

# Maximum Rating Tables

Size 830 • GR & EL Series



Style B

Style H



## Size 830

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	2500	500	10.661	10.091	1272	_8300001	_8300013	_8300025	_8300501.XX
	1750	350	9.093	8.573	1544				
	1170	234	7.434	6.966	1876				
	100	20	1.177	0.928	2925				
7.5	2500	333	8.178	7.669	1450	_8300002	_8300014	_8300026	_8300502.XX
	1750	233	6.879	6.421	1734				
	1170	156	5.668	5.251	2122				
	100	13	0.898	0.683	3228				
10	2500	250	7.293	6.745	1701	_8300003	_8300015	_8300027	_8300503.XX
	1750	175	6.151	5.655	2037				
	1170	117	4.989	4.541	2446				
	100	10	0.799	0.567	3573				
15	2500	166	5.734	5.149	1947	_8300004	_8300016	_8300028	_8300504.XX
	1750	116	4.843	4.311	2329				
	1170	78	3.903	3.426	2768				
	100	6.7	0.663	0.418	3949				
20	2500	125	4.662	4.067	2051	_8300005	_8300017	_8300029	_8300505.XX
	1750	87	3.947	3.407	2454				
	1170	58	3.198	2.713	2923				
	100	5.0	0.579	0.332	4189				
25	2500	100	3.957	3.355	2114	_8300006	_8300018	_8300030	_8300506.XX
	1750	70	3.355	2.807	2527				
	1170	46	2.713	2.223	2993				
	100	4.0	0.519	0.269	4238				
30	2500	83	3.389	2.787	2108	_8300007	_8300019	_8300031	_8300507.XX
	1750	58	2.879	2.332	2519				
	1170	39	2.335	1.845	2982				
	100	3.3	0.472	0.223	4217				
40	2500	62	2.639	2.054	2071	_8300008	_8300020	_8300032	_8300508.XX
	1750	43	2.251	1.720	2477				
	1170	29	1.843	1.366	2944				
	100	2.5	0.407	0.167	4200				
50	2500	50	2.238	1.654	2084	_8300009	_8300021	_8300033	_8300509.XX
	1750	35	1.915	1.383	2490				
	1170	23	1.569	1.094	2945				
	100	2.0	0.372	0.132	4156				
60	2500	41	1.907	1.336	2020	_8300010	_8300022	_8300034	_8300510.XX
	1750	29	1.637	1.117	2413				
	1170	19	1.348	0.883	2854				
	100	1.7	0.341	0.106	4026				
80	2500	31	0.972	0.671	1352	_8300011	_8300023	_8300035	_8300511.XX
	1750	21	0.895	0.585	1684				
	1170	14	0.757	0.463	1996				
	100	1.3	0.126	0.054	2731				
100	2500	25	0.656	0.424	1069	_8300012	_8300024	_8300036	_8300512.XX
	1750	17	0.603	0.367	1321				
	1170	11	0.511	0.289	1554				
	100	1.0	0.087	0.033	2100				

### How To Build a Part Number For Size GR830 & EL830

1. Select partial catalog number from the selection table
2. Replace leading “\_” with series code (GR, EL)
3. For hollow output, replace “XX” suffix with bore code (see next page for codes)

**Example:**

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output  
 GR-B830-5-L  
 GR8300001

