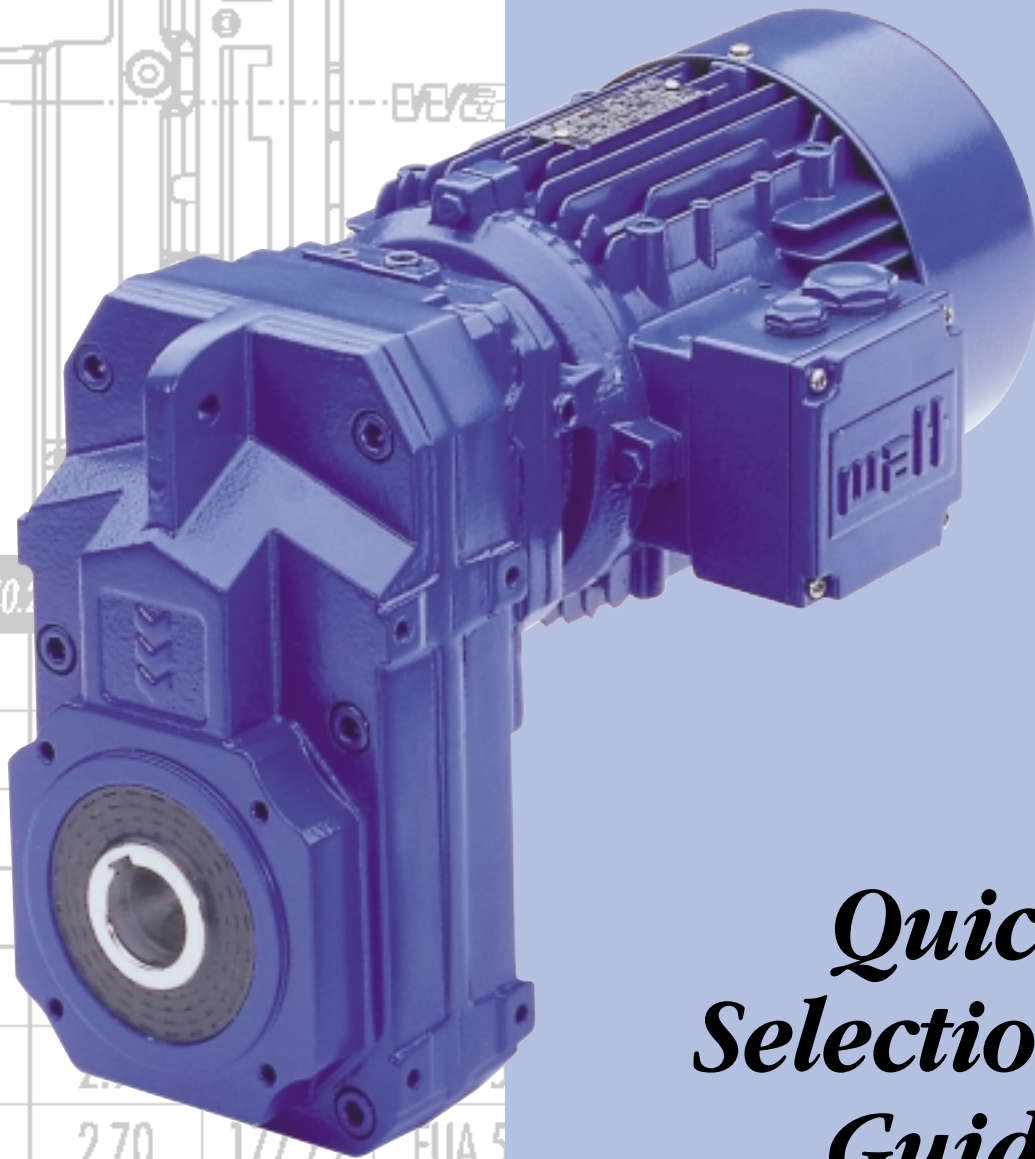


Parallel Shaft

*Series A and
Series F*



1/8 HP nominal (0.2

42 292

38 319

35 354

31 389

28 443

10 443

9.1 1204

7.5 1336

6.8 1620

2.70

177.77

FUA 5

2.20

216.15

FUA 5

2.00

238.50

FUA 5

*Quick
Selection
Guide*

Parallel Shaft 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.

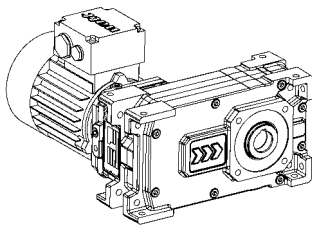
This catalog has been designed merely as a quick selection guide, highlighting the available solutions for basic applications. A wide variety of features, options, speeds, and ratios are offered by WATT Drive. Please contact DieQua Corporation, WATT Drive's manufacturing, engineering, and marketing partner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

Program Benefits:

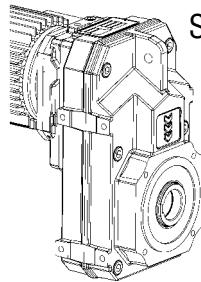
- Optimized gearing for high power density
- Multi Volts/Hz inverter duty integral motors
- NEMA, IEC, or servo motor adapters
- High efficiency and low backlash
- Multiple mounting configurations
- Inch or metric shafts and bores
- Special design options
- Complete drive packages

Designs Available

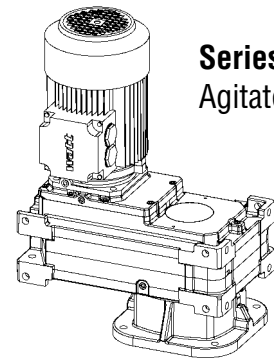
Series F
Parallel Shaft



Series A
Shaft Mount



Series F
Agitator Drive



Selection Guide Contents

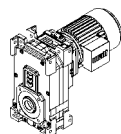
Selection Information	pg. 4
Series F Gearmotor Data	pg. 5-14
Series F Speed Reducer Data	pg. 15-17
Series F Dimensions	pg. 18-21

Series A Gearmotor Data	pg. 22-30
Series A Speed Reducer Data	pg. 31-33
Series A Dimensions	pg. 34-37
Technical Data	pg. 38-40
Ordering Examples	pg. 41

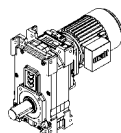
Series F Designs

The Series F is a compact heavy duty gearbox featuring a wide range of input and output mounting configurations and shaft options. Hollow bore with keyway, shrink disc, and single and dual output shafts are available on most models. Housings machined on all sides, along with a bolt on flange option, provide maximum mounting versatility. Integral motors along with adapters for NEMA, Servo, and IEC motors, as well as an input shaft, are available as standard options.

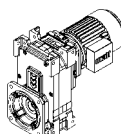
Output Options



FUA
Hollow
Shaft

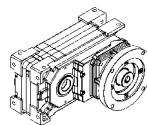


FU
Output
Shaft

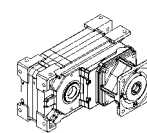


FFA
Flange
Mount

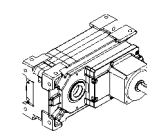
Input Options



NA
NEMA
Adapter

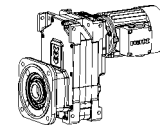


SA
Servo
Adapter

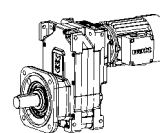


WN
Input
Shaft

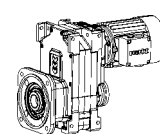
Agitator Designs



FRA
Hollow
Shaft



FR
Output
Shaft



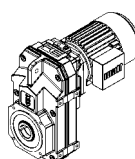
FRS
Shrink
Disc

* Shrink disc available in some sizes.

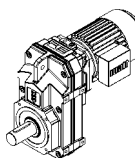
Series A Designs

The Series A is an economical, compact, heavy duty gearbox featuring a support nose and buffer kit to eliminate housing rotation in shaft mounting applications. Fixing points for torque arms and turn buckles are also provided. This, along with machined housings on all sides, a variety of shaft configurations, and an optional output flange, provides the ultimate in mounting versatility. Integral motors and adapters for NEMA, IEC, and Servo motors, as well as an input shaft version, are available for all models.

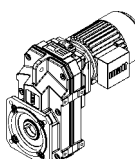
Output Options



ASA
Hollow
Shaft

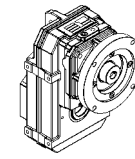


AS
Output
Shaft

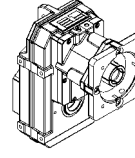


AFA
Flange
Mount

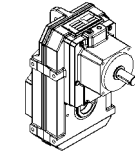
Input Options



NA
NEMA
Adapter



SA
Servo
Adapter



WN
Input
Shaft

* Shrink disc available in some sizes.

Selection Information

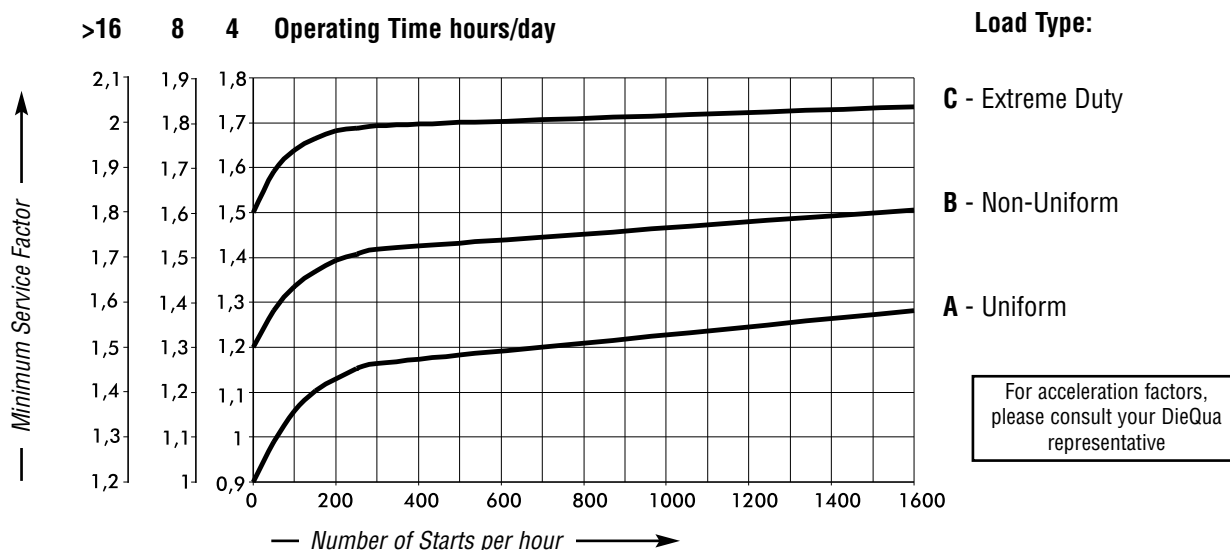
The ratings in this guide are based on 3 phase, 60 Hz, 230 or 460 volt operation. For additional technical data and design options, please contact your WATT Drive/DieQua Corporation representative or request the complete MAS 2000 engineering catalog.

1. Determine horsepower or torque required:

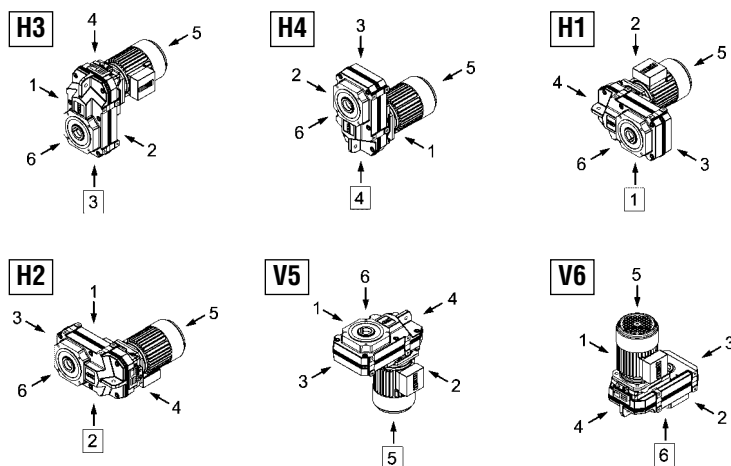
$$\text{Horsepower} = \frac{\text{Output Torque (in-lbs)} \times \text{Output Speed}}{63025}$$

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

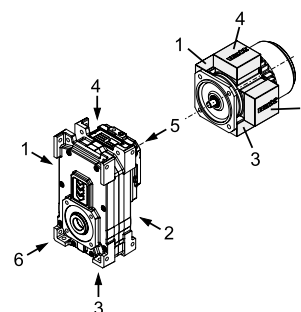
2. Determine service factor:



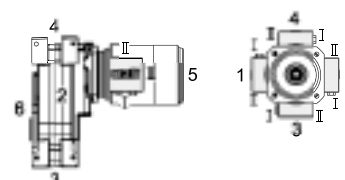
3. Determine: a) Mounting Position



b) Terminal Box Position



c) Cable Entry Position



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



Gearmotor Selection Tables - Series F

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 at 460V operation. Torque output for 1/8 to 2 HP will be lower with 230V power source. For all selections, 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 with 460V)				
42	292	8.85	38.87	FUA 55S 64K4
38	319	8.10	42.54	FUA 55S 64K4
35	354	6.60	46.89	FUA 55S 64K4
31	389	5.10	52.11	FUA 55S 64K4
28	443	3.80	58.48	FUA 55S 64K4
10	443	2.95	160.11	FUA 55C 64K4
9.1	1204	2.70	177.79	FUA 55C 64K4
7.5	1336	2.20	216.15	FUA 55C 64K4
6.8	1620	2.00	238.50	FUA 55C 64K4
6.1	1788	1.80	264.91	FUA 55C 64K4
5.3	1991	1.55	304.21	FUA 55C 64K4
4.9	2283	1.45	333.90	FUA 55C 64K4
4.4	2505	1.30	368.99	FUA 55C 64K4
3.9	2770	1.15	411.09	FUA 55C 64K4
3.5	3478	1.05	462.55	FUA 55C 64K4
3.4	3575	2.00	476.22	FUA 65C 64K4
3.1	3929	1.85	522.69	FUA 65C 64K4
2.8	4337	1.65	577.61	FUA 65C 64K4
2.5	4832	1.50	643.52	FUA 65C 64K4
2.2	5443	1.35	724.07	FUA 65C 64K4
1/4 HP nominal (0.3 HP actual with 460V)				
70	266	9.70	23.25	FUA 55S 64N4
58	319	8.15	27.94	FUA 55S 64N4
53	345	7.45	30.70	FUA 55S 64N4
48	381	6.75	33.97	FUA 55S 64N4
42	434	5.90	38.87	FUA 55S 64N4
38	478	5.40	42.54	FUA 55S 64N4
35	531	4.40	46.89	FUA 55S 64N4
31	584	3.40	52.11	FUA 55S 64N4
28	655	2.55	58.48	FUA 55S 64N4
13	1356	2.65	138.76	FUA 55C 64N4
12	1566	2.30	160.11	FUA 55C 64N4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
10	1805	2.00	177.79	FUA 55C 64N4
9.1	2000	1.80	216.15	FUA 55C 64N4
7.7	2363	3.00	209.67	FUA 65C 64N4
7.5	2434	1.50	238.50	FUA 55C 64N4
6.8	2690	1.35	264.91	FUA 55C 64N4
6.7	2726	2.60	241.92	FUA 65C 64N4
6.1	2982	1.20	304.21	FUA 55C 64N4
5.8	3133	2.30	278.32	FUA 65C 64N4
5.3	3425	1.05	333.90	FUA 55C 64N4
4.9	3761	0.95	368.99	FUA 55C 64N4
4.8	3814	1.90	338.37	FUA 65C 64N4
4.4	4160	0.90	411.09	FUA 55C 64N4
4.3	4204	1.70	373.35	FUA 65C 64N4
3.9	4673	1.55	414.70	FUA 65C 64N4
3.9	4629	0.80	411.09	FUA 55C 64N4
3.4	5363	1.35	476.22	FUA 65C 64N4
3.1	5894	1.25	522.69	FUA 65C 64N4
2.8	6505	1.10	577.61	FUA 65C 64N4
2.7	6691	2.00	593.76	FUA 75C 64N4
2.5	7372	1.85	654.41	FUA 75C 64N4
2.5	7248	1.00	643.52	FUA 65C 64N4
2.2	8195	1.65	727.20	FUA 75C 64N4
2.2	8160	0.90	724.07	FUA 65C 64N4
2	9195	1.45	816.16	FUA 75C 64N4
1/3 HP nominal (0.4 HP actual with 460V)				
101	257	9.95	16.12	FUA 55S 72K4
88	292	8.75	18.42	FUA 55S 72K4
77	327	7.70	21.05	FUA 55S 72K4
70	363	7.00	23.25	FUA 55S 72K4
58	434	5.90	27.94	FUA 55S 72K4
53	478	5.35	30.70	FUA 55S 72K4
48	531	4.85	33.97	FUA 55S 72K4
42	611	4.25	38.87	FUA 55S 72K4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
38	664	3.90	42.54	FUA 55S 72K4
35	735	3.20	46.89	FUA 55S 72K4
31	814	2.45	52.11	FUA 55S 72K4
28	912	1.85	58.48	FUA 55S 72K4
19	1345	2.65	85.86	FUA 55C 72K4
16	1584	2.25	101.18	FUA 55C 72K4
13	1885	1.90	120.33	FUA 55C 72K4
12	2168	1.65	138.76	FUA 55C 72K4
11	2390	3.00	152.88	FUA 65C 72K4
10	2505	1.45	160.11	FUA 55C 72K4
9.1	2779	1.30	177.79	FUA 55C 72K4
8.9	2850	2.50	188.37	FUA 65C 72K4
7.5	3381	1.05	216.15	FUA 55C 72K4
7.5	3398	2.10	217.22	FUA 65C 72K4
6.8	3735	0.95	238.50	FUA 55C 72K4
6.5	3921	1.85	250.64	FUA 65C 72K4
6.1	4151	0.90	264.91	FUA 55C 72K4
5.8	4354	1.65	278.32	FUA 65C 72K4
4.8	5292	1.35	338.37	FUA 65C 72K4
4.3	5841	1.25	373.35	FUA 65C 72K4
3.9	6487	1.10	414.70	FUA 65C 72K4
3.8	6708	2.00	428.48	FUA 75C 72K4
3.4	7452	0.95	476.22	FUA 65C 72K4
3.4	7416	1.80	474.12	FUA 75C 72K4
3.1	8177	0.90	522.69	FUA 65C 72K4
3.0	8487	1.60	542.43	FUA 75C 72K4
2.8	9045	0.80	577.61	FUA 65C 72K4
2.7	9293	1.45	593.76	FUA 75C 72K4
2.5	10239	1.30	654.41	FUA 75C 72K4
2.2	11381	1.20	727.20	FUA 75C 72K4
2.0	12771	1.05	816.16	FUA 75C 72K4
1.9	13310	1.90	850.50	FUA 85C 72K4
1.7	14939	1.70	954.55	FUA 85C 72K4

