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TECHNOLOGY GROUP

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Find the *Kaman / Ohio Gear BM826-50-56-R* at our website: ***Click HERE***

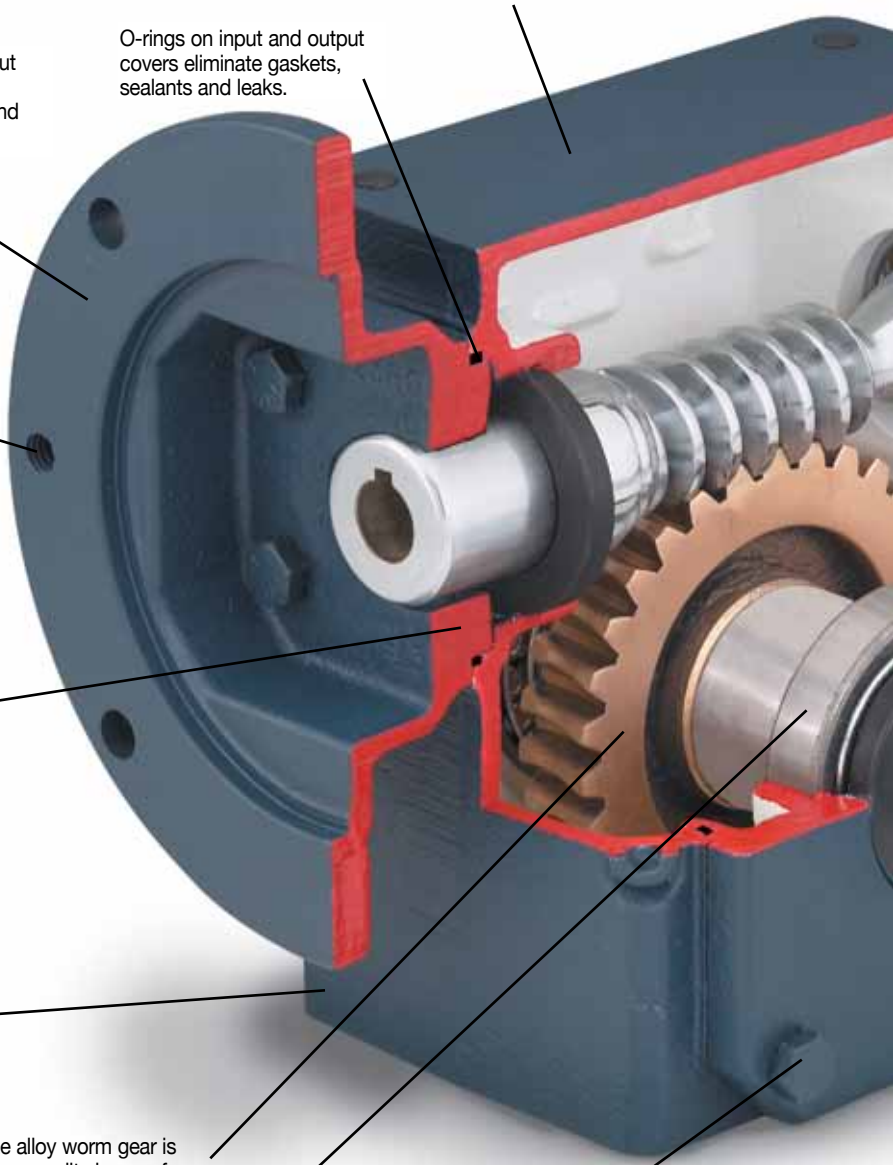
800 Series Gear Reducers Built For Industrial Use

Precision mounting surfaces and extra threaded bolt holes on top and bottom for flexibility and to accept a wide range of stock mounting accessories.

O-rings on input and output covers eliminate gaskets, sealants and leaks.

Cast iron IEC and NEMA C input flange with machined fits for precision alignment of motor and bearings.

Push-off holes drilled and tapped into flange for quick motor removal on quill input styles (56 & 140TC frames).



Seal Guard** on quill-input styles protects input seal from damage during motor installation.

** Sizes 813 through 852 only

IronMan™ fine-grained, one-piece cast housing for rigidity and alignment. Machined for precision alignment of worm, worm gear, bearings and mounting surfaces. Superior resistance to environmental contaminants with high heat dissipation and noise reduction.

Bronze alloy worm gear is premium quality bronze for maximum strength, lubricity and superior life.

Tapered roller bearings on output shaft for high overhung and thrust load capacities.

