



GR Series Dimensions

Styles UMQ UM U

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

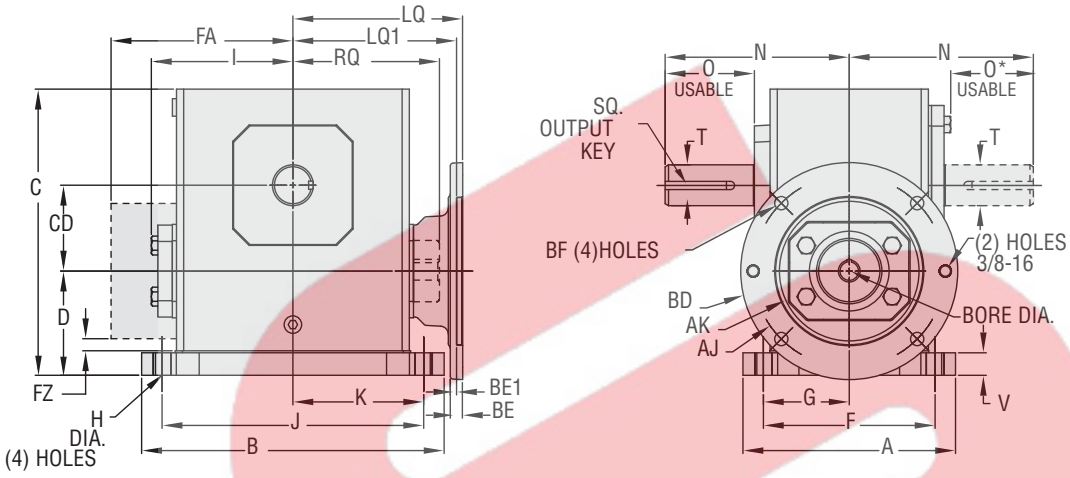
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD Reducers
and GEAR+MOTOR