* 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 - Series F



RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
1/2 HP nominal (0.6 HP actual with 460V)				
139	274	9.2	11.84	FUA 55S 72N4
120	310	8.0	13.74	FUA 55S 72N4
102	372	6.9	16.12	FUA 55S 72N4
89	425	6.0	18.42	FUA 55S 72N4
78	478	5.3	21.05	FUA 55S 72N4
71	531	4.8	23.25	FUA 55S 72N4
59	637	4.1	27.94	FUA 55S 72N4
54	699	3.7	30.70	FUA 55S 72N4
48	779	3.4	33.97	FUA 55S 72N4
42	885	3.0	38.87	FUA 55S 72N4
39	974	2.7	42.54	FUA 55S 72N4
35	1071	2.2	46.89	FUA 55S 72N4
32	1186	1.7	52.11	FUA 55S 72N4
29	1310	2.75	57.27	FUA 55A 72N4
28	1336	1.3	58.48	FUA 55S 72N4
26	1443	2.45	63.37	FUA 55A 72N4
23	1655	2.15	72.50	FUA 55A 72N4
21	1814	2.00	79.36	FUA 55A 72N4
19	2000	1.80	87.47	FUA 55A 72N4
17	2221	1.60	97.20	FUA 55A 72N4
15	2487	1.25	109.09	FUA 55A 72N4
12	3168	1.15	138.76	FUA 55C 72N4
10	3655	1.00	160.11	FUA 55C 72N4
9.2	4062	0.90	177.79	FUA 55C 72N4
8.7	4301	1.65	188.37	FUA 65C 72N4
7.6	4929	0.75	216.15	FUA 55C 72N4
7.6	4956	1.45	217.22	FUA 65C 72N4
6.9	5443	0.70	238.50	FUA 55C 72N4
6.6	5717	1.25	250.64	FUA 65C 72N4
5.9	6354	1.15	278.32	FUA 65C 72N4
5.6	6708	2.00	293.82	FUA 75C 72N4
5.1	7407	1.80	324.42	FUA 75C 72N4
4.9	7726	0.95	338.37	FUA 65C 72N4
4.4	8523	0.85	373.35	FUA 65C 72N4
4.2	8903	1.50	389.87	FUA 75C 72N4
4.0	9470	0.75	414.70	FUA 65C 72N4
3.8	9779	1.40	428.48	FUA 75C 72N4
3.5	10868	0.70	476.22	FUA 65C 72N4
3.5	10824	1.25	474.12	FUA 75C 72N4
3.0	12381	1.10	542.43	FUA 75C 72N4
3.0	12656	2.00	554.50	FUA 85C 72N4
2.8	13549	1.00	593.76	FUA 75C 72N4
2.6	14479	1.75	634.41	FUA 85C 72N4
2.5	14939	0.90	654.41	FUA 75C 72N4
2.4	15850	1.60	694.43	FUA 85C 72N4
2.3	16603	0.80	727.20	FUA 75C 72N4
2.1	17470	1.45	765.37	FUA 85C 72N4
2	18629	0.75	816.16	FUA 75C 72N4
1.9	19417	1.30	850.50	FUA 85C 72N4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
1.7	21789	1.15	954.55	FUA 85C 72N4
1.3	24346	1.85	1222.52	FUA 110D 72N4
1.2	28116	1.60	1397.17	FUA 110D 72N4
3/4 HP nominal (0.8 HP actual with 460V)				
141	398	6.25	11.84	FUA 55S 81K4
122	460	5.45	13.74	FUA 55S 81K4
104	540	4.70	16.12	FUA 55S 81K4
91	611	4.10	18.42	FUA 55S 81K4
80	699	3.65	21.05	FUA 55S 81K4
72	779	3.30	23.25	FUA 55S 81K4
60	929	2.75	27.94	FUA 55S 81K4
55	1027	2.55	30.70	FUA 55S 81K4
49	1133	2.30	33.97	FUA 55S 81K4
43	1292	2.00	38.87	FUA 55S 81K4
43	1310	2.75	39.27	FUA 55A 81K4
39	1416	1.85	42.54	FUA 55S 81K4
39	1443	2.45	43.36	FUA 55A 81K4
36	1566	1.50	46.89	FUA 55S 81K4
32	1735	1.15	52.11	FUA 55S 81K4
32	1735	2.05	52.11	FUA 55A 81K4
29	1947	0.85	58.48	FUA 55S 81K4
29	1912	1.90	57.27	FUA 55A 81K4
26	2115	1.70	63.37	FUA 55A 81K4
23	2416	1.50	72.50	FUA 55A 81K4
23	2478	2.90	74.27	FUA 65A 81K4
21	2646	1.35	79.36	FUA 55A 81K4
20	2726	2.60	81.89	FUA 65A 81K4
19	2912	1.25	87.47	FUA 55A 81K4
18	3124	2.30	93.62	FUA 65A 81K4
17	3239	1.10	97.20	FUA 55A 81K4
16	3407	2.00	102.22	FUA 65A 81K4
15	3637	0.85	109.09	FUA 55A 81K4
15	3744	1.60	112.39	FUA 65A 81K4
12	4717	2.85	141.66	FUA 75C 81K4
11	5275	1.35	158.39	FUA 65C 81K4
10	5505	2.45	165.27	FUA 75C 81K4
8.9	6275	1.15	188.37	FUA 65C 81K4
8.7	6390	2.10	191.80	FUA 75C 81K4
7.7	7239	1.00	217.22	FUA 65C 81K4
7.5	7478	3.00	224.32	FUA 85C 81K4
7.4	7496	1.80	224.95	FUA 75C 81K4
6.7	8354	0.85	250.64	FUA 65C 81K4
6.5	8567	1.55	257.09	FUA 75C 81K4
6.4	8770	2.55	263.10	FUA 85C 81K4
6.0	9275	0.80	278.32	FUA 65C 81K4
5.7	9788	1.40	293.82	FUA 75C 81K4
5.6	10018	2.50	300.68	FUA 85C 81K4
5.2	10815	1.25	324.42	FUA 75C 81K4
4.9	11452	2.20	343.64	FUA 85C 81K4
4.4	12647	2.00	379.43	FUA 85C 81K4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
4.3	12992	1.05	389.87	FUA 75C 81K4
3.9	14275	0.95	428.48	FUA 75C 81K4
3.7	15195	1.65	455.98	FUA 85C 81K4
3.5	15797	0.85	474.12	FUA 75C 81K4
3.3	16700	1.50	501.14	FUA 85C 81K4
3.0	18479	1.35	554.50	FUA 85C 81K4
2.6	21143	1.20	635.41	FUA 85C 81K4
2.4	23143	1.10	694.43	FUA 85C 81K4
2.2	25506	1.00	765.37	FUA 85C 81K4
2.0	28338	0.90	850.50	FUA 85C 81K4
1.9	26276	1.70	898.18	FUA 110D 81K4
1.8	31807	0.80	954.55	FUA 85C 81K4
1.6	30816	1.45	1042.33	FUA 110D 81K4
1.4	36435	1.25	1222.52	FUA 110D 81K4
1.2	41905	1.10	1397.17	FUA 110D 81K4
1 HP nominal (1.2 HP actual with 460V)				
141	540	4.60	11.84	FUA 55S 81N4
122	628	4.00	13.74	FUA 55S 81N4
104	735	3.45	16.12	FUA 55S 81N4
91	841	3.05	18.42	FUA 55S 81N4
80	956	2.65	21.05	FUA 55S 81N4
72	1053	2.45	23.25	FUA 55S 81N4
65	1177	4.90	25.86	FUA 65S 81N4
60	1266	2.05	27.94	FUA 55S 81N4
57	1328	4.35	29.22	FUA 65S 81N4
56	1363	2.60	30.07	FUA 55A 81N4
55	1398	1.85	30.70	FUA 55S 81N4
52	1460	3.95	32.10	FUA 65S 81N4
49	1540	1.70	33.97	FUA 55S 81N4
49	1558	2.30	34.36	FUA 55A 81N4
44	1717	3.20	37.86	FUA 65S 81N4
43	1770	1.50	38.87	FUA 55S 81N4
43	1788	2.00	39.27	FUA 55A 81N4
40	1885	2.75	41.46	FUA 65S 81N4
39	1929	1.35	42.54	FUA 55S 81N4
39	1974	1.80	43.36	FUA 55A 81N4
37	2080	2.25	45.72	FUA 65S 81N4
36	2133	1.10	46.89	FUA 55S 81N4
32	2372	0.85	52.11	FUA 55S 81N4
32	2372	1.50	52.11	FUA 55A 81N4
32	2372	1.75	52.27	FUA 65S 81N4
29	2602	1.40	57.27	FUA 55A 81N4
29	2593	1.50	57.07	FUA 65S 81N4
29	2611	2.75	57.50	FUA 65A 81N4
27	2850	1.20	62.74	FUA 65S 81N4
26	2876	1.25	63.37	FUA 55A 81N4
25	3080	2.30	67.82	FUA 65A 81N4
23	3292	1.10	72.50	FUA 55A 81N4
23	3372	2.10	74.27	FUA 65A 81N4
21	3602	1.00	79.36	FUA 55A 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 - Series F

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
20	3717	1.95	81.89	FUA 65A 81N4
19	3974	0.90	87.47	FUA 55A 81N4
18	4257	1.70	93.62	FUA 65A 81N4
17	4416	0.85	97.20	FUA 55A 81N4
16	4646	1.50	102.22	FUA 65A 81N4
15	5106	1.20	112.39	FUA 65A 81N4
10	7514	1.80	165.27	FUA 75C 81N4
10	7531	2.95	165.68	FUA 85C 81N4
8.9	8558	0.85	188.37	FUA 65C 81N4
8.7	8717	1.55	191.80	FUA 75C 81N4
8.7	8779	2.55	193.30	FUA 85C 81N4
7.5	10195	2.45	224.32	FUA 85C 81N4
7.4	10222	1.30	224.95	FUA 75C 81N4
6.5	11682	1.15	257.09	FUA 75C 81N4
6.4	11956	2.10	263.10	FUA 85C 81N4
5.7	13355	1.00	293.82	FUA 75C 81N4
5.6	13664	1.85	300.68	FUA 85C 81N4
5.2	14744	0.95	324.42	FUA 75C 81N4
4.9	15611	1.60	343.64	FUA 85C 81N4
4.4	17240	1.45	379.43	FUA 85C 81N4
3.7	20718	1.20	455.98	FUA 85C 81N4
3.3	22771	1.10	501.14	FUA 85C 81N4
3.0	25196	1.00	554.50	FUA 85C 81N4
2.9	26214	1.70	378.40	FUA 110C 81N4
2.6	28824	0.90	634.41	FUA 85C 81N4
2.5	30577	1.45	441.41	FUA 110C 81N4
2.4	31550	0.80	694.43	FUA 85C 81N4
2.3	33418	1.35	482.36	FUA 110C 81N4
2.1	36772	1.25	530.74	FUA 110C 81N4
1.9	36506	1.25	898.18	FUA 110D 81N4
1.7	39303	1.85	991.27	FUA 130D 81N4
1.6	42710	1.05	1042.33	FUA 110D 81N4
1.4	50410	0.90	1222.52	FUA 110D 81N4
1.4	46675	1.55	1162.64	FUA 130D 81N4
1.3	53781	1.35	1328.73	FUA 130D 81N4
1.2	57844	0.80	1397.17	FUA 110D 81N4
1.5 HP nominal (1.7 HP actual with 460V)				
228	487	4.90	7.43	FUA 55S 91S4
195	575	4.25	8.66	FUA 55S 91S4
167	673	3.70	10.15	FUA 55S 91S4
143	779	3.20	11.84	FUA 55S 91S4
123	903	2.75	13.74	FUA 55S 91S4
105	1062	2.40	16.12	FUA 55S 91S4
99	1133	5.00	17.12	FUA 65S 91S4
92	1212	2.10	18.42	FUA 55S 91S4
89	1248	2.85	18.94	FUA 55A 91S4
86	1292	4.40	19.62	FUA 65S 91S4
80	1389	1.85	21.05	FUA 55S 91S4
77	1460	2.45	22.09	FUA 55A 91S4
74	1496	3.80	22.74	FUA 65S 91S4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
73	1531	1.70	23.25	FUA 55S 91S4
66	1690	2.10	25.64	FUA 55A 91S4
65	1708	3.35	25.86	FUA 65S 91S4
61	1841	1.40	27.94	FUA 55S 91S4
58	1929	3.00	29.22	FUA 65S 91S4
56	1982	1.80	30.07	FUA 55A 91S4
55	2027	1.30	30.70	FUA 55S 91S4
53	2115	2.75	32.10	FUA 65S 91S4
50	2239	1.15	33.97	FUA 55S 91S4
49	2266	1.60	34.36	FUA 55A 91S4
45	2496	2.20	37.86	FUA 65S 91S4
44	2567	1.05	38.87	FUA 55S 91S4
43	2593	1.40	39.27	FUA 55A 91S4
42	2682	2.65	40.73	FUA 65A 91S4
41	2735	1.90	41.46	FUA 65S 91S4
40	2805	0.95	42.54	FUA 55S 91S4
39	2859	1.25	43.36	FUA 55A 91S4
37	3018	1.55	45.72	FUA 65S 91S4
37	3053	2.35	46.32	FUA 65A 91S4
36	3089	0.80	46.89	FUA 55S 91S4
32	3434	1.05	52.11	FUA 55A 91S4
32	3443	1.20	52.27	FUA 65S 91S4
32	3452	2.10	52.34	FUA 65A 91S4
30	3779	0.95	57.27	FUA 55A 91S4
30	3761	1.05	57.07	FUA 65S 91S4
29	3788	1.90	57.50	FUA 65A 91S4
27	4133	0.80	62.74	FUA 65S 91S4
27	4177	0.85	63.37	FUA 55A 91S4
25	4469	1.60	67.82	FUA 65A 91S4
24	4593	2.90	69.63	FUA 75A 91S4
23	4781	0.75	72.50	FUA 55A 91S4
23	4894	1.45	74.27	FUA 65A 91S4
21	5233	0.70	79.36	FUA 55A 91S4
21	5399	1.35	81.89	FUA 65A 91S4
21	5354	2.50	81.22	FUA 75A 91S4
19	5850	2.30	88.76	FUA 75A 91S4
18	6177	1.15	93.62	FUA 65A 91S4
17	6744	1.05	102.22	FUA 65A 91S4
17	6443	1.90	97.66	FUA 75A 91S4
15	7407	0.80	112.39	FUA 65A 91S4
12	9319	2.70	141.33	FUA 85C 91S4
10	10894	1.25	165.27	FUA 75C 91S4
10	10921	2.30	165.68	FUA 85C 91S4
8.8	12647	1.05	191.80	FUA 75C 91S4
8.8	12744	1.95	193.30	FUA 85C 91S4
7.5	14833	0.90	224.95	FUA 75C 91S4
7.5	14788	1.70	224.32	FUA 85C 91S4
7.2	15541	2.85	235.63	FUA 110C 91S4
6.6	16948	0.80	257.09	FUA 75C 91S4
6.4	17346	1.45	263.10	FUA 85C 91S4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
6.2	17886	2.50	271.32	FUA 110C 91S4
5.6	19824	1.25	300.68	FUA 85C 91S4
5.6	20019	2.25	303.55	FUA 110C 91S4
4.9	22656	1.10	343.64	FUA 85C 91S4
4.9	22780	1.95	345.45	FUA 110C 91S4
4.5	25019	1.00	379.43	FUA 85C 91S4
4.5	24948	1.80	378.40	FUA 110C 91S4
3.8	29108	1.55	441.41	FUA 110C 91S4
3.7	30063	0.85	455.98	FUA 85C 91S4
3.5	31807	1.40	482.36	FUA 110C 91S4
3.2	34993	1.30	530.74	FUA 110C 91S4
2.7	35710	2.00	624.56	FUA 130D 91S4
2.3	42383	1.70	732.16	FUA 130D 91S4
2.0	49967	1.45	854.18	FUA 130D 91S4
1.7	58463	1.25	991.27	FUA 130D 91S4
1.5	69136	1.05	1162.64	FUA 130D 91S4
1.3	79500	0.90	1328.73	FUA 130D 91S4
2 HP nominal (2.3 HP actual with 460V)				
394	389	5.35	4.33	FUA 55S 91L4
324	469	4.70	5.26	FUA 55S 91L4
266	575	4.10	6.40	FUA 55S 91L4
229	664	3.60	7.43	FUA 55S 91L4
197	770	3.15	8.66	FUA 55S 91L4
168	903	2.75	10.15	FUA 55S 91L4
144	1053	2.35	11.84	FUA 55S 91L4
137	1115	5.00	12.48	FUA 65S 91L4
124	1230	2.05	13.74	FUA 55S 91L4
123	1239	2.90	13.86	FUA 55A 91L4
119	1283	4.40	14.36	FUA 65S 91L4
106	1443	1.75	16.12	FUA 55S 91L4
105	1443	2.50	16.15	FUA 55A 91L4
100	1531	3.70	17.12	FUA 65S 91L4
93	1646	1.55	18.42	FUA 55S 91L4
90	1690	2.10	18.94	FUA 55A 91L4
87	1752	3.25	19.62	FUA 65S 91L4
81	1876	1.35	21.05	FUA 55S 91L4
77	1974	1.80	22.09	FUA 55A 91L4
75	2027	2.80	22.74	FUA 65S 91L4
73	2080	1.25	23.25	FUA 55S 91L4
69	2204	4.65	24.66	FUA 75S 91L4
66	2292	1.55	25.64	FUA 55A 91L4
66	2310	2.50	25.86	FUA 65S 91L4
61	2496	1.05	27.94	FUA 55S 91L4
60	2531	4.05	28.40	FUA 75S 91L4
58	2611	2.20	29.22	FUA 65S 91L4
57	2682	1.35	30.07	FUA 55A 91L4
56	2744	0.95	30.70	FUA 55S 91L4
56	2735	2.60	30.67	FUA 65A 91L4
54	2832	3.65	31.77	FUA 75S 91L4
53	2867	2.00	32.10	FUA 65S 91L4

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

Gearmotor Selection Tables - Series F



RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
50	3036	0.85	33.97	FUA 55S 91L4
50	3071	1.20	34.36	FUA 55A 91L4
48	3133	2.30	35.14	FUA 65A 91L4
47	3230	3.15	36.15	FUA 75S 91L4
45	3381	1.65	37.86	FUA 65S 91L4
43	3505	1.05	39.27	FUA 55A 91L4
43	3540	2.65	39.60	FUA 75S 91L4
42	3637	1.95	40.73	FUA 65A 91L4
41	3699	1.40	41.46	FUA 65S 91L4
39	3867	0.95	43.36	FUA 55A 91L4
37	4080	1.15	45.72	FUA 65S 91L4
37	4133	1.75	46.32	FUA 65A 91L4
37	4124	2.05	46.20	FUA 75S 91L4
34	4505	1.70	50.48	FUA 75S 91L4
33	4655	0.80	52.11	FUA 55A 91L4
33	4664	0.90	52.27	FUA 65S 91L4
33	4673	1.55	52.34	FUA 65A 91L4
31	4956	1.40	55.55	FUA 75S 91L4
31	4983	2.70	55.86	FUA 75A 91L4
30	5133	1.40	57.50	FUA 65A 91L4
27	5673	2.35	63.57	FUA 75A 91L4
25	6053	1.20	67.82	FUA 65A 91L4
24	6213	2.15	69.63	FUA 75A 91L4
23	6629	1.10	74.27	FUA 65A 91L4
21	7310	1.00	81.89	FUA 65A 91L4
21	7248	1.85	81.22	FUA 75A 91L4
19	7921	1.70	88.76	FUA 75A 91L4
18	8354	0.85	93.62	FUA 65A 91L4
17	8717	1.40	97.66	FUA 75A 91L4
10	14753	0.90	165.27	FUA 75C 91L4
10	14788	1.70	165.68	FUA 85C91L4
9.8	15479	2.90	173.33	FUA 110C 91L4
8.9	17125	0.80	191.80	FUA 75C 91L4
8.8	17258	1.45	193.30	FUA 85C91L4
8.2	18488	2.40	207.08	FUA 110C 91L4
7.6	20028	1.25	224.32	FUA 85C91L4
7.2	21036	2.15	235.63	FUA 110C 91L4
6.5	23488	1.10	263.10	FUA 85C91L4
6.3	24222	1.85	271.32	FUA 110C 91L4
5.7	26842	0.95	300.68	FUA 85C91L4
5.6	27099	1.65	303.55	FUA 110C 91L4
5.0	30683	0.85	343.64	FUA 85C91L4
4.9	30842	1.45	345.45	FUA 110C 91L4
4.5	33780	1.35	378.40	FUA 110C 91L4
3.9	39409	1.15	441.41	FUA 110C 91L4
3.5	43064	1.05	482.36	FUA 110C 91L4
3.2	47383	0.95	530.74	FUA 110C 91L4
2.3	58463	1.25	732.16	FUA 130D 91L4
2.0	68773	1.05	854.18	FUA 130D 91L4
1.7	80305	0.90	991.27	FUA 130D 91L4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
3 HP nominal (3.4 HP actual)				
394	566	3.65	4.33	FUA 55S 101L4
324	690	3.25	5.26	FUA 55S 101L4
266	841	2.80	6.40	FUA 55S 101L4
229	974	2.45	7.43	FUA 55S 101L4
197	1133	2.15	8.66	FUA 55S 101L4
188	1186	4.60	9.05	FUA 65S 101L4
174	1283	2.80	9.82	FUA 55A 101L4
168	1328	1.85	10.15	FUA 55S 101L4
156	1434	3.85	10.93	FUA 65S 101L4
144	1549	1.60	11.84	FUA 55S 101L4
143	1566	2.30	11.94	FUA 55A 101L4
137	1637	3.40	12.48	FUA 65S 101L4
124	1797	1.40	13.74	FUA 55S 101L4
123	1814	2.00	13.86	FUA 55A 101L4
119	1876	3.00	14.36	FUA 65S 101L4
107	2080	4.85	15.92	FUA 75S 101L4
106	2106	1.20	16.12	FUA 55S 101L4
105	2115	1.70	16.15	FUA 55A 101L4
100	2239	2.55	17.12	FUA 65S 101L4
94	2372	4.25	18.14	FUA 75S 101L4
93	2416	1.05	18.42	FUA 55S 101L4
90	2478	1.45	18.94	FUA 55A 101L4
87	2567	2.80	19.58	FUA 65A 101L4
87	2567	2.25	19.62	FUA 65S 101L4
81	2752	0.95	21.05	FUA 55S 101L4
79	2841	3.60	21.67	FUA 75S 101L4
77	2894	1.25	22.09	FUA 55A 101L4
76	2929	2.45	22.36	FUA 65A 101L4
75	2974	1.95	22.74	FUA 65S 101L4
73	3044	0.85	23.25	FUA 55S 101L4
69	3230	3.20	24.66	FUA 75S 101L4
66	3372	2.15	25.72	FUA 65A 101L4
66	3390	1.70	25.86	FUA 65S 101L4
66	3354	1.10	25.64	FUA 55A 101L4
60	3717	2.80	28.40	FUA 75S 101L4
58	3823	1.50	29.22	FUA 65S 101L4
57	3938	0.90	30.07	FUA 55A 101L4
56	4018	1.80	30.67	FUA 65A 101L4
54	4160	2.50	31.77	FUA 75S 101L4
53	4204	1.40	32.10	FUA 65S 101L4
50	4496	0.80	34.36	FUA 55A 101L4
48	4602	1.55	35.14	FUA 65A 101L4
47	4735	2.15	36.15	FUA 75S 101L4
45	4991	2.70	38.10	FUA 75A 101L4
45	4956	1.15	37.86	FUA 65S 101L4
43	5186	1.80	39.60	FUA 75S 101L4
42	5337	1.35	40.73	FUA 65A 101L4
41	5425	0.95	41.46	FUA 65S 101L4
39	5682	2.35	43.36	FUA 75A 101L4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
37	6053	1.40	46.20	FUA 75S 101L4
37	6062	1.20	46.32	FUA 65A 101L4
37	5983	0.80	45.72	FUA 65S 101L4
34	6540	2.05	49.93	FUA 75A 101L4
34	6611	1.20	50.48	FUA 75S 101L4
33	6850	1.05	52.34	FUA 65A 101L4
31	7310	1.85	55.86	FUA 75A 101L4
31	7275	0.95	55.55	FUA 75S 101L4
30	7531	0.95	57.50	FUA 65A 101L4
27	8328	1.60	63.57	FUA 75A 101L4
25	8850	2.80	67.61	FUA 85A 101L4
25	8877	0.80	67.82	FUA 65A 101L4
24	9116	1.50	69.63	FUA 75A 101L4
22	10001	2.50	76.36	FUA 85A 101L4
21	10638	1.25	81.22	FUA 75A 101L4
20	10939	2.30	83.52	FUA 85A 101L4
19	11620	1.15	88.76	FUA 75A 101L4
17	12788	1.70	97.66	FUA 85A 101L4
17	12788	0.95	97.66	FUA 75A 101L4
15	14824	3.00	113.23	FUA 110C 101L4
15	21691	1.15	165.68	FUA 85C 101L4
13	17612	2.55	134.51	FUA 110C 101L4
13	25311	1.00	193.30	FUA 85C 101L4
11	19913	2.25	152.07	FUA 110C 101L4
11	29373	0.85	224.32	FUA 85C 101L4
9.8	22700	1.95	173.33	FUA 110C 101L4
8.3	26789	2.65	204.58	FUA 130C 101L4
8.2	27116	1.65	207.08	FUA 110C 101L4
7.5	29745	2.40	227.13	FUA 130C 101L4
7.2	30851	1.45	235.63	FUA 110C 101L4
6.8	32683	2.20	249.58	FUA 130C 101L4
6.3	35524	1.25	271.32	FUA 110C 101L4
5.7	39126	1.85	298.79	FUA 130C 101L4
5.6	39745	1.15	303.55	FUA 110C 101L4
5.0	44188	1.65	337.45	FUA 130C 101L4
4.9	45232	1.00	345.45	FUA 110C 101L4
4.6	48330	1.50	369.09	FUA 130C 101L4
4.5	49551	0.90	378.40	FUA 110C 101L4
3.9	56507	1.30	431.55	FUA 130C 101L4
3.9	57799	0.80	441.41	FUA 110C 101L4
2.8	69782	1.80	609.44	FUA 136C 101L4
2.5	79464	1.60	688.31	FUA 136C 101L4
2.3	87447	1.45	752.84	FUA 136C 101L4
1.9	103094	1.25	880.24	FUA 136C 101L4
4 HP nominal (4.6 HP actual)				
394	770	2.70	4.33	FUA 55S 101LA4
324	938	2.35	5.26	FUA 55S 101LA4
268	1133	4.65	6.35	FUA 65S 101LA4
266	1142	2.05	6.40	FUA 55S 101LA4
229	1328	1.80	7.43	FUA 55S 101LA4

