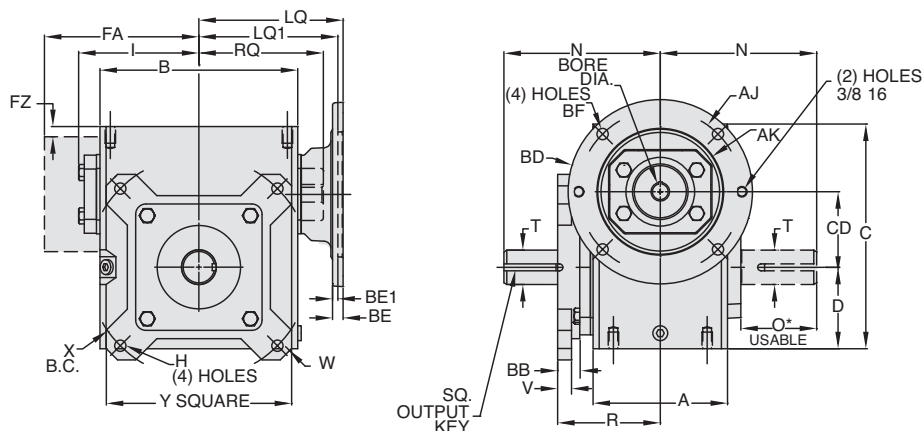




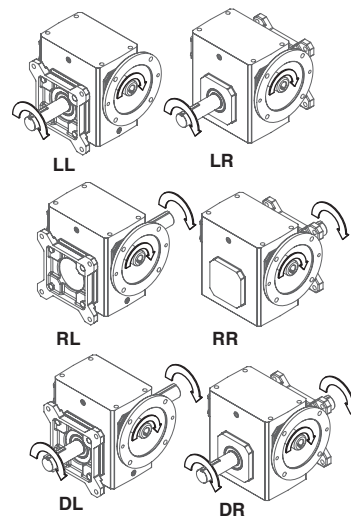
GR Series Dimensions Styles: FMQ, FM, F

**CAST IRON
GR SERIES**

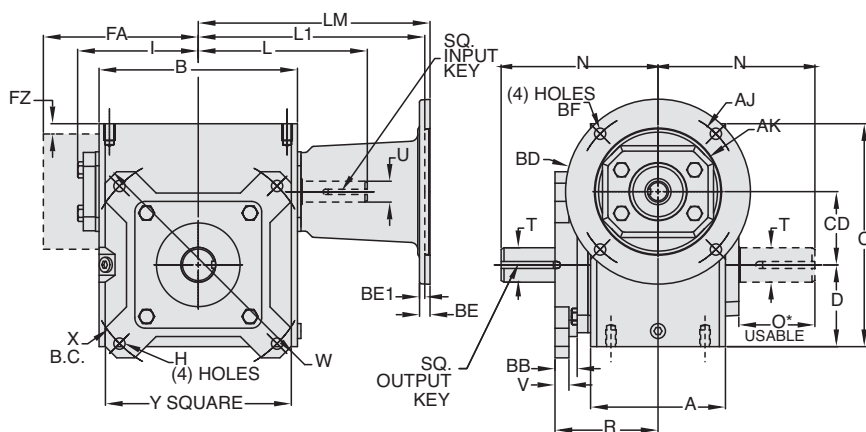
Style FMQ



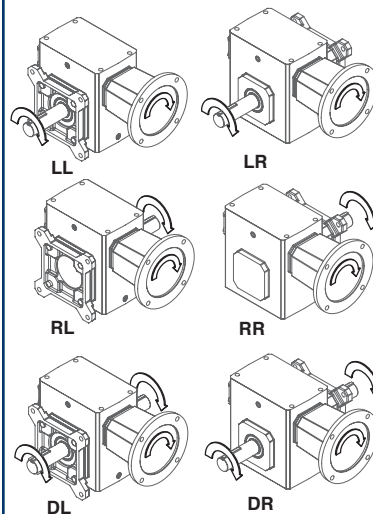
ASSEMBLIES



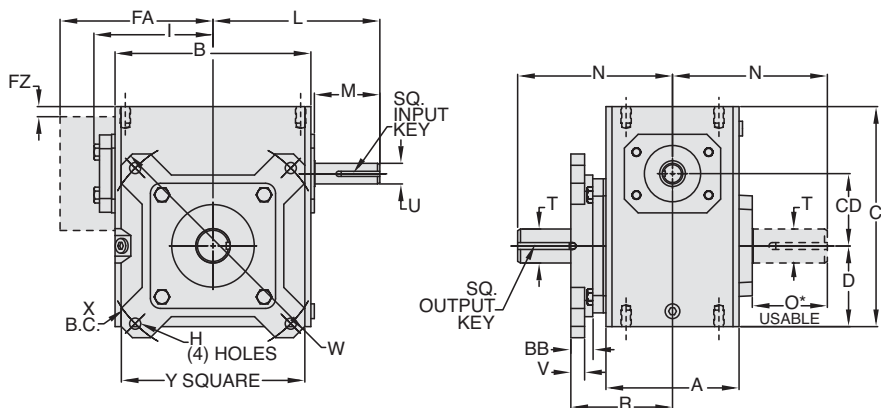
Style FM



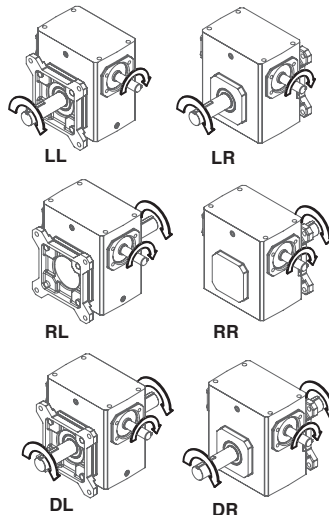
ASSEMBLIES



Style F



ASSEMBLIES



Sizes 813-8100 output flange must be mounted at
Factory on styles FMQ, FM, F.

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


STYLE FMQ, FM, F DIMENSIONS (Inches)

Series	A	B	BB	C	D	CD	FA▼	FZ▼	H	I	L	M	N	O	R	V	W	X	Y	T MAX+ -0.000 +0.0025	U +0.000 -0.0015	Input Key*	Output Key
GR813	2.82	3.80	0.675	4.66	1.72	1.33	N/A	N/A	0.03	2.61	3.82	1.76	4.00	1.94	2.52	0.38	5.92	5.00	4.50	0.625	0.500	1/8 x 1.00	3/16 x 1.50
GR815	3.44	4.88	0.675	5.38	1.91	1.54	N/A	N/A	0.03	3.14	4.35	1.76	4.31	1.90	2.87	0.38	5.88	5.00	4.50	0.750	0.625	3/16 x 1.38	3/16 x 1.50
GR818	3.56	5.06	0.925	5.75	2.06	1.75	N/A	N/A	0.03	3.24	4.45	1.76	4.31	1.84	3.18	0.38	6.64	5.88	5.00	0.875	0.625	3/16 x 1.38	3/16 x 1.38
GR821	3.81	5.80	1.24	6.38	2.28	2.06	N/A	N/A	0.41	3.61	4.82	1.76	4.68	2.08	3.69	0.44	7.88	7.00	5.99	1.000	0.625	3/16 x 1.38	1/4 x 1.44
GR824	4.06	6.12	1.560	6.94	2.50	2.38	N/A	N/A	0.41	3.77	5.51	2.38	5.14	2.44	3.73	0.44	8.39	7.50	6.27	1.125	0.750	3/16 x 1.63	1/4 x 1.75
