

How To Use Maximum Rating Tables

Maximum Rating Tables for Double Reduction Gear Reducers are shown on pages 40-43. Triple Reduction Maximum Rating Tables are shown on pages 44-47. Selection of the appropriate gear reducer can be made using these tables or the Quick Selections on pages 8-37.

BEFORE YOU START:

- Identify the **Service Factor** of the application.
- Determine the **actual input horsepower** of the motor by multiplying the motor's nameplate horsepower by the Service Factor.
- Determine the **output speed (RPM)** required at output shaft of reducer.

Identify the **mounting style** required by your application from the style charts shown on pages 52-55. Note the different bases and flanges to interchange with various competitive units.

To select the proper gear reducer size, use the Maximum Rating Tables as shown:

DOUBLE REDUCTION MAXIMUM RATING TABLES

717 SERIES • ALUMINUM CASE

717 Series • 1.0 S.F. • Aluminum Case • 1750 RPM Input

Basic Motorized Quill Input Reducer

Output Speed (RPM)	Output Torque (lb-in.)	Input HP*	Ratio	Output [†] OHL (lb.)	NON-MOTORIZED		MOTORIZE	
					Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**	
503	802	5.00	3.48	204	P7172045.XX	56C 143-5TC	P7172001.XX P7172023.XX	
405	802	4.03	4.32	216	P7172046.XX	56C 143-5TC	P7172002.XX P7172024.XX	
318	802	2.80	5.50	230	P7172047.XX	56C 143-5TC	P7172003.XX P7172025.XX	
275	802	2.74	6.36	250	P7172048.XX	56C 143-5TC	P7172004.XX P7172026.XX	
241	802	2.40	7.26	260	P7172049.XX	56C 143-5TC	P7172005.XX P7172027.XX	
211	802	2.21	7.89	266	P7172050.XX	56C 143-5TC	P7172006.XX P7172028.XX	
188	798	2.30	10.04	284	P7172052.XX	56C	P7172008.XX	
166	798	1.98	11.64	293	P7172053.XX			
145	798	1.74	13.26	305	P7172054.XX			
125	798	1.50	15.37	321	P7172055.XX			
108	798	1.40	16.20	335	P7172056.XX	56C 143-5TC	P7172012.XX P7172034.XX	
93	798	1.21	18.80	350	P7172057.XX	56C 143-5TC	P7172013.XX P7172035.XX	
81	798	1.07	21.54	374	P7172058.XX	56C 143-5TC	P7172014.XX P7172036.XX	
71	798	1.04	22.26	375	P7172059.XX	56C 143-5TC	P7172015.XX P7172037.XX	
62	798	0.86	26.30	420	P7172060.XX	56C	P7172016.XX	
55	798	0.79	29.40	435	P7172061.XX	56C	P7172017.XX	
48	798	0.63	35.90	470	P7172062.XX	56C	P7172018.XX	
42	798	0.60	38.37	478	P7172063.XX	56C	P7172019.XX	
37	798	0.48	46.80	507	P7172064.XX	56C	P7172020.XX	
33	798	0.46	50.67	510	P7172065.XX	56C	P7172021.XX	
28	798	0.37	61.80	532	P7172066.XX	56C		

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducers without base or motor flange.

1 Find the appropriate Maximum Rating Tables pages for your basic mounting style. The tables begin on page 40.

5 Select motor frame size if reducer is to have a motorized input.

2 Locate output RPM column on left side of the table. All ratings are based on an input speed of 1750 RPM. Scroll down to the output speed (RPM) required. Output speeds are rounded to the nearest whole number. For exact output speed, divide 1750 by the ratio listed.

6 Identify the catalog number of the reducer by continuing to the right. See page 38 for detailed information on building an exact catalog number. The XX suffix will be replaced with optional Mod-Squad codes as detailed on page 52.

3 Move across the table to the Input HP column until you find a rating that is equal to or greater than the actual input horsepower required. Once located, check the top of the table to identify the correct gear reducer size (717, 727, 747, 757, etc.).

7 Verify physical dimensions using the dimensional drawings shown on pages 48-51.

4 Check load capacities against the needs of your application. Do not exceed the overhung load (OHL) capacity shown in the table. Detailed instructions for calculating the actual overhung load are shown on page 58. If overhung and thrust loads will be applied simultaneously or if the load exceeds listed capacities, contact LEESON.