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



Gearmotor Selection Tables - Series F

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
225	1354	4.00	7.56	FUA 65S 101LA4
211	1443	2.50	8.07	FUA 55A 101LA4
197	1549	1.60	8.66	FUA 55S 101LA4
188	1620	3.40	9.05	FUA 65S 101LA4
174	1752	2.05	9.82	FUA 55A 101LA4
168	1814	1.40	10.15	FUA 55S 101LA4
156	1956	2.85	10.93	FUA 65S 101LA4
144	2115	1.20	11.84	FUA 55S 101LA4
144	2115	4.70	11.85	FUA 75S 101LA4
143	2133	1.70	11.94	FUA 55A 101LA4
137	2230	2.50	12.48	FUA 65S 101LA4
126	2416	2.95	13.55	FUA 65A 101LA4
124	2451	1.05	13.74	FUA 55S 101LA4
123	2478	1.45	13.86	FUA 55A 101LA4
121	2513	4.00	14.08	FUA 75S 101LA4
119	2567	2.20	14.36	FUA 65S 101LA4
107	2841	3.55	15.92	FUA 75S 101LA4
106	2876	0.90	16.12	FUA 55S 101LA4
105	2885	1.25	16.15	FUA 55A 101LA4
105	2894	2.45	16.22	FUA 65A 101LA4
100	3053	1.85	17.12	FUA 65S 101LA4
94	3239	3.15	18.14	FUA 75S 101LA4
93	3292	0.80	18.42	FUA 55S 101LA4
90	3381	1.05	18.94	FUA 55A 101LA4
87	3505	1.65	19.62	FUA 65S 101LA4
87	3496	2.05	19.58	FUA 65A 101LA4
79	3867	2.65	21.67	FUA 75S 101LA4
77	3947	0.90	22.09	FUA 55A 101LA4
76	3991	1.80	22.36	FUA 65A 101LA4
75	4062	1.40	22.74	FUA 65S 101LA4
70	4328	4.80	24.21	FUA 85S 101LA4
69	4407	2.35	24.66	FUA 75S 101LA4
66	4575	0.80	25.64	FUA 55A 101LA4
66	4620	1.25	25.86	FUA 65S 101LA4
66	4593	1.55	25.72	FUA 65A 101LA4
61	5000	2.70	27.98	FUA 75A 101LA4
60	5071	2.05	28.40	FUA 75S 101LA4
60	5045	3.80	28.24	FUA 85S 101LA4
58	5222	1.10	29.22	FUA 65S 101LA4
56	5478	1.30	30.67	FUA 65A 101LA4
54	5673	1.85	31.77	FUA 75S 101LA4
54	5602	3.70	31.36	FUA 85S 101LA4
53	5735	1.00	32.10	FUA 65S 101LA4
53	5699	2.35	31.89	FUA 75A 101LA4
49	6151	3.40	34.46	FUA 85S 101LA4
48	6275	1.15	35.14	FUA 65A 101LA4
47	6452	1.60	36.15	FUA 75S 101LA4
45	6761	0.85	37.86	FUA 65S 101LA4
45	6806	2.00	38.10	FUA 75A 101LA4
43	7071	1.35	39.60	FUA 75S 101LA4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
42	7275	1.00	40.73	FUA 65A 101LA4
41	7363	2.70	41.25	FUA 85S 101LA4
39	7744	1.75	43.36	FUA 75A 101LA4
37	8275	0.90	46.32	FUA 65A 101LA4
37	8248	1.05	46.20	FUA 75S 101LA4
37	8319	2.05	46.59	FUA 85S 101LA4
34	9018	0.85	50.48	FUA 75S 101LA4
34	8912	1.50	49.93	FUA 75A 101LA4
33	9346	0.80	52.34	FUA 65A 101LA4
33	9098	1.70	50.96	FUA 85S 101LA4
33	9177	2.75	51.40	FUA 85A 101LA4
31	9974	1.35	55.86	FUA 75A 101LA4
30	10080	2.50	56.48	FUA 85A 101LA4
29	10638	1.25	59.58	FUA 85S 101LA4
27	11355	1.20	63.57	FUA 75A 101LA4
25	12071	2.10	67.61	FUA 85A 101LA4
24	12434	1.10	69.63	FUA 75A 101LA4
22	13638	1.85	76.36	FUA 85A 101LA4
21	14505	0.95	81.22	FUA 75A 101LA4
21	14753	3.00	82.64	FUA 110C 101LA4
20	14912	1.70	83.52	FUA 85A 101LA4
19	15850	0.85	88.76	FUA 75A 101LA4
18	17204	2.60	96.36	FUA 110C 101LA4
17	17435	1.25	97.66	FUA 85A 101LA4
15	20222	2.20	113.23	FUA 110C 101LA4
13	24019	1.85	134.51	FUA 110C 101LA4
12	24559	2.90	137.55	FUA 130C 101LA4
11	27152	1.65	152.07	FUA 110C 101LA4
11	27621	2.60	154.67	FUA 130C 101LA4
10	29586	0.85	165.68	FUA 85C 101LA4
9.8	30948	1.45	173.33	FUA 110C 101LA4
9.7	31320	2.30	175.39	FUA 130C 101LA4
8.3	36533	1.95	204.58	FUA 130C 101LA4
8.2	36975	1.20	207.08	FUA 110C 101LA4
7.5	40560	1.75	227.13	FUA 130C 101LA4
7.2	42073	1.10	235.63	FUA 110C 101LA4
6.8	44560	1.60	249.58	FUA 130C 101LA4
6.3	48445	0.95	271.32	FUA 110C 101LA4
6.1	41666	3.00	280.56	FUA 136C 101LA4
5.7	53348	1.35	298.79	FUA 130C 101LA4
5.6	54197	0.85	303.55	FUA 110C 101LA4
5.4	47542	2.65	315.47	FUA 136C 101LA4
5.0	60260	1.20	337.45	FUA 130C 101LA4
4.8	54711	2.30	357.74	FUA 136C 101LA4
4.6	65906	1.10	369.09	FUA 130C 101LA4
4.1	64747	1.95	417.29	FUA 136C 101LA4
3.9	77057	0.95	431.55	FUA 130C 101LA4
3.7	72482	1.75	463.28	FUA 136C 101LA4
3.3	80305	1.55	509.06	FUA 136C 101LA4
2.8	97138	1.30	609.44	FUA 136C 101LA4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
2.5	110386	1.15	688.31	FUA 136C 101LA4
2.3	121227	1.05	752.84	FUA 136C 101LA4
1.9	142618	0.90	880.24	FUA 136C 101LA4
5.5 HP nominal (6.3 HP actual)				
399	1018	2.05	4.33	FUA 55S 114M4
384	1062	4.80	4.51	FUA 65S 114M4
328	1239	1.80	5.26	FUA 55S 114M4
323	1257	4.15	5.35	FUA 65S 114M4
272	1496	3.55	6.35	FUA 65S 114M4
270	1505	1.60	6.40	FUA 55S 114M4
233	1743	1.40	7.43	FUA 55S 114M4
228	1779	3.05	7.56	FUA 65S 114M4
214	1894	1.9	8.07	FUA 55A 114M4
200	2036	1.20	8.66	FUA 55S 114M4
200	2027	4.80	8.65	FUA 75S 114M4
191	2124	2.60	9.05	FUA 65S 114M4
176	2301	1.6	9.82	FUA 55A 114M4
171	2372	4.15	10.08	FUA 75S 114M4
170	2381	1.05	10.15	FUA 55S 114M4
158	2567	2.15	10.93	FUA 65S 114M4
152	2673	2.65	3.20	FUA 65A 114M4
146	2779	0.90	11.84	FUA 55S 114M4
146	2779	3.60	11.85	FUA 75S 114M4
145	2805	1.3	11.94	FUA 55A 114M4
138	2929	1.90	12.48	FUA 65S 114M4
128	3177	2.25	2.70	FUA 65A 114M4
126	3230	0.80	13.74	FUA 55S 114M4
125	3257	1.1	13.86	FUA 55A 114M4
123	3301	3.05	14.08	FUA 75S 114M4
120	3372	1.70	14.36	FUA 65S 114M4
109	3735	2.70	15.92	FUA 75S 114M4
107	3788	1.0	16.15	FUA 55A 114M4
107	3806	1.90	2.25	FUA 65A 114M4
101	4018	1.45	17.12	FUA 65S 114M4
95	4257	2.40	18.14	FUA 75S 114M4
91	4443	0.8	18.94	FUA 55A 114M4
91	4460	4.60	18.99	FUA 85S 114M4
88	4602	1.25	19.62	FUA 65S 114M4
88	4602	1.55	1.85	FUA 65A 114M4
83	4894	2.75	20.84	FUA 75A 114M4
81	5009	4.10	21.35	FUA 85S 114M4
80	5089	2.00	21.67	FUA 75S 114M4
77	5248	1.35	1.65	FUA 65A 114M4
76	5337	1.10	22.74	FUA 65S 114M4
71	5682	3.65	24.21	FUA 85S 114M4
70	5788	1.80	24.66	FUA 75S 114M4
70	5814	2.30	24.75	FUA 75A 114M4
67	6071	0.95	25.86	FUA 65S 114M4
67	6036	1.20	1.45	FUA 65A 114M4
62	6567	2.05	27.98	FUA 75A 114M4

* 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 - Series F



RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
50 HP nominal (57 HP actual)				
245	15337	2.30	7.23	FUA 110S 226S4
219	17125	2.15	8.08	FUA 110S 226S4
195	19213	1.95	9.06	FUA 110S 226S4
179	20930	2.80	9.87	FUA 130S 226S4
173	21683	1.75	10.23	FUA 110S 226S4
161	23320	2.55	11.00	FUA 130S 226S4
152	24647	1.60	11.63	FUA 110S 226S4
144	26152	2.30	12.33	FUA 130S 226S4
133	28267	1.40	13.33	FUA 110S 226S4
127	29541	2.05	13.93	FUA 130S 226S4
114	32798	1.25	15.47	FUA 110S 226S4
111	33683	1.80	15.89	FUA 130S 226S4
97	38613	1.00	18.21	FUA 110S 226S4
97	38869	1.55	18.33	FUA 130S 226S4
82	45533	1.30	21.48	FUA 130S 226S4
78	47879	2.60	22.59	FUA 136A 226S4
77	48666	0.95	22.95	FUA 110A 226S4
75	50303	1.45	23.73	FUA 130A 226S4
69	54543	2.30	25.72	FUA 136A 226S4
68	55321	0.80	26.09	FUA 110A 226S4
67	56401	1.30	26.60	FUA 130A 226S4
60	62366	2.00	29.42	FUA 136A 226S4
59	63720	1.15	30.05	FUA 130A 226S4
52	72659	1.00	34.27	FUA 130A 226S4
52	71712	1.75	33.83	FUA 136A 226S4
45	83836	0.85	39.55	FUA 130A 226S4
45	83066	1.50	39.18	FUA 136A 226S4
41	92084	1.35	43.43	FUA 136A 226S4
37	102607	1.25	48.40	FUA 136A 226S4
33	115041	1.10	54.26	FUA 136A 226S4
29	129971	1.00	61.30	FUA 136A 226S4
25	148211	0.85	69.91	FUA 136A 226S4
60 HP nominal (69 HP actual)				
245	18647	1.90	7.23	FUA 110S 226M4
219	20824	1.75	8.08	FUA 110S 226M4
199	22957	2.50	8.90	FUA 130S 226M4
195	23364	1.60	9.06	FUA 110S 226M4
179	25453	2.30	9.87	FUA 130S 226M4
173	26373	1.45	10.23	FUA 110S 226M4
161	28364	2.10	11.00	FUA 130S 226M4
152	29975	1.30	11.63	FUA 110S 226M4
144	31798	1.90	12.33	FUA 130S 226M4
133	34382	1.15	13.33	FUA 110S 226M4
127	35931	1.70	13.93	FUA 130S 226M4
114	39887	1.00	15.47	FUA 110S 226M4
111	40967	1.50	15.89	FUA 130S 226M4
110	41595	3.00	16.13	FUA 136A 226M4
97	46967	0.85	18.21	FUA 110S 226M4
97	47277	1.30	18.33	FUA 130S 226M4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
93	49162	2.55	19.07	FUA 136A 226M4
82	55374	1.05	21.48	FUA 130S 226M4
78	58233	2.15	22.59	FUA 136A 226M4
75	61180	1.20	23.73	FUA 130A 226M4
69	66331	1.90	25.72	FUA 136A 226M4
67	68596	1.05	26.60	FUA 130A 226M4
60	75853	1.65	29.42	FUA 136A 226M4
59	77499	0.95	30.05	FUA 130A 226M4
52	88376	0.85	34.27	FUA 130A 226M4
52	87217	1.45	33.83	FUA 136A 226M4
45	101023	1.25	39.18	FUA 136A 226M4
41	111988	1.15	43.43	FUA 136A 226M4
37	124794	1.00	48.40	FUA 136A 226M4
33	139919	0.90	54.26	FUA 136A 226M4
29	158070	0.80	61.30	FUA 136A 226M4
75 HP nominal (89 HP actual)				
199	27966	2.05	8.90	FUA 130S 251M4
180	31002	1.90	9.87	FUA 130S 251M4
161	34550	1.70	11.00	FUA 130S 251M4
144	38736	1.55	12.33	FUA 130S 251M4
127	43763	1.40	13.93	FUA 130S 251M4
112	49905	1.25	15.89	FUA 130S 251M4
*110	50666	2.45	16.13	FUA 136A 251M4
97	57578	1.05	18.33	FUA 130S 251M4
*93	59879	2.10	19.07	FUA 136A 251M4
83	67455	0.90	21.48	FUA 130S 251M4
*79	70933	1.75	22.59	FUA 136A 251M4
75	74526	1.00	23.73	FUA 130A 251M4
*69	80801	1.55	25.72	FUA 136A 251M4
67	83553	0.85	26.60	FUA 130A 251M4
*60	92394	1.35	29.42	FUA 136A 251M4
59	94394	0.80	30.05	FUA 130A 251M4
*53	106244	1.20	33.83	FUA 136A 251M4
*45	123050	1.05	39.18	FUA 136A 251M4
*41	136414	0.95	43.43	FUA 136A 251M4
*37	152008	0.85	48.40	FUA 136A 251M4
100 HP nominal (120 HP actual)				
*199	38135	1.50	8.90	FUA 130S 251M4
*180	42276	1.40	9.87	FUA 130S 251M4
*161	47109	1.25	11.00	FUA 130S 251M4
*144	52826	1.15	12.33	FUA 130S 251M4
*127	59676	1.05	13.93	FUA 130S 251M4
*112	68048	0.90	15.89	FUA 130S 251M4
*110	69092	1.80	16.13	FUA 130S 251M4
*97	78517	0.80	18.33	FUA 136A 251M4
*93	81659	1.55	19.07	FUA 136A 251M4
*79	96731	1.30	22.59	FUA 136A 251M4
*69	110174	1.15	25.72	FUA 136A 251M4
*60	125997	1.00	29.42	FUA 136A 251M4
*53	144875	0.90	33.83	FUA 136A 251M4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
120 HP nominal (145 HP actual)				
*110	82632	1.50	16.13	FUA 136A 281M4
*93	97660	1.30	19.07	FUA 136A 281M4
*79	115687	1.10	22.59	FUA 136A 281M4
*69	131768	0.95	25.72	FUA 136A 281M4
*61	150689	0.85	29.42	FUA 136A 281M4

* 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 - Series F

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 agitator designs 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	Model
Size F55			
4.33	2053	12.79	*S
5.26	2213	11.32	*S
6.4	2345	9.87	*S
7.43	2381	8.65	*S
8.07	3540	11.83	*A
8.66	2416	7.52	*S
9.82	3540	9.72	*A
10.15	2451	6.5	S
11.84	2469	5.62	S
11.94	3540	7.99	*A
13.74	2487	4.88	S
13.86	3540	6.89	A
16.12	2505	4.2	S
16.15	3540	5.91	A
18.42	2513	3.69	S
18.94	3540	5.04	A
21.05	2531	3.25	S
22.09	3540	4.32	A
23.25	2540	2.95	S
25.64	3540	3.73	A
27.94	2558	2.47	S
30.07	3540	3.18	A
30.7	2575	2.25	S
33.97	2575	2.04	S
34.36	3540	2.78	A
38.87	2575	1.78	S
39.27	3540	2.43	A
42.19	3540	2.27	C
42.54	2575	1.64	S
43.36	3540	2.2	A
46.89	2319	1.34	S
50.51	3540	1.89	C
52.11	3540	1.84	A
52.11	1982	1.03	S
57.27	3540	1.66	A

Ratio	in-lbs	HP	Model
58.48	1655	.76	S
60.43	3540	1.58	C
63.37	3540	1.5	A
72.48	3540	1.31	C
72.5	3540	1.31	A
79.36	3540	1.21	A
85.86	3540	1.11	C
87.47	3540	1.09	A
97.2	3540	.98	A
101.18	3540	.94	C
109.09	3540	.76	A
120.33	3540	.79	C
138.76	3540	.68	C
160.11	3540	.59	C
177.79	3540	.54	C
216.15	3540	.44	C
238.5	3540	.4	C
264.91	3540	.36	C
304.21	3540	.31	C
333.9	3540	.28	C
368.99	3540	.25	C
411.09	3540	.23	C
462.55	3540	.2	C
Size F65			
4.51	5027	30.11	*S
5.35	5160	25.99	*S
6.35	5266	22.35	*S
7.56	5354	19.11	*S
8.07	7080	23.67	*A
9.05	5443	16.21	*S
9.58	7080	19.93	*A
10.93	5514	13.6	S
11.38	7080	16.78	*A
12.48	5549	12	S
13.55	7080	14.09	A
14.36	5584	10.5	S

Ratio	in-lbs	HP	Model
16.22	7080	11.77	A
17.12	5629	8.88	S
19.58	7080	9.75	A
19.62	5655	7.78	S
22.36	7080	8.54	A
22.74	5682	6.75	S
25.72	7080	7.43	A
25.86	5699	5.95	S
29.22	5717	5.27	S
30.67	7080	6.22	A
32.1	5726	4.81	S
35.14	7080	5.43	A
37.86	5460	3.89	S
40.73	7080	4.69	A
41.46	5098	3.31	S
45.72	4655	2.75	S
46.32	7080	4.12	A
52.27	4115	2.13	S
52.34	7080	3.65	A
57.07	3770	1.78	S
57.5	7080	3.33	A
62.74	3283	1.41	S
66.05	7080	2.9	C
67.82	7080	2.82	A
74.27	7080	2.57	A
79.06	7080	2.41	C
81.89	7080	2.33	A
93.62	7080	2.04	A
94.6	7080	2.02	C
102.22	6753	1.78	A
112.39	5885	1.41	A
113.46	7080	1.69	C
134.41	7080	1.42	C
158.39	7080	1.21	C
188.37	7080	1.02	C
217.22	7080	.89	C

Ratio	in-lbs	HP	Model
250.64	7080	.76	C
278.32	7080	.68	C
338.37	7080	.56	C
373.35	7080	.51	C
414.7	7080	.46	C
476.22	7080	.4	C
522.69	7080	.36	C
577.61	7080	.34	C
643.52	7080	.3	C
724.07	7080	.27	C
Size F75			
4.43	8169	49.78	*S
5.35	8983	45.3	*S
6.46	9425	39.36	*S
7.46	9567	34.58	*S
7.78	13275	46	*A
8.65	9682	30.2	*S
9.4	13275	38.09	*A
10.08	9788	26.18	S
11.36	13275	31.53	*A
11.85	9885	22.5	S
13.12	13275	27.3	*A
14.08	9974	19.11	S
15.21	13275	23.55	A
15.92	10027	16.99	S
17.73	13275	20.2	A
18.14	10071	14.98	S
20.84	13275	17.19	A
21.67	10169	12.66	S
24.66	10204	11.16	S
24.75	13275	14.47	A
27.98	13275	12.79	A
28.4	10239	9.72	S
31.77	10231	8.69	S
31.89	13275	11.22	A
36.15	10009	7.47	S

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

Speed Reducer Selection Tables - Series F



Ratio	in-lbs	HP	Model
38.1	13275	9.4	A
39.6	9293	6.33	S
43.36	13275	8.26	A
46.2	8275	4.83	S
49.93	13275	7.17	A
50.48	7620	4.06	S
55.55	6868	3.34	S
55.86	13275	6.41	A
60.4	13275	5.93	C
63.57	13275	5.63	A
69.63	13275	5.14	A
73.45	13275	4.88	C
81.22	13275	4.41	A
88.76	13275	4.04	A
89.34	13275	4.01	C
97.66	12071	3.34	A
103.7	13275	3.45	C
120.84	13275	2.96	C
141.66	13275	2.52	C
165.27	13275	2.17	C
191.8	13275	1.86	C
224.95	13275	1.6	C
257.09	13275	1.39	C
293.82	13275	1.22	C
315.66	13275	1.14	D
324.42	13275	1.1	C
377.86	13275	.95	D
389.87	13275	.91	C
428.48	13275	.83	C
452.1	13275	.79	D
474.12	13275	.75	C
542.25	13275	.66	D
542.43	13275	.66	C
593.76	13275	.6	C
642.36	13275	.56	D
654.41	13275	.55	C
727.2	13275	.5	C
756.99	13275	.47	D
816.16	13275	.44	C
900.28	13275	.4	D
1038.16	13275	.35	D
1197.87	13275	.3	D
1330.14	13275	.27	D
1617.13	13275	.23	D
1784.33	13275	.2	D
1981.94	13275	.17	D
2275.96	13275	.16	D
2498.07	13275	.15	D
2760.56	13275	.13	D
3075.54	13275	.12	D