GR826	4.84	7.12	0.796	8.00	2.94	2.63	N/A	N/A	0.41	4.34	6.07	2.38	5.63	2.52	3.70	0.50	8.88	8.00	6.67	▲	0.750	3/16 x 1.63	1/4 x 1.75
GR830	5.25	8.12	0.636	8.88	3.25	3.00	N/A	N/A	0.41	4.84	6.57	2.38	6.75	3.36	3.78	0.50	9.89	9.00	7.37	1.250	0.875	3/16 x 1.63	1/4 x 1.75
GR832	5.75	8.50	0.636	9.38	3.50	3.25	N/A	N/A	0.41	5.02	6.76	2.38	7.06	3.42	4.03	0.50	9.89	9.00	7.37	▲	0.875	3/16 x 1.63	3/8 x 2.25
GR842	6.13	10.25	0.940	11.38	4.44	4.25	N/A	N/A	0.56	6.10	9.57	3.47	8.12	4.21	4.56	0.62	12.95	11.50	9.65	1.875	1.250	1/4 x 2.50	1/2 x 3.06
GR852	7.19	13.00	1.340	14.00	5.12	5.25	N/A	N/A	0.69	7.50	10.88	3.38	9.16	4.53	5.62	0.75	15.50	14.00	11.75	2.000	1.250	1/4 x 3.00	1/2 x 3.50
GR860	8.13	14.25	2.603	16.50	6.50	6.00	11.13	0.33	0.69	N/A	11.78	3.41	10.00	4.65	7.26	0.75	18.00	15.63	14.00	2.500	1.500	3/8 x 3.00	5/8 x 4.00
GR870	7.63	14.88	2.770	18.91	7.59	7.00	11.37	0.35	0.78	N/A	11.50	2.97	11.76	5.65	7.45	0.75	21.00	18.38	15.63	2.750	1.625	3/8 x 2.87**	5/8 x 4.00**
GR880	8.63	17.00	3.090	20.96	8.86	8.00	12.52	0.57	1.03	N/A	12.50	2.84	12.25	5.98	8.34	0.75	24.00	21.00	17.88	3.000	1.875	1/2 x 2.81**	3/4 x 4.50**
GR8100	9.53	20.88	3.298	25.47	10.36	10.00	14.69	0.51	1.03	N/A	15.50	3.76	14.75	6.76	9.07	1.00	29.00	25.00	21.19	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"		5/16 x 2.63			✓	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)