Mounting dimensions are interchangeable with Baldor 900 series, Boston Gear, Browning Raider, Falk, Morse Invader and other "industry standard" reducers.

Premium Grade 5 zinc-plated heat-treated bolts used throughout.

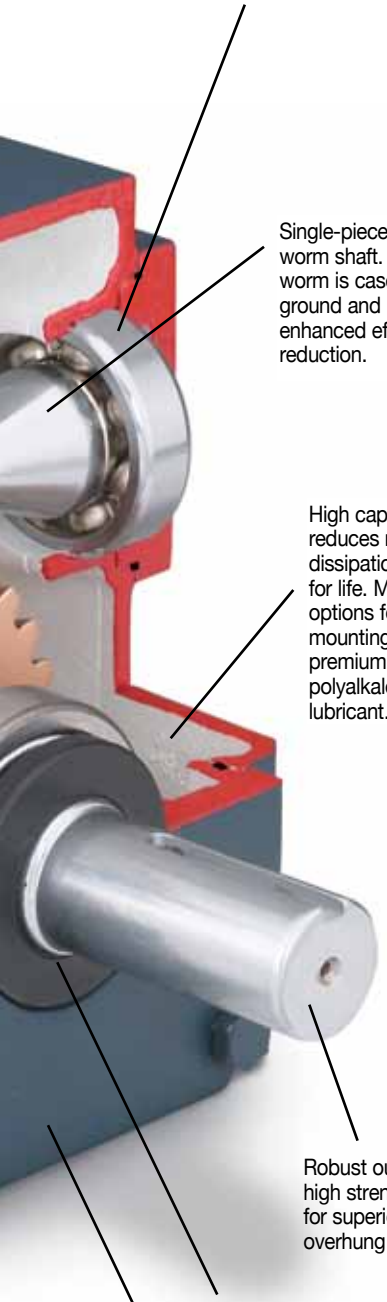
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CAST IRON GR SERIES

CAST IRON NH SERIES

Table of Contents

Oversized positively-retained high speed input shaft bearing for higher shock load capacity, shaft alignment and seal life. Ideal for frequent starting and reversing applications.



Single-piece, alloy steel input worm shaft. High lead angle worm is case-hardened, ground and polished for enhanced efficiency and noise reduction.

High capacity oil reservoir reduces noise, aids heat dissipation and lubricates for life. Multiple venting options for multi-position mounting. Factory filled with premium Mobil Glygoyle 460 polyalkalene glycol (PAG) lubricant.

Robust output shaft of high strength steel alloy for superior torque and overhung load capacities.

Viton® premium quality, double lip seals** throughout —on micro-finished surfaces— mean extended life, resistance to high temperature, abrasion and chemicals.

Single output cover design provides precise centering of gear for lower noise levels and higher overall gear efficiencies.

