SUA 455S 91L4
201	690	0.95	8.48	SUA 454S 91L4
191	672	1.60	8.92	SUA 455A 91L4
175	788	1.45	9.72	SUA 455S 91L4
174	797	0.85	9.78	SUA 454S 91L4
162	841	2.70	10.53	SUA 506S 91L4
160	814	1.40	10.68	SUA 455A 91L4
156	841	2.75	10.95	SUA 506A 91L4
147	938	1.25	11.56	SUA 455S 91L4
138	991	2.35	12.34	SUA 506S 91L4
134	982	2.45	12.71	SUA 506A 91L4
133	982	1.20	12.77	SUA 455A 91L4
128	1080	1.15	13.33	SUA 455S 91L4
118	1159	2.10	14.40	SUA 506S 91L4
116	1168	2.85	14.66	SUA 507S 91L4
115	1159	2.15	14.81	SUA 506A 91L4
111	1186	1.05	15.38	SUA 455S 91L4
111	1248	1.00	15.32	SUA 455A 91L4
102	1345	1.90	16.71	SUA 506S 91L4
100	1363	2.50	17.10	SUA 507S 91L4
100	1381	0.95	17.08	SUA 455S 91L4
98	1363	1.90	17.36	SUA 506A 91L4
97	1363	2.55	17.55	SUA 507A 91L4
94	1407	0.90	18.15	SUA 455A 91L4
87	1575	1.65	19.60	SUA 506S 91L4
86	1593	2.25	19.84	SUA 507S 91L4
84	1593	1.70	20.25	SUA 506A 91L4
83	1602	2.25	20.57	SUA 507A 91L4
82	1673	0.80	20.77	SUA 455S 91L4
80	1655	0.80	21.39	SUA 455A 91L4
76	1797	1.50	22.40	SUA 506S 91L4
73	1867	2.00	23.28	SUA 507S 91L4
73	1841	1.50	23.50	SUA 506A 91L4
71	1876	2.00	24.00	SUA 507A 91L4
67	2053	1.35	25.60	SUA 506S 91L4
64	2133	1.80	26.60	SUA 507S 91L4
62	2159	1.35	27.56	SUA 506A 91L4
61	2177	1.80	27.85	SUA 507A 91L4
60	2266	1.25	28.27	SUA 506S 91L4
59	2266	2.60	28.80	SUA 608A 91L4
56	2434	1.60	30.40	SUA 507S 91L4
54	2460	1.20	31.50	SUA 506A 91L4
52	2593	2.35	33.00	SUA 608A 91L4
52	2558	1.60	32.67	SUA 507A 91L4
51	2682	1.50	33.57	SUA 507S 91L4
50	2708	1.10	33.97	SUA 506S 91L4
47	2805	1.10	36.00	SUA 506A 91L4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
46	2912	1.45	37.33	SUA 507A 91L4
46	2974	1.05	37.33	SUA 506S 91L4
45	2974	2.85	37.89	SUA 609A 91L4
45	3000	2.10	38.25	SUA 608A 91L4
43	3098	1.00	39.75	SUA 506A 91L4
42	3213	1.30	40.34	SUA 507S 91L4
41	3275	0.95	41.31	SUA 506S 91L4
40	3328	1.30	42.67	SUA 507A 91L4
39	3443	2.55	43.92	SUA 609A 91L4
39	3407	1.90	43.50	SUA 608A 91L4
38	3522	1.20	44.33	SUA 507S 91L4
36	3575	1.20	47.11	SUA 507A 91L4
36	3735	0.85	47.26	SUA 506S 91L4
36	3699	0.90	47.77	SUA 506A 91L4
35	3841	1.75	49.15	SUA 608A 91L4
35	3885	1.15	49.05	SUA 507S 91L4
34	3903	2.30	49.94	SUA 609A 91L4
33	4080	0.80	51.73	SUA 506S 91L4
32	4204	1.60	54.00	SUA 608A 91L4
31	3522	0.90	55.06	SUA 506B 91L4
30	4398	2.10	56.44	SUA 609A 91L4
30	4434	0.95	56.12	SUA 507S 91L4
30	4381	1.05	56.62	SUA 507A 91L4
28	4841	0.80	61.43	SUA 507S 91L4
27	4823	1.95	62.00	SUA 609A 91L4
27	4938	1.40	63.69	SUA 608A 91L4
27	4797	0.95	62.22	SUA 507A 91L4
27	4098	0.80	64.16	SUA 506B 91L4
24	5390	1.35	69.75	SUA 608A 91L4
23	5664	1.70	73.13	SUA 609A 91L4
23	4797	1.00	75.68	SUA 507B 91L4
22	5921	1.25	76.91	SUA 608A 91L4
21	6177	1.60	80.08	SUA 609A 91L4
19	6788	1.35	88.30	SUA 609A 91L4
19	6726	1.05	87.92	SUA 608A 91L4
19	5602	0.85	88.71	SUA 507B 91L4
18	7319	0.90	96.00	SUA 608A 91L4
17	7726	1.05	100.95	SUA 609A 91L4
16	6558	1.60	105.00	SUA 609B 91L4
16	6531	1.20	104.68	SUA 608B 91L4
14	7496	1.40	120.79	SUA 609B 91L4
14	7700	1.05	124.80	SUA 608B 91L4
12	8850	1.25	144.00	SUA 609B 91L4
12	8735	0.95	143.00	SUA 608B 91L4
10	10054	1.10	165.00	SUA 609B 91L4
10	10009	0.85	165.75	SUA 608B 91L4
8.9	11514	1.00	191.25	SUA 609B 91L4
7.8	12956	0.90	217.50	SUA 609B 91L4
6.9	14470	0.80	245.77	SUA 609B 91L4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
3 HP nominal (3.4 HP actual)				
324	602	3.15	5.26	SUA 506S 101L4
266	743	2.70	6.40	SUA 506S 101L4
230	841	2.50	7.40	SUA 506A 101L4
219	912	2.30	7.78	SUA 506S 101L4
189	1071	2.05	9.04	SUA 506S 101L4
189	1027	2.15	9.00	SUA 506A 101L4
184	1080	2.75	9.24	SUA 507S 101L4
162	1248	1.80	10.53	SUA 506S 101L4
160	1212	2.55	10.67	SUA 507A 101L4
159	1266	2.45	10.73	SUA 507S 101L4
156	1266	1.85	10.95	SUA 506A 101L4
138	1469	1.60	12.34	SUA 506S 101L4
136	1478	2.15	12.50	SUA 507S 101L4
134	1469	1.65	12.71	SUA 506A 101L4
131	1487	2.20	12.97	SUA 507A 101L4
118	1708	1.45	14.40	SUA 506S 101L4
116	1735	1.90	14.66	SUA 507S 101L4
115	1717	1.45	14.81	SUA 506A 101L4
113	1735	1.95	15.06	SUA 507A 101L4
102	1982	1.30	16.71	SUA 506S 101L4
100	2027	1.70	17.10	SUA 507S 101L4
98	2018	1.30	17.36	SUA 506A 101L4
97	2027	1.75	17.55	SUA 507A 101L4
93	2142	2.50	18.39	SUA 608A 101L4
87	2328	1.15	19.60	SUA 506S 101L4
86	2354	1.50	19.84	SUA 507S 101L4
84	2354	1.15	20.25	SUA 506A 101L4
83	2381	1.55	20.57	SUA 507A 101L4
81	2451	2.25	21.00	SUA 608A 101L4
76	2646	1.05	22.40	SUA 506S 101L4
73	2752	1.35	23.28	SUA 507S 101L4
73	2726	1.05	23.50	SUA 506A 101L4
71	2805	2.75	24.11	SUA 609A 101L4
71	2814	2.00	24.16	SUA 608A 101L4
71	2779	1.35	24.00	SUA 507A 101L4
67	3018	0.95	25.60	SUA 506S 101L4
64	3142	1.20	26.60	SUA 507S 101L4
62	3186	0.90	27.56	SUA 506A 101L4
61	3221	2.45	27.74	SUA 609A 101L4
61	3221	1.20	27.85	SUA 507A 101L4
60	3328	0.85	28.27	SUA 506S 101L4
59	3354	1.75	28.80	SUA 608A 101L4
56	3584	1.10	30.40	SUA 507S 101L4
54	3637	0.85	31.50	SUA 506A 101L4
52	3841	2.15	33.07	SUA 609A 101L4
52	3832	1.60	33.00	SUA 608A 101L4
52	3770	1.10	32.67	SUA 507A 101L4
51	3947	1.05	33.57	SUA 507S 101L4
46	4301	1.00	37.33	SUA 507A 101L4

* These units have thermal limitations. Please contact a DieQua representative for details.
⁽¹⁾ At nominal horsepower, the service factor (SF) will increase by up to 20%.

