



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.

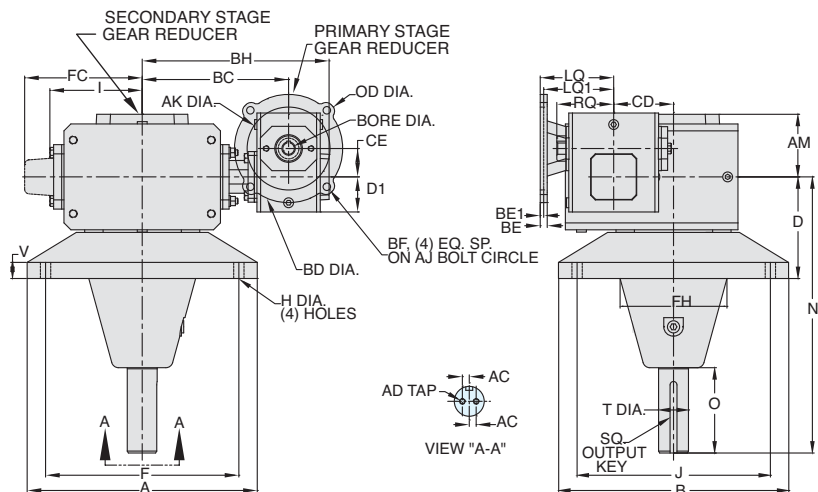


GR Series Dimensions

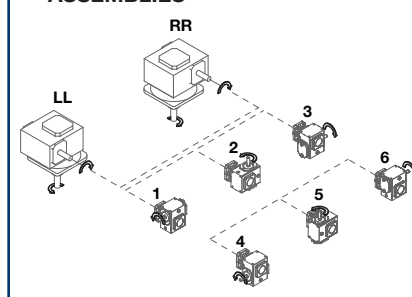
Styles: DFEMQ, DFEM, DFE

CAST IRON
GR SERIES

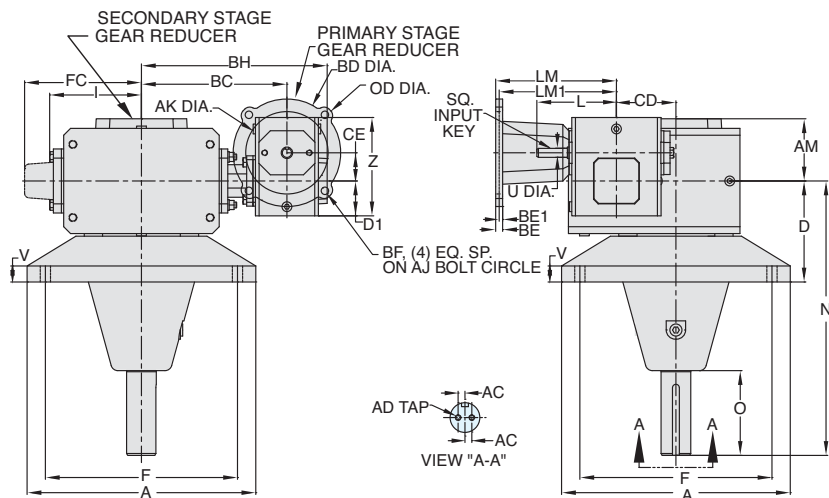
Style DFEMQ



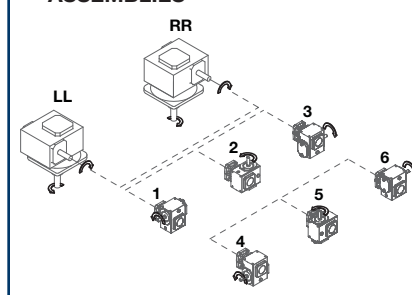
ASSEMBLIES



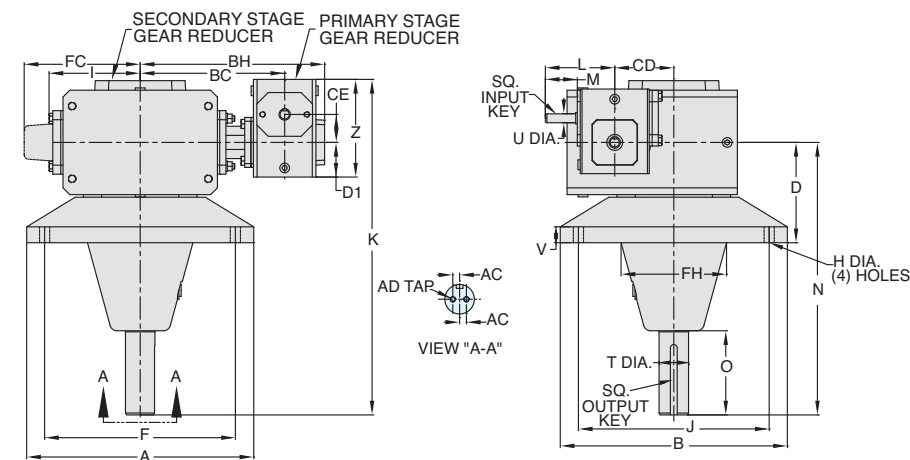
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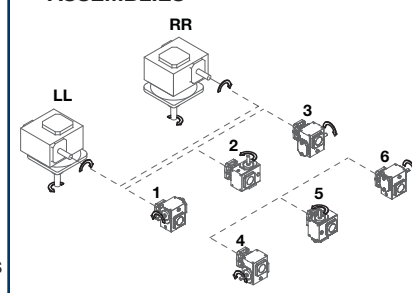
ASSEMBLIES