Ratio	in-lbs	HP	Model
3460.53	13275	.11	D
Size F85			
5.59	14886	71.84	*S
6.58	16213	66.41	*S
7.76	17355	60.28	*S
9.16	24408	71.84	*A
9.20	18505	54.27	*S
10.48	19346	49.78	*S
10.79	24780	61.94	*A
12.01	19983	44.87	*S
12.73	24780	52.51	*A
13.86	20143	39.21	S
15.07	24780	44.35	*A
16.13	20284	33.93	S
17.18	24780	38.90	A
18.99	20426	29.02	S
19.69	24780	33.95	A
21.35	20505	25.91	S
22.71	24780	29.44	A
24.21	20576	22.92	S
26.43	24780	25.29	A
28.24	19160	18.30	S
31.13	24780	21.47	A
31.36	20621	17.74	S
34.46	20665	16.17	S
35.00	24780	19.10	A
39.69	24780	16.84	A
41.25	19540	12.78	S
46.30	24780	14.44	A
46.59	16744	9.70	S
50.96	15319	8.11	S
51.40	24780	13.01	A
56.48	24780	11.84	A
59.58	13009	5.89	S
67.61	24780	9.88	A
70.64	24780	9.47	C
76.36	24780	8.76	A
83.52	24780	8.01	A
85.91	24780	7.78	C
97.66	21328	5.89	A
104.48	24780	6.40	C
121.28	24780	5.51	C
141.33	24780	4.73	C
165.68	24780	4.04	C
193.30	24780	3.46	C
224.32	24780	2.98	C
263.10	24780	2.53	C
300.68	24780	2.23	C
343.64	24780	1.94	C
369.18	24780	1.81	D

Ratio	in-lbs	HP	Model
379.43	24780	1.76	C
441.93	24780	1.52	D
455.98	24780	1.46	C
501.14	24780	1.33	C
528.76	24780	1.26	D
554.50	24780	1.21	C
634.19	24780	1.06	D
634.41	24780	1.06	C
694.43	24780	0.97	C
751.28	24780	0.89	D
765.37	24780	0.87	C
850.50	24780	0.79	C
885.34	24780	0.75	D
954.55	24780	0.70	C
1052.92	24780	0.63	D
1214.18	24780	0.55	D
1400.98	24780	0.48	D
1555.67	24780	0.43	D
1891.32	24780	0.35	D
2086.88	24780	0.32	D
2317.98	24780	0.30	D
2661.86	24780	0.25	D
2921.63	24780	0.23	D
3228.62	24780	0.20	D
3597.01	24780	0.19	D
4047.27	24780	0.16	D
Size F110			
7.23	34949	130.33	*S
8.08	36011	120.25	*S
9.06	36772	109.44	*S
10.23	37869	99.87	*S
11.63	38595	89.55	*S
13.33	39161	79.23	*S
15.47	39462	68.81	S
16.23	44250	73.53	A
18.13	44250	65.84	A
18.21	37834	56.03	S
20.34	44250	58.68	A
21.88	33586	41.41	S
22.95	44250	51.99	A
26.09	44250	45.74	A
29.93	44250	39.88	A
34.72	44250	34.38	A
40.88	44250	29.19	A
42.31	44250	28.22	C
49.1	44250	24.31	A
51.09	44250	23.36	C
54.33	44250	21.97	A
60.6	44250	19.7	A
61.72	44250	19.34	C

Ratio	in-lbs	HP	Model
67.98	44250	17.55	A
71.28	44250	16.75	C
74.35	44250	16.05	A
82.64	44250	14.44	C
88.38	44100	13.46	A
96.36	44250	12.39	C
99.06	35382	9.63	A
113.23	44250	10.54	C
134.51	44250	8.88	C
152.07	44250	7.84	C
173.33	44250	6.88	C
207.08	44250	5.77	C
235.63	44250	5.07	C
271.32	44250	4.4	C
303.55	44250	3.93	C
328.22	44250	3.63	D
345.45	44250	3.46	C
378.4	44250	3.15	C
399.19	44250	2.99	D
441.41	44250	2.71	C
482.36	44250	2.48	C
485.5	44250	2.45	D
530.74	44250	2.25	C
563.56	44250	2.12	D
656.73	44250	1.82	D
769.87	44250	1.56	D
898.18	44250	1.33	D
1042.33	44250	1.14	D
1222.52	44250	.98	D
1397.17	44250	.86	D
1596.76	44250	.75	D
1715.44	44250	.7	F
1763.09	44250	.67	D
2053.48	44250	.58	F
2118.78	44250	.56	D
2328.61	44250	.51	D
2456.95	44250	.48	F
2576.59	44250	.47	D
2946.88	44250	.4	F
2947.87	44250	.4	D
3226.79	44250	.38	D
3490.92	44250	.34	F
3556.42	44250	.34	D
3951.99	44250	.31	D
4113.88	44250	.3	F
4435.45	44250	.27	D
4892.58	44250	.24	F
5641.89	44250	.21	F
6509.88	44250	.19	F
7228.67	44250	.16	F

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



Speed Reducer Selection Tables - Series F

Ratio	in-lbs	HP	Model
8788.33	44250	.13	F
9697	44250	.12	F
10770.88	44250	.11	F
12368.76	44250	.09	F
13575.8	44250	.09	F
15002.3	44250	.08	F
16714.11	44250	.07	F
18806.31	44250	.07	F
Size F130			
8.9	56693	171.72	*S
9.87	57888	158.17	*S
11	58569	143.62	*S
12.33	59711	130.59	*S
13.93	60260	116.66	*S
15.89	60419	102.57	*S
18.33	60127	88.47	S
19.21	70800	99.42	*A
21.29	70800	89.69	A
21.48	57693	72.47	S
23.73	70800	80.49	A
26.6	70800	71.78	A
30.05	70800	63.54	A
34.27	70800	55.72	A
39.55	70800	48.29	A
40.49	70800	47.16	C
46.32	70800	41.22	A
47.68	70800	40.06	C
55.36	70800	34.49	A
56.24	70800	33.95	C
61.12	70800	31.25	A
66.6	70800	28.67	C
68.02	70800	28.08	A
75.93	70800	25.16	C
76.05	70800	25.12	A
83.05	65092	21.15	A
87	70800	21.95	C
100.36	70800	19.03	C
116.81	70800	16.35	C
137.55	70800	13.88	C
154.67	70800	12.35	C
175.39	70800	10.89	C
204.58	70800	9.33	C
227.13	70800	8.41	C
249.58	70800	7.66	C
298.79	70800	6.4	C
312.15	70800	6.12	D
337.45	70800	5.66	C
369.09	70800	5.18	C
379.64	70800	5.03	D
431.55	70800	4.43	C

Ratio	in-lbs	HP	Model
461.72	70800	4.13	D
535.96	70800	3.57	D
624.56	70800	3.06	D
732.16	70800	2.61	D
854.18	70800	2.24	D
991.27	70800	1.93	D
1162.64	70800	1.64	D
1328.73	70800	1.43	D
1518.55	70800	1.26	D
1631.41	70800	1.17	F
1676.73	70800	1.14	D
1952.89	70800	.98	F
2014.99	70800	.95	D
2214.55	70800	.86	D
2336.6	70800	.82	F
2450.38	70800	.78	D
2802.53	70800	.68	F
2803.47	70800	.68	D
3068.73	70800	.62	D
3319.92	70800	.58	F
3382.21	70800	.56	D
3758.4	70800	.51	D
3912.36	70800	.48	F
4218.18	70800	.46	D
4652.92	70800	.42	F
5365.53	70800	.36	F
6190.99	70800	.31	F
6874.58	70800	.28	F
8357.84	70800	.23	F
9222	70800	.2	F
10243.28	70800	.19	F
11762.89	70800	.16	F
12910.8	70800	.15	F
14267.42	70800	.13	F
15895.37	70800	.12	F
17885.09	70800	.11	F
Size F136			
16.13	123900	207.16	*A
19.07	123900	175.3	*A
22.59	123900	147.97	*A
25.72	123900	129.92	*A
29.42	123900	113.61	*A
33.83	123900	98.81	*A
39.18	123900	85.3	A
43.43	123900	76.95	A
48.4	123900	69.05	A
54.26	123900	61.59	A
61.3	123900	54.51	A
69.91	123900	47.81	A
80.66	123900	41.44	A

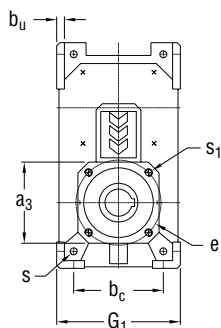
Ratio	in-lbs	HP	Model
82.6	123900	40.46	C
94.49	123900	35.38	A
97.26	123900	34.36	C
112.93	123900	29.6	A
114.72	123900	29.13	C
124.66	123900	26.81	A
135.85	123900	24.59	C
138.74	123900	24.08	A
154.87	123900	21.58	C
155.12	123900	21.55	A
169.39	123900	19.73	A
177.45	123900	18.83	C
204.71	123900	16.32	C
238.26	123900	14.03	C
280.56	123900	11.91	C
315.47	123900	10.59	C
357.74	123900	9.35	C
417.29	123900	8.01	C
463.28	123900	7.21	C
509.06	123900	6.57	C
609.44	123900	5.48	C
636.69	123900	5.24	D
688.31	123900	4.85	C
752.84	123900	4.44	C
774.35	123900	4.32	D
880.24	123900	3.8	C
941.77	123900	3.55	D
1093.2	123900	3.06	D
1273.93	123900	2.63	D
1493.38	123900	2.24	D
1742.28	123900	1.92	D
2021.91	123900	1.65	D
2371.44	123900	1.41	D
2710.21	123900	1.23	D
3097.39	123900	1.07	D
3420.03	123900	.98	D
4110	123900	.82	D
4517.02	123900	.74	D
4998.06	123900	.67	D
5718.26	123900	.59	D
6259.31	123900	.54	D
6898.73	123900	.48	D
7666.04	123900	.44	D
8603.86	123900	.39	D

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

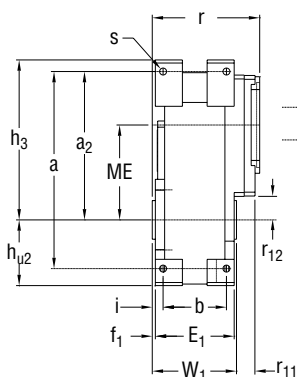
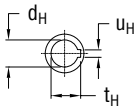
Schematics - Series F

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

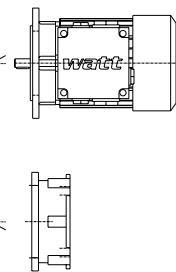
Size 55 - 136



Hollow Shaft

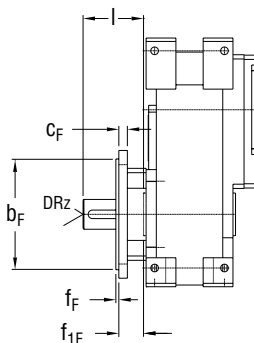
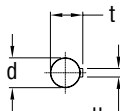
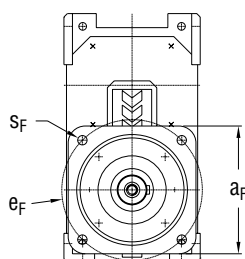


Motor - dimensions on page 20.

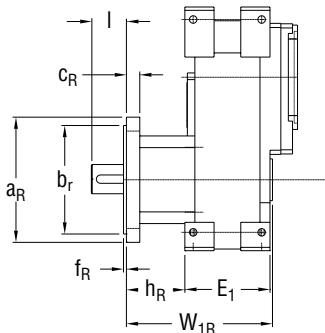
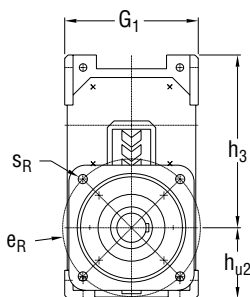


NEMA Motor Adapter - dimensions on page 21.

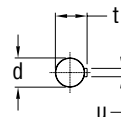
Output Shaft with Optional Output Flange



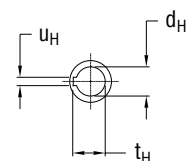
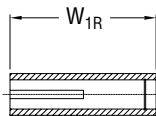
Agitator Drive



Output Shaft



Hollow Shaft



Main Dimensions

	a	a ₂	a ₃	b	b _c	b _u	e	E ₁	f ₁	G ₁	h ₃	h _{u2}	i	ME	r	r ₁₁	r ₁₂	s	s ₁ ⁽¹⁾
55 A,S	10.04	7.6	4.1	3.23	4.57	0.4	4.33	4.02	0.16	6.3	8.15	3.3	0.55	4.8	5.5	1.07	1.1	0.35	m10x16
55 C	10.04	7.6	4.1	3.23	4.57	0.4	4.33	4.02	0.16	6.3	8.15	3.3	0.55	5.8	5.5	1.07	1.1	0.35	m10x16
65 AS	11.54	8.7	5.3	4.09	5.67	0.5	5.71	4.96	0.18	7.9	9.29	3.9	0.61	6.2	6.7	0.83	1.5	0.45	m12x20
65 C	11.54	8.7	5.3	4.09	5.67	0.5	5.71	4.96	0.18	7.9	9.29	3.9	0.61	7.3	6.7	0.95	1.5	0.45	m12x20
75 A,S	14.57	11.0	6.9	4.49	7.48	0.6	7.48	5.51	0.20	9.8	11.81	4.7	0.71	7.4	7.2	1.03	1.8	0.55	m12x20
75 C	14.57	11.0	6.9	4.49	7.48	0.6	7.48	5.51	0.20	9.8	11.81	4.7	0.71	8.6	7.2	1.11	1.8	0.55	m12x20
75 D	14.57	11.0	6.9	4.49	7.48	0.6	7.48	5.51	0.20	9.8	11.81	4.7	0.71	9.6	7.2	1.11	1.8	0.55	m12x20
85 A,S	18.31	13.7	7.1	5.43	9.13	0.7	7.48	6.69	0.20	12.2	14.76	6.1	0.83	9.1	8.4	1.11	2.8	0.71	m16x24
85 C	18.31	13.7	7.1	5.43	9.13	0.7	7.48	6.69	0.20	12.2	14.76	6.1	0.83	10.6	8.4	1.11	2.8	0.71	m16x24
85 D	18.31	13.7	7.1	5.43	9.13	0.7	7.48	6.69	0.20	12.2	14.76	6.1	0.83	11.5	8.4	1.11	2.8	0.71	m16x24
110 A,S	20.08	15.5	9.1	6.69	10.0	0.9	9.45	8.82	0.20	13.8	17.56	6.9	1.26	11.5	10.9	1.85	2.4	0.87	m20x35
110 C	20.08	15.5	9.1	6.69	10.0	0.9	9.45	8.82	0.20	13.8	17.56	6.9	1.26	13.3	10.9	2.56	2.4	0.87	m20x35
110 D	20.08	15.5	9.1	6.69	10.0	0.9	9.45	8.82	0.20	13.8	17.56	6.9	1.26	14.5	10.9	2.56	2.4	0.87	m20x35
110 F	20.08	15.5	9.1	6.69	10.0	0.9	9.45	8.82	0.20	13.8	17.56	6.9	1.26	15.5	10.9	2.56	2.4	0.87	m20x35
130 A,S	24.21	18.3	10.6	7.48	11.81	0.9	10.63	9.84	0.20	15.7	20.31	7.9	1.38	13.3	11.9	1.26	2.8	0.87	m24x36
130 C	24.21	18.3	10.6	7.48	11.81	0.9	10.63	9.84	0.20	15.7	20.31	7.9	1.38	15.2	11.9	1.97	2.8	0.87	m24x36
130 D	24.21	18.3	10.6	7.48	11.81	0.9	10.63	9.84	0.20	15.7	20.31	7.9	1.38	16.6	11.9	1.97	2.8	0.87	m24x36
130 F	24.21	18.3	10.6	7.48	11.81	0.9	10.63	9.84	0.20	15.7	20.31	7.9	1.38	17.6	11.9	1.97	2.8	0.87	m24x36
136 A	27.95	21.9	13.4	11.42	12.2	1.1	11.81	13.31	0.24	17.7	23.90	8.9	1.18	16.9	15.6	1.46	6.4	1.03	m24x36
136 C	27.95	21.9	13.4	11.42	12.2	1.1	11.81	13.31	0.24	17.7	23.90	8.9	1.18	18.8	15.6	1.46	6.4	1.03	m24x36
136 D	27.95	21.9	13.4	11.42	12.2	1.1	11.81	13.31	0.24	17.7	23.90	8.9	1.18	20.2	15.6	1.46	6.4	1.03	m24x36

Dimensions are in inches.

Dimensions are subject to change without notice.

⁽¹⁾ Metric Thread.

Output Shaft Dimensions & Optional Output Flange

	Optional Output Flange							Hollow Bore				Solid Shaft					
	a _F	b _F	c _F	e _F	f _F	f _{1F}	s _F	d _H	t _H	u _H	W ₁	d	l	t	u	z ⁽¹⁾	
F55	5.91	5.12	0.39	6.5	0.14	1.1	0.43	1.375	1.52	0.3125	4.29	1.25	2.36	1.36	0.25	m12	
F65	7.87	7.09	0.47	8.46	0.16	1.5	0.55	1.5	1.67	0.375	5.67	1.625	3.15	1.79	0.375	m16	
F75	9.84	9.06	0.55	10.43	0.16	1.97	0.55	2	2.23	0.5	6.07	2.0	3.94	2.22	0.5	m20	
F85	11.81	9.84	0.63	11.81	0.2	1.97	0.71	2.375	2.66	0.625	7.17	2.375	4.72	2.65	0.625	m20	
F110	17.72	13.78	0.94	15.75	0.2	2.72	0.71	2.75	2.94	0.625	8.43	2.875	5.51	3.2	0.75	m20	
F130	17.72	13.78	0.94	15.75	0.2	2.72	0.71	3.625	4.02	0.875	10.24	3.625	6.69	4.01	0.875	m24	
F136	21.65	17.72	0.94	19.69	0.2	2.91	0.71	4	4.44	1	13.78	4.375	8.27	4.44	1	m24	

Dimensions are in inches.

Dimensions are subject to change without notice.

⁽¹⁾ Metric Thread.

Agitator Dimensions

	Main Dimensions											Hollow Shaft ⁽³⁾				Solid Shaft ⁽³⁾			
	a _R	b _R	c _R	e _R	E ₁	f _R	G ₁	h _R	h ₃	h _{u2}	s _R	d _h	t _h	u _h	W _{1r}	d	l	t	u
F55	5.9	5.118	0.63	6.5	4.01	0.138	6.29	2.75	8.15	3.34	0.43	1.378	1.51	0.39	6.89	1.38	2.76	1.5	0.4
F65	7.87	7.087	0.78	8.5	4.96	0.157	7.87	2.79	9.29	3.93	0.55	1.575	1.70	0.47	8.29	1.57	3.15	1.7	0.5
F75	9.84	9.055	0.78	10.4	5.51	0.157	9.84	3.54	11.81	4.72	0.55	1.969	2.12	0.55	9.41	1.97	3.94	2.1	0.6
F85	11.41	9.843	0.86	11.8	6.69	0.197	12.2	4.44	14.76	6.1	0.71	2.362	2.54	0.71	11.34	2.36	4.33	2.5	0.7
F110	17.71	13.780	1.02	15.7	8.81	0.197	13.78	5.11	17.56	6.89	0.71	2.756	2.95	0.79	13.35	2.76	4.72	2.9	0.8
F130	17.71	13.780	1.02	15.7	9.84	0.197	15.74	6.29	20.28	7.87	0.71	3.543	3.76	0.98	16.34	3.54	6.69	3.7	1.0
F136	17.71	17.717	1.1	19.7	13.3	0.197	17.71	7.87	23.90	8.85	0.71	3.937	4.19	1.10	21.42	4.33	8.27	4.6	1.1

Dimensions are in inches.

⁽¹⁾ Dual output option available.

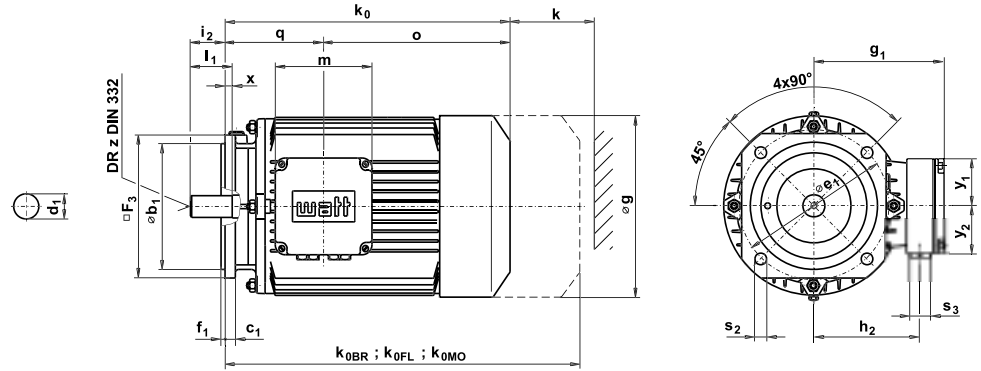
Dimensions are subject to change without notice.

⁽²⁾ Metric thread.

⁽³⁾ Estimate converted from metric dimension.

Integral Motor Dimensions - Series F

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*	kobr*	kofl*	komo*	m	q	s ₂	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	10	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	10	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	10	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	10	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	12	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	12	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	14.5	2xM32x1.5	2.76	2.76
161M,L	12.36	9.76	7.87	2.36	25.12	29.97	31.42	7.28	5.71	15	2xM40x1.5	3.94	3.94
181M,L	14.96	10.83	8.9	2.56	29.97	32.27	34.3	7.44	6.26	15	2xM40x1.5+M16x1.5	3.9	4.17
201L	16.34	12.6	10.12	3.15	33.05	36.12	38.01	9.33	6.89	19	2xM50x1.5+M16x1.5	4.84	7.64
226S,M	17.52	13.58	10.63	3.94	33.1	36.09	39.24	9.33	7.09	19	2xM50x1.5+M16x1.5	4.72	7.64
251M	19.29	14.94	11.81	3.94	38.41	39	44.71	8.58	7.87	8x19	2xM63x1.5+M16x1.5	5.12	7.28

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 "k₀" to reducer length "r", found on page 19.