Gearmotor Selection Tables



RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
45	4390	1.95	37.89	SUA 609A 101L4
45	4425	1.45	38.25	SUA 608A 101L4
42	4726	0.90	40.34	SUA 507S 101L4
40	4903	0.90	42.67	SUA 507A 101L4
39	5071	1.75	43.92	SUA 609A 101L4
39	5018	1.30	43.50	SUA 608A 101L4
38	5186	0.85	44.33	SUA 507S 101L4
36	5399	0.80	47.11	SUA 507A 101L4
35	5646	1.20	49.15	SUA 608A 101L4
34	5753	1.55	49.94	SUA 609A 101L4
32	6186	1.10	54.00	SUA 608A 101L4
30	6478	1.45	56.44	SUA 609A 101L4
27	7098	1.35	62.00	SUA 609A 101L4
27	7257	0.95	63.69	SUA 608A 101L4
24	7921	0.90	69.75	SUA 608A 101L4
23	8328	1.15	73.13	SUA 609A 101L4
22	7169	1.35	76.15	SUA 609B 101L4
21	9089	1.10	80.08	SUA 609A 101L4
21	7496	1.00	79.70	SUA 608B 101L4
19	8602	1.20	91.96	SUA 609B 101L4
19	9983	0.95	88.30	SUA 609A 101L4
19	8496	0.90	91.00	SUA 608B 101L4
16	9762	1.05	105.00	SUA 609B 101L4
16	9691	0.80	104.68	SUA 608B 101L4
14	11142	0.95	120.79	SUA 609B 101L4
12	13125	0.85	144.00	SUA 609B 101L4
4 HP nominal (4.6 HP actual)				
324	841	2.25	5.26	SUA 506S 101L4
273	991	2.70	6.25	SUA 507S 101L4
266	1035	1.95	6.40	SUA 506S 101L4
230	1168	1.80	7.40	SUA 506A 101L4
224	1221	2.35	7.60	SUA 507S 101L4
219	1266	1.65	7.78	SUA 506S 101L4
194	1372	2.15	8.77	SUA 507A 101L4
189	1469	1.50	9.04	SUA 506S 101L4
189	1425	1.55	9.00	SUA 506A 101L4
184	1496	2.00	9.24	SUA 507S 101L4
162	1717	1.35	10.53	SUA 506S 101L4
160	1682	1.85	10.67	SUA 507A 101L4
159	1699	2.75	10.69	SUA 608A 101L4
159	1743	1.80	10.73	SUA 507S 101L4
156	1743	1.35	10.95	SUA 506A 101L4
138	2009	1.20	12.34	SUA 506S 101L4
136	2027	1.60	12.50	SUA 507S 101L4
134	2027	2.40	12.72	SUA 608A 101L4
134	2027	1.20	12.71	SUA 506A 101L4
131	2062	1.60	12.97	SUA 507A 101L4
118	2345	1.05	14.40	SUA 506S 101L4
116	2381	1.40	14.66	SUA 507S 101L4
115	2363	1.05	14.81	SUA 506A 101L4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
113	2398	1.40	15.06	SUA 507A 101L4
112	2434	2.10	15.23	SUA 608A 101L4
102	2717	0.95	16.71	SUA 506S 101L4
100	2779	1.25	17.10	SUA 507S 101L4
98	2770	0.95	17.36	SUA 506A 101L4
97	2788	2.55	17.49	SUA 609A 101L4
97	2797	1.25	17.55	SUA 507A 101L4
93	2947	1.80	18.39	SUA 608A 101L4
87	3177	0.85	19.60	SUA 506S 101L4
86	3221	1.10	19.84	SUA 507S 101L4
84	3221	0.85	20.25	SUA 506A 101L4
83	3275	1.10	20.57	SUA 507A 101L4
81	3372	2.20	21.12	SUA 609A 101L4
81	3363	1.65	21.00	SUA 608A 101L4
73	3770	1.00	23.28	SUA 507S 101L4
71	3850	2.00	24.11	SUA 609A 101L4
71	3859	1.50	24.16	SUA 608A 101L4
71	3814	1.00	24.00	SUA 507A 101L4
64	4301	0.90	26.60	SUA 507S 101L4
61	4425	1.80	27.74	SUA 609A 101L4
61	4416	0.90	27.85	SUA 507A 101L4
59	4584	1.30	28.80	SUA 608A 101L4
56	4903	0.80	30.40	SUA 507S 101L4
52	5257	1.55	33.07	SUA 609A 101L4
52	5239	1.15	33.00	SUA 608A 101L4
52	5168	0.80	32.67	SUA 507A 101L4
45	6009	1.40	37.89	SUA 609A 101L4
45	6053	1.05	38.25	SUA 608A 101L4
39	6938	1.25	43.92	SUA 609A 101L4
39	6859	0.95	43.50	SUA 608A 101L4
35	7717	0.85	49.15	SUA 608A 101L4
34	7868	1.15	49.94	SUA 609A 101L4
32	8452	0.80	54.00	SUA 608A 101L4
30	8859	1.05	56.44	SUA 609A 101L4
27	9700	1.00	62.00	SUA 609A 101L4
23	11372	0.85	73.13	SUA 609A 101L4
21	12408	0.80	80.08	SUA 609A 101L4
5 HP nominal (6.1 HP actual)				
328	1124	1.70	5.26	SUA 506S 114M4
277	1328	2.05	6.25	SUA 507S 114M4
270	1372	1.45	6.40	SUA 506S 114M4
228	1584	2.70	7.58	SUA 608A 114M4
227	1620	1.75	7.60	SUA 507S 114M4
222	1673	1.25	7.78	SUA 506S 114M4
192	1894	2.40	9.00	SUA 608A 114M4
191	1947	1.15	9.04	SUA 506S 114M4
187	1982	1.50	9.24	SUA 507S 114M4
164	2266	1.00	10.53	SUA 506S 114M4
162	2257	2.10	10.69	SUA 608A 114M4
161	2301	1.35	10.73	SUA 507S 114M4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
141	2584	2.55	12.27	SUA 609A 114M4
140	2655	0.90	12.34	SUA 506S 114M4
138	2690	1.20	12.50	SUA 507S 114M4
136	2690	1.80	12.72	SUA 608A 114M4
120	3098	0.80	14.40	SUA 506S 114M4
118	3080	2.20	14.61	SUA 609A 114M4
118	3151	1.05	14.66	SUA 507S 114M4
113	3221	1.60	15.23	SUA 608A 114M4
101	3673	0.95	17.10	SUA 507S 114M4
99	3690	1.95	17.49	SUA 609A 114M4
94	3894	1.40	18.39	SUA 608A 114M4
87	4248	0.85	19.84	SUA 507S 114M4
82	4460	1.65	21.12	SUA 609A 114M4
82	4434	1.25	21.00	SUA 608A 114M4
72	5089	1.50	24.11	SUA 609A 114M4
72	5089	1.15	24.16	SUA 608A 114M4
62	5841	1.35	27.74	SUA 609A 114M4
60	6053	1.00	28.80	SUA 608A 114M4
52	6938	1.20	33.07	SUA 609A 114M4
52	6912	0.90	33.00	SUA 608A 114M4
46	7930	1.10	37.89	SUA 609A 114M4
45	7974	0.80	38.25	SUA 608A 114M4
39	9151	0.95	43.92	SUA 609A 114M4
35	10372	0.90	49.94	SUA 609A 114M4
31	11673	0.80	56.44	SUA 609A 114M4
7.5 HP nominal (8.4 HP actual)				
*276	1850	1.45	6.25	SUA 507S 114ML4
*227	2257	1.25	7.60	SUA 507S 114ML4
198	2531	2.40	8.70	SUA 609A 114ML4
*186	2752	1.10	9.24	SUA 507S 114ML4
167	3018	2.10	10.33	SUA 609A 114ML4
*160	3195	1.00	10.73	SUA 507S 114ML4
140	3593	1.85	12.27	SUA 609A 114ML4
*138	3726	0.85	12.50	SUA 507S 114ML4
118	4283	1.60	14.61	SUA 609A 114ML4
*117	4363	0.80	14.66	SUA 507S 114ML4
98	5124	1.40	17.49	SUA 609A 114ML4
82	6177	1.20	21.12	SUA 609A 114ML4
71	7045	1.10	24.11	SUA 609A 114ML4
62	8080	1.00	27.74	SUA 609A 114ML4
52	9602	0.85	33.07	SUA 609A 114ML4
45	10956	0.80	37.89	SUA 609A 114ML4
10 HP nominal (12 HP actual)				
*201	3443	0.80	8.70	SUA 609A 134M4
*169	4098	0.90	10.33	SUA 609A 134M4
*142	4868	1.05	12.27	SUA 609A 134M4
*120	5797	1.20	14.61	SUA 609A 134M4
*100	6930	1.35	17.49	SUA 609A 134M4
*83	8346	1.55	21.12	SUA 609A 134M4
*72	9505	1.75	24.11	SUA 609A 134M4

* These units have thermal limitations. Please contact a DieQua representative for details.

⁽¹⁾ At nominal horsepower, the service factor (SF) will increase by up to 20%.



Speed Reducer Selection Tables

WATT Drive speed reducers are known the world over for offering superior performance and reliable operation in the most demanding applications. An optimized gear tooth design provides high power density resulting in greater torque capacities in a smaller size. The modular housing allows for shaft, foot, or flange mounting to increase design versatility.

A variety of input styles are offered including adapters for NEMA, IEC, and servo motors, as well as a model with standard input shaft. Output shafts are available

in both inch and metric dimensions. Bolt on output flanges and mounting feet are standard options.

Engineering Note:

The torque and horsepower capacities highlighted in the selection charts are based on mechanical limitations. For continuous duty applications, some models may have lower thermal horsepower capacities. Consult your representative with any questions regarding proper selection.