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ELECTRA-GEAR

Aluminum Gear Reducers Built For Industrial Use

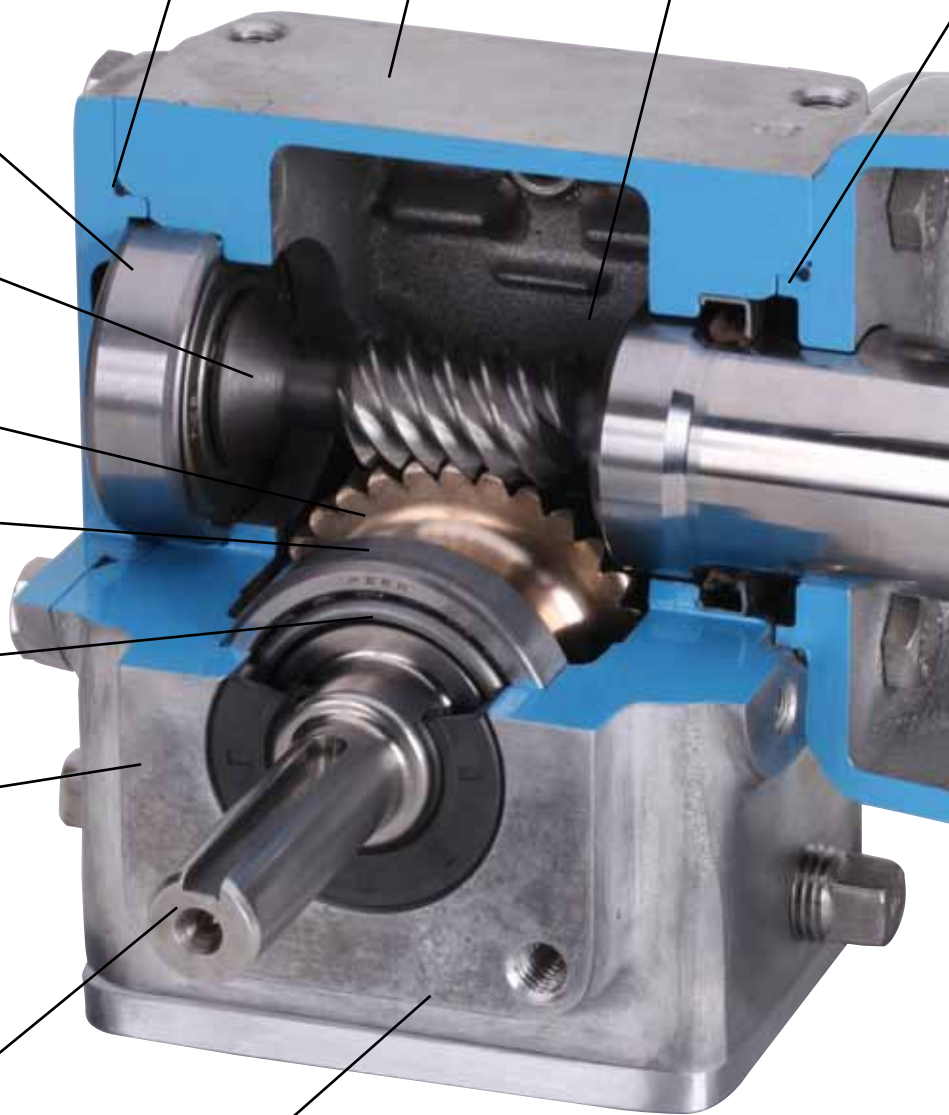
Precision mounting surfaces and extra threaded bolt holes on top and bottom for flexibility and to accept a wide range of stock mounting accessories.

High capacity oil reservoir reduces noise, aids heat dissipation and lubricates for life. Multiple venting options for multi-position mounting. Factory filled with premium synthetic Mobil Glygoyle 460 polyalkalene glycol (PAG) lubricant.

O-rings on input and output covers eliminate gaskets, sealants and leaks.

Oversized positively-retained high speed input shaft bearing for higher shock load capacity, shaft alignment and seal life. Ideal for frequent starting and reversing applications.

Single-piece, alloy steel input worm shaft. High lead angle worm is case-hardened, ground and polished for enhanced efficiency and noise reduction.



DIN1705 (CuSn45Ni4) bronze alloy provides maximum strength, lubricity and superior life.

Tapered roller bearings on output shaft for high overhung and thrust load capacities.

Viton® premium quality, double lip seals provide extended life and resistance to high temperature, abrasion and chemicals. Only non-rusting rubber O.D. seals used in all exposed locations.

EL Series One piece 356T cast aluminum housing to provide strength and rigidity. Polished finish also available.

Robust output shaft of high strength steel alloy for superior torque and overhung load capacities.

Single output cover design provides precise centering of gear for lower noise levels and higher overall gear efficiencies. Output shaft comes out non-cover side as standard.

EL Series Mounting dimensions same as the original Electra-Gear product with an option to match the industry standard dimensions of Grove Gear.

GR and NH Series Mounting dimensions are interchangeable with Baldor 900 series, Boston Gear, Browning Raider, Falk, Morse Invader and other "industry standard" reducers.

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ALL FEATURES SHOWN ARE SAME FOR ALL GR, NH AND EL SERIES EXCEPT WHERE NOTED.



Seal Guard** on quill-input styles protects input seal from damage during motor installation.

** Sizes 813 through 852 only

Cast aluminum NEMA C-input with machined fits for precision alignment of motors and bearings. (EL Series)

Cast iron NEMA C-input flange with machined fits for precision alignment of motors and bearings. (GR & NH Series)

Push-off holes drilled and tapped into flange for quick motor removal on quill input styles (56 & 140TC frames).

Premium Grade 5 zinc-plated bolts used throughout.

