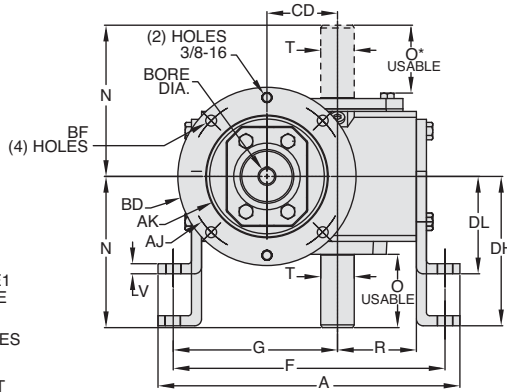
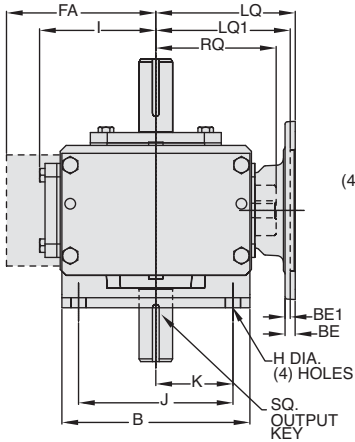




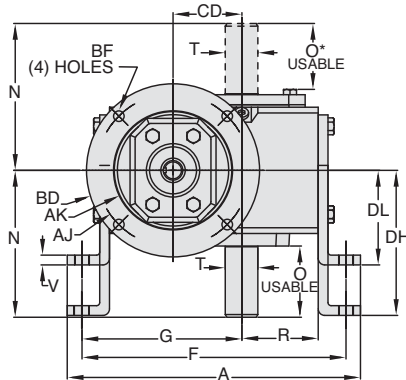
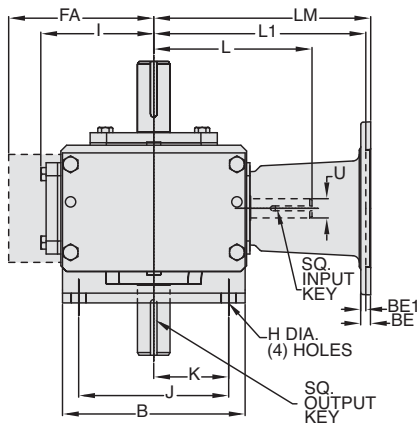
GR Series Dimensions

Styles: V_MQ, V_M, V_

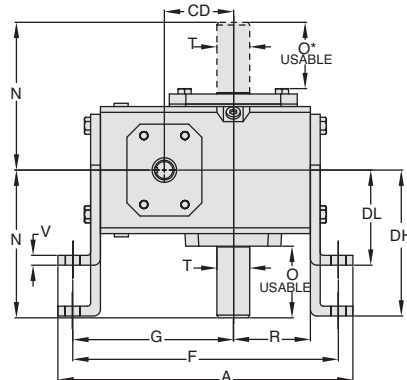
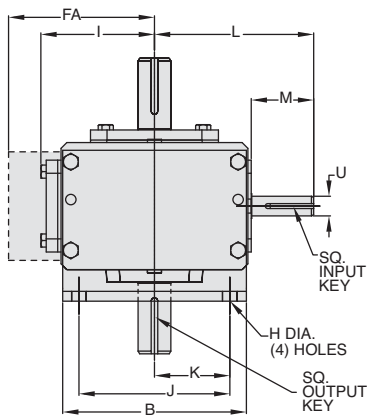
Style V(L or H)MQ



Style V(L or H)M

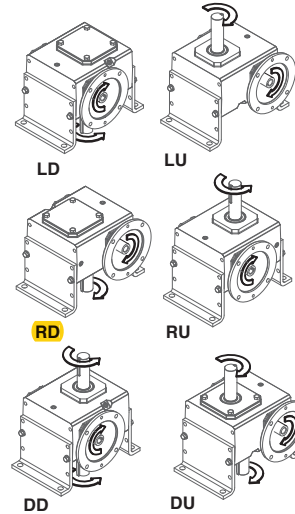


Style V(L or H)