Ratio	in-lbs.	HP	Eff.	Model
Size 404/414 ⁽¹⁾				
2.97	274	2.8	88	S
3.56	283	2.4	88	S
4.26	301	2.1	89	S
5.11	310	1.9	89	S
6.05	327	1.6	89	S
6.49	310	1.6	81	A
7.13	336	1.4	89	S
7.76	327	1.4	81	A
8.48	354	1.3	88	S
9.29	345	1.2	82	A
9.78	363	1.1	88	S
11.14	354	1.1	82	A
11.28	381	1.0	88	S
12.53	389	0.95	88	S
13.20	372	0.93	82	A
15.23	407	0.82	88	S
15.56	389	0.82	82	A
16.81	416	0.76	87	S
18.50	398	0.71	82	A
18.67	425	0.70	87	S
21.33	416	0.64	81	A
21.44	434	0.63	87	S
23.51	407	0.83	57	B
23.53	443	0.59	86	S
24.62	425	0.58	81	A
26.00	460	0.55	86	S
27.33	443	0.54	81	A
28.15	425	0.71	58	B
28.97	469	0.51	86	S
32.59	478	0.47	85	S
33.23	460	0.46	81	A
33.68	443	0.62	58	B
36.67	469	0.43	80	A
40.39	460	0.54	58	B
40.73	478	0.39	80	A

Ratio	in-lbs.	HP	Eff.	Model
46.77	496	0.36	80	A
47.85	478	0.47	58	B
51.33	504	0.34	79	A
56.39	496	0.40	58	B
56.73	513	0.31	79	A
63.20	522	0.28	78	A
67.06	513	0.36	58	B
71.11	531	0.25	78	A
77.33	522	0.32	58	B
89.23	540	0.28	57	B
99.08	549	0.27	57	B
120.46	566	0.23	56	B
132.92	575	0.21	56	B
147.64	584	0.19	55	B
169.54	593	0.17	55	B
186.08	602	0.16	54	B
205.64	611	0.15	54	B
229.10	620	0.13	53	B
257.78	628	0.12	52	B
Size 454/464 ⁽¹⁾				
2.97	487	4.8	92	S
3.56	504	4.2	92	S
4.26	531	3.7	91	S
5.11	558	3.2	91	S
6.05	575	2.8	91	S
6.49	558	2.7	86	A
7.13	602	2.5	91	S
7.76	584	2.4	86	A
8.48	628	2.2	91	S
9.29	611	2.0	86	A
9.78	646	2.0	91	S
11.14	637	1.8	86	A
11.28	673	1.8	90	S
12.53	690	1.6	90	S
13.20	664	1.6	86	A
15.23	717	1.4	90	S

Ratio	in-lbs.	HP	Eff.	Model
15.56	681	1.4	86	A
16.81	735	1.3	90	S
18.50	717	1.2	86	A
18.67	752	1.2	89	S
21.33	735	1.1	85	A
21.44	779	1.1	89	S
23.51	735	1.3	67	B
23.53	797	1.0	89	S
24.62	761	1.0	85	A
26.00	814	1.0	89	S
27.33	779	0.91	85	A
28.15	761	1.1	67	B
28.97	832	0.87	88	S
32.59	788	0.80	88	S
33.23	814	0.78	84	A
33.68	788	1.0	67	B
36.67	832	0.72	84	A
40.39	823	0.82	67	B
40.73	850	0.67	84	A
46.77	876	0.60	83	A
47.85	850	0.72	66	B
51.33	894	0.56	83	A
56.39	876	0.64	66	B
56.73	912	0.52	83	A
63.20	929	0.48	82	A
67.06	912	0.56	65	B
71.11	947	0.44	82	A
77.33	938	0.50	65	B
89.23	956	0.46	64	B
99.08	974	0.42	64	B
120.46	1009	0.36	63	B
132.92	1027	0.34	63	B
147.64	1044	0.31	62	B
169.54	1062	0.28	61	B
186.08	1080	0.25	61	B
205.64	1089	0.24	60	B

Ratio	in-lbs.	HP	Eff.	Model
229.10	1106	0.21	59	B
257.78	1115	0.20	58	B
Size 455				
4.05	903	6.5	92	S
4.85	947	5.7	92	S
5.81	982	5.0	92	S
6.96	1027	4.4	92	S
8.25	1071	3.8	91	S
8.92	1053	3.7	87	A
9.72	1115	3.4	91	S
10.68	1097	3.2	87	A
11.56	1159	3.0	91	S
12.77	1142	2.8	87	A
13.33	1204	2.7	91	S
15.32	1195	2.4	87	A
15.38	1248	2.4	91	S
17.08	1274	2.2	90	S
18.15	1239	2.1	86	A
20.77	1336	1.9	90	S
21.39	1292	1.9	86	A
22.92	1363	1.8	90	S
25.44	1345	1.7	86	A
25.45	1398	1.7	90	S
29.23	1443	1.5	89	S
29.33	1381	1.5	86	A
31.62	1372	1.7	68	B
32.08	1469	1.4	89	S
33.85	1425	1.3	85	A
35.45	1469	1.3	89	S
37.58	1460	1.2	85	A
37.85	1434	1.5	68	B
39.50	1274	1.2	88	S
44.44	1080	1.1	88	S
45.29	1487	1.3	68	B
45.69	1522	1.1	85	A
50.42	1549	1.0	84	A

⁽¹⁾ Sizes 414 and 464 have aluminum housings.

Speed Reducer Selection Tables



Ratio	in-lbs.	HP	Eff.	Model
54.32	1540	1.1	68	B
56.00	1584	0.91	84	A
64.31	1628	0.82	83	A
64.35	1593	1.0	67	B
70.58	1655	0.76	83	A
75.83	1637	0.76	67	B
78.00	1690	0.71	83	A
86.90	1726	0.64	82	A
90.19	1690	0.76	66	B
97.78	1761	0.59	82	A
104.00	1735	0.62	66	B
120.00	1779	0.62	65	B
133.25	1805	0.56	64	B
162.00	1859	0.48	63	B
178.75	1885	0.46	63	B
198.55	1912	0.42	62	B
228.00	1947	0.38	61	B
250.25	1965	0.35	61	B
276.55	1991	0.32	60	B
308.10	2009	0.30	60	B
346.67	2036	0.27	59	B
Size 506				
5.26	1885	10.5	92	S
6.40	1982	9.1	92	S
7.40	2080	8.4	90	A
7.78	2080	7.8	92	S
9.00	2186	7.3	90	A
9.04	2151	7.0	92	S
10.53	2230	6.2	92	S
10.95	2292	6.3	90	A
12.34	2319	5.5	91	S
12.71	2372	5.6	90	A
14.40	2407	4.9	91	S
14.81	2460	5.0	89	A
16.71	2487	4.4	91	S
17.36	2549	4.4	89	A
19.60	2584	3.9	91	S
20.25	2637	4.0	89	A
22.40	2664	3.5	90	S
23.50	2735	3.5	89	A
25.60	2744	3.2	90	S
27.56	2832	3.1	88	A
28.27	2805	3.0	90	S
31.50	2912	2.8	88	A
32.07	2814	3.3	72	B
33.97	2921	2.6	89	S
36.00	3000	2.6	87	A
37.33	2974	2.4	89	S
39.00	2938	2.8	72	B
39.75	3062	2.4	87	A

Ratio	in-lbs.	HP	Eff.	Model
41.31	3044	2.2	89	S
47.26	3124	2.0	88	S
47.43	3053	2.4	72	B
47.77	3186	2.1	87	A
51.73	3186	1.9	88	S
52.50	3248	1.9	86	A
55.06	3151	2.2	71	B
57.02	2823	1.5	88	S
58.09	3310	1.8	86	A
63.36	2416	1.2	87	S
64.16	3248	1.9	71	B
66.46	3398	1.6	85	A
71.11	2009	0.87	87	S
72.75	3460	1.5	85	A
75.21	3345	1.7	70	B
80.18	3522	1.4	85	A
87.75	3443	1.5	69	B
89.10	3390	1.2	84	A
100.00	2832	0.91	84	A
101.83	3531	1.4	68	B
119.44	3620	1.2	68	B
136.50	3699	1.1	67	B
156.00	3770	1.0	66	B
167.59	3814	0.94	66	C
172.25	3823	0.91	66	B
200.62	3903	0.82	65	C
207.00	3921	0.79	64	B
227.50	3965	0.74	64	B
240.04	3991	0.71	63	C
251.73	4018	0.68	63	B
287.90	4071	0.62	62	C
288.00	4071	0.62	62	B
315.25	4115	0.58	61	B
341.06	4142	0.54	61	C
347.45	4151	0.54	61	B
386.10	4195	0.48	60	B
401.92	4204	0.47	60	C
433.33	4230	0.44	59	B
477.99	4266	0.42	58	C
551.20	4310	0.38	57	C
636.00	4354	0.34	56	C
706.23	4381	0.31	55	C
858.60	4425	0.25	54	C
947.38	4443	0.24	53	C
1052.29	4469	0.21	52	C
1208.40	4496	0.20	51	C
1326.33	4505	0.19	50	C
1465.69	4522	0.17	49	C
1632.98	4540	0.16	48	C
1837.33	4549	0.15	47	C

Ratio	in-lbs.	HP	Eff.	Model
Size 507				
6.25	2682	12.5	92	S
7.60	2805	10.8	92	S
8.77	2947	10.0	90	A
9.24	2947	9.3	92	S
10.67	3089	8.7	90	A
10.73	3053	8.3	92	S
12.50	3159	7.4	92	S
12.97	3239	7.5	90	A
14.66	3283	6.6	92	S
15.06	3354	6.7	90	A
17.10	3407	5.9	91	S
17.55	3469	6.0	90	A
19.84	3522	5.3	91	S
20.57	3602	5.3	89	A
23.28	3655	4.7	91	S
24.00	3726	4.7	89	A
26.60	3761	4.2	90	S
27.85	3850	4.2	89	A
30.40	3876	3.8	90	S
32.67	3991	3.7	88	A
33.57	3956	3.5	90	S
37.33	4106	3.4	88	A
37.82	3983	3.9	73	B
40.34	4115	3.1	89	S
42.67	4221	3.0	88	A
44.33	4204	2.9	89	S
46.00	4151	3.4	72	B
47.11	4310	2.8	87	A
49.05	4292	2.7	89	S
55.95	4319	2.9	72	B
56.12	4124	2.2	88	S
56.62	4469	2.5	87	A
61.43	3797	1.9	88	S
62.22	4558	2.3	86	A
64.94	4443	2.6	71	B
67.71	3345	1.5	88	S
68.85	4646	2.1	86	A
75.24	2867	1.2	87	S
75.68	4575	2.3	71	B
78.77	4761	1.9	85	A
84.44	2390	0.87	87	S
86.22	4841	1.8	85	A
88.71	4708	2.0	70	B
95.03	4699	1.6	85	A
103.50	4832	1.8	69	B
105.60	4018	1.2	84	A
118.52	3354	0.9	84	A
120.11	4947	1.6	69	B
140.88	5071	1.4	68	B