Series Comparison

CAST IRON GR SERIES



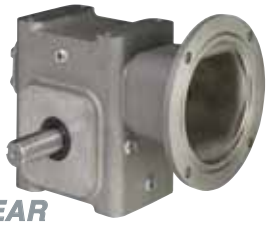
- Grove Gear IRONMAN 800 Series
- Cast Iron Housing Construction
- Mounting dimensions are interchangeable with most industry standard reducers
- Designed with industry leading premium features as standard
- Combines the premium features of the LEESON IRONMAN with the industry's broadest product offering of the Grove Gear Flexaline
- GEAR+MOTOR™ Available

CAST IRON NH SERIES



- Grove Gear IRONMAN Narrow Housing 800 Series
- Cast Iron Housing Construction
- Designed with industry leading premium features as standard
- Replacement for Grove Gear OE Series and original Alling Lander gear reducers
- Compact housing design to fit where other reducer brands cannot
- GEAR+MOTOR™ Available

ALUMINUM EL SERIES



ELECTRA-GEAR

- Electra-Gear 800 Series
- Aluminum Housing Construction
- Lightweight design with all the premium features of the GR and NH series as standard
- Replacement to original Electra-Gear reducers
- GEAR+MOTOR™ Available

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Interchange Guide

Single Reduction


Style BMQ


Style TMQ


Style JMQ


Style FMQ


Style CMQ


Style FEMQ


Style HMQ


Style JHMQ


Style VLHMQ

CAST IRON GR SERIES / CAST IRON NH SERIES / ALUMINUM EL SERIES Reducer Style	Replaces Original GROVE GEAR OE Series Reducer Style	Replaces Original ELECTRA-GEAR Reducer Style
B	U	M
BM & BMQ	UFC & UF	MC & MSC
B★	N/A	ML
BM & BMQ★	N/A	MLC & MLSC
T & U	Z & UB	A
TM & TMQ	ZFC & ZF	AC & ASC
T★	N/A	AL
TM & TMQ★	N/A	ALC & ALSC
UM & UMQ	UBFC & UBF	NEW
J	J	JB
JM & JMQ	JFC & JF	JBC & JBSC
VL & VH	SL & SH	B
VLM & VLMQ	SLFC & SLF	BC & BSC
VHM	SHFC	N/A
VHMQ	SHF	N/A
F	K & V	N/A
FM & FMQ	KFC & KF / VFC & VF	N/A
C	P	N/A
CM & CMQ	PFC & PF	N/A
FE	E	N/A
FEM & FEMQ	EFC & EF	N/A
H	Y	MH_ & H_
HM & HMQ	YFC & YF	MH_C/ MH_SC & H_C/H_SC
JH	N/A	JBH_
JHM & JHMQ	N/A	JBH_C & JBH_SC
FH	M	RH_
FHM & FHMQ	MFC & MF	RH_C & H_C/H_SC & RH_SC
FR	N/A	New
FRM & FRMQ	N/A	New
FL	N/A	RL
FLM & FLMQ	N/A	RLC & RLSC
BL (Torque Limiter Reducer)	UL	N/A
BLM & BLMQ (Torque Limiter Reducer)	ULFC & ULF	N/A
ABC	N/A	ABC (contact factory)
Accessory		
Horizontal Base Kit (T & U)	Horizontal Base Kit (Z & UB)	Horizontal Base Kit (AK Kit #'s)
Vert. Output Shaft Base Kit (VL & VH)	Vert. Output Shaft Base Kit (SL & SH)	Vert. Output Shaft Base Kit (BK Kit #'s)
Vertical Input Shaft Base Kit (J)	Vert. Input Shaft Base Kit (J)	Vert. Input Shaft Base Kit (JBK Kit #'s)
Cast Iron Output Flange (F)	Cast Iron Output Flange (K & V)	Cast Iron Output Flange (Square)
ABC Base Kit	N/A	ABC
Cast Iron Output Flange for Solid Output Shaft Styles (FR)	N/A	Cast Iron Output Flange (Round)
Coupling Input "C" Flange Kit – Single Red.✚	C-Flange Mounting Kit	N/A
Coupling Input "C" Flange Kit – Double Red.✚	C-Flange Mounting Kit	N/A
Hollow Shaft Tie Rod Kit	Hollow Shaft Tie Rod Kit	Hollow Shaft Tie Rod Kit
Hollow Shaft Torque Arm Bracket	Hollow Shaft Torque Arm Bracket	Hollow Shaft Torque Arm Bracket (TAK Kit #'s)

★ Confirm required output shaft length
✚ Convert Style B to BM using coupling input kit

SEE PAGE 123 FOR DOUBLE REDUCTION

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800 Series Gear Reducer Model Number Nomenclature

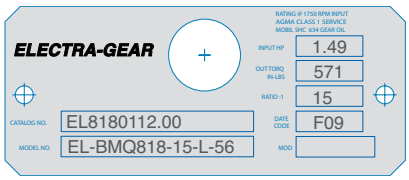
All new stock and custom 800 Series Grove Gear and Electra-Gear worm gear reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.