Integral Motor Length Adder "k ₀ "									
	64	72	81	91	101	114	134	161	181
55A,S	7.76	8.86	10.16	11.7	13.11	15.16	---	---	---
55C	7.76	8.86	10.16	11.7	---	---	---	---	---
65A,S	7.76	8.86	10.16	11.7	13.11	15.16	17.64	---	---
65C	7.76	8.86	10.16	11.7	---	---	---	---	---
75A,S	7.76	8.86	10.16	11.7	13.11	15.16	17.64	21.7	24.6
75C	7.76	8.86	10.16	11.7	13.11	15.16	---	---	---
75D	7.76	8.86	10.16	11.7	---	---	---	---	---
85A,S	---	---	---	---	12.91	14.96	17.44	21.5	24.4
85C	7.76	8.86	10.16	11.7	13.11	15.16	---	---	---
85D	7.76	8.86	10.16	11.7	---	---	---	---	---

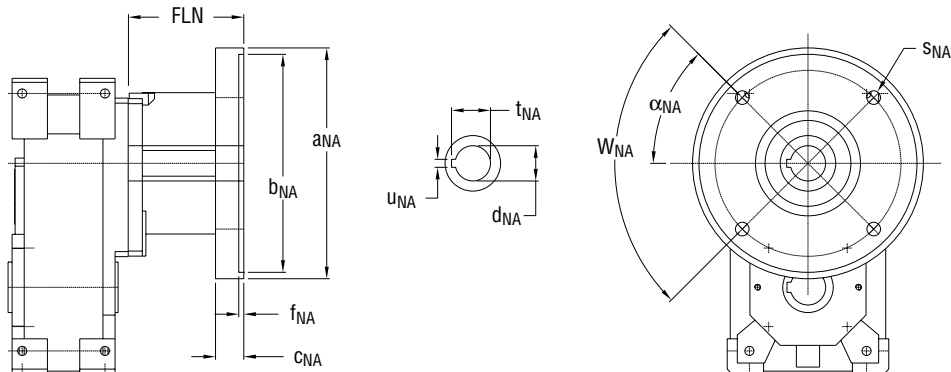
Integral Motor Length Adder "k ₀ "												
	64	72	81	91	101	114	134	161	181	201	226	251
110A,S	---	---	---	---	---	---	16.77	20.8	23.7	28.9	28.9	32.7
110C	7.76	8.86	10.16	11.7	13.11	15.16	17.64	21.7	24.6	---	---	---
110D	7.76	8.86	10.16	11.7	13.11	15.16	---	---	---	---	---	---
110F	7.76	8.86	10.16	11.7	---	---	---	---	---	---	---	---
130A,S	---	---	---	---	---	---	16.77	20.8	23.7	28.9	28.9	32.7
130C	---	---	---	---	12.91	14.96	17.44	21.5	24.4	---	---	---
130D	7.76	8.86	10.16	11.7	13.11	15.16	---	---	---	---	---	---
130F	7.76	8.86	10.16	11.7	---	---	---	---	---	---	---	---
136A	---	---	---	---	---	---	16.77	20.8	23.7	28.5	28.5	32.3
136C	---	---	---	---	12.91	14.96	17.44	21.5	24.4	---	---	---
136D	7.76	8.86	10.16	11.7	13.11	15.16	---	---	---	---	---	---

Dimensions are in inches.

Dimensions are subject to change without notice.

NEMA Motor Adapter Dimensions - Series F

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 "r", found on page 19.

NEMA Flange Length Adder "FLN"						
	56	143/145	182/184	213/215	254/256	284/286
55A,S	2.283	2.283	3.74	3.74	---	---
55C	2.283	2.283	---	---	---	---
65A,S	2.283	2.283	3.74	3.74	---	---
65C	2.283	2.283	---	---	---	---
75A,S	2.283	2.283	3.74	3.74	4.72	5.51
75C	2.283	2.283	3.74	3.74	---	---
75D	2.283	2.283	---	---	---	---
85A,S	---	---	5.31	5.31	5.31	5.31
85C	2.283	2.283	3.74	3.74	---	---
85D	2.283	2.283	---	---	---	---

NEMA Flange Length Adder "FLN"						
	56	143/145	182/184	213/215	254/256	284/286
110A,S	---	---	---	4.65	4.65	4.65
110C	2.28	2.28	3.74	3.74	3.94	3.94
110D	2.28	2.28	3.7	3.7	---	---
110F	2.28	2.28	---	---	---	---
130A,S	---	---	---	---	4.65	4.65
130C	---	---	5.31	5.31	5.31	5.31
130D	2.28	2.28	3.7	3.7	---	---
130F	1.61	1.61	---	---	---	---
136A	---	---	---	---	4.65	4.65
136C	---	---	5.31	5.31	5.31	5.31
136D	2.28	2.28	3.7	3.7	---	---

Dimensions are in inches.

Dimensions are subject to change without notice.

Gearmotor Selection Tables - Series A



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 at 460V operation. Torque output for 1/8 to 2 HP will be lower with 230V power source. For all selections, 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 with 460V)				
205	62	4.65	7.90	ASA 40E 64K4
182	71	3.60	8.89	ASA 40E 64K4
57	212	5.00	28.31	ASA 40A 64K4
52	239	4.50	31.43	ASA 40A 64K4
42	283	3.70	38.22	ASA 40A 64K4
38	319	3.40	42.17	ASA 40A 64K4
35	354	3.05	46.84	ASA 40A 64K4
30	407	2.65	53.78	ASA 40A 64K4
27	443	2.40	59.03	ASA 40A 64K4
25	487	2.20	65.24	ASA 40A 64K4
22	549	1.95	72.68	ASA 40A 64K4
20	611	1.75	81.78	ASA 40A 64K4
10	1204	2.95	160.11	ASA 55C 64K4
9.1	1336	2.70	177.79	ASA 55C 64K4
7.5	1620	2.20	216.15	ASA 55C 64K4
6.8	1788	2.00	238.50	ASA 55C 64K4
6.1	1991	1.80	264.91	ASA 55C 64K4
5.3	2283	1.55	304.21	ASA 55C 64K4
4.9	2505	1.45	333.90	ASA 55C 64K4
4.4	2770	1.30	368.99	ASA 55C 64K4
3.9	3089	1.15	411.09	ASA 55C 64K4
3.5	3478	1.05	462.55	ASA 55C 64K4
3.4	3575	2.00	476.22	ASA 65C 64K4
3.1	3929	1.85	522.69	ASA 65C 64K4
2.8	4337	1.65	577.61	ASA 65C 64K4
2.5	4832	1.50	643.52	ASA 65C 64K4
2.2	5443	1.35	724.07	ASA 65C 64K4
1/4 HP nominal (0.3 HP actual with 460V)				
252	71	4.80	6.42	ASA 40E 64N4
228	80	3.90	7.09	ASA 40E 64N4
205	89	3.10	7.90	ASA 40E 64N4
182	97	2.40	8.89	ASA 40E 64N4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
76	239	4.45	21.28	ASA 40A 61N4
66	274	3.85	24.53	ASA 40A 61N4
57	319	3.35	28.31	ASA 40A 61N4
52	354	3.00	31.43	ASA 40A 61N4
42	434	2.50	38.22	ASA 40A 61N4
38	478	2.25	42.17	ASA 40A 61N4
35	531	2.05	46.84	ASA 40A 61N4
30	602	1.80	53.78	ASA 40A 61N4
27	664	1.60	59.03	ASA 40A 61N4
25	735	1.45	65.24	ASA 40A 61N4
22	823	1.30	72.68	ASA 40A 61N4
20	920	1.20	81.78	ASA 40A 61N4
13	1356	2.65	120.33	ASA 55C 64N4
12	1566	2.30	138.76	ASA 55C 64N4
10	1805	2.00	160.11	ASA 55C 64N4
9.1	2000	1.80	177.79	ASA 55C 64N4
7.7	2363	3.00	209.67	ASA 65C 64N4
7.5	2434	1.50	216.15	ASA 55C 64N4
6.8	2690	1.35	238.50	ASA 55C 64N4
6.7	2726	2.60	241.92	ASA 65C 64N4
6.1	2982	1.20	264.91	ASA 55C 64N4
5.8	3133	2.30	278.32	ASA 65C 64N4
5.3	3425	1.05	304.21	ASA 55C 64N4
4.9	3761	0.95	333.90	ASA 55C 64N4
4.8	3814	1.90	338.37	ASA 65C 64N4
4.4	4160	0.90	368.99	ASA 55C 64N4
4.3	4204	1.70	373.35	ASA 65C 64N4
3.9	4673	1.55	414.70	ASA 65C 64N4
3.4	5363	1.35	476.22	ASA 65C 64N4
3.1	5894	1.25	522.69	ASA 65C 64N4
2.8	6505	1.10	577.61	ASA 65C 64N4
2.7	6691	2.00	593.76	ASA 75C 64N4
2.5	7248	1.00	643.52	ASA 65C 64N4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
2.5	7372	1.85	654.41	ASA 75C 64N4
2.2	8160	0.90	724.07	ASA 65C 64N4
2.2	8195	1.65	727.20	ASA 75C 64N4
2.0	9195	1.45	816.16	ASA 75C 64N4
1/3 HP nominal (0.4 HP actual with 460V)				
318	80	4.95	5.09	ASA 40E 72K4
277	89	4.05	5.85	ASA 40E 72K4
252	97	3.45	6.42	ASA 40E 72K4
228	115	2.80	7.09	ASA 40E 72K4
219	116	4.90	7.38	ASA 50E 72K4
205	124	2.25	7.90	ASA 40E 72K4
200	127	4.20	8.08	ASA 50E 72K4
182	142	1.75	8.89	ASA 40E 72K4
182	140	3.40	8.91	ASA 50E 72K4
164	155	2.65	9.90	ASA 50E 72K4
146	174	2.00	11.11	ASA 50E 72K4
107	239	4.50	15.18	ASA 40A 72K4
91	283	3.80	17.89	ASA 40A 72K4
76	336	3.20	21.28	ASA 40A 72K4
66	381	2.80	24.53	ASA 40A 72K4
57	443	2.40	28.31	ASA 40A 72K4
52	496	2.20	31.43	ASA 40A 72K4
42	602	1.80	38.22	ASA 40A 72K4
36	699	2.80	44.56	ASA 45A 72K4
35	735	1.45	46.84	ASA 40A 72K4
33	770	2.55	49.17	ASA 45A 72K4
30	841	1.30	53.78	ASA 40A 72K4
30	858	2.30	54.61	ASA 45A 72K4
28	664	1.65	42.17	ASA 40A 72K4
27	920	1.15	59.03	ASA 40A 72K4
26	982	2.00	62.71	ASA 45A 72K4
25	1018	1.05	65.24	ASA 40A 72K4
24	1080	1.85	68.83	ASA 45A 72K4



Gearmotor Selection Tables - Series A

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
22	1142	0.95	72.68	ASA 40A 72K4
21	1195	1.65	76.07	ASA 45A 72K4
20	1283	0.85	81.78	ASA 40A 72K4
19	1328	1.50	84.75	ASA 45A 72K4
19	1345	2.65	85.86	ASA 55C 72K4
16	1584	2.25	101.18	ASA 55C 72K4
13	1885	1.90	120.33	ASA 55C 72K4
12	2168	1.65	138.76	ASA 55C 72K4
11	2390	3.00	152.88	ASA 65C 72K4
10	2505	1.45	160.11	ASA 55C 72K4
9.1	2779	1.30	177.79	ASA 55C 72K4
8.9	2850	2.50	181.82	ASA 65C 72K4
7.5	3381	1.05	216.15	ASA 55C 72K4
7.5	3398	2.10	217.22	ASA 65C 72K4
6.8	3735	0.95	238.50	ASA 55C 72K4
6.5	3921	1.85	250.64	ASA 65C 72K4
6.1	4151	0.90	264.91	ASA 55C 72K4
5.8	4354	1.65	278.32	ASA 65C 72K4
4.8	5292	1.35	338.37	ASA 65C 72K4
4.3	5841	1.25	373.35	ASA 65C 72K4
3.9	6487	1.10	414.70	ASA 65C 72K4
3.8	6708	2.00	428.48	ASA 75C 72K4
3.4	7452	0.95	476.22	ASA 65C 72K4
3.4	7416	1.80	474.12	ASA 75C 72K4
3.1	8177	0.90	522.69	ASA 65C 72K4
3.0	8487	1.60	542.43	ASA 75C 72K4
2.7	9293	1.45	593.76	ASA 75C 72K4
2.5	10239	1.30	654.41	ASA 75C 72K4
2.2	11381	1.20	727.20	ASA 75C 72K4
2.0	12771	1.05	816.16	ASA 75C 72K4
1.9	13310	1.90	850.50	ASA 85C 72K4
1.7	14939	1.70	954.55	ASA 85C 72K4
1/2 HP nominal (0.6 HP actual with 460V)				
323	115	3.40	5.09	ASA 40E 72N4
296	97	4.50	4.15	ASA 40E 72N4
281	133	2.80	5.85	ASA 40E 72N4
259	106	4.05	4.58	ASA 40E 72N4
256	150	2.40	6.42	ASA 40E 72N4
255	150	4.25	6.45	ASA 50E 72N4
232	159	1.95	7.09	ASA 40E 72N4
223	168	3.35	7.38	ASA 50E 72N4
208	177	1.55	7.90	ASA 40E 72N4
203	186	2.85	8.08	ASA 50E 72N4
185	204	1.20	8.89	ASA 40E 72N4
185	204	2.35	8.91	ASA 50E 72N4
184	204	5.25	8.93	ASA 40A 72N4
166	230	1.85	9.90	ASA 50E 72N4
154	248	4.40	10.68	ASA 40A 72N4
148	257	1.40	11.11	ASA 50E 72N4
128	292	3.65	12.81	ASA 40A 72N4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
108	345	3.10	15.18	ASA 40A 72N4
92	407	2.65	17.89	ASA 40A 72N4
77	487	2.20	21.28	ASA 40A 72N4
67	558	1.90	24.53	ASA 40A 72N4
58	646	1.65	28.31	ASA 40A 72N4
57	655	3.00	28.61	ASA 45A 72N4
52	717	1.50	31.43	ASA 40A 72N4
50	752	2.60	33.01	ASA 45A 72N4
45	841	2.35	36.65	ASA 45A 72N4
43	876	1.25	38.22	ASA 40A 72N4
39	965	1.15	42.17	ASA 40A 72N4
37	1018	1.95	44.56	ASA 45A 72N4
35	1071	1.00	46.84	ASA 40A 72N4
33	1124	1.75	49.17	ASA 45A 72N4
31	1230	0.90	53.78	ASA 40A 72N4
30	1248	1.60	54.61	ASA 45A 72N4
29	1310	2.75	57.27	ASA 55A 72N4
26	1434	1.40	62.71	ASA 45A 72N4
26	1443	2.45	63.37	ASA 55A 72N4
24	1575	1.25	68.83	ASA 45A 72N4
23	1655	2.15	72.50	ASA 55A 72N4
22	1735	1.15	76.07	ASA 45A 72N4
21	1814	2.00	79.36	ASA 55A 72N4
19	1938	1.05	84.75	ASA 45A 72N4
19	2000	1.80	87.47	ASA 55A 72N4
17	2177	0.90	95.35	ASA 45A 72N4
17	2221	1.60	97.20	ASA 55A 72N4
15	2487	1.25	109.09	ASA 55A 72N4
12	3168	1.15	138.76	ASA 55C 72N4
10	3655	1.00	160.11	ASA 55C 72N4
9.2	4062	0.90	177.79	ASA 55C 72N4
8.7	4301	1.65	188.37	ASA 65C 72N4
7.6	4956	1.45	217.22	ASA 65C 72N4
6.6	5717	1.25	250.64	ASA 65C 72N4
5.9	6354	1.15	278.32	ASA 65C 72N4
5.6	6708	2.00	293.82	ASA 75C 72N4
5.1	7407	1.80	324.42	ASA 75C 72N4
4.9	7726	0.95	338.37	ASA 65C 72N4
4.4	8523	0.85	373.35	ASA 65C 72N4
4.2	8903	1.50	389.87	ASA 75C 72N4
3.8	9779	1.40	428.48	ASA 75C 72N4
3.5	10824	1.25	474.12	ASA 75C 72N4
3.0	12381	1.10	542.43	ASA 75C 72N4
3.0	12656	2.00	554.50	ASA 85C 72N4
2.8	13549	1.00	593.76	ASA 75C 72N4
2.6	14479	1.75	634.41	ASA 85C 72N4
2.5	14939	0.90	654.41	ASA 75C 72N4
2.4	15850	1.60	694.43	ASA 85C 72N4
2.1	17470	1.45	765.37	ASA 85C 72N4
1.9	19417	1.30	850.50	ASA 85C 72N4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
1.7	21789	1.15	954.55	ASA 85C 72N4
3/4 HP nominal (0.8 HP actual with 460V)				
628	89	4.80	2.67	ASA 40E 81K4
544	106	4.15	3.08	ASA 40E 81K4
490	115	3.75	3.42	ASA 40E 81K4
403	142	3.10	4.15	ASA 40E 81K4
365	150	2.80	4.58	ASA 40E 81K4
329	168	2.35	5.09	ASA 40E 81K4
315	177	4.10	5.31	ASA 50E 81K4
287	195	3.50	5.83	ASA 50E 81K4
286	195	1.90	5.85	ASA 40E 81K4
261	212	1.65	6.42	ASA 40E 81K4
259	212	2.90	6.45	ASA 50E 81K4
237	239	4.60	7.08	ASA 60E 81K4
236	239	1.35	7.09	ASA 40E 81K4
227	248	2.30	7.38	ASA 50E 81K4
224	248	4.30	7.46	ASA 40A 81K4
216	257	3.90	7.75	ASA 60E 81K4
212	266	1.05	7.90	ASA 40E 81K4
207	266	2.00	8.08	ASA 50E 81K4
196	283	3.20	8.55	ASA 60E 81K4
188	292	0.85	8.89	ASA 40E 81K4
188	301	1.60	8.91	ASA 50E 81K4
187	301	3.60	8.93	ASA 40A 81K4
171	327	2.45	9.77	ASA 60E 81K4
169	327	1.25	9.90	ASA 50E 81K4
157	354	2.10	10.67	ASA 60E 81K4
157	354	3.00	10.68	ASA 40A 81K4
151	372	0.95	11.11	ASA 50E 81K4
143	389	1.70	11.73	ASA 60E 81K4
131	425	2.50	12.81	ASA 40A 81K4
110	504	2.10	15.18	ASA 40A 81K4
94	593	1.80	17.89	ASA 40A 81K4
80	699	2.85	20.86	ASA 45A 81K4
79	708	1.50	21.28	ASA 40A 81K4
68	814	1.30	24.53	ASA 40A 81K4
67	823	2.40	24.81	ASA 45A 81K4
59	947	1.15	28.31	ASA 40A 81K4
59	956	2.05	28.61	ASA 45A 81K4
53	1044	1.05	31.43	ASA 40A 81K4
51	1097	1.80	33.01	ASA 45A 81K4
46	1221	1.60	36.65	ASA 45A 81K4
44	1274	0.85	38.22	ASA 40A 81K4
43	1310	2.75	39.27	ASA 55A 81K4
39	1443	2.45	43.36	ASA 55A 81K4
38	1487	1.35	44.56	ASA 45A 81K4
34	1637	1.20	49.17	ASA 45A 81K4
32	1735	2.05	52.11	ASA 55A 81K4
31	1823	1.10	54.61	ASA 45A 81K4
29	1912	1.90	57.27	ASA 55A 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 - Series A



RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
27	2089	0.95	62.71	ASA 45A 81K4
26	2115	1.70	63.37	ASA 55A 81K4
24	2292	0.85	68.83	ASA 45A 81K4
23	2416	1.50	72.50	ASA 55A 81K4
23	2478	2.90	74.27	ASA 65A 81K4
21	2646	1.35	79.36	ASA 55A 81K4
20	2726	2.60	81.89	ASA 65A 81K4
19	2912	1.25	87.47	ASA 55A 81K4
18	3124	2.30	93.62	ASA 65A 81K4
17	3239	1.10	97.20	ASA 55A 81K4
16	3407	2.00	102.22	ASA 65A 81K4
15	3637	0.85	109.09	ASA 55A 81K4
15	3744	1.60	112.39	ASA 65A 81K4
12	4717	2.85	141.66	ASA 75C 81K4
11	5275	1.35	158.39	ASA 65C 81K4
10	5505	2.45	165.27	ASA 75C 81K4
8.9	6275	1.15	188.37	ASA 65C 81K4
8.7	6390	2.10	191.80	ASA 75C 81K4
7.7	7239	1.00	217.22	ASA 65C 81K4
7.5	7478	3.00	224.32	ASA 85C 81K4
7.4	7496	1.80	224.95	ASA 75C 81K4
6.7	8354	0.85	250.64	ASA 65C 81K4
6.5	8567	1.55	257.09	ASA 75C 81K4
6.4	8770	2.55	263.10	ASA 85C 81K4
5.7	9788	1.40	293.82	ASA 75C 81K4
5.6	10018	2.50	300.68	ASA 85C 81K4
5.2	10815	1.25	324.42	ASA 75C 81K4
4.9	11452	2.20	343.64	ASA 85C 81K4
4.4	12647	2.00	379.43	ASA 85C 81K4
4.3	12992	1.05	389.87	ASA 75C 81K4
3.9	14275	0.95	428.48	ASA 75C 81K4
3.7	15195	1.65	455.98	ASA 85C 81K4
3.5	15797	0.85	474.12	ASA 75C 81K4
3.3	16700	1.50	501.14	ASA 85C 81K4
3.0	18479	1.35	554.50	ASA 85C 81K4
2.6	21143	1.20	634.41	ASA 85C 81K4
2.4	23143	1.10	694.43	ASA 85C 81K4
2.2	25506	1.00	765.37	ASA 85C 81K4
2.0	28338	0.90	850.50	ASA 85C 81K4
1 HP nominal (1.2 HP actual with 460V)				
861	89	4.85	1.94	ASA 40E 81N4
724	106	4.05	2.31	ASA 40E 81N4
628	124	3.55	2.67	ASA 40E 81N4
544	142	3.05	3.08	ASA 40E 81N4
490	159	2.75	3.42	ASA 40E 81N4
478	159	4.85	3.50	ASA 50E 81N4
419	186	4.25	4.00	ASA 50E 81N4
403	186	2.30	4.15	ASA 40E 81N4
379	204	3.85	4.42	ASA 50E 81N4
365	212	2.05	4.58	ASA 40E 81N4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
329	230	1.75	5.09	ASA 40E 81N4
315	239	3.00	5.31	ASA 50E 81N4
287	266	2.60	5.83	ASA 50E 81N4
286	266	1.40	5.85	ASA 40E 81N4
279	274	4.50	6.00	ASA 60E 81N4
261	292	1.20	6.42	ASA 40E 81N4
259	292	2.15	6.45	ASA 50E 81N4
237	319	3.35	7.08	ASA 60E 81N4
236	319	1.00	7.09	ASA 40E 81N4
227	336	1.70	7.38	ASA 50E 81N4
224	336	3.15	7.46	ASA 40A 81N4
216	354	2.85	7.75	ASA 60E 81N4
207	372	1.45	8.08	ASA 50E 81N4
196	389	2.35	8.55	ASA 60E 81N4
188	407	1.20	8.91	ASA 50E 81N4
187	407	2.65	8.93	ASA 40A 81N4
171	443	1.80	9.77	ASA 60E 81N4
169	451	0.95	9.90	ASA 50E 81N4
157	487	1.55	10.67	ASA 60E 81N4
157	487	2.20	10.68	ASA 40A 81N4
143	531	1.25	11.73	ASA 60E 81N4
131	584	1.85	12.81	ASA 40A 81N4
112	681	2.90	14.94	ASA 45A 81N4
110	690	1.55	15.18	ASA 40A 81N4
95	805	2.45	17.70	ASA 45A 81N4
94	814	1.35	17.89	ASA 40A 81N4
80	947	2.10	20.86	ASA 45A 81N4
79	965	1.10	21.28	ASA 40A 81N4
68	1115	1.00	24.53	ASA 40A 81N4
67	1124	1.75	24.81	ASA 45A 81N4
59	1283	0.85	28.31	ASA 40A 81N4
59	1301	1.50	28.61	ASA 45A 81N4
56	1363	2.60	30.07	ASA 55A 81N4
51	1496	1.30	33.01	ASA 45A 81N4
49	1558	2.30	34.36	ASA 55A 81N4
46	1664	1.20	36.65	ASA 45A 81N4
43	1788	2.00	39.27	ASA 55A 81N4
39	1974	1.80	43.36	ASA 55A 81N4
38	2027	1.00	44.56	ASA 45A 81N4
34	2230	0.90	49.17	ASA 45A 81N4
32	2372	1.50	52.11	ASA 55A 81N4
29	2602	1.40	57.27	ASA 55A 81N4
29	2611	2.75	57.50	ASA 65A 81N4
26	2876	1.25	63.37	ASA 55A 81N4
25	3080	2.30	67.82	ASA 65A 81N4
23	3292	1.10	72.50	ASA 55A 81N4
23	3372	2.10	74.27	ASA 65A 81N4
21	3602	1.00	79.36	ASA 55A 81N4
20	3717	1.95	81.89	ASA 65A 81N4
19	3974	0.90	87.47	ASA 55A 81N4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
18	4257	1.70	93.62	ASA 65A 81N4
17	4416	0.85	97.20	ASA 55A 81N4
16	4646	1.50	102.22	ASA 65A 81N4
15	5106	1.20	112.39	ASA 65A 81N4
10	7514	1.80	165.27	ASA 75C 81N4
10	7531	2.95	165.68	ASA 85C 81N4
8.9	8558	0.85	188.37	ASA 65C 81N4
8.7	8717	1.55	191.80	ASA 75C 81N4
8.7	8779	2.55	193.30	ASA 85C 81N4
7.5	10195	2.45	224.32	ASA 85C 81N4
7.4	10222	1.30	224.95	ASA 75C 81N4
6.5	11682	1.15	257.09	ASA 75C 81N4
6.4	11956	2.10	263.10	ASA 85C 81N4
5.7	13355	1.00	293.82	ASA 75C 81N4
5.6	13664	1.85	300.68	ASA 85C 81N4
5.2	14744	0.95	324.42	ASA 75C 81N4
4.9	15611	1.60	343.64	ASA 85C 81N4
4.4	17240	1.45	379.43	ASA 85C 81N4
3.7	20718	1.20	455.98	ASA 85C 81N4
3.3	22771	1.10	501.14	ASA 85C 81N4
3.0	25196	1.00	554.50	ASA 85C 81N4
2.6	28824	0.90	634.41	ASA 85C 81N4
1.5 HP nominal (1.7 HP actual with 460V)				
1025	106	3.95	1.65	ASA 40E 91S4
870	124	3.35	1.94	ASA 40E 91S4
732	150	2.80	2.31	ASA 40E 91S4
648	168	4.50	2.61	ASA 50E 91S4
635	177	2.45	2.67	ASA 40E 91S4
552	204	3.85	3.06	ASA 50E 91S4
550	204	2.10	3.08	ASA 40E 91S4
495	221	1.90	3.42	ASA 40E 91S4
483	230	3.35	3.50	ASA 50E 91S4
423	266	2.95	4.00	ASA 50E 91S4
407	274	1.60	4.15	ASA 40E 91S4
398	283	4.95	4.25	ASA 60E 91S4
383	292	2.65	4.42	ASA 50E 91S4
369	301	1.40	4.58	ASA 40E 91S4
350	319	4.35	4.83	ASA 60E 91S4
332	336	1.20	5.09	ASA 40E 91S4
319	354	2.05	5.31	ASA 50E 91S4
310	363	3.60	5.46	ASA 60E 91S4
290	381	1.80	5.83	ASA 50E 91S4
289	389	1.00	5.85	ASA 40E 91S4
282	398	3.10	6.00	ASA 60E 91S4
264	425	0.85	6.42	ASA 40E 91S4
262	425	1.50	6.45	ASA 50E 91S4
239	469	2.35	7.08	ASA 60E 91S4
229	487	1.20	7.38	ASA 50E 91S4
218	513	2.00	7.75	ASA 60E 91S4
209	531	1.00	8.08	ASA 50E 91S4

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



Gearmotor Selection Tables - Series A

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
198	566	1.65	8.55	ASA 60E 91S4
195	575	3.40	8.70	ASA 45A 91S4
173	646	1.25	9.77	ASA 60E 91S4
163	690	2.85	10.41	ASA 45A 91S4
159	699	1.10	10.67	ASA 60E 91S4
144	770	0.85	11.73	ASA 60E 91S4
136	823	2.40	12.46	ASA 45A 91S4
113	982	2.00	14.94	ASA 45A 91S4
96	1168	1.70	17.70	ASA 45A 91S4
89	1248	2.85	18.94	ASA 55A 91S4
81	1372	1.45	20.86	ASA 45A 91S4
77	1460	2.45	22.09	ASA 55A 91S4
68	1637	1.20	24.81	ASA 45A 91S4
66	1690	2.10	25.64	ASA 55A 91S4
59	1885	1.05	28.61	ASA 45A 91S4
56	1982	1.80	30.07	ASA 55A 91S4
51	2177	0.90	33.01	ASA 45A 91S4
49	2266	1.60	34.36	ASA 55A 91S4
46	2416	0.85	36.65	ASA 45A 91S4
43	2593	1.40	39.27	ASA 55A 91S4
42	2682	2.65	40.73	ASA 65A 91S4
39	2859	1.25	43.36	ASA 55A 91S4
37	3053	2.35	46.32	ASA 65A 91S4
32	3434	1.05	52.11	ASA 55A 91S4
32	3452	2.10	52.34	ASA 65A 91S4
30	3779	0.95	57.27	ASA 55A 91S4
29	3788	1.90	57.50	ASA 65A 91S4
27	4177	0.85	63.37	ASA 55A 91S4
25	4469	1.60	67.82	ASA 65A 91S4
24	7071	2.90	69.63	ASA 75A 91S4
23	4894	1.45	74.27	ASA 65A 91S4
21	5399	1.35	81.89	ASA 65A 91S4
21	8257	2.50	81.22	ASA 75A 91S4
19	9018	2.30	88.76	ASA 75A 91S4
18	6177	1.15	93.62	ASA 65A 91S4
17	6744	1.05	102.22	ASA 65A 91S4
17	9921	1.90	97.66	ASA 75A 91S4
12	9319	2.70	141.33	ASA 85C 91S4
10	10894	1.25	165.27	ASA 75C 91S4
10	10921	2.30	165.68	ASA 85C 91S4
8.8	12647	1.05	191.80	ASA 75C 91S4
8.8	12744	1.95	193.30	ASA 85C 91S4
7.5	14833	0.90	224.95	ASA 75C 91S4
7.5	14788	1.70	224.32	ASA 85C 91S4
6.4	17346	1.45	263.10	ASA 85C 91S4
5.6	19824	1.25	300.68	ASA 85C 91S4
4.9	22656	1.10	343.64	ASA 85C 91S4
4.5	25019	1.00	379.43	ASA 85C 91S4
3.7	30063	0.85	455.98	ASA 85C 91S4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
2 HP nominal (2.3 HP actual with 460V)				
1491	150	2.90	1.65	ASA 40E 91L4
1265	177	2.45	1.94	ASA 40E 91L4
1064	204	2.10	2.31	ASA 40E 91L4
1036	150	4.40	1.65	ASA 50E 91L4
922	239	1.80	2.67	ASA 40E 91L4
884	168	3.95	1.93	ASA 50E 91L4
799	274	1.55	3.08	ASA 40E 91L4
757	204	3.85	2.25	ASA 50E 91L4
720	301	1.40	3.42	ASA 40E 91L4
653	230	3.35	2.61	ASA 50E 91L4
592	372	1.15	4.15	ASA 40E 91L4
556	274	2.85	3.06	ASA 50E 91L4
537	407	1.05	4.58	ASA 40E 91L4
533	283	4.75	3.20	ASA 60E 91L4
487	310	2.50	3.50	ASA 50E 91L4
483	451	0.90	5.09	ASA 40E 91L4
465	327	4.20	3.67	ASA 60E 91L4
426	354	2.20	4.00	ASA 50E 91L4
401	381	3.65	4.25	ASA 60E 91L4
394	389	5.35	4.33	ASA 55S 91L4
386	398	2.00	4.42	ASA 50E 91L4
353	434	3.20	4.83	ASA 60E 91L4
324	469	4.70	5.26	ASA 55S 91L4
321	478	1.55	5.31	ASA 50E 91L4
313	487	4.45	5.44	ASA 70E 91L4
312	487	2.70	5.46	ASA 60E 91L4
292	522	1.30	5.83	ASA 50E 91L4
284	540	2.30	6.00	ASA 60E 91L4
280	540	4.35	6.08	ASA 70E 91L4
266	575	4.10	6.40	ASA 55S 91L4
264	575	1.10	6.45	ASA 50E 91L4
246	620	3.25	6.92	ASA 70E 91L4
241	628	1.75	7.08	ASA 60E 91L4
231	655	0.90	7.38	ASA 50E 91L4
229	664	3.60	7.43	ASA 55S 91L4
225	681	2.80	7.58	ASA 70E 91L4
220	690	1.45	7.75	ASA 60E 91L4
199	761	1.20	8.55	ASA 60E 91L4
197	770	3.15	8.66	ASA 55S 91L4
196	779	2.55	8.70	ASA 45A 91L4
193	788	2.10	8.85	ASA 70E 91L4
176	867	1.80	9.67	ASA 70E 91L4
174	876	0.95	9.77	ASA 60E 91L4
168	903	2.75	10.15	ASA 55S 91L4
164	929	2.10	10.41	ASA 45A 91L4
160	947	1.45	10.64	ASA 70E 91L4
144	1053	2.35	11.84	ASA 55S 91L4
137	1115	1.80	12.46	ASA 45A 91L4
124	1230	2.05	13.74	ASA 55S 91L4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
123	1239	2.90	13.86	ASA 55A 91L4
119	1283	4.40	14.36	ASA 65S 91L4
114	1336	1.50	14.94	ASA 45A 91L4
106	1443	1.75	16.12	ASA 55S 91L4
105	1443	2.50	16.15	ASA 55A 91L4
100	1531	3.70	17.12	ASA 65S 91L4
96	1584	1.25	17.70	ASA 45A 91L4
93	1646	1.55	18.42	ASA 55S 91L4
90	1690	2.10	18.94	ASA 55A 91L4
87	1752	3.25	19.62	ASA 65S 91L4
82	1859	1.05	20.86	ASA 45A 91L4
81	1876	1.35	21.05	ASA 55S 91L4
77	1974	1.80	22.09	ASA 55A 91L4
75	2027	2.80	22.74	ASA 65S 91L4
73	2080	1.25	23.25	ASA 55S 91L4
69	2213	0.90	24.81	ASA 45A 91L4
69	2204	4.65	24.66	ASA 75S 91L4
66	2292	1.55	25.64	ASA 55A 91L4
66	2310	2.50	25.86	ASA 65S 91L4
61	2496	1.05	27.94	ASA 55S 91L4
60	2531	4.05	28.40	ASA 75S 91L4
58	2611	2.20	29.22	ASA 65S 91L4
57	2682	1.35	30.07	ASA 55A 91L4
56	2744	0.95	30.70	ASA 55S 91L4
56	2735	2.60	30.67	ASA 65A 91L4
54	2832	3.65	31.77	ASA 75S 91L4
53	2867	2.00	32.10	ASA 65S 91L4
50	3036	0.85	33.97	ASA 55S 91L4
50	3071	1.20	34.36	ASA 55A 91L4
48	3133	2.30	35.14	ASA 65A 91L4
47	3230	3.15	36.15	ASA 75S 91L4
45	3381	1.65	37.86	ASA 65S 91L4
43	3505	1.05	39.27	ASA 55A 91L4
43	3540	2.65	39.60	ASA 75S 91L4
42	3637	1.95	40.73	ASA 65A 91L4
41	3699	1.40	41.46	ASA 65S 91L4
39	3867	0.95	43.36	ASA 55A 91L4
37	4080	1.15	45.72	ASA 65S 91L4
37	4133	1.75	46.32	ASA 65A 91L4
37	4124	2.05	46.20	ASA 75S 91L4
34	4505	1.70	50.48	ASA 75S 91L4
33	4664	0.90	52.27	ASA 65S 91L4
33	4673	1.55	52.34	ASA 65A 91L4
31	4956	1.40	55.55	ASA 75S 91L4
30	5133	1.40	57.50	ASA 65A 91L4
25	6053	1.20	67.82	ASA 65A 91L4
23	6629	1.10	74.27	ASA 65A 91L4
21	7310	1.00	81.89	ASA 65A 91L4
18	8354	0.85	93.62	ASA 65A 91L4
16	9540	1.40	69.63	ASA 75A 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 - Series A



RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
174	6425	1.55	10.08	ASA 75S 161M4
167	6673	2.90	10.48	ASA 85S 161M4
154	7230	1.85	11.36	ASA 75A 161M4
148	7549	1.35	11.85	ASA 75S 161M4
146	7646	2.65	12.01	ASA 85S 161M4
134	8354	1.60	13.12	ASA 75A 161M4
126	8823	2.30	13.86	ASA 85S 161M4
124	8965	1.15	14.08	ASA 75S 161M4
116	9593	2.60	15.07	ASA 85A 161M4
115	9682	1.40	15.21	ASA 75A 161M4
110	10133	1.00	15.92	ASA 75S 161M4
109	10266	2.00	16.13	ASA 85S 161M4
102	10939	2.30	17.18	ASA 85A 161M4
99	11293	1.20	17.73	ASA 75A 161M4
97	11549	0.90	18.14	ASA 75S 161M4
92	12089	1.70	18.99	ASA 85S 161M4
89	12540	2.00	19.69	ASA 85A 161M4
84	13266	1.05	20.84	ASA 75A 161M4
82	13594	1.55	21.35	ASA 85S 161M4
77	14461	1.75	22.71	ASA 85A 161M4
72	15417	1.35	24.21	ASA 85S 161M4
71	15762	0.85	24.75	ASA 75A 161M4
66	16833	1.50	26.43	ASA 85A 161M4
62	17983	1.10	28.24	ASA 85S 161M4
56	19966	1.05	31.36	ASA 85S 161M4
56	19824	1.30	31.13	ASA 85A 161M4
51	21939	0.95	34.46	ASA 85S 161M4
50	22284	1.15	35.00	ASA 85A 161M4
44	25276	1.00	39.69	ASA 85A 161M4
38	29479	0.85	46.30	ASA 85A 161M4
20 HP nominal (24 HP actual)				
1110	1372	2.25	1.58	ASA 80E 181L4
973	1566	2.10	1.80	ASA 80E 181L4
849	1788	1.90	2.06	ASA 80E 181L4
736	2062	1.70	2.38	ASA 80E 181L4
633	2407	1.50	2.77	ASA 80E 181L4
537	2832	1.30	3.26	ASA 80E 181L4
478	3186	1.20	3.67	ASA 80E 181L4
421	3611	1.05	4.16	ASA 80E 181L4
396	3841	2.15	4.43	ASA 75S 161L4
328	4646	1.95	5.35	ASA 75S 161L4
325	4673	0.95	5.38	ASA 80E 161L4
313	4859	3.10	5.59	ASA 85S 161L4
271	5611	1.70	6.46	ASA 75S 161L4
266	5717	2.85	6.58	ASA 85S 161L4
235	6478	1.50	7.46	ASA 75S 161L4
226	6744	2.60	7.76	ASA 85S 161L4
225	6761	2.00	7.78	ASA 75A 161L4
203	7514	1.30	8.65	ASA 75S 161L4
191	7983	2.35	9.20	ASA 85S 161L4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
186	8160	1.65	9.40	ASA 75A 161L4
174	8753	1.15	10.08	ASA 75S 161L4
167	9098	2.15	10.48	ASA 85S 161L4
162	9372	2.65	10.79	ASA 85A 161L4
154	9859	1.35	11.36	ASA 75A 161L4
148	10293	1.00	11.85	ASA 75S 161L4
146	10425	1.95	21.01	ASA 85S 161L4
138	11054	2.25	12.73	ASA 85A 161L4
134	11390	1.20	13.12	ASA 75A 161L4
126	12027	1.70	13.86	ASA 85S 161L4
124	12222	0.85	14.08	ASA 75S 161L4
116	13089	1.90	15.07	ASA 85A 161L4
115	13204	1.05	15.21	ASA 75A 161L4
109	14001	1.45	16.13	ASA 85S 161L4
102	14921	1.70	17.18	ASA 85A 161L4
99	15399	0.90	17.73	ASA 75A 161L4
92	16488	1.25	18.99	ASA 85S 161L4
89	17098	1.45	19.69	ASA 85A 161L4
82	18541	1.15	21.35	ASA 85S 161L4
77	19718	1.30	22.71	ASA 85A 161L4
72	21028	1.00	24.21	ASA 85S 161L4
66	22957	1.10	26.43	ASA 85A 161L4
56	27028	0.95	31.13	ASA 85A 161L4
50	30391	0.85	35.00	ASA 85A 161L4
25 HP nominal (30 HP actual)				
1113	1682	1.85	1.58	ASA 80E 181M4
977	1920	1.70	1.80	ASA 80E 181M4
852	2204	1.55	2.06	ASA 80E 181M4
739	2540	1.40	2.38	ASA 80E 181M4
635	2956	1.25	2.77	ASA 80E 181M4
539	3478	1.10	3.26	ASA 80E 181M4
479	3912	0.95	3.67	ASA 80E 181M4
423	4434	0.85	4.16	ASA 80E 181M4
314	5965	2.50	5.59	ASA 85S 181M4
267	7027	2.35	6.58	ASA 85S 181M4
*226	8310	1.60	7.78	ASA 75A 181M4
226	8284	2.10	7.76	ASA 85S 181M4
192	9779	2.50	9.16	ASA 75A 181M4
191	9815	1.90	9.20	ASA 85S 181M4
*187	10036	1.35	9.40	ASA 75A 181M4
168	11186	1.75	10.48	ASA 85S 181M4
163	11514	2.20	10.79	ASA 75A 181M4
*155	12125	1.10	11.36	ASA 75A 181M4
146	12815	1.60	12.01	ASA 85S 181M4
138	13585	1.85	12.73	ASA 75A 181M4
*134	14001	0.95	13.12	ASA 75A 181M4
127	14788	1.40	13.86	ASA 85S 181M4
117	16089	1.55	15.07	ASA 75A 181M4
*116	16231	0.85	15.21	ASA 75A 181M4
109	17213	1.20	16.13	ASA 85S 181M4

RPM	In-lbs.	SF ⁽¹⁾	Ratio	Model
102	18337	1.40	17.18	ASA 75A 181M4
93	20267	1.05	18.99	ASA 85S 181M4
89	21010	1.20	19.69	ASA 75A 181M4
82	22789	0.90	21.35	ASA 85S 181M4
77	24240	1.05	22.71	ASA 75A 181M4
67	28214	0.90	26.43	ASA 75A 181M4
30 HP nominal (36 HP actual)				
*1110	2009	1.55	1.58	ASA 80E 181L4
*973	2292	1.40	1.80	ASA 80E 181L4
*849	2628	1.30	2.06	ASA 80E 181L4
*736	3027	1.15	2.38	ASA 80E 181L4
*633	3531	1.05	2.77	ASA 80E 181L4
*537	4151	0.90	3.26	ASA 80E 181L4
313	7124	2.10	5.59	ASA 85S 181L4
266	8381	1.95	6.58	ASA 85S 181L4
226	9885	1.80	7.76	ASA 85S 181L4
191	11709	1.60	9.20	ASA 85S 181L4
191	11673	2.10	9.16	ASA 85A 181L4
167	13346	1.45	10.48	ASA 85S 181L4
162	13744	1.85	10.79	ASA 85A 181L4
146	15293	1.35	12.01	ASA 85S 181L4
138	16213	1.55	12.73	ASA 85A 181L4
126	17647	1.15	13.86	ASA 85S 181L4
116	19196	1.30	15.07	ASA 85A 181L4
109	20541	1.00	16.13	ASA 85S 181L4
102	21886	1.15	17.18	ASA 85A 181L4
92	24187	0.85	18.99	ASA 85S 181L4
89	25072	1.00	19.69	ASA 85A 181L4
77	28922	0.90	22.71	ASA 85A 181L4