Ratio	in-lbs.	HP	Eff.	Model
161.00	5177	1.3	67	B
184.00	5275	1.2	66	B
197.68	5319	1.1	66	C
203.17	5337	1.1	66	B
236.63	5443	1.0	65	C
244.15	5460	0.94	64	B
268.33	5522	0.87	64	B
283.12	5549	0.83	63	C
296.91	5576	0.80	63	B
339.58	5611	0.72	62	C
339.69	5611	0.72	62	B
371.83	5611	0.66	61	B
402.27	5611	0.62	61	C
409.82	5611	0.60	61	B
455.40	5611	0.55	60	B
474.06	5611	0.54	60	C
511.11	5611	0.50	59	B
563.79	5611	0.46	58	C
650.13	5611	0.40	57	C
750.15	5611	0.36	56	C
832.98	5611	0.34	55	C
1012.71	5611	0.28	53	C
1117.42	5611	0.25	53	C
1241.16	5611	0.24	52	C
1425.29	5611	0.21	51	C
1564.38	5611	0.20	50	C
1728.76	5611	0.17	49	C
1926.02	5611	0.16	48	C
2167.11	5611	0.15	47	C
Size 608				
7.58	4283	16.6	92	A
9.00	4469	14.6	92	A
10.69	4655	12.8	91	A
12.72	4850	11.3	91	A
15.23	5062	9.9	91	A
18.39	5283	8.6	90	A
21.00	5452	7.8	90	A
24.16	5620	7.0	90	A
28.80	5850	6.1	89	A
32.84	6036	6.6	75	B
33.00	6027	5.5	89	A
38.25	6213	4.9	89	A
39.00	6266	5.8	75	B
43.50	6390	4.5	88	A
46.31	6496	5.1	74	B
49.15	6549	4.1	88	A
54.00	6673	3.8	88	A
55.14	6726	4.5	73	B
63.69	6894	3.4	87	A
66.00	6965	3.9	73	B



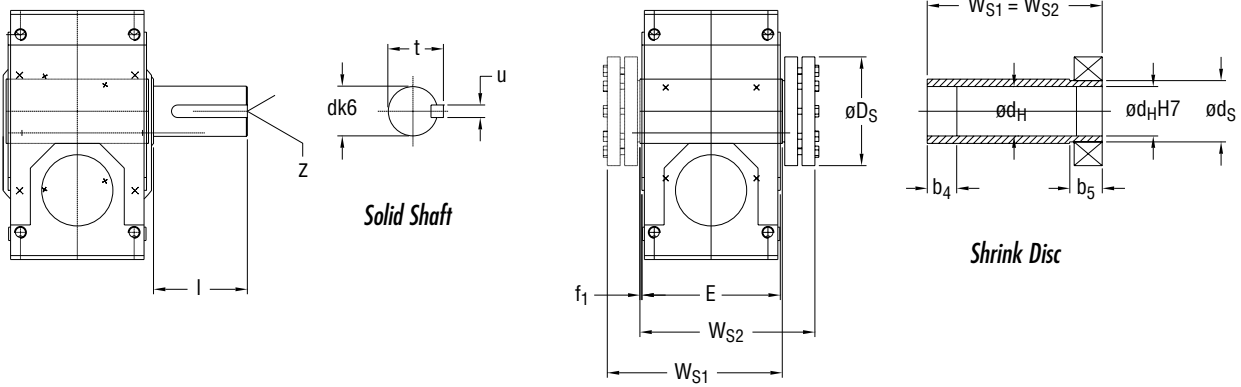
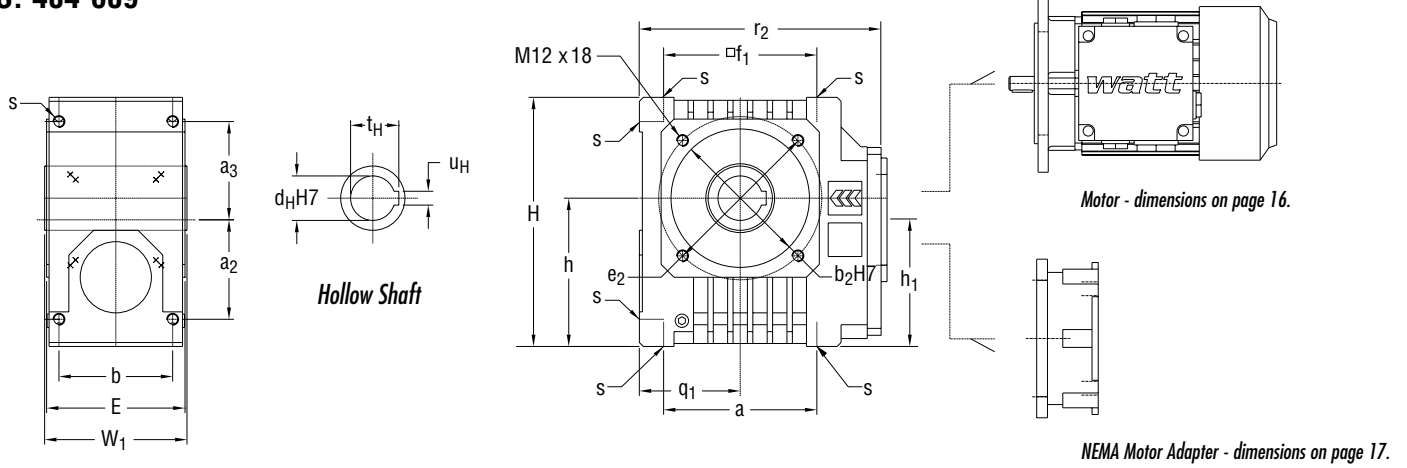
Speed Reducer Selection Tables

Ratio	in-lbs.	HP	Eff.	Model
69.75	7018	3.1	87	A
76.91	7142	2.9	86	A
79.70	7213	3.4	72	B
87.92	6930	2.5	86	A
91.00	7390	3.1	71	B
96.00	6337	2.1	85	A
104.68	7567	2.8	70	B
105.55	5531	1.7	85	A
124.80	7788	2.4	69	B
143.00	7956	2.2	68	B
165.75	8124	2.0	67	B
188.50	8266	1.8	66	B
213.00	8399	1.6	66	B
234.00	8496	1.5	65	B
268.78	8629	1.4	64	C
276.00	8655	1.3	64	B
302.25	8744	1.2	63	B
321.75	8797	1.2	63	C
333.27	8823	1.2	62	B
381.00	8939	1.0	61	B
384.97	8947	1.0	61	C
416.00	9009	1.0	61	B
457.36	9080	0.90	60	B
461.73	9080	0.90	60	C
546.98	9195	0.80	58	C
644.58	9301	0.70	57	C
766.59	9390	0.60	55	C
884.00	9461	0.50	54	C
1020.00	9523	0.50	53	C
1132.63	9567	0.40	52	C
1377.00	9629	0.40	50	C
1519.38	9664	0.30	50	C
1687.64	9691	0.30	49	C
1938.00	9726	0.30	47	C
2127.13	9753	0.30	47	C
2350.64	9770	0.20	46	C
2618.85	9788	0.20	45	C
2946.67	9815	0.20	44	C
Size 609				
8.70	5991	20.2	92	A
10.33	6239	17.8	92	A
12.27	6505	15.6	91	A
14.61	6770	13.7	91	A
17.49	7062	12.0	91	A
21.12	7372	10.4	91	A
24.11	7602	9.4	90	A
27.74	7841	8.5	90	A
33.07	8151	7.4	89	A
37.89	8390	6.7	89	A
37.89	8416	7.9	76	B

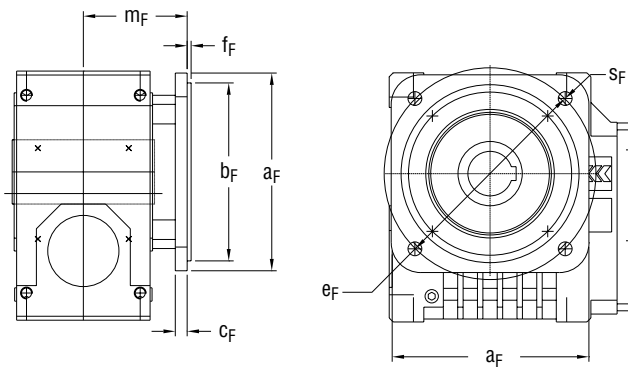
Ratio	in-lbs.	HP	Eff.	Model
43.92	8655	6.0	89	A
45.00	8726	7.0	75	B
49.94	8885	5.4	88	A
53.44	9036	6.1	74	B
56.44	9107	5.0	88	A
62.00	9275	4.6	88	A
63.62	9346	5.4	74	B
73.13	9567	4.1	87	A
76.15	9673	4.7	73	B
80.08	9726	3.8	87	A
88.30	8992	3.2	86	A
91.96	10001	4.1	72	B
100.95	7956	2.5	86	A
105.00	10231	3.7	71	B
110.22	7284	2.1	85	A
120.79	10470	3.3	70	B
121.18	6345	1.7	85	A
144.00	10753	2.9	69	B
165.00	10974	2.6	68	B
191.25	11195	2.4	67	B
217.50	11381	2.1	67	B
245.77	11487	1.9	66	B
270.00	11487	1.8	65	B
310.14	11487	1.6	64	C
318.46	11487	1.5	64	B
348.75	11487	1.4	63	B
371.25	11487	1.3	63	C
384.55	11487	1.3	62	B
439.62	11487	1.2	61	B
444.19	11487	1.1	61	C
480.00	11487	1.1	61	B
527.73	11487	1.0	60	B
532.77	11487	1.0	60	C
631.13	11487	0.84	58	C
743.75	11487	0.74	57	C
884.53	11487	0.63	55	C
1020.00	11487	0.56	54	C
1176.92	11487	0.50	53	C
1306.88	11487	0.46	52	C
1588.85	11487	0.39	50	C
1753.13	11487	0.36	49	C
1947.27	11487	0.32	49	C
2236.15	11487	0.30	47	C
2454.38	11487	0.27	47	C
2712.27	11487	0.25	46	C
3021.75	11487	0.23	45	C
3400.00	11487	0.21	44	C

We have provided basic dimensions only. For complete drawings, please visit our website or contact your DieQua representative.