NOTE: All reducers also have a catalog number—for example EL8130001 and GR8130001. Reducers and renewal parts should be ordered by catalog number. If a stock reducer has been Factory modified by the addition of an optional base for example, the modification number T818EL is stamped in the blank column of the nameplate. Accessories that are field installed will not be noted on the nameplate.

Catalog numbers 3000 and higher (for example, GR8133000 and NH8133000) are WASHGUARD® reducers for washdown service.

Catalog numbers 5000 and higher (for example, GR8135000 and EL8135000) are custom reducers manufactured for a specific application. The machinery or equipment manufacturer should be contacted for replacement reducers. Renewal parts can be ordered by catalog number.

TYPICAL NAMEPLATE
(Electra-Gear shown)



Series Code

GR - Grove Gear IRONMAN Cast Iron Reducers
NH - Grove Gear IRONMAN Narrow Housing Cast Iron Reducers
EL - Electra-Gear Aluminum Reducers
GRG - Grove Gear Flexaline Interchange (Sizes 821, 826, 832)
GRL - Leeson IRONMAN Interchange (Sizes 821, 826, 832)

Style

SOLID OUTPUT SHAFT
BMQ – Motorized, Quill Input
BM – Motorized, Flexible Coupling Input
B – Non-Flanged

HOLLOW OUTPUT SHAFT
HMQ – Motorized, Quill Input
HM – Motorized, Flexible Coupling Input
H – Non-Flanged

WASHGUARD STYLES
W prefix; i.e. WBMQ denotes WASHDOWN Reducer
S prefix; i.e. SHMQ denotes All-Stainless Steel Reducer

Size

800 SERIES CENTER DISTANCES

Size	Center Distance (Inches)
813	1.33
815**	1.54
818	1.75
821	2.06
824	2.38
826	2.62
830	3.00
832	3.25
842	4.25
852	5.25
860	6.00
870*	7.00
880*	8.00
8100*	10.00

* GR Series only
** Not available in EL Series

Ratio

See Selection Tables on pages 32-58, for all available ratios.

Output Shaft Orientation

L – Left-hand Output Shaft*
R – Right-hand Output Shaft*
D – Double Output Shaft
H – Hollow Output Shaft
* Viewed from drive end of reducer.

Motor Flange

Input Code		For Input Type	
Single Input	Dual Input		
blank	A	non-motorized	NEMA Input
48**	48A	48CZ	
56	56A	56C	
140	140A	143-5TC	
180	180A	182-4TC	
210	210A	213-5TC	
250	250A	254-6TC	
63	Contact Factory	D63D B5	IEC Input
71		D71D B5	
80		D80D B5	
90		D90D B5	
110		D100LD/D112MD B5	
132		D132D	

** Not available in EL Series

Output Bore Code

Hollow Shaft Only
See bottom right hand pages of Max Ratings Tables starting on page 37.

Sample Model Numbers

Solid Output Shaft - GR Series

Cast iron, single reduction, 2.38" reducer with 56C motorized quill input, left-hand output shaft, 30:1 ratio.

GR	-	BMQ	824	-	30	-	L	-	56
Series		Style	Size		Ratio		Shaft Orientation		Input Type

Hollow Output Shaft - EL Series

Aluminum, single reduction, 1.75" reducer with 56C motorized quill input, 1.00" hollow output bore, 10:1 ratio.

EL	-	HMQ	818	-	10	-	H	-	56	-	16
Series		Style	Size		Ratio		Shaft Orientation		Input Type		Output Bore Code

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Cast Iron Solid Shaft Output Styles

CAST IRON GR SERIES | CAST IRON NH SERIES

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles BMQ, BM and B can be field or Factory modified into a wide range of styles. See pages 296 for details.