* 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 - Series A

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 agitator designs 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	Model
Size 40 E			
0.81	319	5.95	*E
0.97	345	5.77	*E
1.16	381	5.54	*E
1.39	407	5.27	*E
1.65	425	4.99	*E
1.94	425	4.72	*E
2.31	425	4.41	*E
2.67	425	4.16	*E
3.08	425	3.73	*E
3.42	425	3.35	*E
4.15	425	2.76	*E
4.58	425	2.49	E
5.09	398	2.09	E
5.85	372	1.70	E
6.42	345	1.45	E
7.09	310	1.18	E
7.90	274	0.94	E
8.89	239	0.72	E
Size 50 E			
0.82	478	8.82	*E
1.00	522	8.52	*E
1.22	575	8.14	*E
1.41	611	7.82	*E
1.65	646	7.46	*E
1.93	681	7.05	*E
2.25	770	6.65	*E
2.61	770	6.26	*E
3.06	770	5.83	*E
3.50	770	5.48	*E
4.00	770	5.14	E
4.42	770	4.71	E
5.31	717	3.65	E
5.83	673	3.12	E
6.45	620	2.59	E
7.38	566	2.07	E

Ratio	in-lbs	HP	Model
8.08	522	1.76	E
8.91	469	1.42	E
9.90	407	1.11	E
11.11	345	0.84	E
Size 40 A			
7.46	1062	1.01	*A
8.93	1062	1.01	*A
10.68	1062	1.01	*A
12.81	1062	1.01	*A
15.18	1062	1.01	*A
17.89	1062	1.01	*A
21.28	1062	1.01	*A
24.53	1062	1.01	*A
28.31	1062	1.01	*A
31.43	1062	0.91	A
38.22	1062	0.75	A
42.17	1062	0.68	A
46.84	1062	0.62	A
53.78	1062	0.54	A
59.03	1062	0.48	A
65.24	1062	0.44	A
72.68	1062	0.39	A
81.78	1062	0.35	A
Size 60 E			
0.84	1000	20.28	*E
1.00	1089	19.62	*E
1.19	1186	18.85	*E
1.41	1274	17.97	*E
1.69	1354	16.98	*E
2.04	1381	15.86	*E
2.33	1381	15.06	*E
2.68	1381	13.88	*E
3.20	1345	11.36	*E
3.67	1363	10.04	E
4.25	1381	8.76	E
4.83	1381	7.71	E

Ratio	in-lbs	HP	Model
5.46	1292	6.38	E
6.00	1221	5.47	E
7.08	1071	4.09	E
7.75	1000	3.49	E
8.55	912	2.87	E
9.77	797	2.20	E
10.67	743	1.88	E
11.73	655	1.50	E
Size 45 A			
8.70	1947	6.03	*A
10.41	1947	5.04	A
12.46	1947	4.21	A
14.94	1947	3.51	A
17.70	1947	2.96	A
20.86	1947	2.52	A
24.81	1947	2.12	A
28.61	1947	1.84	A
33.01	1947	1.60	A
36.65	1947	1.43	A
44.56	1947	1.18	A
49.17	1947	1.07	A
54.61	1947	0.97	A
62.71	1947	0.83	A
68.83	1947	0.76	A
76.07	1947	0.68	A
84.75	1947	0.62	A
95.35	1947	0.55	A
Size 70 E			
0.85	1566	31.39	*E
1.02	1655	30.25	*E
1.24	1805	28.91	*E
1.43	1920	27.75	*E
1.66	2036	26.47	*E
1.93	2142	25.09	*E
2.27	2239	26.54	*E
2.70	2319	21.94	*E

Ratio	in-lbs	HP	Model
3.05	2363	20.77	E
3.47	2398	18.61	E
4.15	2142	13.95	E
4.72	2151	12.30	E
5.44	2159	10.69	E
6.08	2345	10.42	E
6.92	2009	7.82	E
7.58	1867	6.65	E
8.85	1646	5.03	E
9.67	1531	4.28	E
10.64	1372	3.49	E
Size 55 A,CS			
4.33	2053	12.79	*S
5.26	2213	11.32	*S
6.40	2345	9.87	*S
7.43	2381	8.65	*S
8.07	3540	11.83	*A
8.66	2416	7.52	*S
9.82	3540	9.72	*A
10.15	2451	6.50	S
11.84	2469	5.62	S
11.94	3540	7.99	*A
13.74	2487	4.88	S
13.86	3540	6.89	A
16.12	2505	4.20	S
16.15	3540	5.91	A
18.42	2513	3.69	S
18.94	3540	5.04	A
21.05	2531	3.25	S
22.09	3540	4.32	A
23.25	2540	2.95	S
25.64	3540	3.73	A
27.94	2558	2.47	S
30.07	3540	3.18	A
30.70	2567	2.25	S
33.97	2575	2.04	S

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

Speed Reducer Selection Tables - Series A



Ratio	in-lbs	HP	Model
34.36	3540	2.78	A
38.87	2575	1.78	S
39.27	3540	2.43	A
42.19	3540	2.27	C
42.54	2575	1.64	S
43.36	3540	2.20	A
46.89	2319	1.34	S
50.51	3540	1.89	C
52.11	3540	1.84	A
52.11	1982	1.03	S
57.27	3540	1.66	A
58.48	1655	0.76	S
60.43	3540	1.58	C
63.37	3540	1.50	A
72.48	3540	1.31	C
72.50	3540	1.31	A
79.36	3540	1.21	A
85.86	3540	1.11	C
87.47	3540	1.09	A
97.20	3540	0.98	A
101.18	3540	0.94	C
109.09	3089	0.76	A
120.33	3540	0.79	C
138.76	3540	0.68	C
160.11	3540	0.59	C
177.79	3540	0.54	C
216.15	3540	0.44	C
238.50	3540	0.40	C
264.91	3540	0.36	C
304.21	3540	0.31	C
333.90	3540	0.28	C
368.99	3540	0.25	C
411.09	3540	0.23	C
462.55	3540	0.20	C
Size 80E			
0.96	2451	46.08	*E
1.13	2664	44.47	*E
1.33	2867	42.59	*E
1.58	3062	40.49	*E
1.80	3204	38.76	*E
2.06	3345	36.88	*E
2.38	3478	34.87	*E
2.77	3593	32.69	E
3.26	3673	30.37	E
3.67	3699	27.24	E
4.16	3744	24.26	E
4.85	3213	17.88	E
5.38	4239	21.21	E
5.92	4071	18.53	E
7.08	3487	13.28	E

Ratio	in-lbs	HP	Model
8.00	3009	10.15	E
8.75	2761	8.52	E
10.23	2292	6.03	E
Size 65 A, C, S			
4.51	5027	30.11	*S
5.35	5160	25.99	*S
6.35	5266	22.35	*S
7.56	5354	19.11	*S
8.07	7080	23.67	*A
9.05	5443	16.21	*S
9.58	7080	19.93	*A
10.93	5514	13.6	S
11.38	7080	16.78	*A
12.48	5549	12	S
13.55	7080	14.09	A
14.36	5584	10.5	S
16.22	7080	11.77	A
17.12	5629	8.88	S
19.58	7080	9.75	A
19.62	5655	7.78	S
22.36	7080	8.54	A
22.74	5682	6.75	S
25.72	7080	7.43	A
25.86	5699	5.95	S
29.22	5717	5.27	S
30.67	7080	6.22	A
32.1	5726	4.81	S
35.14	7080	5.43	A
37.86	5460	3.89	S
40.73	7080	4.69	A
41.46	5098	3.31	S
45.72	4655	2.75	S
46.32	7080	4.12	A
52.27	4115	2.13	S
52.34	7080	3.65	A
57.07	3770	1.78	S
57.5	7080	3.33	A
62.74	2383	1.41	S
66.05	7080	2.9	C
67.82	7080	2.82	A
74.27	7080	2.57	A
79.06	7080	2.41	C
81.89	7080	2.33	A
93.62	7080	2.04	A
94.6	7080	2.02	C
102.22	6753	1.78	A
112.39	5885	1.41	A
113.46	7080	1.69	C
134.41	7080	1.42	C
158.39	7080	1.21	C

Ratio	in-lbs	HP	Model
188.37	7080	1.02	C
217.22	7080	0.89	C
250.64	7080	0.76	C
278.32	7080	0.68	C
338.37	7080	0.56	C
373.35	7080	0.51	C
414.7	7080	0.46	C
476.22	7080	0.4	C
522.69	7080	0.36	C
577.61	7080	0.34	C
643.52	7080	0.3	C
724.07	7080	0.27	C
Size 75 A, C, D, S			
4.43	8169	49.78	*S
5.35	8983	45.30	*S
6.46	9425	39.36	*S
7.46	9567	34.58	*S
7.78	13275	46.00	*A
8.65	9682	30.20	*S
9.40	13275	38.09	*A
10.08	9788	26.18	S
11.36	13275	31.53	*A
11.85	9885	22.50	S
13.12	13275	27.30	*A
14.08	9974	19.11	S
15.21	13275	23.55	A
15.92	10027	16.99	S
17.73	13275	20.20	A
18.14	10071	14.98	S
20.84	13275	17.19	A
21.67	10169	12.66	S
24.66	10204	11.16	S
24.75	13275	14.47	A
27.98	13275	12.79	A
28.40	10239	9.72	S
31.77	10231	8.69	S
31.89	13275	11.22	A
36.15	10009	7.47	S
38.10	13275	9.40	A
39.60	9293	6.33	S
43.36	13275	8.26	A
46.20	8275	4.83	S
49.93	13275	7.17	A
50.48	7620	4.06	S
55.55	6868	3.34	S
55.86	13275	6.41	A
60.40	13275	5.93	C
63.57	13275	5.63	A
69.63	13275	5.14	A
73.45	13275	4.88	C

Ratio	in-lbs	HP	Model
81.22	13275	4.41	A
88.76	13275	4.04	A
89.34	13275	4.01	C
97.66	12071	3.34	A
103.70	13275	3.45	C
120.84	13275	2.96	C
141.66	13275	2.52	C
165.24	13275	2.17	C
191.80	13275	1.86	C
224.95	13275	1.60	C
257.09	13275	1.39	C
293.82	13275	1.22	C
315.66	13275	1.14	D
324.42	13275	1.10	C
377.86	13275	0.95	D
389.87	13275	0.91	C
428.48	13275	0.83	C
452.10	13275	0.79	D
474.12	13275	0.75	C
542.25	13275	0.66	D
542.43	13275	0.66	C
593.76	13275	0.60	C
642.36	13275	0.56	D
654.41	13275	0.55	C
727.20	13275	0.50	C
756.99	13275	0.47	D
816.16	13275	0.44	C
900.28	13275	0.40	D
1038.16	13275	0.35	D
1197.87	13275	0.30	D
1330.14	13275	0.27	D
1617.13	13275	0.23	D
1784.33	13275	0.20	D
1981.94	13275	0.17	D
2275.96	13275	0.16	D
2498.07	13275	0.15	D
2760.56	13275	0.13	D
3075.54	13275	0.12	D
3460.53	13275	0.11	D
Size 85 A, C, D, S			
5.59	14886	71.84	*S
6.58	16213	66.41	*S
7.76	17355	60.28	*S
9.16	24780	71.84	*A
9.20	18505	54.27	*S
10.48	19346	49.78	*S
10.79	24780	61.94	*A
12.01	19983	44.87	*S
12.73	24780	52.51	*A
13.86	20143	39.21	S

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



Speed Reducer Selection Tables - Series A

Ratio	in-lbs	HP	Model
15.07	24780	44.35	*A
16.13	20284	33.93	S
17.18	24780	38.90	A
18.99	20426	29.02	S
19.69	24780	33.95	A
21.35	20505	25.91	S
22.71	24780	29.44	A
24.21	20576	22.92	S
26.43	24780	25.29	A
28.24	19160	18.30	S
31.13	24780	21.47	A
31.36	20621	17.74	S
34.46	20665	16.17	S
35.00	24780	19.10	A
39.69	24780	16.84	A
41.25	19541	12.78	S
46.30	24780	14.44	A
46.59	16744	9.70	S
50.96	15319	8.11	S
51.40	24780	13.01	A
56.48	24780	11.84	A
59.58	13010	5.89	S
67.61	24780	9.88	A
70.64	24780	9.47	C
76.36	24780	8.76	A
83.52	24780	8.01	A
85.91	24780	7.78	C
97.66	21329	5.89	A
104.48	24780	6.40	C
121.28	24780	5.51	C
141.33	24780	4.73	C
165.68	24780	4.04	C
193.30	24780	3.46	C
224.32	24780	2.98	C
263.10	24780	2.53	C
300.68	24780	2.23	C
343.64	24780	1.94	C
369.18	24780	1.81	D
379.43	24780	1.76	C
441.93	24780	1.52	D
455.98	24780	1.46	C
501.14	24780	1.33	C
528.76	24780	1.26	D
554.50	24780	1.21	C
634.19	24780	1.06	D
634.41	24780	1.06	C
694.43	24780	0.97	C
751.28	24780	0.89	D
765.37	24780	0.87	C
850.50	24780	0.79	C

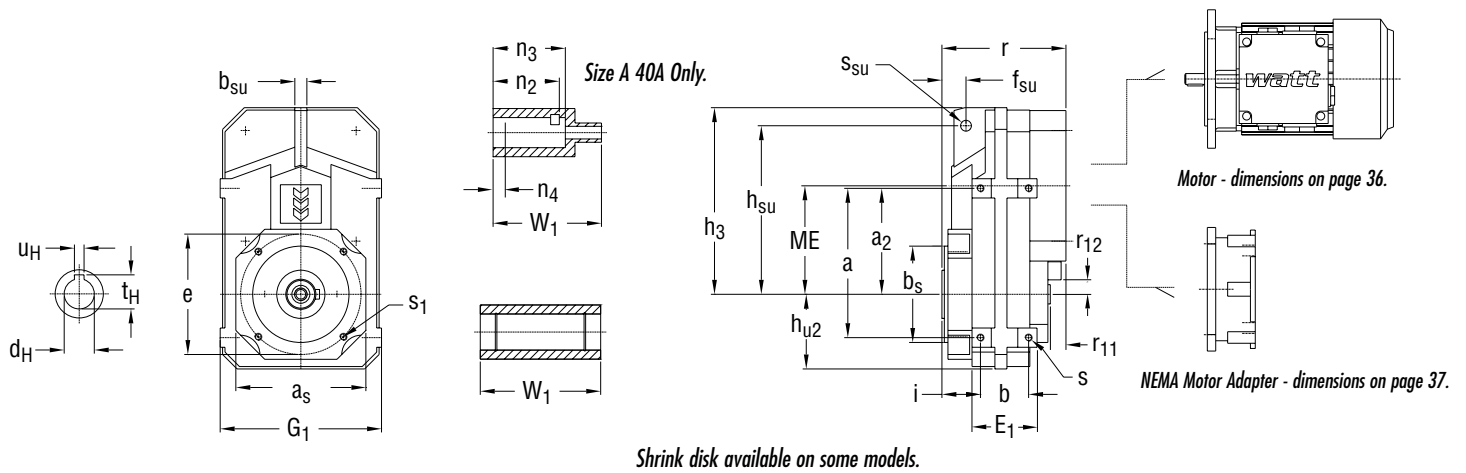
Ratio	in-lbs	HP	Model
885.34	24780	0.75	D
954.55	24780	0.70	C
1052.92	24780	0.63	D
1214.18	24780	0.55	D
1400.98	24780	0.48	D
1555.67	24780	0.43	D
1891.32	24780	0.35	D
2086.88	24780	0.32	D
2317.98	24780	0.30	D
2661.86	24780	0.25	D
2921.63	24780	0.23	D
3228.62	24780	0.20	D
3597.01	24780	0.19	D
4047.27	24780	0.16	D

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

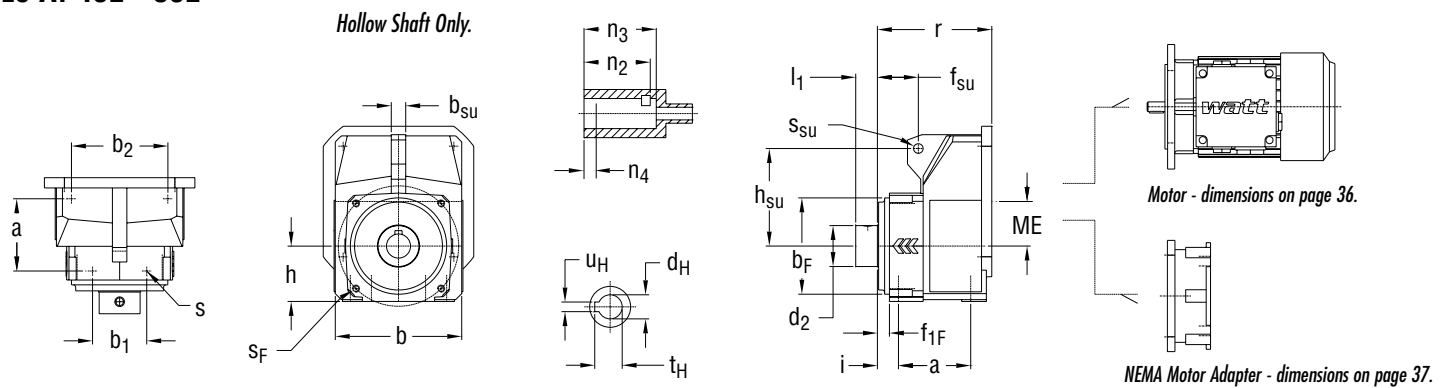
Schematics - Series A

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

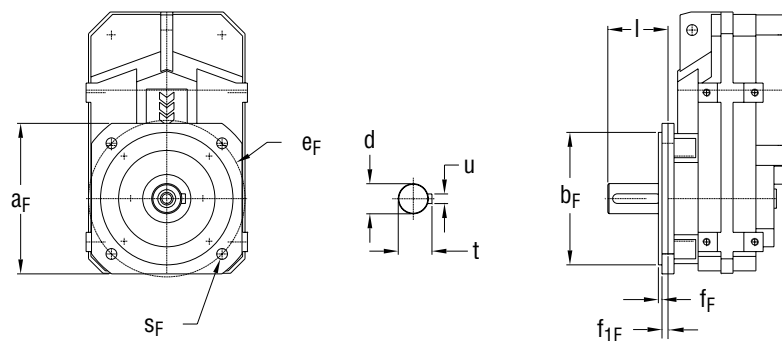
Size A. 40 - 85 A,C,D,S



Size A. 40E - 80E



Output Shaft with Optional Output Flange



A. 40 - 85 A,C,D,S

	a	a ₂	a ₅	b	b ₅	b _{su}	e	E ₁	f _{su}	G ₁	h ₃	h _{su}	h _{u2}	i	ME	r	r ₁₁	r ₁₂	s ⁽¹⁾	s ₁ ⁽¹⁾	s _{su}
A. 40A	4.88	3.46	4.25	1.57	3.15	0.4	3.94	2.1	0.8	5.3	6.10	5.5	2.4	1.3	3.55	4.06	0.35	0.47	m6 x 10	m6 x 12	0.35
A. 45A	5.51	3.74	3.94	2.2	3.15	0.5	3.94	2.8	1.2	5.9	6.81	6.2	2.9	1.3	4.09	4.8	0.69	0.98	m8 x 12	m6 x 12	0.43
A. 55A	6.18	4.13	5.12	2.28	4.33	0.5	5.12	2.9	1.3	6.3	7.68	6.7	3.3	1.6	4.84	5.47	0.98	1.06	m8 x 12	m8 x 14	0.43
A. 55C	6.18	4.13	5.12	2.28	4.33	0.5	5.12	2.9	1.3	6.3	7.68	6.7	3.3	1.6	5.80	6.81	1.06	1.06	m8 x 12	m8 x 14	0.43
A. 65A,S	7.48	5.12	5.91	3.31	5.12	0.7	6.5	4.0	1.6	7.9	9.37	8.6	3.9	1.9	6.19	6.69	0.83	1.5	m10 x 17	m10 x 17	0.55
A. 65C	7.48	5.12	5.91	3.31	5.12	0.7	6.5	4.0	1.6	7.9	9.37	8.6	3.9	1.9	7.30	6.81	0.94	1.5	m10 x 17	m10 x 17	0.55
A. 75A,S	9.45	6.69	7.68	3.31	7.09	0.8	8.46	4.2	2	9.8	11.97	10.9	4.7	2.1	7.39	7.20	1.02	1.77	m12 x 20	m12 x 20	0.63
A. 75C	9.45	6.69	7.68	3.31	7.09	0.8	8.46	4.2	2	9.8	11.97	10.9	4.7	2.1	8.60	8.82	1.1	1.77	m12 x 20	m12 x 20	0.63
A. 75D	9.45	6.69	7.68	3.31	7.09	0.8	8.46	4.2	2	9.8	11.97	10.9	4.7	2.1	9.57	10.16	1.1	1.77	m12 x 20	m12 x 20	0.63
A. 85A,S	12.21	8.27	7.72	4.02	7.09	1	8.46	5.1	2.4	12.2	14.65	13.6	6.1	2.3	9.13	8.23	1.1	2.76	m16 x 24	m16 x 24	0.63
A. 85C	12.21	8.27	7.72	4.02	7.09	1	8.46	5.1	2.4	12.2	14.65	13.6	6.1	2.3	10.55	9.84	1.1	2.76	m16 x 24	m16 x 24	0.63
A. 85D	12.21	8.27	7.72	4.02	7.09	1	8.46	5.1	2.4	12.2	14.65	13.6	6.1	2.3	11.52	11.18	1.1	2.76	m16 x 24	m16 x 24	0.63

Dimensions are in inches.

Dimensions are subject to change without notice.

⁽¹⁾ Metric Thread.

AS 40E - 80E

	a	b	b ₁	b ₂	b _f	b _{su}	f _{su}	f _{1F}	h	h _{su}	i	ME	r	s ⁽¹⁾	s _f ⁽¹⁾	Ssu
A 40E	2.36	4.13	1.77	3.15	3.15	0.47	1.34	0.39	1.81	3.19	0.69	1.46	3.74	m8 x 14	m6 x 15	0.31
A 50E	2.36	4.53	1.77	3.15	3.15	0.55	1.54	0.39	1.97	3.94	0.69	1.79	4.33	m8 x 14	m6 x 15	0.39
A 60E	2.56	5.31	2.56	4.13	4.33	0.59	1.77	0.55	2.46	4.61	0.98	2.29	4.92	m10 x 16	m8 x 14	0.47
A 70E	2.95	6.50	3.54	4.92	5.12	0.75	2.09	0.63	2.95	5.79	1.18	2.80	5.71	m12 x 20	m10 x 17	0.55
A 80E	3.74	7.48	3.54	5.51	5.12	0.87	2.44	0.63	3.35	6.69	1.18	3.19	6.69	m16 x 25	m10 x 17	0.63

Dimensions are in inches.