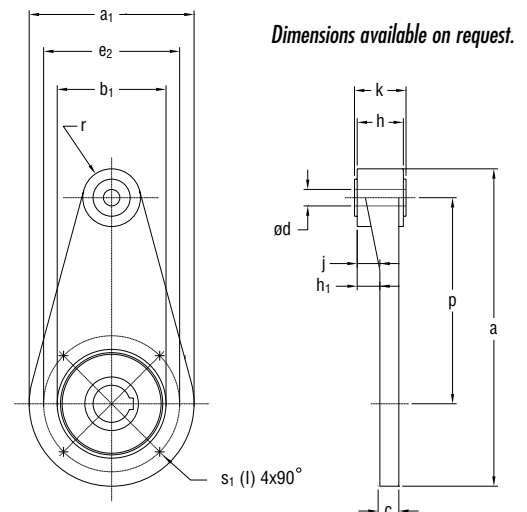
S. 404-609



Optional Output Flange



Optional Torque Arm



Helical Worm Main Dimensions

	a	a ₂	a ₃	b	b ₂	E	e ₂	f ₁	H	h	h ₁	q ₁	r ₂	s ⁽¹⁾
S404 A,B,S	2.76	2.76	1.34	2.76	2.95	3.78	3.54	3.35	5.51	3.46	3.35	2.05	5.91	M8x12
S414* A,B,S	2.76	2.76	1.34	2.76	2.95	3.78	3.54	3.35	5.51	3.46	3.35	2.05	5.91	M8x12
S454 A,B,S	2.76	2.76	1.34	2.76	2.95	3.78	3.54	3.35	5.51	3.46	3.35	2.05	5.91	M8x12
S455 A,B,S	3.94	3.35	1.97	3.15	3.54	4.13	4.33	4.13	6.89	4.13	3.62	2.76	6.61	M10x15
S464* A,B,S	2.76	2.76	1.34	2.76	2.95	3.78	3.54	3.35	5.51	3.46	3.35	2.05	5.91	M8x12
S506 A,B,S	4.92	3.92	2.46	3.74	4.33	4.72	5.12	4.92	7.95	4.72	4.03	3.23	8.43	M10x15
S506 C	4.92	3.92	2.46	3.74	4.33	4.72	5.12	4.92	7.95	4.72	5.00	3.23	9.76	M10x15
S507 A,B,S	5.51	4.13	2.56	3.74	4.72	4.72	5.71	5.51	8.66	5.12	4.11	3.54	8.74	M12x18
S507 C	5.51	4.13	2.56	3.74	4.72	4.72	5.71	5.51	8.66	5.12	5.08	3.54	10.08	M12x18
S608 A,B,S	6.10	4.82	3.05	4.53	5.51	5.51	6.50	6.30	9.92	5.91	5.04	4.02	9.88	M12x18
S608 C	6.10	4.82	3.05	4.53	5.51	5.51	6.50	6.30	9.92	5.91	6.16	4.02	11.22	M12x18
S609 A,B	6.69	5.12	3.15	4.72	6.30	5.91	7.48	7.09	10.63	6.30	5.04	4.33	10.20	M12x18
S609 C	6.69	5.12	3.15	4.72	6.30	5.91	7.48	7.09	10.63	6.30	6.16	4.33	11.54	M12x18

* Models with aluminum housings.

⁽¹⁾ Metric thread.

Dimensions are subject to change without notice.

Dimensions are in inches.

Output Shaft and Flange Dimensions

	Hollow Shaft				Solid Shaft ⁽¹⁾					Shrink Disc					Optional Output Flange						
	d _H	t _H	u _H	W ₁	d	l	t	u	z ⁽²⁾	b ₄	b ₅	d _H ⁽³⁾	D _S	W _{S2}	a _F	b _F	c _F	e _F	f _F	m _F	s _F
S404	0.75	0.837	0.1875	3.94	0.75	1.58	0.832	0.1875	m6	0.787	0.827	1.181	2.84	4.96	5.12	4.33	0.40	5.12	0.12	3.15	0.35
S414*	0.75	0.837	0.1875	3.94	0.75	1.58	0.832	0.1875	m6	0.787	0.827	1.181	2.84	4.96	5.12	4.33	0.40	5.12	0.12	3.15	0.35
S454	1.25	1.37	0.25	3.94	1.0	1.97	1.11	.025	m12	0.787	0.827	1.181	2.84	4.96	5.12	4.33	0.40	5.12	0.12	3.15	0.35
S455	1.375	1.52	0.3125	4.29	1.25	2.36	1.37	0.25	m12	0.787	0.945	1.378	3.15	5.44	5.91	5.12	0.40	6.5	0.14	3.33	0.43
S464*	1.25	1.37	0.25	3.94	1.0	1.97	1.11	.025	m12	0.787	0.827	1.181	2.84	4.96	5.12	4.33	0.40	5.12	0.12	3.15	0.35
S506	1.50	1.67	0.375	4.88	1.375	2.76	1.52	0.3125	m12	0.787	0.984	1.575	3.55	6.11	5.91	5.12	0.40	6.50	0.14	4.02	0.43
S507	1.75	1.93	0.375	4.88	1.75	3.54	1.92	0.375	m16	0.787	0.984	1.575	3.55	6.38	7.88	7.09	0.48	8.47	0.16	4.02	0.55
S608	2.0	2.23	0.50	5.67	2.0	3.94	2.22	0.50	m20	1.18	1.03	1.969	4.33	6.97	7.88	7.09	0.48	8.47	0.16	4.14	0.55
S609	2.0	2.23	0.50	6.06	2.0	3.94	2.22	0.50	m20	1.18	1.11	2.362	4.33	8.47	7.88	9.06	0.455	10.43	0.16	5.12	0.55

* Models with aluminum housings.

⁽¹⁾ Dual output option available.

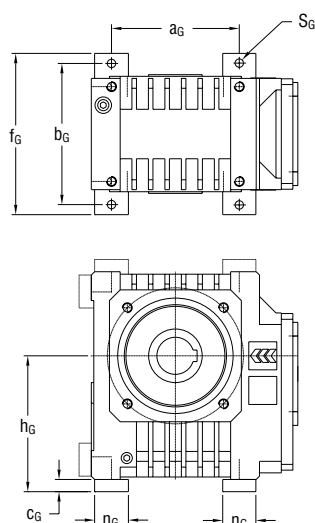
Dimensions are subject to change without notice.

Dimensions are in inches.

⁽²⁾ Metric thread.

⁽³⁾ Estimate converted from metric dimension.

Optional Foot Mounting Plate



Foot Mounting Plate Dimensions

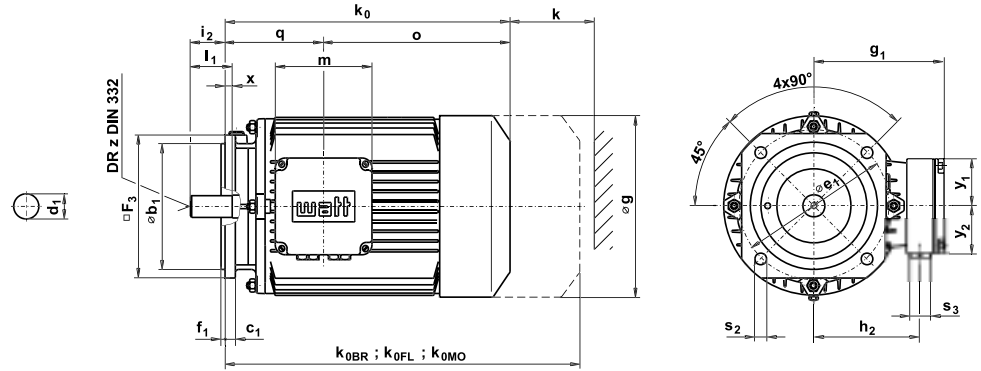
	a _G	b _G	c _G	f _G	h _G	n _G	S _G
SG 404	2.76	4.72	0.47	5.35	3.94	1.18	0.35
SG 414*	2.76	4.72	0.47	5.35	3.94	1.18	0.35
SG 454	2.76	4.72	0.47	5.35	3.94	1.18	0.35
SG 455	3.94	5.31	0.47	6.14	4.61	1.18	0.43
SG 464*	2.76	4.72	0.47	5.35	3.94	1.18	0.35
SG 506	4.92	5.91	0.47	6.77	5.20	1.18	0.43
SG 507	5.51	6.06	0.59	7.09	5.71	1.38	0.55
SG 608	6.10	6.85	0.59	7.87	6.50	1.38	0.55
SG 609	6.69	7.25	0.59	8.27	6.89	1.38	0.55

* Models with aluminum housings.

Dimensions are in inches.

Integral Motor Dimensions

The WATT Drive EUSAS brand motor is a high quality design featuring cast housings, upgraded bearings, superior protection, and windings capable of operating in any volts/Hz combination, for worldwide usage. These motors offer up to 20% additional horsepower over similar competitive frame sizes.



Type	Motor Dimensions												
	g	g ₁	h ₂	k*	k _{0BR} *	k _{0FL} *	k _{0MO} *	m	q	s	s ₃	y ₁	y ₂
64K,N	4.76	4.61	3.35	0.87	9.53	12	14.02	3.54	2.83	Ø10	2xM25x1.5+M16x1.5	1.77	1.77
72K,N	5.47	5	3.74	0.94	10.91	13.62	15.51	3.54	2.83	Ø10	2xM25x1.5+M16x1.5	1.77	1.77
81K,N	6.14	5.35	4.09	1.02	12.24	15.39	17.13	4.8	3.31	Ø10	2xM25x1.5+M16x1.5	2.4	2.4
91S,L	6.85	5.67	4.41	1.1	14.65	17.09	19.41	4.8	3.58	Ø10	2xM25x1.5+M16x1.5	2.4	2.4
101L,LA	7.72	6.3	4.96	1.54	15.79	18.63	20.63	4.8	4.25	Ø12	2xM32x1.5	2.4	2.4
114M,ML	8.66	6.85	5.55	1.73	18.59	20.87	23.43	4.8	4.37	Ø12	2xM32x1.5	2.4	2.4
134S,M	10.2	7.68	6.18	1.97	21.42	24.02	26.42	5.51	5.08	Ø14.5	2xM32x1.5	2.76	2.76

Dimensions are in inches. * k = air flow space, k_{0BR} = motor with brake, k_{0FL} = motor with forced cooling, k_{0MO} = motor with forced cooling and encoder.