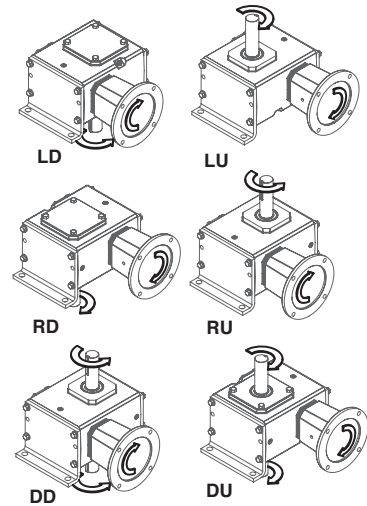


**CAST IRON
GR SERIES**

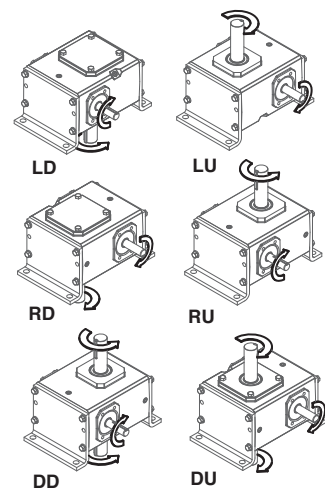
ASSEMBLIES



ASSEMBLIES



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

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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		180TC	LQ1 210TC	250TC	RQ	
	48CZ	56C/140TC			48CZ/56C/140TC	180TC				250TC	
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	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
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	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
GR824	N/A	7.76	8.76	N/A	4.63	5.06	N/A	N/A	4.09	4.56	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
GR830	N/A	8.82	9.82	N/A	5.95	6.15	6.56	N/A	5.32	5.63	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
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	D			LQ1 D90D	D100LD/D112MD	D132D	RQ				
	D63D	D71D	D80D				D63D	D71D	D80D	D90D	D132D
GR813	2.62	2.65	2.89	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	2.98	3.00	3.24	N/A	N/A
GR818	3.25	3.28	3.52	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	3.43	3.44	3.68	N/A	N/A
GR824	N/A	4.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A
GR826*	N/A	3.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	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
GR832*	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	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.

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

Maximum Rating Tables

Size 818 • GR, NH, EL Series



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

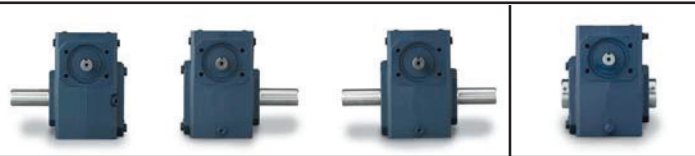
WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Style B

Style H



Size 818

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	3.095	2.900	366	_8180001	_8180013	_8180025	_8180501.XX
	1750	350	2.600	2.422	436				
	1170	234	2.066	1.906	513				
7.5	100	20	0.312	0.228	717	_8180002	_8180014	_8180026	_8180502.XX
	2500	333	2.307	2.127	402				
	1750	233	1.909	1.745	471				
10	1170	156	1.473	1.328	537	_8180003	_8180015	_8180027	_8180503.XX
	100	13	0.227	0.147	697				
	2500	250	1.996	1.820	459				
15	1750	175	1.625	1.466	528	_8180004	_8180016	_8180028	_8180504.XX
	1170	117	1.239	1.099	592				
	100	10	0.196	0.118	744				
20	2500	166	1.485	1.301	492	_8180005	_8180017	_8180029	_8180505.XX
	1750	116	1.224	1.058	571				
	1170	78	0.945	0.799	645				
25	100	6.7	0.165	0.087	823	_8180006	_8180018	_8180030	_8180506.XX
	2500	125	1.283	1.093	551				
	1750	87	1.046	0.875	630				
30	1170	58	0.803	0.652	702	_8180007	_8180019	_8180031	_8180507.XX
	100	5.0	0.150	0.069	872				
	2500	100	1.088	0.900	567				
40	1750	70	0.884	0.715	644	_8180008	_8180020	_8180032	_8180508.XX
	1170	46	0.678	0.530	713				
	100	4.0	0.135	0.055	874				
50	2500	83	0.892	0.702	531	_8180009	_8180021	_8180033	_8180509.XX
	1750	58	0.741	0.569	614				
	1170	39	0.580	0.428	692				
60	100	3.3	0.126	0.047	880	_8180010	_8180022	_8180034	_8180510.XX
	2500	62	0.739	0.551	556				
	1750	43	0.609	0.440	634				
80	1170	29	0.476	0.328	706	_8180011	_8180023	_8180035	_8180511.XX
	100	2.5	0.113	0.035	874				
	2500	50	0.625	0.444	559				
100	1750	35	0.515	0.352	634	_8180012	_8180024	_8180036	_8180512.XX
	1170	23	0.404	0.260	701				
	100	2.0	0.103	0.027	857				
	2500	41	0.542	0.363	550				
	1750	29	0.449	0.288	623				
	1170	19	0.354	0.213	689				
	100	1.7	0.097	0.022	842				
	2500	31	0.247	0.156	314				
	1750	21	0.208	0.124	356				
	1170	14	0.164	0.091	392				
	100	1.3	0.023	0.009	470				
	2500	25	0.167	0.097	245				
	1750	17	0.141	0.077	277				
	1170	11	0.111	0.057	304				
	100	1.0	0.016	0.006	362				

How To Build a Part Number For Size GR818, NH818 & EL818

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GR, NH, 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-B818-5-L
GR8180001