8 Determine reducer mounting position from page 60.

717 Series • 1.0 S.F. • Aluminum Case • 1750 RPM Input



Basic Motorized
Quill Input Reducer



Basic Non-Motorized
Input Reducer

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED	MOTORIZED QUILL INPUT	
					Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
503	602	5.00	3.48	204	P7172045.XX	56C 143-5TC	P7172001.XX P7172023.XX
405	602	4.03	4.32	216	P7172046.XX	56C 143-5TC	P7172002.XX P7172024.XX
318	602	2.80	5.50	230	P7172047.XX	56C 143-5TC	P7172003.XX P7172025.XX
275	602	2.74	6.36	250	P7172048.XX	56C 143-5TC	P7172004.XX P7172026.XX
241	602	2.40	7.26	260	P7172049.XX	56C 143-5TC	P7172005.XX P7172027.XX
222	602	2.21	7.89	266	P7172050.XX	56C 143-5TC	P7172006.XX P7172028.XX
174	798	2.30	10.04	284	P7172052.XX	56C 143-5TC	P7172008.XX P7172030.XX
150	798	1.98	11.64	293	P7172053.XX	56C 143-5TC	P7172009.XX P7172031.XX
132	798	1.74	13.26	305	P7172054.XX	56C 143-5TC	P7172010.XX P7172032.XX
114	798	1.50	15.37	321	P7172055.XX	56C 143-5TC	P7172011.XX P7172033.XX
108	798	1.40	16.20	335	P7172056.XX	56C 143-5TC	P7172012.XX P7172034.XX
93	798	1.21	18.80	350	P7172057.XX	56C 143-5TC	P7172013.XX P7172035.XX
81	798	1.07	21.54	374	P7172058.XX	56C 143-5TC	P7172014.XX P7172036.XX
79	798	1.04	22.26	375	P7172059.XX	56C 143-5TC	P7172015.XX P7172037.XX
67	798	0.86	26.30	420	P7172060.XX	56C	P7172016.XX
60	798	0.79	29.40	435	P7172061.XX	56C	P7172017.XX
49	798	0.63	35.90	470	P7172062.XX	56C	P7172018.XX
46	798	0.60	38.37	478	P7172063.XX	56C	P7172019.XX
37	798	0.48	46.80	507	P7172064.XX	56C	P7172020.XX
35	798	0.46	50.67	510	P7172065.XX	56C	P7172021.XX
28	798	0.37	61.80	532	P7172066.XX	56C	P7172022.XX

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

WHEN ORDERING, SUBSTITUTE THE XX SUFFIX WITH REQUIRED MOD-SQUAD CODE. FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 52-55.

IN THIS CATALOG

RPM = Revolutions Per Minute
HP = Horsepower
TQ = Torque (lb-in.)
OHL = Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL = Thrust Load (lbs.) - Output Shaft

SELECT REDUCER MOUNTING POSITION ON PAGE 60

727 Series • 1.0 S.F. • Aluminum Case • 1750 RPM Input

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED	MOTORIZED QUILL INPUT
					Basic Reducer Catalog Number**	Motor Frame Basic Reducer Catalog Number**
503	708	5.88	3.48	268	P7272045.XX	56C 143-5TC P7272001.XX P7272023.XX
405	775	5.19	4.32	289	P7272046.XX	56C 143-5TC P7272002.XX P7272024.XX
318	887	4.67	5.50	350	P7272047.XX	56C 143-5TC P7272003.XX P7272025.XX
275	949	4.32	6.36	376	P7272048.XX	56C 143-5TC P7272004.XX P7272026.XX
241	1065	4.24	7.26	391	P7272049.XX	56C 143-5TC P7272005.XX P7272027.XX
222	1065	3.90	7.89	400	P7272050.XX	56C 143-5TC P7272006.XX P7272028.XX
174	1190	3.43	10.04	420	P7272052.XX	56C 143-5TC P7272008.XX P7272030.XX
150	1190	2.96	11.64	445	P7272053.XX	56C 143-5TC P7272009.XX P7272031.XX
132	1190	2.60	13.26	476	P7272054.XX	56C 143-5TC P7272010.XX P7272032.XX
114	1190	2.24	15.37	508	P7272055.XX	56C 143-5TC P7272011.XX P7272033.XX
108	1158	2.03	16.20	520	P7272056.XX	56C 143-5TC P7272012.XX P7272034.XX
93	1158	1.75	18.80	535	P7272057.XX	56C 143-5TC P7272013.XX P7272035.XX
81	1190	1.60	21.54	562	P7272058.XX	56C 143-5TC P7272014.XX P7272036.XX
79	1190	1.55	22.26	562	P7272059.XX	56C 143-5TC P7272015.XX P7272037.XX
67	1158	1.25	26.30	615	P7272060.XX	56C 143-5TC P7272016.XX P7272038.XX
60	1190	1.17	29.40	629	P7272061.XX	56C 143-5TC P7272017.XX P7272039.XX
49	1158	0.92	35.90	660	P7272062.XX	56C P7272018.XX
46	1127	0.85	38.37	663	P7272063.XX	56C P7272019.XX
37	1065	0.65	46.80	674	P7272064.XX	56C P7272020.XX
35	1127	0.64	50.67	674	P7272065.XX	56C P7272021.XX
28	1065	0.49	61.80	674	P7272066.XX	56C P7272022.XX



Basic Motorized Quill Input Reducer



Basic Non-Motorized Input Reducer

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

WHEN ORDERING, SUBSTITUTE THE XX SUFFIX WITH REQUIRED MOD-SQUAD CODE. FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 52-55.