To determine complete gearmotor length, add basic motor length " k_0 " to reducer length " r_2 ", found on page 15.

Integral Motor Length Adder "Ko"							
	64	72	81	91	101	114	134
S404 A,B,S	7.76	8.86	10.16	11.69	---	---	---
S414* A,B,S	7.76	8.86	10.16	11.69	---	---	---
S454 A,B,S	7.76	8.86	10.16	11.69	---	---	---
S455 A,B,S	7.76	8.86	10.16	11.69	---	---	---
S464* A,B,S	7.76	8.86	10.16	11.69	---	---	---
S506 A,B,S	7.76	8.86	10.16	11.69	13.11	15.16	---
S506 C	7.76	8.86	10.16	11.69	---	---	---
S507 A,B,S	7.76	8.86	10.16	11.69	13.11	15.16	---
S507 C	7.76	8.86	10.16	11.69	---	---	---
S608 A,B	7.76	8.86	10.16	11.69	13.11	15.16	17.64
S608 C	7.76	8.86	10.16	11.69	---	---	---
S609 A,B	7.76	8.86	10.16	11.69	13.11	15.16	17.64
S609 C	7.76	8.86	10.16	11.69	---	---	---

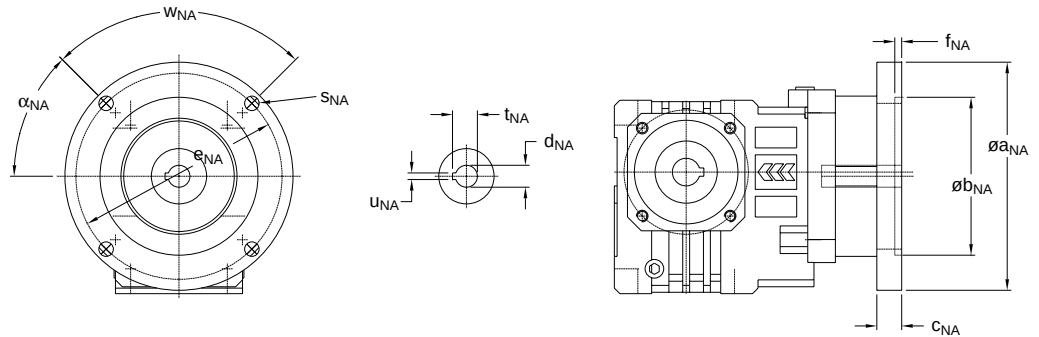
* Models with aluminum housings.

Dimensions are in inches.

Dimensions are subject to change without notice.

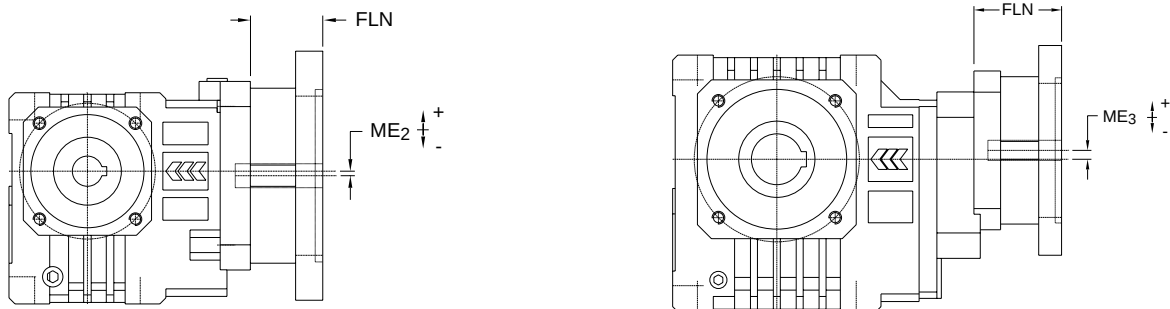
NEMA Motor Adapter Dimensions

WATT Drive speed reducers are available with motor adapters for NEMA, IEC, and a wide variety of servo motors. For IEC and servo motor adapter dimensions, consult your DieQua representative. NEMA adapter dimensions, for the appropriate reducers, are provided on this page.



Type	NEMA Adapter Dimensions											
	a _{NA}	b _{NA}	c _{NA}	d _{NA}	d x l	e _{NA}	f _{NA}	s _{NA}	t _{NA}	u _{NA}	w _{NA}	α _{NA}
NA56	6.5	4.5	0.71	0.625	0.625 x 2.056	5.875	0.2	0.41	0.709	0.188	4x90°	45°
NA143/145	6.5	4.5	0.71	0.875	0.875 x 2.12	5.875	0.2	0.41	0.964	0.188	4x90°	45°
NA182/184	10	8.5	1.1	1.125	1.125 x 2.62	7.25	0.2	0.53	1.241	0.25	4x90°	45°
NA213/215	10	8.5	1.1	1.375	1.375 x 3.12	7.25	0.2	0.53	1.518	0.312	4x90°	45°
NA254/256	10	8.5	1.1	1.625	1.625 x 3.75	7.25	0.2	0.53	1.796	0.375	4x90°	45°
NA284/286	11.25	10.5	1.1	1.875	1.875 x 4.38	9	0.2	0.53	2.096	0.5	4x90°	45°

Dimensions are in inches.



To determine complete reducer length, add flange length "FLN" to reducer length "r₂", found on page 15.

NEMA Flange Length Adder "FLN"					
	ME ₂	56	143/145	182/184	213/215
S404 A,B,S	-0.118	2.28	2.28	---	---
S414 A,B,S	-0.118	2.28	2.28	---	---
S454 A,B,S	-0.118	2.28	2.28	---	---
S455 A,B,S	-0.512	2.28	2.28	---	---
S464 A,B,S	-0.512	2.28	2.28	---	---
S506 A,B,S	-0.693	2.28	2.28	3.74	3.74
S507 A,B,S	-1.01	2.28	2.28	3.74	3.74
S608 A,B	-0.862	2.28	2.28	3.74	3.74
S609 A,B	-1.26	2.28	2.28	4.92	4.92

NEMA Flange Length Adder "FLN"			
	ME ₃	56	143/145
S506 C	+0.276	2.28	2.28
S507 C	-0.040	2.28	2.28
S608 C	+0.256	2.28	2.28
S609 C	-0.138	2.28	2.28

Dimensions are in inches.

Dimensions are subject to change without notice.

The EUSAS Motor

The WATT Drive EUSAS Motor is specially designed for worldwide operation and can accommodate all volts/Hz combinations. At 60 Hz, the actual power is up to 20% higher than similar motor frame sizes. As a special feature, the winding design can provide full torque at double nominal speed when inverter driven at a specific voltage and wire connection. Therefore, in some cases, a smaller motor may be selected to generate the required torque. The modular motor design also allows for a variety of options, many of them field retrofitable.

Component Materials

The frames of motor sizes 64 to 161 are made of cast aluminum. Motor sizes 181 to 281 are made of cast iron, as are the end shields for all sizes. Fan covers are made of plate steel. The stator windings have class F insulation, with class B temperature rise, as standard. The motor rotors have a squirrel cage design, in die cast aluminum, and are suitable for direct on line starting. The motor shaft is made of CK45 steel, which is comparable to ST 70.

Motor Protection Classifications and Options

The standard motor protection class is IP55. Protection Class IP56 and IP65 is also available. It is recommended that starters with thermal overload protection are used. Windings with Class F insulation are provided. For additional safety, temperature switches and temperature sensors can be incorporated. Condensation drainage holes, anti-condensation heating, and options for extreme climate conditions are also available.

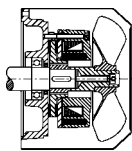
Motor cooling is achieved by integral fans. See the dimension pages for the required airflow space. For inverter controlled applications, low speed operation may require forced cooling. Consult your representative to determine when this is necessary.

Motor Speed and Design Options

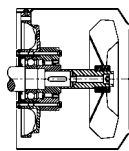
EUSAS motors are available in 2 pole, 4 pole, 6 pole, and 8 pole designs. Two speed motors in 4/2, 8/4, 6/4, 6/2, and 8/2 pole combinations are also possible. A unique asynchronous servo motor, for precise speed and positioning applications, is also offered. It provides the possibility of highly dynamic motion profiles operated by frequency inverters with closed loop control.

Modular System Options

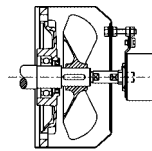
The EUSAS motor is designed to allow the integration of brakes, backstops, and encoders. In most cases kits can be provided to field retrofit these options. Brakes are offered for both holding and working applications. Encoders with a variety of resolutions and feedback are available. Consult your representative for the appropriate option selection.



