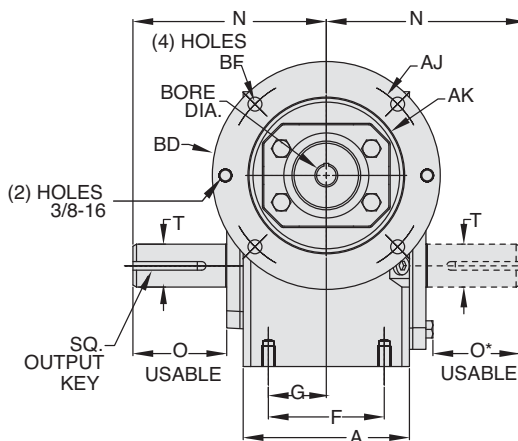
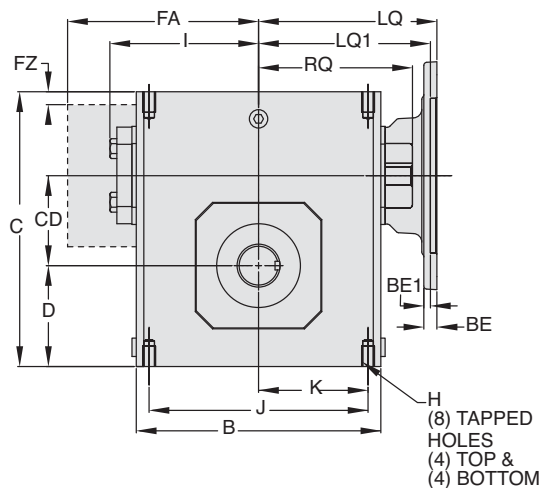




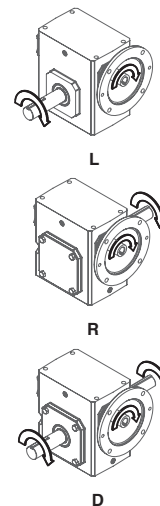
GR Series Dimensions Styles: BMQ, BM, B

**CAST IRON
GR SERIES**

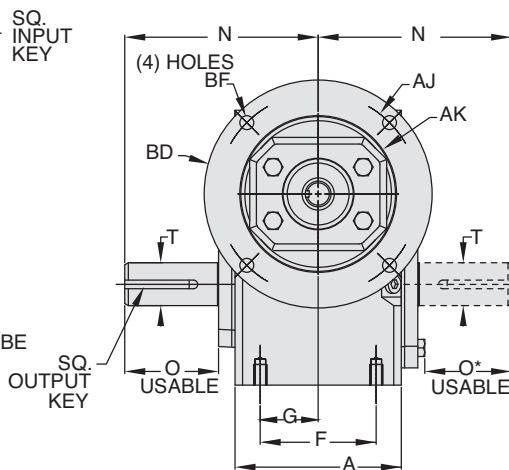
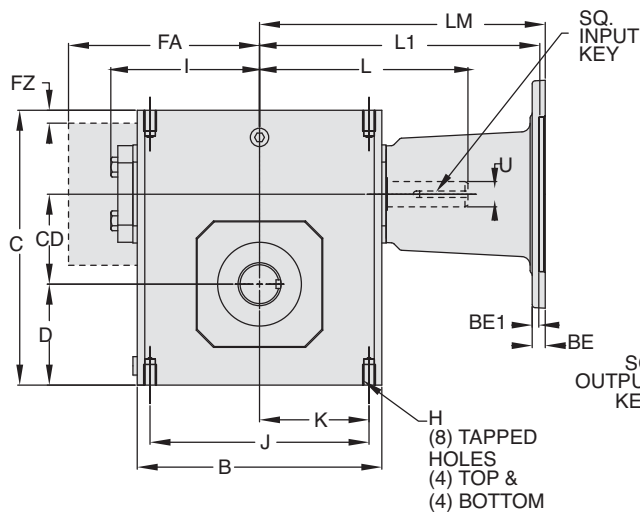
Style BMQ



