



Select and order double reduction reducers with model number. Refer to page 112 for Model Number System.

SIZES 842, 852, 860 • 1.0 S.F.

Overall Ratio	Input RPM	Output RPM	SIZE 842			SIZE 852			SIZE 860**		
			Input HP	Output HP	Output TQ (lb-in)	Input HP	Output HP	Output TQ (lb-in)	Input HP	Output HP	Output TQ (lb-in)
75	1750	23.30	3.845	2.941	7945	7.099	5.472	14782	9.100	7.135	19271
	1170	15.60	3.001	2.215	8949	5.800	4.296	17357	6.941	5.231	21133
100	1750	17.50	3.820	2.815	10140	7.206	5.269	18977	8.665	5.947	21417
	1170	11.70	2.978	2.099	11307	5.470	3.822	20589	6.123	4.355	23458
150	1750	11.70	2.870	2.029	10931	5.336	3.724	20059	5.945	4.357	23471
	1170	7.80	2.182	1.479	11950	4.273	2.845	22985	3.283	3.093	24995
200	1750	8.75	2.347	1.612	11613	4.438	2.983	21487	4.954	3.416	24607
	1170	5.85	1.689	1.109	11953	3.258	2.082	22429	2.728	2.397	25821
250	1750	7.00	1.960	1.290	11619	3.834	2.424	21825	4.251	2.759	24841
	1170	4.68	1.417	0.890	11941	2.827	1.699	22777	2.354	1.943	26061
300	1750	5.83	1.704	1.100	11955	3.230	2.065	22434	3.607	2.376	25821
	1170	3.90	1.226	0.754	12191	2.358	1.429	23097	2.627	1.652	26689
400	1750	4.38	1.376	0.847	12132	2.660	1.601	22932	3.009	1.848	26473
	1170	2.93	0.973	0.567	12313	1.895	1.079	23443	2.138	1.249	27140
500	1750	3.50	1.149	0.679	12219	2.249	1.290	23238	2.516	1.492	26872
	1170	2.34	0.787	0.441	12092	1.591	0.863	23655	1.801	1.000	27416
600	1750	2.92	0.936	0.524	11386	1.951	1.079	23447	2.242	1.249	27151
	1170	1.95	0.665	0.348	11241	1.411	0.736	23798	1.629	0.854	27602
750	1750	2.33	0.873	0.446	12217	1.686	0.869	23807	1.929	0.999	27386
	1170	1.56	0.650	0.314	12369	1.270	0.613	24161	1.458	0.707	27851
900	1750	1.94	0.766	0.371	12293	1.516	0.725	24049	1.622	0.827	27434
	1170	1.30	0.566	0.256	12420	1.121	0.503	24406	1.218	0.575	27900
1000	1750	1.75	0.749	0.351	12273	1.467	0.687	24072	1.611	0.792	27737
	1170	1.17	0.538	0.236	12417	1.059	0.463	24342	1.171	0.535	28088
1200	1750	1.46	0.665	0.295	12389	1.325	0.579	24316	1.403	0.659	27683
	1170	0.975	0.465	0.192	12485	0.931	0.378	24589	1.000	0.433	28138
1500	1750	1.17	0.538	0.226	11853	0.938	0.393	20658	1.240	0.535	28088
	1170	0.780	0.361	0.141	11117	0.654	0.254	19979	0.903	0.360	28328
1800	1750	0.972	0.439	0.168	10608	0.915	0.356	22441	1.000	0.401	25273
	1170	0.650	0.320	0.111	10016	0.666	0.238	21472	0.767	0.283	25490
2400	1750	0.729	0.371	0.129	11595	0.785	0.267	24026	0.839	0.310	27893
	1170	0.488	0.272	0.086	10782	0.618	0.192	24206	0.694	0.223	28130
3000	1750	0.583	0.360	0.116	12214	0.756	0.227	23866	0.750	0.255	26792
	1170	0.390	0.269	0.078	12271	0.557	0.153	24044	0.602	0.171	27020
3600	1750	0.486	0.315	0.094	11816	0.688	0.186	23474	0.653	0.183	23067
	1170	0.325	0.213	0.057	11870	0.456	0.113	23649	0.436	0.111	23264

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements. Refer to page 131 for exact ratio of worm gear primary stage and worm gear secondary stage.

At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.

** Size 860 is only available in GR & EL Series.

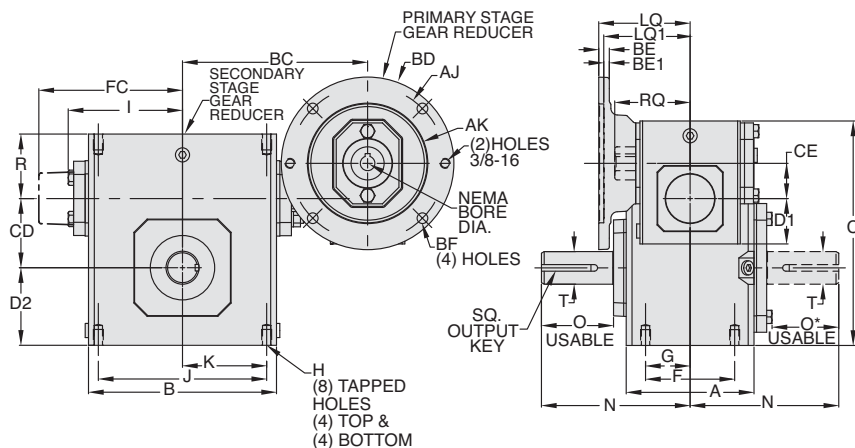
For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.