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

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	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)◆

Series	D63D	D71D	D80D	LQ1 D90D	D100LD/D112MD	D132D	D63D	D71D	RQ 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	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	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
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 FM 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 F and FM only.

▼ Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.



WARNING

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

WASGUARD® Reducers
and GEAR-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



Modified Stock Gear Reducers

CAST IRON
GR 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 T OR U HORIZONTAL BASE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813	G185000	2
GR815	G185120	3
GR818	G185005	3
GR821	G185010	4
GR824	G185015	4
GR826	G185020	6
GR830	G185121	6
GR832	G185025	9
GR842	G185030	14
GR852	G185035	20
GR860	G185040	31
GR870	G185189	41
GR880	G185190	48
GR8100	G185191	76

STYLE J VERTICAL INPUT BASE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813	G185001	1
GR815	G185122	1
GR818	G185006	2
GR821	G185011	3
GR824	G185016	3
GR826	G185021	5
GR830	G185123	6
GR832	G185124	6
GR842	◆	10
GR852	◆	15

◆ J Brackets for sizes 842-852 require grease fittings in input covers and must be installed at Factory. Contact Factory for field replacement kits.

HOLLOW SHAFT TIE ROD KIT



(GR SERIES SHOWN)

Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813 - 842	G185152	5
GR852 - 860	G185153	5

NOTE: Kit does not include Torque Arm Bracket that mounts to reducer. See "TORQUE ARM BRACKET" table.

TORQUE ARM BRACKET



Reducer Size	Accessory Kit Only Catalog No. ▲
GR813	G185450
GR815	G185451
GR818	G185451
GR821	G185452
GR824	G185453
GR826	G185454
GR830	G185455
GR832	G185456
GR842	G185457
GR852	G185458
GR860	G185459
GR870	G185460
GR880	--
GR8100	--

▲ Torque arm bracket mounts to hollow shaft reducer.

STYLE F OUTPUT FLANGE CAST IRON



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813	G185130**	1
GR815	G185131**	1
GR818	G185132**	2
GR821	G185133**	3
GR824	G185134**	3
GR826	G185135**	4
GR830	G185136**	10
GR832	G185137**	10
GR842	G185138**	15
GR852	G185139**	30
GR860	G185140**	38
GR870	**	**
GR880	**	**
GR8100	**	**

** Output flange must be installed at Factory for all solid output shaft reducers (sizes 813-8100). Specify Mod-Squad Service Number for flange when ordering these reducers.

▼ Flange can only mount to "bolted cover side" of hollow reducer on sizes 813-852. Please specify correct mounting assembly with order. Refer to pages 64-65, for assembly positions. Must designate L (left) or R (right).

STYLE R RISER BLOCK



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR815	G185141	7
GR818	G185142	7
GR821	G185143	9
GR824	G185144	9
GR826	G185145	12
GR830	G185146	15
GR832	G185147	31
GR842	G185148	24
GR852	G185149	15

NOTE: Mounting bolts are not included.

STYLE VL & VH VERTICAL OUTPUT BASE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813	G185002	2
GR815	G185127	3
GR818	G185007	3
GR821	G185012	7
GR824	G185017	7
GR826	G185022	9
GR830	G185128	10
GR832	G185027	13
GR842	■	20
GR852	■	25
GR860	■	36
GR870	■	71
GR880	■	78
GR8100	■	156

■ VL & VH bases for sizes 842-8100 require grease retainer and zerk fittings in output covers and must be installed at Factory. Contact Factory for field replacement kits.

** Must designate D or U.