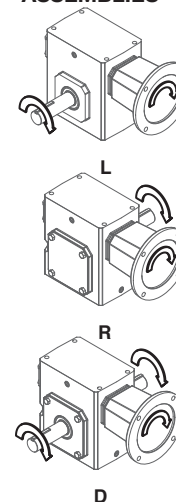
ASSEMBLIES



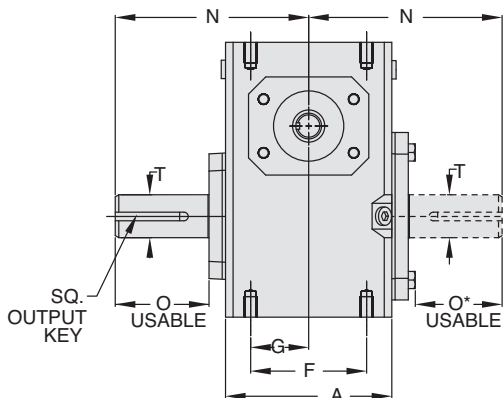
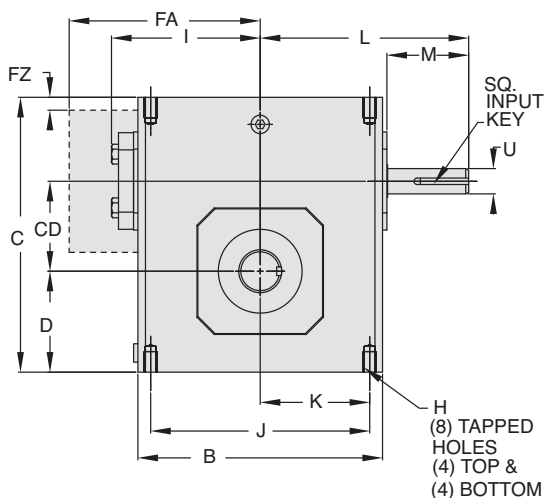
Style BM



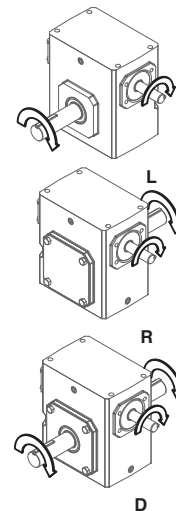
ASSEMBLIES



Style B



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 BMQ, BM, B DIMENSIONS (Inches)

Size	A	B	C	D	CD	F	FA ▼	FZ ▼	G	H		I	J	K	L	M	N	O	O*	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*	Output Key
										Tap Size	Depth												
GR813	2.82	3.80	4.66	1.72	1.33	2.00	N/A	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	.625	.500	1/8 X 1.00	3/16 X 1.50
GR815	3.44	4.88	5.38	1.91	1.54	2.75	N/A	N/A	1.38	5/16-18 UNC	.63	3.14	4.19	2.09	4.35	1.76	4.31	2.11	1.90	.750	.625	3/16 X 1.38	3/16 X 1.50
GR818	3.56	5.06	5.75	2.06	1.75	2.75	N/A	N/A	1.38	5/16-18 UNC	.63	3.24	4.19	2.09	4.45	1.76	4.31	2.05	1.84	.875	.625	3/16 X 1.38	3/16 X 1.38
GR821	3.81	5.80	6.38	2.28	2.06	▲	N/A	N/A	1.44	5/16-18 UNC	.63	3.61	▲	2.50	4.82	1.76	4.68	2.29	2.08	1.000	.625	3/16 X 1.38	1/4 X 1.44
GR824	4.06	6.12	6.94	2.50	2.38	2.88	N/A	N/A	1.44	3/8-16 UNC	.69	3.77	5.00	2.50	5.51	2.38	5.14	2.66	2.44	1.125	.750	3/16 X 1.63	1/4 X 1.75
GR826	4.84	7.12	8.00	2.94	2.63	3.38	N/A	N/A	1.69	3/8-16 UNC	.69	4.34	6.38	3.19	6.07	2.38	5.63	2.73	2.52	▲	.750	3/16 X 1.63	1/4 X 1.75
GR830	5.25	8.12	8.88	3.25	3.00	4.00	N/A	N/A	2.00	7/16-14 UNC	.88	4.84	7.00	3.50	6.57	2.38	6.75	3.60	3.36	1.250	.875	3/16 X 1.63	1/4 X 1.75
GR832	5.75	8.50	9.38	3.50	3.25	4.00	N/A	N/A	2.00	7/16-14 UNC	.88	5.02	7.50	3.75	6.76	2.38	7.06	3.66	3.42	▲	.875	3/16 X 1.63	▲
GR842	6.13	10.25	11.38	4.44	4.25	5.00	N/A	N/A	2.50	5/8-11 UNC	1.00	6.10	8.50	4.25	9.57	3.47	8.12	4.50	4.21	1.875	1.250	1/4 X 2.50	1/2 X 3.06
GR852	7.19	13.00	14.00	5.12	5.25	5.81	N/A	N/A	2.91	5/8-11 UNC	1.25	7.50	11.00	5.50	10.88	3.38	9.06	4.78	4.53	2.000	1.250	1/4 X 3.00	1/2 X 3.50
GR860	8.13	14.25	16.50	6.50	6.00	6.38	11.13	0.33	3.19	5/8-11 UNC	1.00	N/A	12.75	6.38	11.78	3.41	10.00	4.65	4.65	2.500	1.500	3/8 X 3.00	5/8 X 4.00
GR870	7.63	14.88	18.91	7.59	7.00	5.50	11.37	0.35	2.75	1-8 UNC	1.56	N/A	12.50	6.25	11.50	2.97	11.76	5.65	5.65	2.750	1.625	3/8 x 2.87**	5/8 x 4.00**
GR880	8.63	17.00	20.96	8.86	8.00	6.50	12.52	0.57	3.25	1-8 UNC	1.66	N/A	14.25	7.13	12.50	2.84	12.25	5.98	5.98	3.000	1.875	1/2 x 2.81**	3/4 x 4.50**
GR100	9.53	20.88	25.47	10.36	10.00	6.88	14.69	0.51	3.44	1-1/4 -7 UNC	2.04	N/A	17.75	8.88	15.50	3.76	14.75	6.76	6.76	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	(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"					GRL