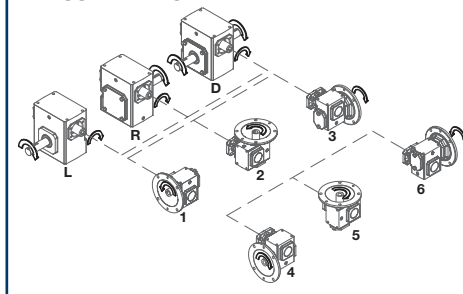
GR Series Dimensions Styles: DMQ, DM, D

**CAST IRON
GR SERIES**

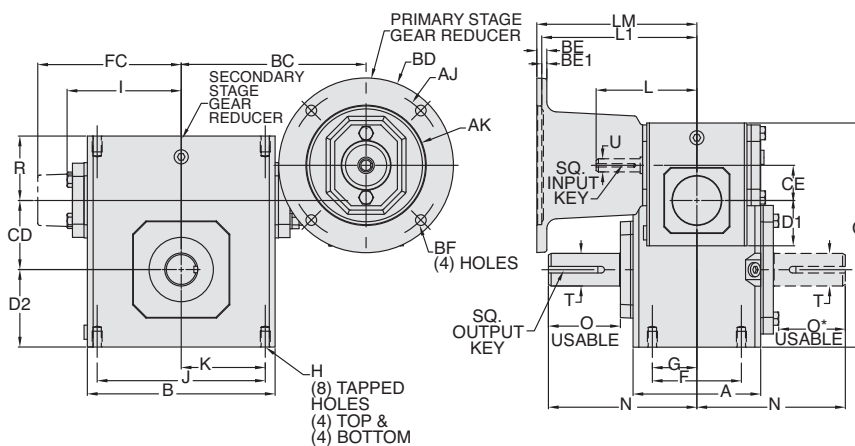
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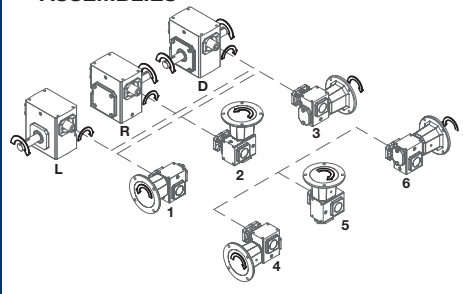
ASSEMBLIES



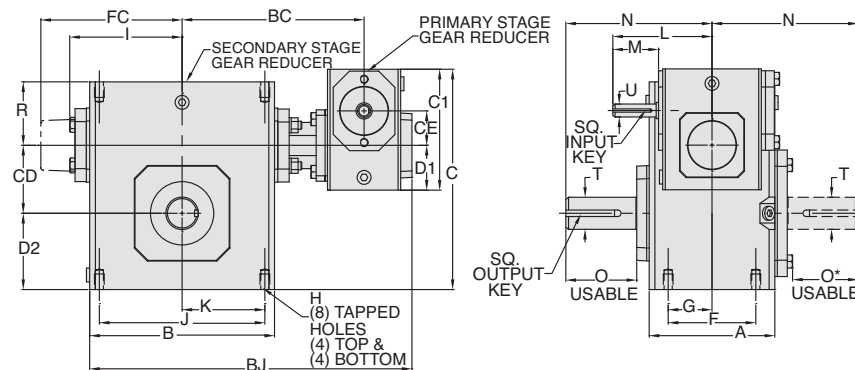
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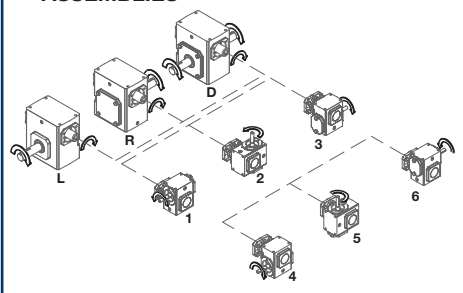
ASSEMBLIES