SELECT REDUCER MOUNTING POSITION ON PAGE 60

IN THIS CATALOG

RPM = Revolutions Per Minute
HP = Horsepower
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747 Series • 1.0 S.F. • Aluminum Case • 1750 RPM Input



Basic Motorized
Quill Input Reducer



Basic Non-Motorized
Input Reducer

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED	MOTORIZED QUILL INPUT	
					Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
485	1473	11.80	3.61	450	P7472058.XX	143-5TC 182-4TC	P7472020.XX P7472039.XX
414	1792	12.27	4.23	474	P7472059.XX	143-5TC 182-4TC	P7472021.XX P7472040.XX
349	2200	12.69	5.01	491	P7472060.XX	143-5TC 182-4TC	P7472022.XX P7472041.XX
288	2200	10.49	6.07	522	P7472061.XX	143-5TC 182-4TC	P7472023.XX P7472042.XX
257	2404	10.22	6.81	540	P7472062.XX	143-5TC 182-4TC	P7472024.XX P7472043.XX
220	2404	8.73	7.96	579	P7472064.XX	143-5TC 182-4TC	P7472026.XX P7472045.XX
185	2502	7.66	9.45	615	P7472065.XX	143-5TC 182-4TC	P7472027.XX P7472046.XX
153	2600	6.58	11.43	658	P7472066.XX	143-5TC 182-4TC	P7472028.XX P7472047.XX
123	2300	4.68	14.21	693	P7472067.XX	143-5TC 182-4TC	P7472029.XX P7472048.XX
105	2502	4.36	16.62	711	P7472068.XX	56C 143-5TC 182-4TC	P7472011.XX P7472030.XX P7472049.XX
87	2502	3.60	20.10	780	P7472069.XX	56C 143-5TC 182-4TC	P7472012.XX P7472031.XX P7472050.XX
70	2300	2.66	24.98	877	P7472070.XX	56C 143-5TC 182-4TC	P7472013.XX P7472032.XX P7472051.XX
60	2502	2.46	29.41	900	P7472071.XX	56C 143-5TC	P7472014.XX P7472033.XX
49	2502	2.03	35.58	922	P7472072.XX	56C 143-5TC	P7472015.XX P7472034.XX
43	2404	1.72	40.50	988	P7472073.XX	56C 143-5TC	P7472016.XX P7472035.XX
40	2300	1.50	44.23	1012	P7472074.XX	56C 143-5TC	P7472017.XX P7472036.XX
36	2404	1.42	49.00	1028	P7472075.XX	56C 143-5TC	P7472018.XX P7472037.XX
29	2200	1.04	60.90	1050	P7472076.XX	56C 143-5TC	P7472019.XX P7472038.XX

*Overhung load is calculated at centerline of output shaft.

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SELECT REDUCER MOUNTING POSITION ON PAGE 60

757 Series • 1.0 S.F. • Aluminum Case • 1750 RPM Input

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED	MOTORIZED QUILL INPUT	
					Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
485	1651	13.22	3.61	534	P7572134.XX	143-5TC 182-4TC	P7572058.XX P7572096.XX
414	1932	13.23	4.23	566	P7572135.XX	143-5TC 182-4TC	P7572059.XX P7572097.XX
349	2293	13.23	5.01	603	P7572136.XX	143-5TC 182-4TC	P7572060.XX P7572098.XX
288	2774	13.23	6.07	629	P7572137.XX	143-5TC 182-4TC	P7572061.XX P7572099.XX
257	2860	12.15	6.81	646	P7572138.XX	143-5TC 182-4TC	P7572062.XX P7572100.XX
220	3180	11.55	7.96	663	P7572140.XX	143-5TC 182-4TC	P7572064.XX P7572102.XX
185	3000	9.18	9.45	674	P7572141.XX	143-5TC 182-4TC	P7572065.XX P7572103.XX
153	3442	8.71	11.43	778	P7572142.XX	143-5TC 182-4TC	P7572066.XX P7572104.XX
123	3800	7.73	14.21	850	P7572143.XX	143-5TC 182-4TC	P7572067.XX P7572105.XX
105	3800	6.61	16.62	872	P7572144.XX	143-5TC 182-4TC	P7572068.XX P7572106.XX
87	3800	5.47	20.10	900	P7572145.XX	143-5TC 182-4TC	P7572069.XX P7572107.XX
70	3800	4.40	24.98	944	P7572146.XX	143-5TC 182-4TC	P7572070.XX P7572108.XX
60	3000	2.95	29.41	1012	P7572147.XX	56C 143-5TC	P7572033.XX P7572071.XX
49	3000	2.44	35.58	1079	P7572148.XX	56C 143-5TC	P7572034.XX P7572072.XX
43	2567	1.83	40.50	1192	P7572149.XX	56C 143-5TC	P7572035.XX P7572073.XX
40	2800	1.83	44.23	1304	P7572150.XX	56C 143-5TC	P7572036.XX P7572074.XX
36	2777	1.64	49.00	1330	P7572151.XX	56C 143-5TC	P7572037.XX P7572075.XX
29	2800	1.33	60.90	1367	P7572152.XX	56C 143-5TC	P7572038.XX P7572076.XX

*Overhung load is calculated at centerline of output shaft.

**Catalog numbers are for basic reducer without base or output flange.



Basic Motorized Quill Input Reducer



Basic Non-Motorized Input Reducer

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SELECT REDUCER MOUNTING POSITION ON PAGE 60

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