Single Reduction  
Worm Gear Reducers









Double Reduction  
Worm - Worm Gear Reducers

Double Reduction  
Helical - Worm Gear Reducers

WASHGUARD® Reducers  
and GEAR+MOTOR™

Ratio Multipliers

Accessories and  
Additional Capabilities

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
182-4TC 213-5TC	8300109 8300145	8300121 8300157	8300133 8300169	8300537.XX 8300549.XX	8300253 8300289	8300265 8300301	8300277 8300313	8300585.XX 8300597.XX	5
182-4TC	8300110	8300122	8300134	8300538.XX	8300254	8300266	8300278	8300586.XX	7.5
143-5TC 182-4TC	8300075 8300111	8300087 8300123	8300099 8300135	8300527.XX 8300539.XX	8300219 8300255	8300231 8300267	8300243 8300279	8300575.XX 8300587.XX	10
143-5TC 182-4TC	8300076 8300112	8300088 8300124	8300100 8300136	8300528.XX 8300540.XX	8300220 8300256	8300232 8300268	8300244 8300280	8300576.XX 8300588.XX	15
143-5TC 182-4TC	8300077 8300113	8300089 8300125	8300101 8300137	8300529.XX 8300541.XX	8300221 8300257	8300233 8300269	8300245 8300281	8300577.XX 8300589.XX	20
143-5TC 182-4TC	8300078 8300114	8300090 8300126	8300102 8300138	8300530.XX 8300542.XX	8300222 8300258	8300234 8300270	8300246 8300282	8300578.XX 8300590.XX	25
143-5TC 182-4TC	8300079 8300115	8300091 8300127	8300103 8300139	8300531.XX 8300543.XX	8300223 8300259	8300235 8300271	8300247 8300283	8300579.XX 8300591.XX	30
56C 143-5TC	8300044 8300080	8300056 8300092	8300068 8300104	8300520.XX 8300532.XX	8300188 8300224	8300200 8300236	8300212 8300248	8300568.XX 8300580.XX	40
56C 143-5TC	8300045 8300081	8300057 8300093	8300069 8300105	8300521.XX 8300533.XX	8300189 8300225	8300201 8300237	8300213 8300249	8300569.XX 8300581.XX	50
56C 143-5TC	8300046 8300082	8300058 8300094	8300070 8300106	8300522.XX 8300534.XX	8300190 8300226	8300202 8300238	8300214 8300250	8300570.XX 8300582.XX	60
56C 143-5TC	8300047 8300083	8300059 8300095	8300071 8300107	8300523.XX 8300535.XX	8300191 8300227	8300203 8300239	8300215 8300251	8300571.XX 8300583.XX	80
56C 143-5TC	8300048 8300084	8300060 8300096	8300072 8300108	8300524.XX 8300536.XX	8300192 8300228	8300204 8300240	8300216 8300252	8300572.XX 8300584.XX	100

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.

\* Catalog numbers are for hollow output shaft reducers.

When ordering, substitute the XX suffix with the required output bore code.

**Available bore codes**

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

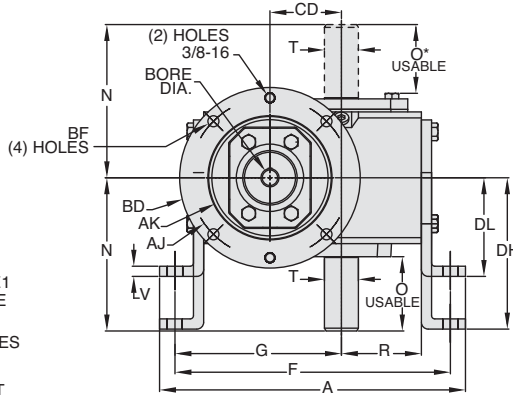
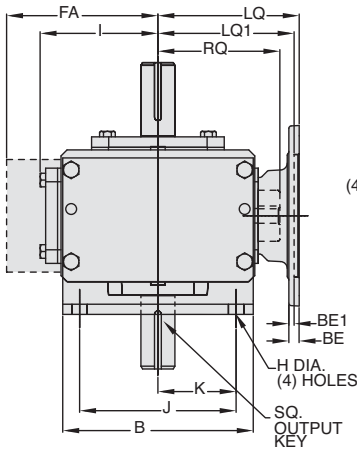