Style DFE



ASSEMBLIES



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

STYLE DFEMQ, DFEM, DFE DIMENSIONS (Inches)

Size	A	AC	AD	AM	B	BC	BH	CD	CE	C1	D	D1	F	FC▼	FH
GR830	11.00	0.375	.31-18 UNC X 1.00 DP	3.15	11.00	7.86	10.06	3.00	1.75	5.38	4.60	2.06	9.00	N/A	5.12
GR832	12.50	0.375	.31-18 UNC X 1.00 DP	3.40	12.50	8.05	10.25	3.25	1.75	5.38	5.52	2.06	10.50	N/A	5.75
GR842	14.00	0.500	.38-16 UNC X 1.00 DP	3.62	14.00	9.18	11.57	4.25	2.06	6.38	5.74	2.28	12.00	N/A	6.75
GR852	16.00	0.750	.38-16 UNC X 1.00 DP	4.28	16.00	11.57	14.47	5.25	2.62	8.00	6.00	2.94	14.00	N/A	8.00
GR860	19.50	0.750	.38-16 UNC X 1.00 DP	5.28	19.50	13.30	16.70	6.00	3.25	9.38	7.00	3.50	17.00	10.24	9.50
GR870	22.00	1.000	.38-16 UNC X 1.00 DP	6.06	22.00	12.96	16.90	7.00	3.25	9.38	8.50	3.50	19.00	10.63	10.75
GR880	28.00	1.062	.62-11 UNC X 1.50 DP	6.22	28.00	13.94	18.19	8.00	4.25	11.38	10.00	4.44	24.00	11.93	13.75
GR8100	32.00	1.118	.62-11 UNC X 1.50 DP	7.94	32.00	17.05	22.30	10.00	5.25	14.00	12.50	5.12	28.00	14.34	17.00

Size	H	I	J	K	L	M	N	O ^a	V -0.0015	T -0.0015 -0.0015	U +0.000	P*	Output Key*
GR830	.56	4.84	9.00	17.85	4.35	1.76	14.38	4.96	0.78	1.438	.625	3/16 x 1.38	3/8 x 3.88
GR832	.56	5.02	10.50	18.47	4.35	1.76	15.00	4.63	0.88	1.438	.625	3/16 x 1.38	3/8 x 3.69
GR842	.69	6.10	12.00	20.59	4.82	1.76	16.50	5.91	1.00	1.688	.625	3/16 x 1.38	3/8 x 4.68
GR852	.81	7.50	14.00	21.56	6.07	2.38	16.50	5.62	1.25	2.188	.750	3/16 x 1.63	1/2 x 4.63
GR860	.88	N/A	17.00	28.36	6.76	2.38	22.50	7.63	1.50	2.438	.875	3/16 x 1.63	5/8 x 6.50
GR870	1.13	N/A	19.00	29.88	6.76	2.38	24.00	7.63	1.75	2.937	.875	3/16 x 1.75**	3/4 x 6.44
GR880	1.31	N/A	24.00	34.00	9.57	3.47	27.06	9.25	2.00	3.438	1.250	1/4 X 2.88**	7/8 x 8.00
GR8100	1.31	N/A	28.00	38.38	10.88	3.38	29.50	9.43	2.25	3.938	1.250	1/4 X 3.00**	1 x 7.75

Motor Mounting Dimensions
NEMA DIMENSIONS (Inches)

Size	LM 48CZ 56C/ 140TC	L1 180TC/ 210TC	250TC	LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	RQ 48CZ/ 56C/140TC	180TC	210TC	250TC
GR830	6.26	6.70	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	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	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	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF◆
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	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

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

Size	LQ1				RQ				D100LD/ D112MD			
	D63D	D71D	D80D	D90D	D63D	D71D	D80D	D90D	D63D	D71D	D80D	D90D
GR830	3.25	3.28	3.52	N/A	2.95	2.97	3.21	N/A	3.25	3.28	3.52	N/A
GR832	3.25	3.28	3.52	N/A	2.95	2.97	3.21	N/A	3.25	3.28	3.52	N/A
GR842	3.62	3.65	3.89	N/A	3.43	3.44	3.68	N/A	3.62	3.65	3.89	N/A
GR852	N/A	4.28	4.90	4.90	4.09	4.72	4.72	5.07	N/A	N/A	N/A	N/A
GR860	N/A	4.97	5.59	5.59	4.78	5.41	5.41	5.76	N/A	N/A	N/A	N/A
GR870	N/A	4.97	5.59	5.59	4.78	5.41	5.41	5.76	N/A	N/A	N/A	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	6.16	6.14	6.93	N/A	N/A
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	7.46	7.45	8.24	N/A	N/A

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

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

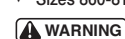
◆ Keyway width by depth

■ 48CZ not available

* Style DFE and DFEM only.

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

▼ 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.

^a "O" dimension is the minimum dimension to output or screw head on sizes GR860-GR8100