	Stock Style	Horizontal Base Worm Over	Horizontal Base Worm Under	Horizontal Base Worm Center	Vertical Input Shaft
MOTORIZED C-FLANGE QUILL INPUT	Style BMQ	Style TMQ	Style UMQ*	Style RMQ	Style JMQ
					
	Ratings Pages: 32-58 Dimension Pages: GR Series 62-63 NH Series 84-85	Ratings Pages: 32-58 Dimension Pages: GR Series 64-65 NH Series 86-87	Ratings Pages: 32-58 Dimension Pages: GR Series 66-67 NH Series 88-89	Ratings Pages: 32-58 Dimension Pages: GR Series 72-73	Ratings Pages: 32-58 Dimension Pages: GR Series 68-69 NH Series 90-91
MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT	Style BM	Style TM	Style UM*	Style RM	Style JM
					
	Ratings Pages: 32-58 Dimension Pages: GR Series 62-63 NH Series 84-85	Ratings Pages: 32-58 Dimension Pages: GR Series 64-65 NH Series 86-87	Ratings Pages: 32-58 Dimension Pages: GR Series 66-67 NH Series 88-89	Ratings Pages: 32-58 Dimension Pages: GR Series 72-73	Ratings Pages: 32-58 Dimension Pages: GR Series 68-69 NH Series 90-91
NON-FLANGED INPUT	Style B	Style T	Style U*	Style R	Style J
					
	Ratings Pages: 32-58 Dimension Pages: GR Series 62-63 NH Series 84-85	Ratings Pages: 32-58 Dimension Pages: GR Series 64-65 NH Series 86-87	Ratings Pages: 32-58 Dimension Pages: GR Series 66-67 NH Series 88-89	Ratings Pages: 32-58 Dimension Pages: GR Series 72-73	Ratings Pages: 32-58 Dimension Pages: GR Series 68-69 NH Series 90-91

* Not a recommended mounting style. Contact Factory for selection assistance.

Additional accessories, options and assembly services are available, contact Factory for details.

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Cast Iron
Solid Shaft Output Styles

Vertical Output Shaft Low Base	Vertical Output Shaft High Base	Flange Mounted Output Shaft	"C" Flange Mounted Output Shaft	Extended Flange Mounted Output Shaft
Style VLMQ**	**Style VHMQ****	**Style FMQ**	**Style CMQ**	**Style FEMQ**
				
Ratings Pages: 32-58 Dimension Pages: GR Series 70-71 NH Series 92-93	Ratings Pages: 32-58 Dimension Pages: GR Series 70-71 NH Series 92-93	Ratings Pages: 32-58 Dimension Pages: GR Series 74-75 NH Series 94-95	Ratings Pages: 32-58 Dimension Pages: GR Series 76-77	Ratings Pages: 32-58 Dimension Pages: GR Series 82-83 NH Series 100-101
Style VLM**	**Style VHM****	**Style FM**	**Style CM**	**Style FEM**
				
Ratings Pages: 32-58 Dimension Pages: GR Series 70-71 NH Series 92-93	Ratings Pages: 32-58 Dimension Pages: GR Series 70-71 NH Series 92-93	Ratings Pages: 32-58 Dimension Pages: GR Series 74-75 NH Series 94-95	Ratings Pages: 32-58 Dimension Pages: GR Series 76-77	Ratings Pages: 32-58 Dimension Pages: GR Series 82-83 NH Series 100-101
Style VL **	**Style VH****	**Style F**	**Style C**	**Style FE**
				
Ratings Pages: 32-58 Dimension Pages: GR Series 70-71 NH Series 92-93	Ratings Pages: 32-58 Dimension Pages: GR Series 70-71 NH Series 92-93	Ratings Pages: 32-58 Dimension Pages: GR Series 74-75 NH Series 94-95	Ratings Pages: 32-58 Dimension Pages: GR Series 76-77	Ratings Pages: 32-58 Dimension Pages: GR Series 82-83 NH Series 100-101

** SPECIFY SHAFT UP OR DOWN FOR THESE STYLES.

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Cast Iron Hollow Shaft Output Styles

CAST IRON GR SERIES | CAST IRON NH SERIES

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles HMQ, HM and H can be field or Factory modified into a wide range of styles. See pages 286-287 for details.

MOTORIZED C-FLANGE QUILL INPUT

Style HMQ



Ratings Pages: 32-58

Dimension Pages:
GR Series 78-79
NH Series 96-97

Vertical Input Shaft

Style JHMQ



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT

Style HM



Ratings Pages: 32-58

Dimension Pages:
GR Series 78-79
NH Series 96-97

Style JHM



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

NON-FLANGED INPUT

Style H



Ratings Pages: 32-58

Dimension Pages:
GR Series 78-79
NH Series 96-97

Style JH



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Additional accessories, options and assembly services are available, Contact Factory for details.