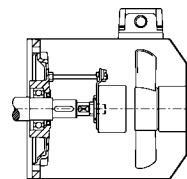
Brake



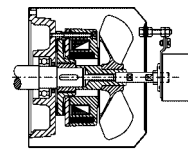
Backstop



Encoder



Forced Cooling



Brake & Encoder

Type	Nominal HP	Rated HP	Rated Speed RPM	Rated Current			Mn in-lbs ⁽²⁾	Ma/Mn ⁽³⁾	Double Power/Double Speed ⁽⁴⁾		
				In 230V [A]	In 460V [A]	Ia/In ⁽¹⁾			Rated Speed		In 460V [A]
							HP	RPM			
64K4	0.16	0.2	1660	1	0.5	3	7	1.9	0.32	2880	0.9
64N4	0.25	0.3	1650	1.2	0.6	3.2	11	2	0.48	2860	1
72K4	0.33	0.4	1630	1.6	0.8	3.1	15	1.8	0.66	2820	1.4
72N4	0.5	0.6	1650	2.2	1.1	3.7	22	1.9	1	2860	1.9
81K4	0.75	0.8	1670	3	1.5	4	32	1.9	1.5	2890	2.6
81N4	1	1.2	1680	4	2	4.6	43	2.2	2	2910	3.5
91S4	1.5	1.7	1700	5.2	2.6	5.5	63	2.5	2.9	2940	4.5
91L4	2	2.3	1710	7	3.5	6	85	2.6	4	2960	6.1
101L4	3	3.4	1710	9.4	4.7	5.9	125	2.2	6.7	3420	9.4
101LA4	4	4.6	1700	12.6	6.3	6	172	2.5	9.2	3400	12.6
114M4	5	6.1	1720	16.6	8.3	6.5	230	2.4	12	3440	16.6
114ML4	7.5	8.4	1730	25	12.5	6.7	310	3.2	17	3460	25
134S4	7.5	8.4	1740	23	11.5	7.3	310	2.4	17	3480	23
134M4	10	12	1740	30	15	7.2	416	2.4	23	3480	30

(1) Starting current to rated current ratio.

(2) Rated torque.

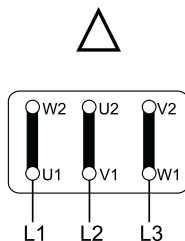
(3) Starting torque to rated torque ratio.

(4) Engineering Note: The double power/double speed option allows full torque up to 120Hz when inverter driven. This effectively doubles the power of a given motor. When incorporated with a higher ratio reducer, the same output torque can be achieved with a smaller motor than competitive gearmotors. Please be advised that the higher horsepower inverter and a 460V - 480V power source is required.

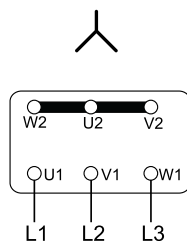
Wiring Diagrams

For Motor Sizes 60 to 90

220 - 240V at 50Hz
220 - 280V at 60Hz
Delta Connection

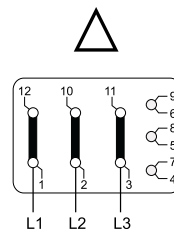


380 - 420V at 50Hz
380 - 480V at 60Hz
Star Connection, Standard

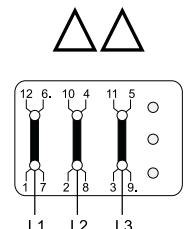


For Motor Sizes 100 to 280

380 - 420V at 50Hz
380 - 480V at 60Hz
Delta Connection, Standard Supply



190 - 210V at 50Hz
190 - 240V at 60Hz
Delta/Delta Connection



Radial Load Capacities

The output radial load capacities of these gearmotors and reducers is based on several factors. These include the output speed, percentage of unit torque utilization, direction of radial force, position of radial force on the shaft, and service factor desired, contact your representative for a precise calculation.

Lubrication

The WATT drive MAS 2000 gearmotors and speed reducers are prefilled with oil prior to shipment. The amount of oil is determined by the mounting position. The lubricant used is an ISO VG460 Polyglycol Synthetic oil. A special washdown seal assures lubrication integrity. After mounting it is necessary to install the included breather plug in the uppermost plug location. Contact your representative for additional operating instructions.

Backlash

Gearing and machining tolerances have been optimized to provide excellent backlash control. The level of backlash within each unit is a function of the ratio. Reduced backlash options are available for precise rotary motion such as used in servo or other positioning applications. Contact your representative for backlash values and capabilities.

Moments of Inertia

Unit moments of inertia are a function of the gear ratio. Higher ratios have lower moments of inertia. Contact your representative for inertia values of the unit selected.

Mechanical Efficiency

Helical worm reducers utilize a helical gear stage to improve efficiency over standard worm reducers. Precision machining and optimized tooth geometry maximizes power, torque transmission, and efficiency. However, higher ratios are less efficient. Please consult the catalog data, or your DieQua representative, to determine the efficiency of the unit selected.

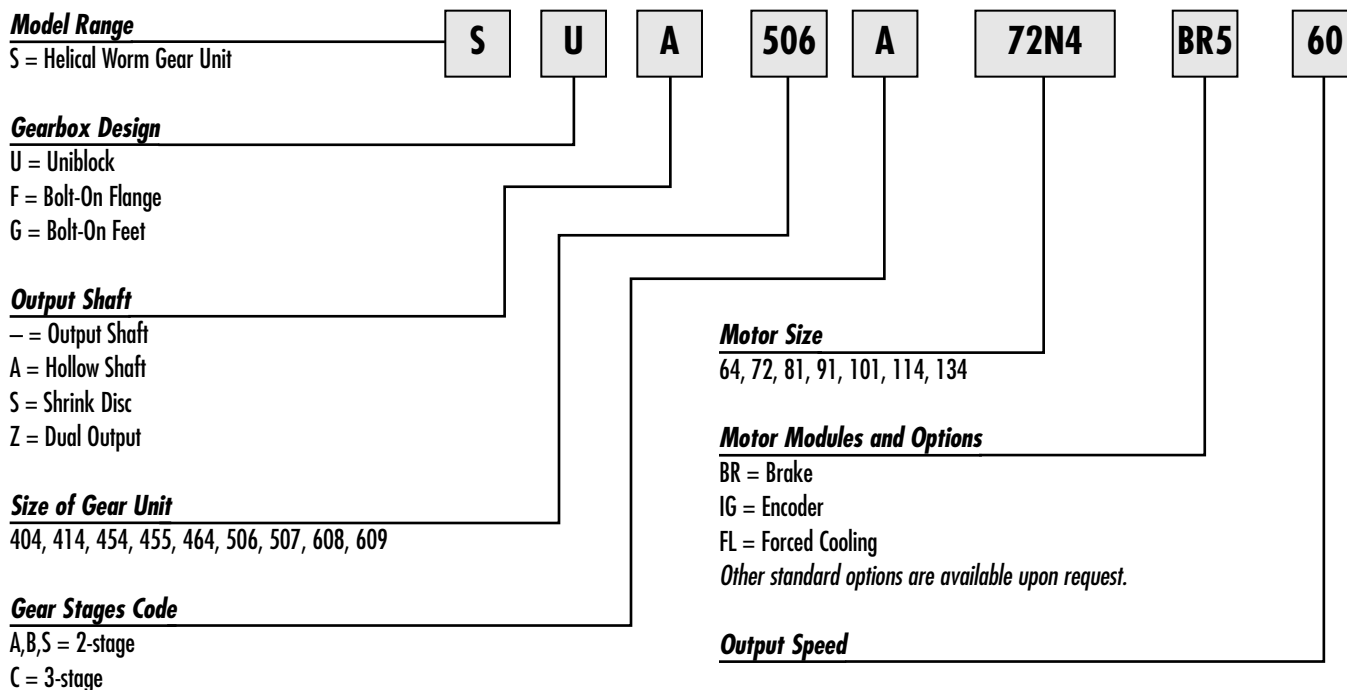
Horsepower Capacity

The horsepower ratings in this catalog are based on mechanical limits. The thermal capacity will vary and is a function of ambient conditions and other heat dissipation criteria. In most cases, the thermal limit will exceed the mechanical limit. However, when considering lower ratios, the mechanical limit may exceed the thermal limit. Consult your DieQua representative for the horsepower limit of the reducer selected.