# GR Series Dimensions

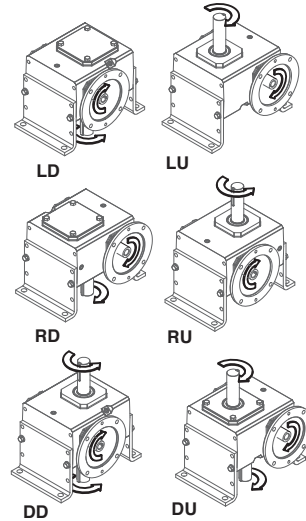
Styles: V\_MQ, V\_M, V\_

**CAST IRON**  
**GR SERIES**

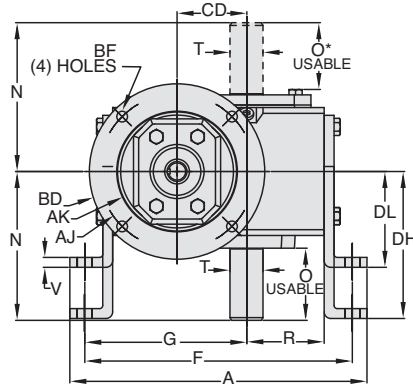
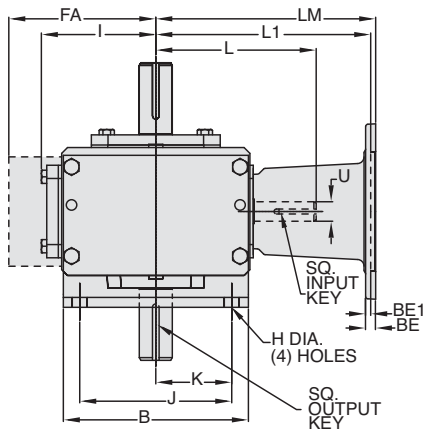
## Style V(L or H)MQ



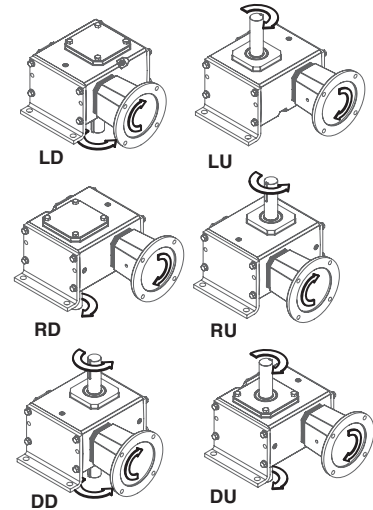
### ASSEMBLIES



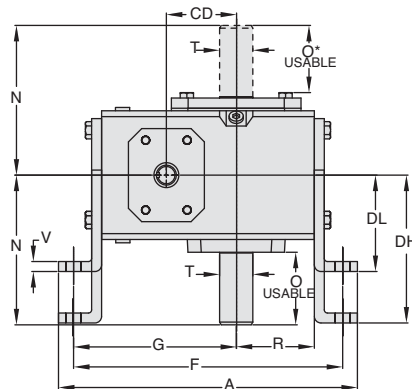
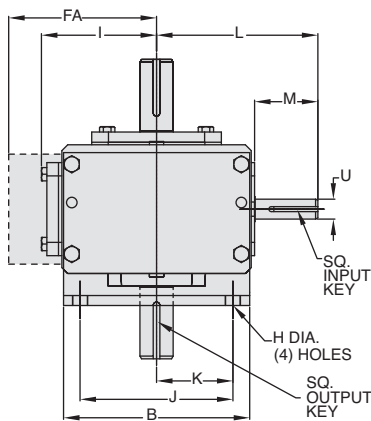
## Style V(L or H)M