Motor Mounting Dimensions
NEMA DIMENSIONS (Inches)

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

NEMA DIMENSIONS (Inches)

Frame	Ajb	AK	BD	BE	BE1	Bore Dia.	Keyway	Bfb
48CZ	3.75	3.00	4.36	0.38	N/A	.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.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	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	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	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	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	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	5.07	N/A
GR830	N/A	4.78	5.41	5.41	5.88	N/A	N/A	4.59	5.22	5.22	5.57	N/A
GR832*	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	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 BM 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 B and BM 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.

WASHGUARD® Maximum Rating Tables

Size 830 • GR, EL Series



Style WBMQ

Style WHMQ



830 Series

Ratio	Input RPM	Output RPM+	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	1750	350.0	9.093	8.573	1544	143-5TC	<u>8303037</u>	<u>8303049</u>	<u>8303061</u>	<u>8303513.XX</u>
7.5	1750	233.3	6.879	6.421	1734	143-5TC	<u>8303038</u>	<u>8303050</u>	<u>8303062</u>	<u>8303514.XX</u>
10	1750	175.0	6.151	5.655	2037	143-5TC	<u>8303039</u>	<u>8303051</u>	<u>8303063</u>	<u>8303515.XX</u>
15	1750	116.7	4.843	4.311	2329	143-5TC	<u>8303040</u>	<u>8303052</u>	<u>8303064</u>	<u>8303516.XX</u>
20	1750	87.5	3.947	3.407	2454	143-5TC	<u>8303041</u>	<u>8303053</u>	<u>8303065</u>	<u>8303517.XX</u>
25	1750	70.0	3.355	2.807	2527	143-5TC	<u>8303042</u>	<u>8303054</u>	<u>8303066</u>	<u>8303518.XX</u>
30	1750	58.3	2.879	2.332	2519	143-5TC	<u>8303043</u>	<u>8303055</u>	<u>8303067</u>	<u>8303519.XX</u>
40	1750	43.8	2.251	1.720	2477	56C 143-5TC	<u>8303008</u> <u>8303044</u>	<u>8303020</u> <u>8303056</u>	<u>8303032</u> <u>8303068</u>	<u>8303508.XX</u> <u>8303520.XX</u>
50	1750	35.0	1.915	1.383	2490	56C 143-5TC	<u>8303009</u> <u>8303045</u>	<u>8303021</u> <u>8303057</u>	<u>8303033</u> <u>8303069</u>	<u>8303509.XX</u> <u>8303521.XX</u>
60	1750	29.2	1.637	1.117	2413	56C 143-5TC	<u>8303010</u> <u>8303046</u>	<u>8303022</u> <u>8303058</u>	<u>8303034</u> <u>8303070</u>	<u>8303510.XX</u> <u>8303522.XX</u>
80	1750	21.9	0.895	0.585	1684	56C 143-5TC	<u>8303011</u> <u>8303047</u>	<u>8303023</u> <u>8303059</u>	<u>8303035</u> <u>8303071</u>	<u>8303511.XX</u> <u>8303523.XX</u>
100	1750	17.5	0.603	0.367	1321	56C	<u>8303012</u>	<u>8303024</u>	<u>8303036</u>	<u>8303512.XX</u>

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

▲ Contact Factory for other motor flanges available.

+ For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 34-35.

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
3. For Hollow output, replace “XX” suffix with bore code.

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 140TC
GR-WBMQ830-10--140-L, GR8303039

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	1.250	1.500	1.625	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

* Catalog numbers are for hollow output shaft reducers.

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