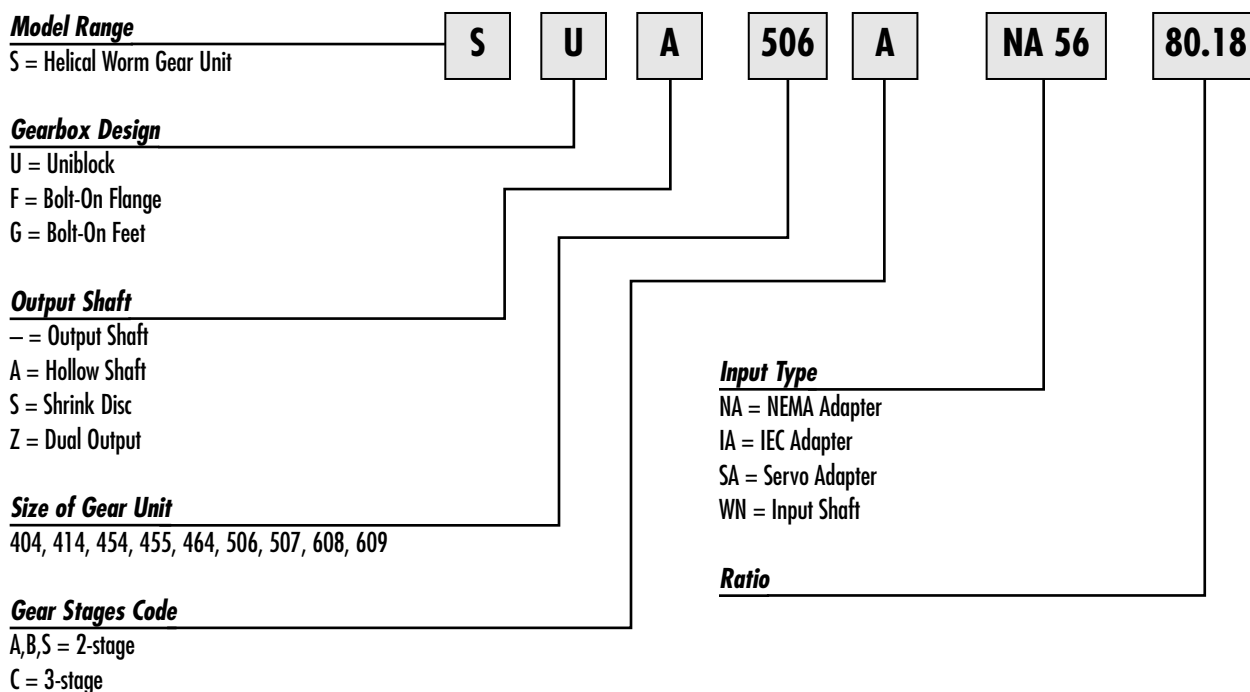
Housing Material

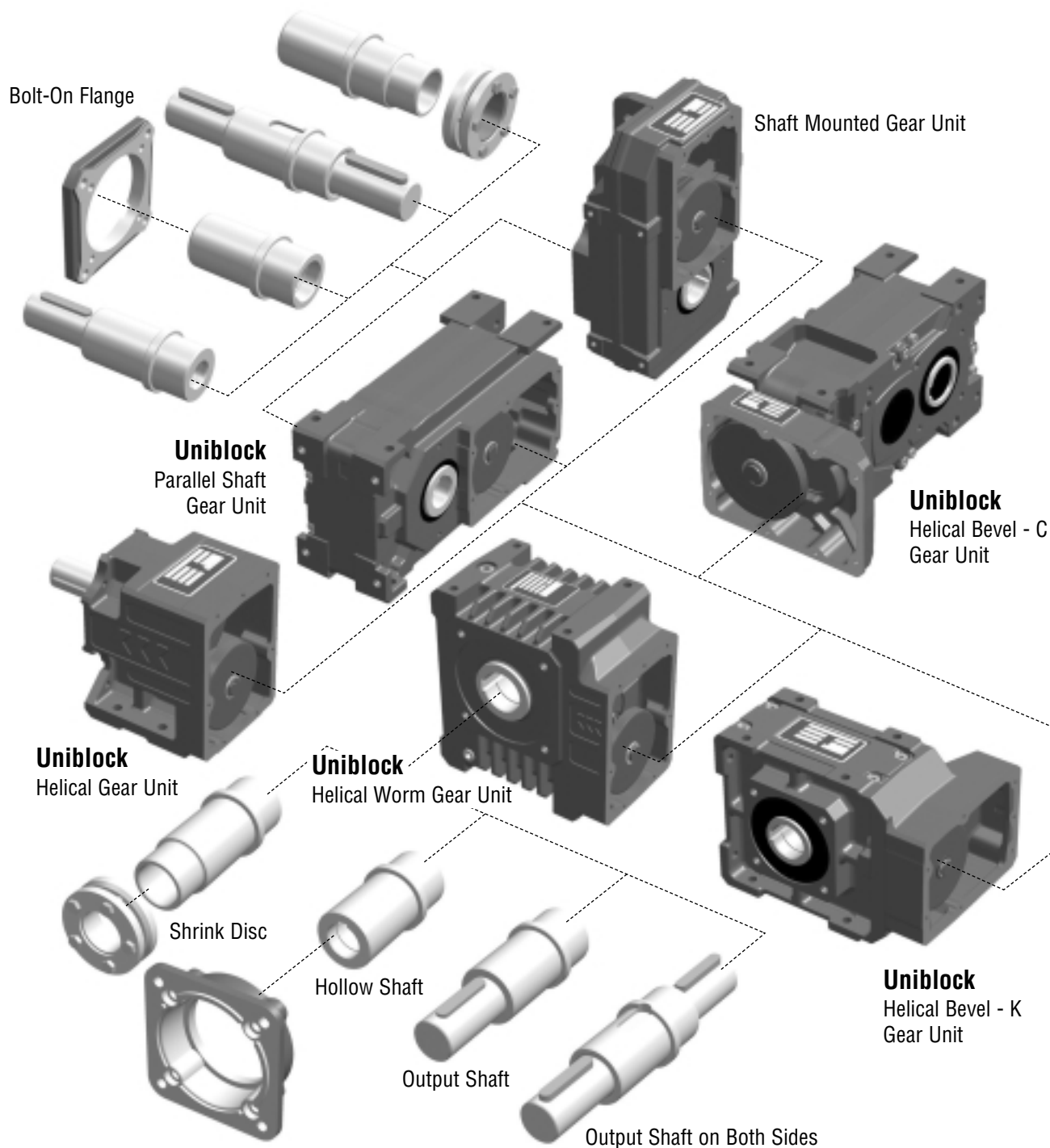
All housings are made of cast iron. Sizes 404 (414) and 454 (464) are available in cast aluminum as an option.

Gear Motor Example: SUA 506A 72N4 BR5 60



Speed Reducer Example: SUA 506A NA56 80.18





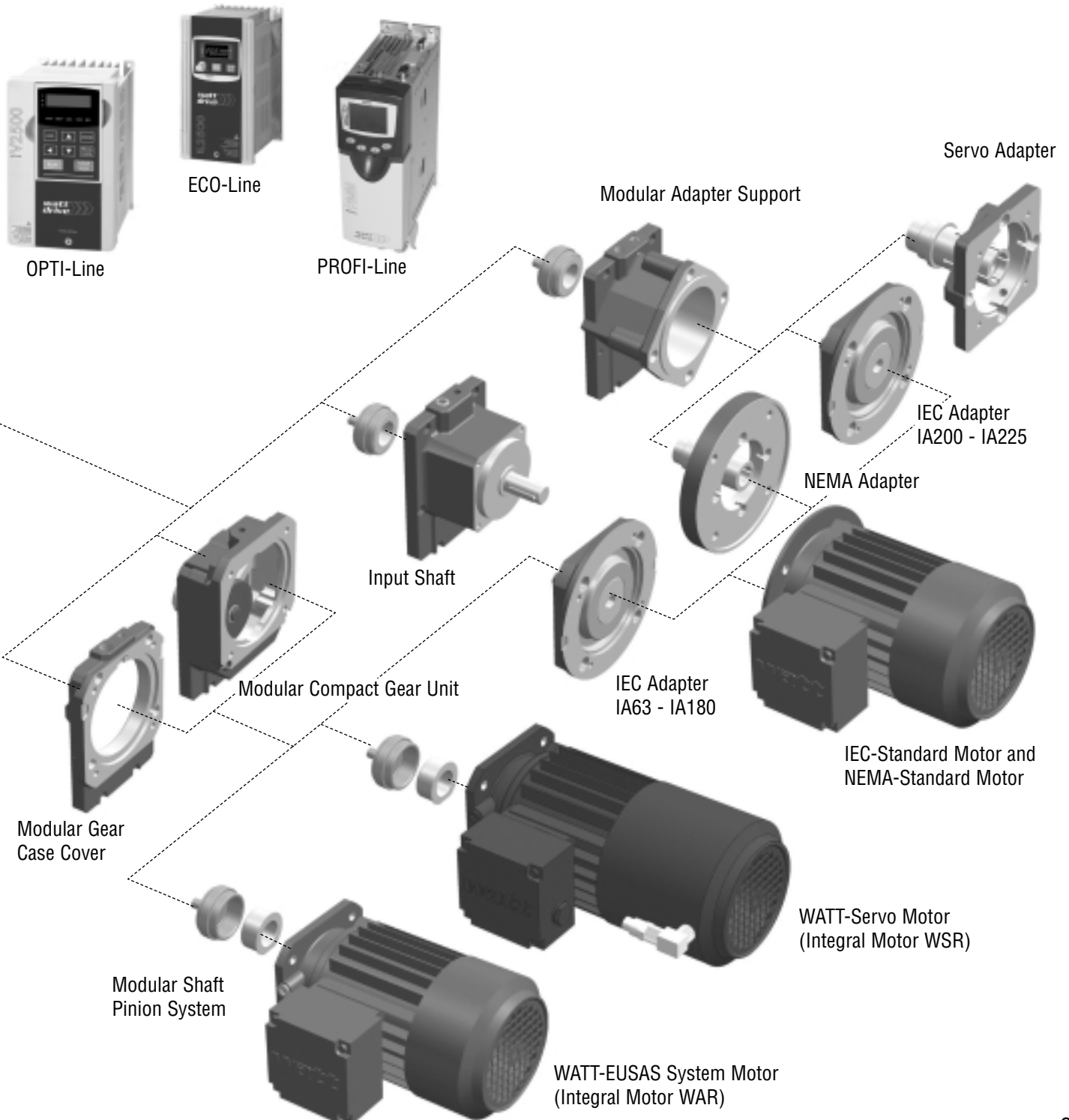
watt drive >>> - *The intelligent choice!*

The WATT Drive philosophy is to provide the optimal drive solution for each unique application. By combining the most appropriate reducer, motor and drive, or just individual components, the result is maximum design versatility, outstanding operating performance, and extreme reliability.

WATT Drive has been a global supplier of cutting edge drive technology for over 30 years. With manufacturing, assembly, warehousing, and tech center facilities throughout Europe, North America, and Asia, WATT Drive provides local personal service along with worldwide customer support.

MAS means Modular Assembly System

- **Modular Gear System** - Standard parts integrated into different gearbox designs.
- **Modular Motor System** - Standard design accommodates a variety of add-on options
- **Modular Electronic System** - Frequency inverters for speed and positioning control.



Other Products & Services



Inline Helical - H



Shaft Mount - A



Parallel Shaft - F



Helical Bevel - C



Helical Bevel - K



Motors



Controls

Engineering Support

DieQua Corporation has several decades of combined experience specifying power transmission and motion control components. This assures the proper selection of components and systems for your unique requirements.



Manufacturing

DieQua Corporation's manufacturing capabilities allow production of many of the components used in the drives we provide. Mounting components and design modifications are also available from our full service machine shop.



Assembly

DieQua Corporation has a team of factory trained technicians that assemble the majority of the drives we provide. This allows prompt delivery of your production requirements or service repairs.



Warehousing

DieQua Corporation maintains an extensive inventory of common speed reducer and motor components for quick delivery of small orders, prototypes, and spare parts.



DIEQUA
Corporation

Specialists in Precision Power Transmission Components

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Web: www.diequa.com