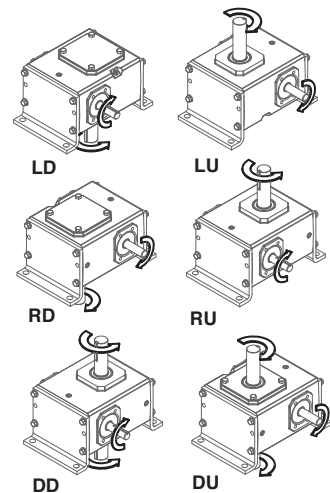
### ASSEMBLIES



## Style V(L or H)



### ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction  
Worm Gear Reducers

Double Reduction  
Worm - Worm Gear Reducers

Double Reduction  
Helical - Worm Gear Reducers

WASHGUARD® Reducers  
and GEAR+MOTOR™

Ratio Multipliers

Accessories and  
Additional Capabilities



**STYLE V\_MQ, V\_M, V\_ DIMENSIONS (Inches)**

Size	A	B	CD	Model VLMQ DL	Model VHMQ DH	F	FA▼	FZ▼	G	H	I	J	K	L	M	N	O	O*	R	V	T MAX +0.000 -0.0015	U +0.000 -0.0015	Input Key*	Output Key
GR813	7.26	4.00	1.33	2.63	3.56	6.50	N/A	N/A	3.86	0.38	2.61	3.00	1.50	3.82	1.76	4.00	2.16	1.94	1.72	0.25	0.625	0.500	1/8 x 1.00	3/16 x 1.50
GR815	7.88	5.00	1.54	3.00	4.38	7.00	N/A	N/A	4.28	0.44	3.14	4.00	2.00	4.35	1.76	4.31	2.11	1.90	1.91	0.25	0.750	0.625	3/16 x 1.38	3/16 x 1.50
GR818	8.25	5.00	1.75	3.00	4.38	7.37	N/A	N/A	4.50	0.44	3.24	4.00	2.00	4.45	1.76	4.31	2.05	1.84	2.06	0.25	0.875	0.625	3/16 x 1.38	3/16 x 1.38
GR821	9.38	6.00	2.06	3.13	4.88	8.38	N/A	N/A	5.09	0.50	3.61	4.88	2.44	4.82	1.76	4.68	2.29	2.08	2.28	0.38	1.000	0.625	3/16 x 1.38	1/4 x 1.44
GR824	9.94	6.00	2.38	3.38	5.25	8.81	N/A	N/A	5.44	0.50	3.77	4.88	2.44	5.51	2.38	5.14	2.66	2.44	2.50	0.38	1.125	0.750	3/16 x 1.63	1/4 x 1.75
GR826	11.24	7.00	2.63	3.63	5.56	10.12	N/A	N/A	6.12	0.56	4.34	5.75	2.88	6.07	2.38	5.63	2.73	2.52	2.94	0.38	▲	0.750	3/16 x 1.63	1/4 x 1.75
GR830	12.50	8.00	3.00	3.94	5.88	11.13	N/A	N/A	6.75	0.56	4.84	6.00	3.00	6.57	2.38	6.75	3.60	3.36	3.25	0.38	1.250	0.875	3/16 x 1.63	1/4 x 1.75
GR832	13.00	8.50	3.25	4.69	6.25	11.88	N/A	N/A	7.13	0.56	5.02	6.13	3.06	6.76	2.38	7.06	3.66	3.42	3.50	0.38	▲	0.875	3/16 x 1.63	3/8 x 2.25
GR842	16.26	10.00	4.25	5.00	7.50	14.88	N/A	N/A	8.69	0.69	6.10	7.88	3.94	9.57	3.47	8.12	4.50	4.21	4.44	0.50	1.875	1.250	1/4 x 2.50	1/2 x 3.06
GR852	19.62	13.00	5.25	5.16	9.16	18.00	N/A	N/A	10.88	0.78	7.50	10.00	5.00	10.88	3.38	9.06	4.78	4.53	5.12	0.50	2.000	1.250	1/4 x 3.00	1/2 x 3.50
GR860	23.26	14.75	6.00	7.31	9.63	20.88	11.13	0.33	12.19	0.91	N/A	11.76	5.88	11.78	3.41	10.00	4.65	4.65	6.50	0.50	2.500	1.500	3/8 x 3.00	5/8 x 4.00
GR870	26.91	14.88	7.00	7.00	N/A	23.99	11.37	0.35	13.87	1.13	N/A	12.50	6.25	11.50	2.97	11.76	5.65	5.65	7.59	0.75	2.750	1.625	3/8 x 2.87**	5/8 x 4.00**
GR880	28.96	17.00	8.00	8.00	N/A	25.50	12.52	0.57	14.38	1.13	N/A	14.00	7.00	12.50	2.84	12.25	5.98	5.98	8.86	0.75	3.000	1.875	1/2 x 2.81**	3/4 x 4.50**
GR8100	37.47	20.88	10.00	9.00	N/A	30.75	14.69	0.51	17.76	1.44	N/A	17.75	8.88	15.50	3.76	14.75	6.76	6.76	10.36	1.00	3.750	2.250	1/2 x 3.69**	7/8 x 5.00**