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Cast Iron Hollow Shaft Output Styles

Vertical Output Shaft Low Base

Style VLHMQ



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style VLHM



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style VLH



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Vertical Output Shaft High Base

Style VHHMQ



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style VHHM



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style VHH



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Flange Mounted Output Shaft

Style FHMQ



Ratings Pages: 32-58

Dimension Pages:
GR Series 80-81
NH Series 98-99

Style FHM



Ratings Pages: 32-58

Dimension Pages:
GR Series 80-81
NH Series 98-99

Style FH



Ratings Pages: 32-58

Dimension Pages:
GR Series 80-81
NH Series 98-99

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ELECTRA-GEAR
Aluminum
Solid Shaft Output Styles

ALUMINUM EL SERIES

	Stock Styles	Modified Stock Styles	
		Using off-the-shelf accessories, stock styles BMQ, BM and B can be field or Factory modified into a wide range of styles. See pages 296 for details.	
		Horizontal Base Worm Over	Horizontal Base Worm Under
MOTORIZED C-FLANGE QUILL INPUT	Style BMQ	Style TMQ	Style UMQ*
			
	Ratings Pages: 32-58 Dimension Pages: EL Series 104-105	Ratings Pages: 32-58 Dimension Pages: EL Series 106-107	Ratings Pages: 32-58 Dimension Pages: EL Series 108-109
MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT	Style BM	Style TM	Style UM*
			
	Ratings Pages: 32-58 Dimension Pages: EL Series 104-105	Ratings Pages: 32-58 Dimension Pages: EL Series 106-107	Ratings Pages: 32-58 Dimension Pages: EL Series 108-109
NON-FLANGED INPUT	Style B	Style T	Style U*
			
	Ratings Pages: 32-58 Dimension Pages: EL Series 104-105	Ratings Pages: 32-58 Dimension Pages: EL Series 106-107	Ratings Pages: 32-58 Dimension Pages: EL Series 108-109

* Not a recommended mounting style. Contact Factory for selection assistance.

Additional accessories, options and assembly services are available, Contact Factory for details.

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Vertical Input Shaft

Style JMQ**



Ratings Pages: 32-58

Dimension Pages:
EL Series 110-111

Style JM**



Ratings Pages: 32-58

Dimension Pages:
EL Series 110-111

Style J **



Ratings Pages: 32-58

Dimension Pages:
EL Series 110-111

Vertical Output Shaft Low Base

Style VLMQ**



Ratings Pages: 32-58

Dimension Pages:
EL Series 112-113

Style VLM **



Ratings Pages: 32-58

Dimension Pages:
EL Series 112-113

Style VL **



Ratings Pages: 32-58

Dimension Pages:
EL Series 112-113

Flange Mounted Output Shaft

Style FRMQ



Ratings Pages: 32-58

Dimension Pages:
EL Series 114-115

Style FRM



Ratings Pages: 32-58

Dimension Pages:
EL Series 114-115

Style FR



Ratings Pages: 32-58

Dimension Pages:
EL Series 114-115

** SPECIFY SHAFT UP OR DOWN FOR THESE STYLES.

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ELECTRA-GEAR
Aluminum
Hollow Shaft Output Styles

ALUMINUM EL SERIES

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles HMQ, HM and H can be field or Factory modified into a wide range of styles. See pages 296 for details.

MOTORIZED C-FLANGE QUILL INPUT

Style HMQ



Ratings Pages: 32-58

Dimension Pages:
EL Series 116-117

Vertical Input Shaft

Style JHMQ



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT

Style HM



Ratings Pages: 32-58

Dimension Pages:
EL Series 116-117

Style JHM



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

NON-FLANGE INPUT

Style H



Ratings Pages: 32-58

Dimension Pages:
EL Series 116-117

Style JH



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Additional accessories, options and assembly services are available, Contact Factory for details.

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Vertical Output Shaft Low Base

Style VLHMQ



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Flange Mounted Output Shaft

Style FHMQ



Ratings Pages: 32-58

Dimension Pages:
EL Series 118-119

Style VLHM



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style FHM



Ratings Pages: 32-58

Dimension Pages:
EL Series 118-119

Style VLH



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style FH



Ratings Pages: 32-58

Dimension Pages:
EL Series 118-119

Additional accessories, options and assembly services are available, Contact Factory for details.

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Quick Selections

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

How to Use

Based on required output RPM and input motor horsepower, read across chart for the appropriate reducer size. As a rule of thumb, use 1.00 service factor chart for applications having uniform loads with up to 10 hours service duration per day. Use 1.25 service factor chart for longer service or shock loading. These charts are to be considered as guides only. Refer to page 642 or Contact Factory with specific application information.