Style D



ASSEMBLIES



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



GR Series Dimensions

Styles: DMQ, DM, D



STYLE DMQ, DM, D DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CD	CE	C1	D1	D2	F	FC▼	G	H		I	J	K	L	M	N	O	O*	R	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*	Output Key
														Tap Size	Depth													
GR813	2.82	3.80	5.32	9.06	5.99	1.33	1.33	4.66	1.72	1.72	2.00	N/A	1.00	5/16-18 UNC	.50	2.61	3.25	1.63	3.82	1.76	4.00	2.16	1.94	1.61	.625	0.500	1/8 x 1.00	3/16 X 1.50
GR815	3.44	4.88	5.85	10.13	6.38	1.54	1.33	4.66	1.72	1.91	2.75	N/A	1.38	5/16-18 UNC	.63	3.14	4.19	2.09	3.82	1.76	4.31	2.11	1.90	1.93	.750	0.500	1/8 x 1.00	3/16 X 1.50
GR818	3.56	5.06	5.94	10.32	6.75	1.75	1.33	4.66	1.72	2.06	2.75	N/A	1.38	5/16-18 UNC	.63	3.24	4.19	2.09	3.82	1.76	4.31	2.05	1.84	1.94	.875	0.500	1/8 x 1.00	3/16 X 1.38
GR821	3.81	5.80	6.32	11.06	7.28	2.06	1.33	4.66	1.72	2.28	▲	N/A	1.44	3/8-16 UNC	.63	3.61	▲	2.50	3.82	1.76	4.68	2.29	2.08	2.03	1.000	0.500	1/8 x 1.00	1/4 X 1.44
GR824	4.06	6.12	6.44	11.35	7.81	2.38	1.33	4.66	1.72	2.50	2.88	N/A	1.44	3/8-16 UNC	.69	3.77	5.00	2.50	3.82	1.76	5.14	2.66	2.44	2.06	1.125	0.500	1/8 x 1.00	1/4 X 1.75
GR826	4.84	7.12	7.01	12.41	8.50	2.63	1.33	4.66	1.72	2.94	3.38	N/A	1.69	3/8-16 UNC	.69	4.34	6.38	3.19	3.82	1.76	5.63	2.73	2.52	2.44	▲	0.500	1/8 x 1.00	1/4 X 1.75
GR830	5.25	8.12	7.86	14.12	9.94	3.00	1.75	5.38	2.06	3.25	4.00	N/A	2.00	7/16-14 UNC	.88	4.84	7.00	3.50	4.45	1.76	6.75	3.60	3.36	2.63	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	5.75	8.50	8.05	14.50	10.44	3.25	1.75	5.38	2.06	3.50	4.00	N/A	2.00	7/16-14 UNC	.88	5.02	7.50	3.75	4.45	1.76	7.06	3.66	3.42	2.63	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	6.13	10.25	9.18	16.69	12.78	4.25	2.06	6.38	2.28	4.44	5.00	N/A	2.50	5/8-11 UNC	1.00	6.10	8.50	4.25	4.82	1.76	8.12	4.50	4.21	2.69	1.875	0.625	3/16 x 1.38	1/2 X 3.06
GR852	7.19	13.00	11.57	20.97	15.43	5.25	2.63	8.00	2.94	5.12	5.81	N/A	2.91	5/8-11 UNC	1.25	7.50	11.00	5.50	6.07	2.38	9.06	4.78	4.53	3.63	2.000	0.750	3/16 x 1.63	1/2 X 3.50
GR860	8.13	14.25	13.30	23.82	18.38	6.00	3.25	9.38	3.50	6.50	6.38	10.24	3.19	5/8-11 UNC	1.00	N/A	12.75	6.38	6.76	2.38	10.00	4.65	4.65	4.00	2.500	0.875	3/16 x 1.63	5/8 X 4.00
GR870	7.63	14.88	12.96	24.33	20.46	7.00	3.25	9.38	3.50	7.59	5.50	10.63	2.75	1-8 UNC	1.56	N/A	12.50	6.25	6.76	2.38	11.76	5.65	5.65	4.33	2.750	0.875	3/16 x 1.75..	5/8 x 4.00..
GR880	8.63	17.00	13.94	26.69	23.79	8.00	4.25	11.38	4.44	8.86	6.50	11.93	3.25	1-8 UNC	1.66	N/A	14.25	7.13	9.57	3.47	12.25	5.98	5.98	4.11	3.000	1.250	1/4 X 2.88..	3/4 x 4.50..
GR8100	9.53	20.88	17.05	32.74	29.24	10.00	5.25	14.00	5.12	10.36	6.88	14.34	3.44	1-1/4 -7 UNC	2.04	N/A	17.75	8.88	10.88	3.38	14.75	6.76	6.76	5.12	3.750	1.250	1/4 X 3.00..	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	(F)3.00" x (J)4.75"	Identical	Identical	✓	✓	GRG
		(F)2.88" x (J)5.00"					GRL
826	1.250"	Identical	Identical	Identical	✓	✓	GRG
	1.125"						GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓	✓	GRG
	1.375"		5/16 x 2.63				GRL

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1	250TC	LQ 48CZ/ 56C/140TC	LQ1			48CZ/ 56C/140TC	RQ		
	48CZ	56C/ 140TC				180TC/ 210TC	250TC	180TC		210TC	250TC	180TC
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	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821*	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826*	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832*	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

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

Size	LQ1					RQ						
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821*	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826*	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832*	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

* Style D and DM only.

◆ Metric IEC B5 input flange options are available only on quill input styles.

* Dimensions same for GRG and GRL Series

▼ Sizes 860-8100 have extended cap. Dimensions refer to cap 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.