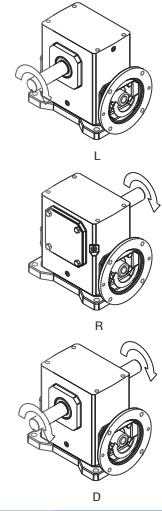
Ratio Multipliers

Accessories and
Additional Capabilities

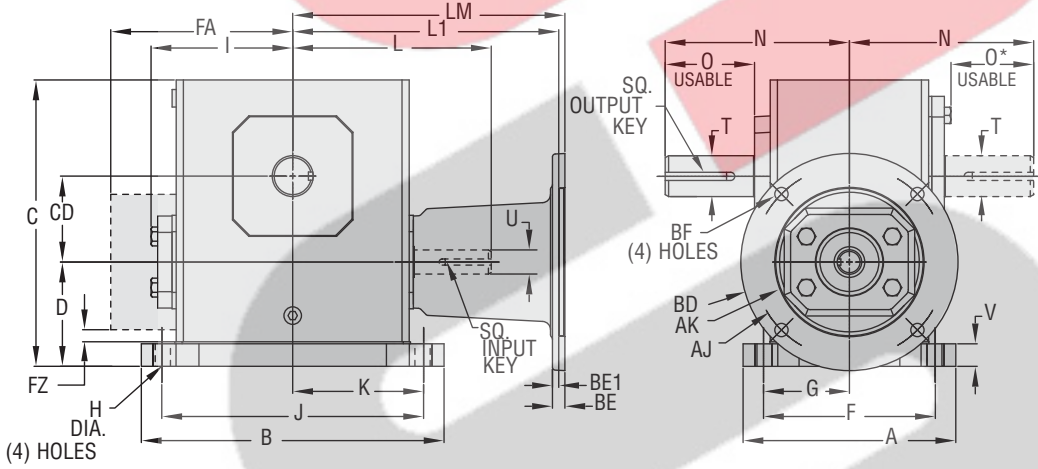
Style UMQ



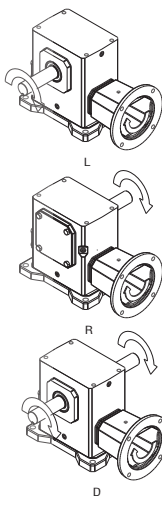
ASSEMBLIES



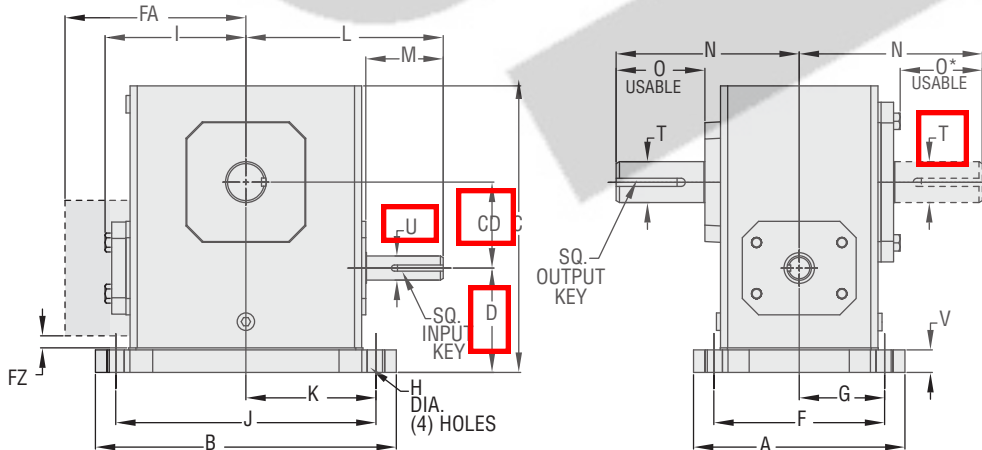
Style UM



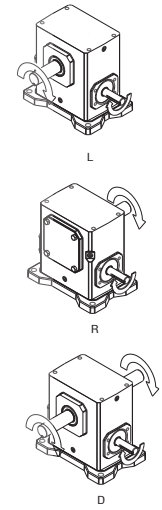
ASSEMBLIES



Style U



ASSEMBLIES



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



STYLE UMQ UM U DIMENSIONS (Inches)