▲ See feature comparison chart.

**FEATURE COMPARISON (821, 826, 832)**

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical	Identical	Identical	✓	✓	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✓		GRG
	1.125"						GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓		GRG
	1.375"						GRL

⊖ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 52-53 (B, BM, BMQ).

**Motor Mounting Dimensions  
NEMA DIMENSIONS (Inches)**

Size	LM		180TC/210TC	L1	250TC	LQ 48CZ/56C/140TC	180TC	LQ1 210TC	250TC	RQ 48CZ/56C/140TC	180TC	250TC
	48CZ	56C/140TC										
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR824	N/A	7.76	8.76	N/A	4.63	5.06	N/A	N/A	4.09	4.56	N/A	N/A
GR826*	N/A	8.32	9.32	N/A	5.19	5.62	N/A	N/A	4.82	5.13	N/A	N/A
GR830	N/A	8.82	9.82	N/A	5.95	6.15	6.56	N/A	5.32	5.63	N/A	N/A
GR832*	N/A	9.01	10.01	N/A	6.14	6.34	6.75	N/A	5.51	5.81	N/A	N/A
GR842	N/A	11.81	12.90	13.46	6.45	7.21	7.21	7.77	6.04	6.68	7.24	
GR852	N/A	13.21	14.30	14.86	7.85	8.61	8.61	9.17	7.35	7.98	8.54	
GR860	N/A	N/A	15.88	16.50	10.45	9.33	9.33	9.94	10.01	8.69	8.69	
GR870	N/A	N/A	15.50	15.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
GR880	N/A	N/A	16.58	16.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

**NEMA DIMENSIONS (Inches)**

Frame	AjB	AK	BD	BE	BE1	Bore Dia.	Keyway	BFb
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53

**IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)⊖**

Size	D63D			D80D	LQ1		D100LD/D112MD	RQ				
	D63D	D71D	D80D		D90D	D100LD/D112MD		D132D	D63D	D71D	D80D	D90D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A
GR815	3.15	3.18	3.42	N/A	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A
GR818	3.25	3.28	3.52	N/A	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A
GR821	3.62	3.65	3.89	N/A	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A
GR824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
GR826*	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	N/A	N/A
GR830	N/A	4.78	5.41	5.41	5.88	N/A	N/A	4.59	5.22	5.22	N/A	N/A
GR832*	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	N/A	N/A
GR842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.93	
GR852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	8.24	

**IEC B5 & B3/B5 METRIC DIMENSIONS (MM)**

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- \* Applies to double output shaft
- \*\* Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- ⊖ Mounting holes rotated 45 degrees from positions shown on Size GR860, Style V\_M with frame sizes 180TC-250TC.
- 48CZ not available
- 180TC not available

- ◆ Metric IEC B5 input flange options are available only on quill input styles.
- \* Dimensions same for GRG and GRL Series
- ◆ Style V\_ and V\_M only.
- ▲ Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.