Dimensions are subject to change without notice.

⁽¹⁾ Metric Thread.

Shaft Dimensions & Optional Output Flange

	Hollow Shaft									Output Shaft					Optional Output Flange ⁽²⁾					
	d _H	d ₂	l ₁	n ₂	n ₃	n ₄	t _H	u _H	w ₁	d	l	t	u	z ⁽¹⁾	a _F	b _F	e _F	f _F	f _{1F}	s _F ⁽¹⁾
A. 40A	1.0	---	---	2.17	2.36	---	1.11	0.25	3.54	4.92	4.33	5.1	0.12	0.2	0.35	4.33	5.12	0.12	0.2	---
A. 40E	0.787	1.34	0.71	1.30	2.17	0.39	0.9	0.236	---	4.92	4.33	5.1	0.12	0.4	0.35	3.15	3.94	---	0.39	m6 x 15
A. 45	1.25	---	---	---	---	---	1.37	0.25	3.94	4.92	4.33	5.1	0.12	0.2	0.35	4.33	5.12	0.12	0.2	---
A. 50E	0.984	1.55	0.79	1.97	2.76	0.39	1.12	0.315	---	4.92	4.33	5.1	0.12	0.4	0.35	3.15	3.94	---	0.39	m6 x 15
A. 55	1.375	---	---	---	---	---	1.52	0.3125	4.29	5.91	5.12	6.5	0.12	0.4	0.43	5.12	6.5	0.12	0.35	---
A. 60E	1.181	1.74	0.87	2.37	3.15	0.39	1.32	0.315	---	5.91	5.12	6.5	0.12	0.6	0.43	4.33	5.12	---	0.55	m8 x 14
A. 65	1.5	---	---	---	---	---	1.67	0.375	5.67	7.87	7.09	8.5	0.14	0.4	0.55	7.09	8.46	0.14	0.43	---
A. 70E	1.378	2.13	0.91	2.76	3.15	0.39	1.51	0.394	---	7.87	7.09	8.5	0.14	0.6	0.55	5.12	6.5	---	0.63	m10 x 17
A. 75	2.0	---	---	---	---	---	2.22	0.5	6.06	9.84	9.06	10.4	0.16	0.6	0.55	9.06	10.43	0.16	0.59	---
A. 80E	1.575	2.33	0.91	3.15	3.55	0.39	1.71	0.472	---	9.84	9.06	10.4	0.16	0.6	0.55	5.12	6.5	---	0.63	m10 x 17
A. 85	2.375	---	---	---	---	---	2.65	0.625	7.17	9.84	9.06	10.4	0.16	0.6	0.55	9.06	10.43	0.16	0.59	---

Dimensions are in inches.

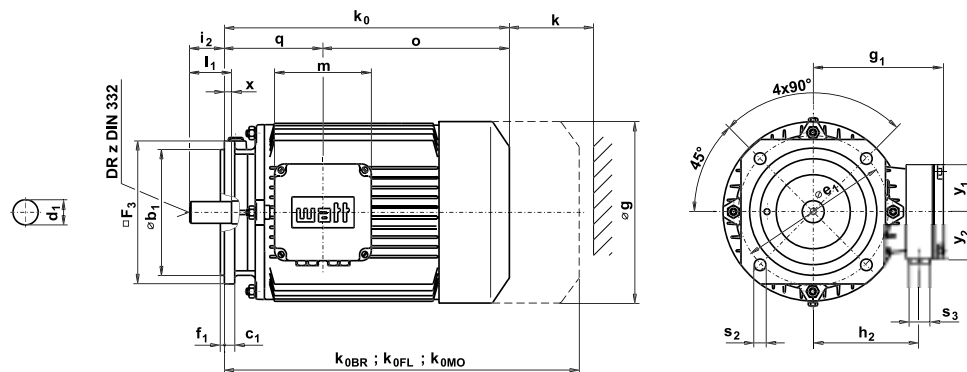
Dimensions are subject to change without notice.

⁽¹⁾ Metric Thread.

⁽²⁾ Other flange dimensions available.

Integral Motor Dimensions - Series A

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 ₂	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	10	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	10	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	10	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	10	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	12	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	12	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	14.5	2xM32x1.5	2.76	2.76
161M,L	12.36	9.76	7.87	2.36	25.12	29.97	31.42	7.28	5.71	15	2xM40x1.5	3.94	3.94
181M,L	14.96	10.83	8.9	2.56	29.97	32.27	34.3	7.44	6.26	15	2xM40x1.5+M16x1.5	3.9	4.17
201L	16.34	12.6	10.12	3.15	33.05	36.12	38.01	9.33	6.89	19	2xM50x1.5+M16x1.5	4.84	7.64
226S,M	17.52	13.58	10.63	3.94	33.1	36.09	39.24	9.33	7.09	19	2xM50x1.5+M16x1.5	4.72	7.64
251M	19.29	14.94	11.81	3.94	38.41	39	44.71	8.58	7.87	8x19	2xM63x1.5+M16x1.5	5.12	7.28

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 "k₀" to reducer length "r", found on page 35.

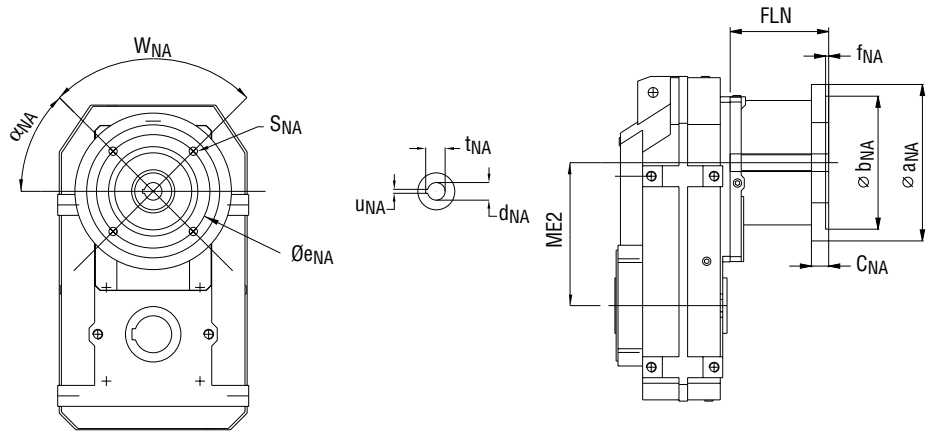
Integral Motor Length Adder "k ₀ "									
	64	72	81	91	101	114	134	161	181
40A	7.76	8.86	10.16	11.69	---	---	---	---	---
40E	7.76	8.86	10.16	11.69	---	---	---	---	---
45A	7.76	8.86	10.16	11.69	---	---	---	---	---
50E	7.76	8.86	10.16	11.69	13.11	15.16	---	---	---
55A,S	7.76	8.86	10.16	11.69	13.11	15.16	---	---	---
55C	7.76	8.86	10.16	11.69	---	---	---	---	---
60E	7.76	8.86	10.16	11.69	13.11	15.16	17.64	---	---
65A,S	7.76	8.86	10.16	11.69	13.11	15.16	17.64	---	---
65C	7.76	8.86	10.16	11.69	---	---	---	---	---
70E	7.76	8.86	10.16	11.69	13.11	15.16	17.64	---	---
75A,S	7.76	8.86	10.16	11.69	13.11	15.16	17.64	---	---
75C	7.76	8.86	10.16	11.69	13.11	15.16	---	---	---
75D	7.76	8.86	10.16	11.69	---	---	---	---	---
80E	---	---	---	---	12.91	14.96	17.44	21.46	24.41
85A,S	7.76	8.86	10.16	11.69	13.11	15.16	17.64	21.65	24.61
85C	7.76	8.86	10.16	11.69	13.11	15.16	---	---	---
85D	7.76	8.86	10.16	11.69	---	---	---	---	---

Dimensions are in inches.

Dimensions are subject to change without notice.

NEMA Motor Adapter Dimensions - Series A

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 "r", found on page 35.

NEMA Flange Length Adder "FLN"						
	56	143/145	182/184	213/215	254/256	284/286
40A	2.28	2.28	---	---	---	---
40E	2.28	2.28	---	---	---	---
45A	2.28	2.28	---	---	---	---
50E	1.81	1.81	3.74	3.74	---	---
55A,S	2.28	2.28	3.74	3.74	---	---
55C	2.28	2.28	---	---	---	---
60E	2.28	2.28	3.74	3.74	---	---
65A,S	2.28	2.28	3.74	3.74	---	---
65C	2.28	2.28	---	---	---	---
70E	2.48	2.48	3.94	3.94	4.92	5.71
75A,S	2.28	2.28	3.74	3.74	4.72	5.51
75C	2.28	2.28	3.74	3.74	---	---
75D	2.28	2.28	---	---	---	---
80E	---	---	5.31	5.31	5.31	5.31
85A,S	---	---	5.51	5.51	5.51	5.51
85C	2.28	2.28	3.74	3.74	---	---
85D	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.

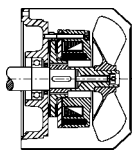
Motor cooling is achieved by integral fans. See the dimension pages for the required airflow space. For inverter controlled applications, low speed operation may require forced cooling. Consult your representative to determine when this is necessary.

Motor Speed and Design Options

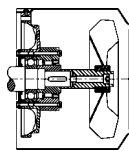
EUSAS motors are available in 2 pole, 4 pole, 6 pole, and 8 pole designs. Two speed motors in 4/2, 8/4, 6/4, 6/2, and 8/2 pole combinations are also possible. A unique asynchronous servo motor, for precise speed and positioning applications, is also offered. It provides the possibility of highly dynamic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

Modular System Options

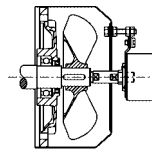
The EUSAS motor is designed to allow the integration of brakes, backstops, and encoders. In most cases kits can be provided to field retrofit these options. Brakes are offered for both holding and working applications. Encoders with a variety of resolutions and feedback are available. Consult your representative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



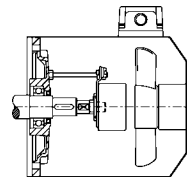
Brake



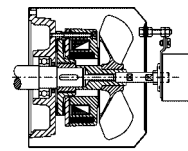
Backstop



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
134ML4	12.5	14	1740	40	20	7.9	513	3.5	28	3480	40
161M4	15	17	1750	43	22	6.5	610	2.3	34	3500	43
161L4	20	23	1750	57	29	7.7	832	2.8	46	3500	57
181M4	25	28	1750	72	36	7	1027	2.1	57	3500	72
181L4	30	34	1760	84	42	7.4	1212	2.2	67	3520	84
201L4	40	46	1760	110	55	7	1655	2.6	92	3520	110
226S4	50	57	1760	136	68	7.9	2045	2.7	113	3520	136
226M4	60	69	1760	164	82	8.8	2487	2.9	138	3520	164
251M4	80	84	1780	198	99	6.1	3000	2.2	N/A	N/A	N/A
251ML4	110	115	1782	264	132	7	4089	2.3	N/A	N/A	N/A
281S4	110	115	1785	264	132	7.1	4080	2.3	N/A	N/A	N/A
281M4	135	138	1785	316	158	7.4	4903	2.3	N/A	N/A	N/A
281L4	165	169	1788	390	196	7.9	5983	2.6	N/A	N/A	N/A

* At 460V only. At 230V, use nominal HP rating.

(1) Starting current to rated current ratio.

(2) Rated torque.

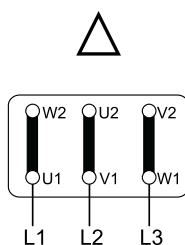
(3) Starting torque to rated torque ratio.

(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.

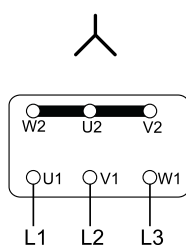
Wiring Diagrams

For Motor Sizes 64 to 91

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

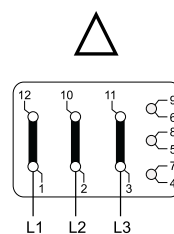


380 - 420V at 50Hz
380 - 480V at 60Hz
Star Connection, Standard

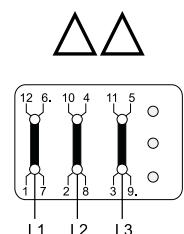


For Motor Sizes 101 to 281

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 DieQua 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 a standard ISO VG 220 mineral oil. A synthetic oil option is also available. After mounting it is necessary to install the included breather plug in the uppermost plug location. Contact your DieQua 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 DieQua 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 DieQua representative for inertia values of the unit selected.

Mechanical Efficiency

Helical gearing is one of the most efficient gear types available. Precision machining and optimized tooth geometry maximizes power and torque transmission. In general, power losses are limited to 1 - 2% per gear stage. Ambient conditions may affect these values. Contact your DieQua representative for efficiency values 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.

Gear Motor Example: FUA 55A 72N4 BR5 29

Model Range

A = Shaft Mount
F = Parallel Shaft

Gearbox Design

F = Bolt-On Flange S = Support Type
R = Agitator Design U = Uniblock

Shaft Design

— = Output Shaft S = Shrink Disc
A = Hollow Shaft Z = Output Shaft on Both Sides

Size of Gear Unit

40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 110, 130, 136

Gear Stage Code

E = 1-stage D = 4-stage
A, S = 2-stage F = 5-stage
C = 3-stage

Motor Size

WATT-Type = 64, 72, 81, 91, 101, 114, 134, 161, 181, 201, 226, 251, 281
IEC-Size = 63, 71, 80, 90, 100, 112, 132, 160, 180, 200, 225, 250, 280

Motor Modules and Options

BR = Brake
IG = Encoder
FL = Forced Cooling
Other standard options are available upon request.

Output Speed

Speed Reducer Example: ASA 55A NA56 87.47

Model Range

A = Shaft Mount
F = Parallel Shaft

Gearbox Design

F = Bolt-On Flange S = Support Type
R = Agitator Design U = Uniblock

Shaft Design

— = Output Shaft S = Shrink Disc
A = Hollow Shaft Z = Output Shaft on Both Sides

Gear Unit Size

40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 110, 130, 136

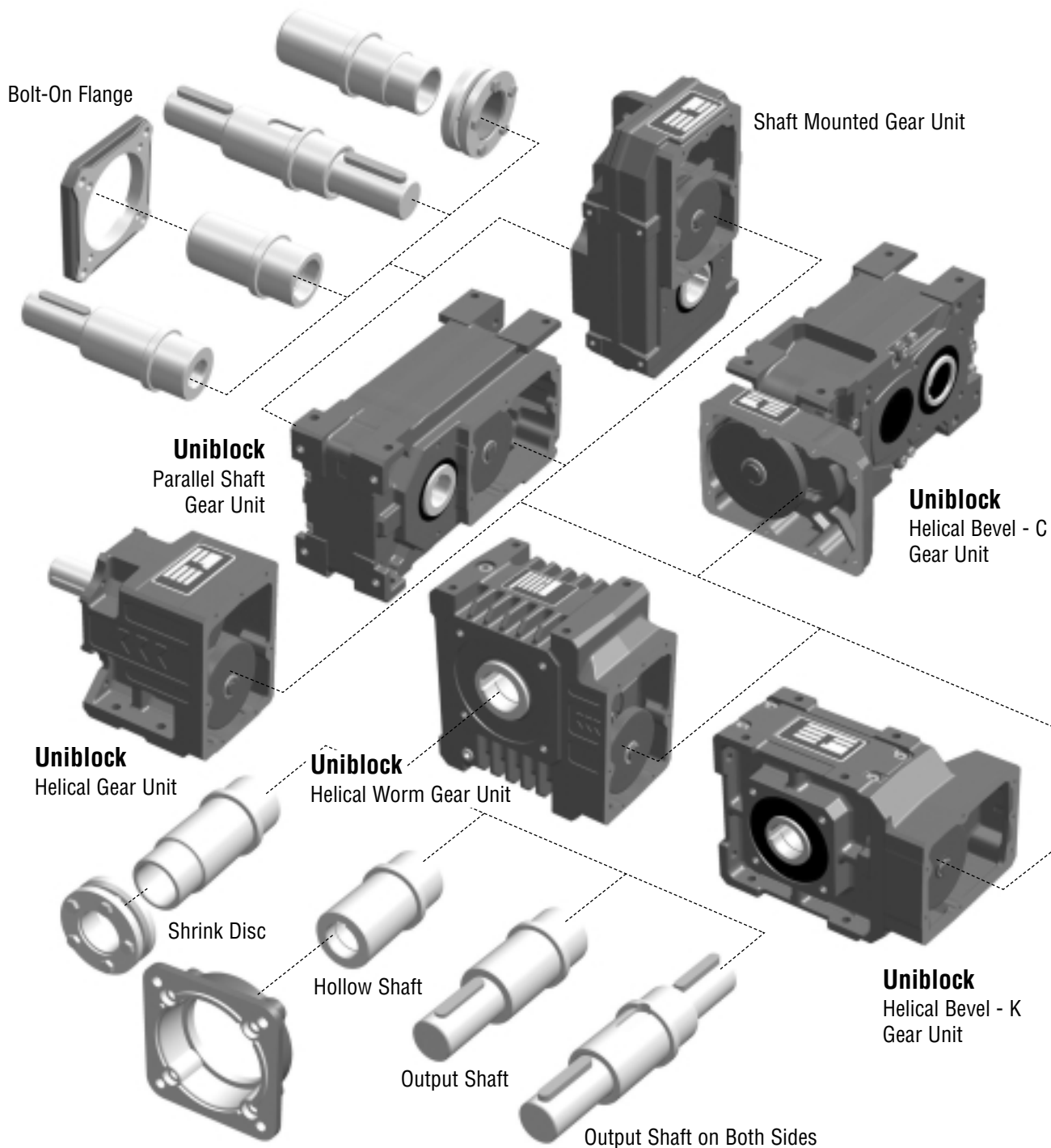
Gear Stage Code

E = 1-stage D = 4-stage
A, S = 2-stage F = 5-stage
C = 3-stage

Input Type

NA = NEMA Adapter
IA = IEC Adapter
SA = Servo Adapter
WN = Input Shaft

Ratio



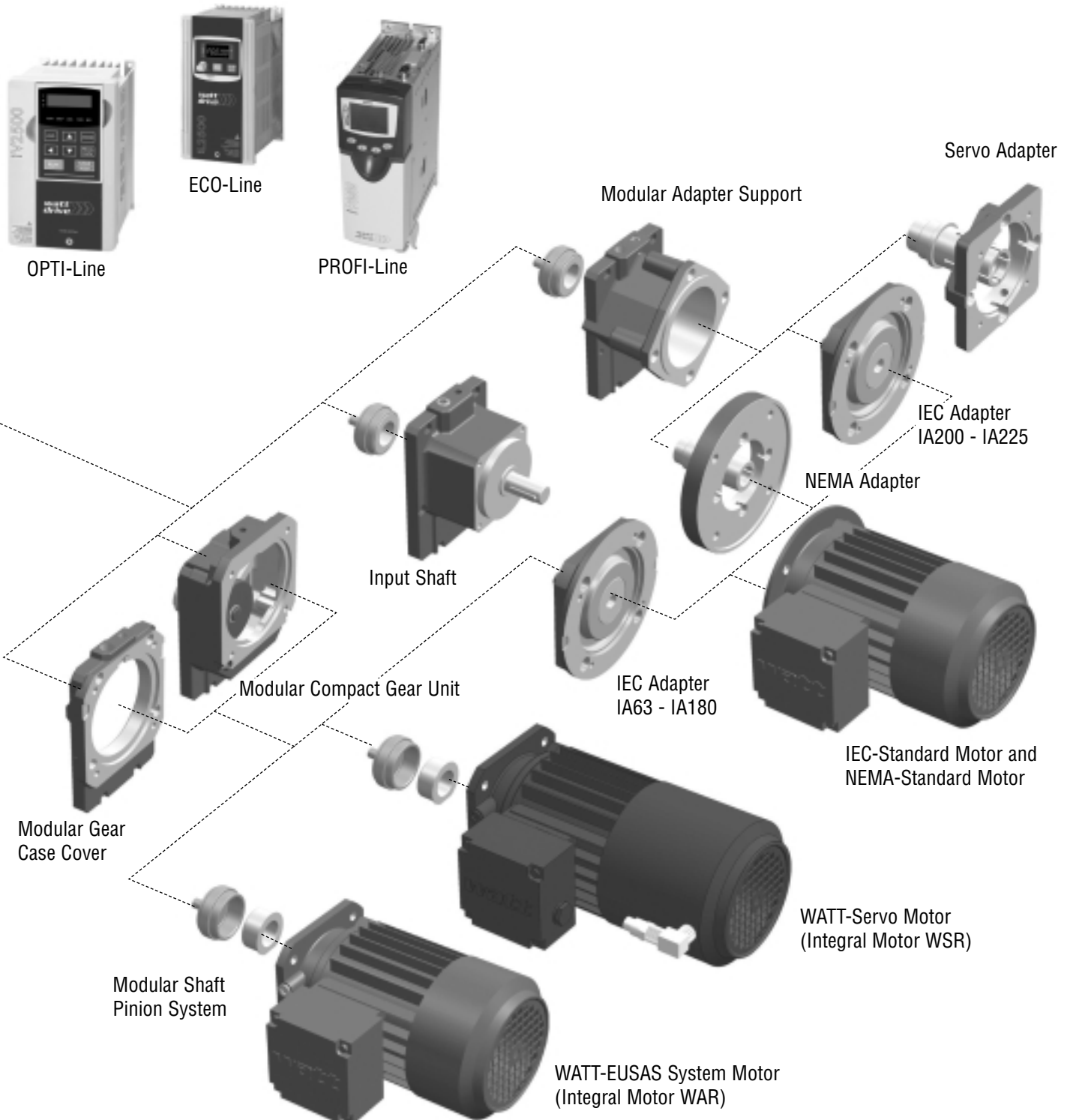
watt drive >>> - *The intelligent choice!*

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



Helical Worm - S



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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