Size	A	B	C	D	CD	F	FA W	FZ W	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input KeyL	Output Key
GR813	4.24	5.37	5.19	2.14	1.33	3.31	N/A	N/A	1.66	.34	2.61	4.37	2.19	3.82	1.76	4.00	2.16	1.94	0.53	.625	.500	1/8 X 1.00	3/16 X 1.50
GR815	5.56	6.50	5.97	2.52	1.54	4.31	N/A	N/A	2.16	.41	3.14	5.25	2.63	4.35	1.76	4.31	2.11	1.90	0.59	.750	.625	3/16 X 1.38	3/16 X 1.50
GR818	5.75	6.99	6.44	2.63	1.75	4.50	N/A	N/A	2.25	.41	3.24	5.75	2.88	4.45	1.76	4.31	2.05	1.84	0.69	.875	.625	3/16 X 1.38	3/16 X 1.38
GR821	6.00	7.69	7.09	2.75	2.06	4.69	N/A	N/A	2.34	.47	3.61	6.38	3.19	4.82	1.76	4.68	2.29	2.08	0.72	1.000	.625	3/16 X 1.38	1/4 X 1.44
GR824	6.19	8.37	7.69	2.81	2.38	4.88	N/A	N/A	2.44	.49	3.77	7.06	3.53	5.51	2.38	5.14	2.66	2.44	0.75	1.125	.750	3/16 X 1.38	1/4 X 1.75
GR826	6.50	9.25	8.75	3.19	2.63	5.25	N/A	N/A	2.63	.53	4.34	8.00	4.00	6.07	2.38	5.63	2.73	2.52	0.75	v	.750	3/16 X 1.63	1/4 X 1.75
GR830	7.50	10.00	9.63	3.38	3.00	5.88	N/A	N/A	2.94	.53	4.84	8.44	4.22	6.57	2.38	6.75	3.60	3.36	0.75	1.250	.875	3/16 X 1.63	1/4 X 1.75
GR832	7.75	11.12	10.25	3.50	3.25	6.13	N/A	N/A	3.06	.53	5.02	9.50	4.75	6.76	2.38	7.06	3.66	3.42	0.81	v	.875	3/16 X 1.63	3/8 X 2.25
GR842	9.75	13.24	12.38	3.69	3.25	7.63	N/A	N/A	3.81	.66	6.10	11.12	5.56	9.57	3.47	8.12	4.50	4.21	1.00	1.875	1.250	1/4 X 2.50	1/2 X 3.06
GR852	10.50	16.24	15.13	4.76	3.25	9.38	N/A	N/A	4.19	.78	7.50	14.12	7.06	10.88	3.38	9.06	4.78	4.53	1.13	2.000	.250	1/4 X 3.00	1/2 X 3.50
GR860	12.00	18.99	17.75	5.25	6.00	9.50	11.13	0.33	4.75	.91	N/A	16.49	8.25	11.78	3.41	10.00	4.65	4.65	1.25	2.500	1.500	3/8 X 3.00	5/8 X 4.00
GR870	13.38	15.38	20.33	5.74	7.00	11.25	11.37	0.35	5.63	1.18	N/A	13.00	6.50	11.50	2.97	11.76	5.65	5.65	1.42	2.750	1.625	3/8 x 2.87**	5/8 x 4.00**
GR880	13.50	17.37	22.61	5.75	8.00	11.50	12.52	0.57	5.75	1.18	N/A	14.75	7.38	12.50	2.84	12.25	5.98	5.98	1.65	3.000	1.875	1/2 x 2.81**	3/4 x 4.50**
GR8100	16.88	21.14	27.12	6.76	10.00	14.00	14.69	0.51	7.00	1.44	N/A	17.00	8.50	15.50	3.76	14.75	6.76	6.76	1.65	3.750	2.250	1/2 x 3.69**	7/8 x 5.00**

v 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 2	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

2 If Accessory it 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 48CZ	56C/ 140TC	L1 180TC/ 210TC	250TC	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	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	Q	5.06	N/A	4.09	Q	4.56	N/A	
GR826	N/A	8.32	9.32	N/A	5.19	Q	5.62	N/A	4.82	Q	5.13	N/A	
GR830	N/A	8.82	9.82	N/A	5.95	Q	6.15	6.56	5.32	Q	5.63	N/A	
GR832	N/A	9.01	10.01	N/A	6.14	Q	6.34	6.75	5.51	Q	5.81	N/A	
GR842	N/A	11.81	12.90	13.46	6.45	Q	7.21	7.21	7.77	6.04	Q	6.68	7.24
GR852	N/A	13.21	14.30	14.86	7.85	Q	8.61	8.61	9.17	7.35	Q	7.98	8.54
GR860	N/A	N/A	15.88	16.50	10.45	Q	9.33	9.33	9.94	10.01	Q	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	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	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJb	AK	BD	BE	BE1	Bore Dia.	KeywayX	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

* Applies to double output shaft

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

X Keyway width by depth

E Mounting holes rotated 45 degrees from positions shown on Size GR860 Style UM with frame sizes 180TC-250TC.

Q 48CZ not available

O 180TC not available

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

Dimensions same for GRG and GRL Series

L Style U and UM only.

W 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.

Note Styles UMQ UM and U are worm under mounting assemblies and not recommended due to increase potential for high speed shaft seal leakage and potential mounting interference. Motor flange may extend below base. Riser blocs are available upon request (see page 274). Contact Factory for selection assistance.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGARD Reducers
and GEAR-MOTOR

Ratio Multipliers

Accessories and
Additional Capabilities