1.0 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM																				
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50	60	75	100
5	350	813	813	813	813	813	813	815	818	821	824	830*	832**	842	852	852	852	860	870	880	8100	8100
7.5	233	813	813	813	813	813	813	818	821	824	826	832	842	842	852	852	860	870	880	8100	8100	
10	175	813	813	813	813	813	815	818	821	824	830	832**	842	842	852	860	870	880	8100	8100		
15	117	813	813	813	813	815	815	821	824	826	832	842	842	852	870	870	880	8100	8100			
20	88	813	813	813	813	815	818	821	824	826	832**	842	852	860	870	880	8100	8100				
25	70	813	813	813	815	815	821	824	826	830*	842	842	852	870	880	8100	8100					
30	58	813	813	813	815	821	821	824	826	832	842	852	852	880	8100	8100						
40	44	813	813	813	815	821	824	826	830*	842	842	852	870	8100	8100							
50	35	813	813	815	818	821	824	830	832**	842	852	870	880	8100								
60	29	813	813	815	821	824	826	830*	832**	842	852	880	8100									
70	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	870	880	8100									
80	22	815	821	824	826	830	832	842	852	860												
100	18	821	824	826	830	842	842	852	852													

1.25 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM																			
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50	60	75
5	350	813	813	813	813	813	813	815	821	824	826	832**	842	852	852	852	870	870	880	8100	8100
7.5	233	813	813	813	813	813	815	818	821	824	830*	842	842	852	852	870	870	880	8100	8100	
10	175	813	813	813	813	815	815	821	824	826	832	842	842	852	860	870	880	8100	8100		
15	117	813	813	813	813	815	818	821	824	830	842	842	852	860	870	880	8100	8100			
20	88	813	813	813	815	818	821	824	826	830*	842	842	852	870	880	8100	8100				
25	70	813	813	813	815	821	821	824	826	832**	842	852	860	880	8100	8100					
30	58	813	813	815	815	821	824	826	830*	842	842	852	870	8100	8100						
40	44	813	813	815	821	824	824	830*	832**	842	852	870	880	8100							
50	35	813	815	815	821	824	826	830*	842	842	852	880	8100								
60	29	813	815	818	821	824	830	832	842	852	870	8100	8100								
70	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	870	880	8100									
80	22	815	821	824	830	832	842	852	852												
100	18	815	824	830	832	842	852	852	860												

Note: This chart is meant as a guide for reducer selections at specific motor horsepowers.

Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 32-58.

♠ Refer to page 30 for exact ratio of single reduction worm gear reducers.

* Size 832 must be used for NH Series for this selection.

** Size 842 must be used for NH Series for this selection.

indicates a selection where a smaller reducer (1 case size) can be used with redesigned product due to rating increase.

indicates a selection where a smaller reducer (2 case sizes) can be used with redesigned product due to rating increase.

Refer To Pages 522-581 for K Series Helical-Bevel right angle gear reducers for higher horsepower selections not covered here

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1.50 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM																		
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50	60
5	350	813	813	813	813	813	815	818	821	824	830*	832**	842	852	852	870	870	880	8100	8100
7.5	233	813	813	813	813	815	815	821	824	826	832	842	842	852	860	870	880	8100	8100	
10	175	813	813	813	813	815	818	821	824	826	832**	842	852	852	870	880	8100	8100		
15	117	813	813	813	815	818	821	824	826	830*	842	852	852	870	880	8100	8100			
20	88	813	813	813	815	821	821	824	826	832**	842	852	860	880	8100	8100				
25	70	813	813	815	815	821	824	826	830*	842	842	852	870	8100	8100					
30	58	813	813	815	821	821	824	830	832	842	852	870	880	8100						
40	44	813	815	815	821	824	826	830*	832**	842	852	880	8100							
50	35	813	815	818	821	824	830	832**	842	852	870	880	8100							
60	29	813	815	821	824	826	830*	842	842	852	880	8100								
70	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	870	880	8100								
80	22	821	824	826	830	842	842	852	860											
100	18	824	826	830	842	842	852	860												

1.75 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM																		
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50	60
5	350	813	813	813	813	815	815	818	821	824	830*	842	842	852	860	870	880	8100	8100	8100
7.5	233	813	813	813	813	815	818	821	824	830	832**	842	852	852	870	880	880	8100		
10	175	813	813	813	815	818	821	824	824	830	842	842	852	870	870	880	8100			
15	117	813	813	813	815	821	821	824	826	832	842	852	852	870	8100	8100				
20	88	813	813	815	815	821	824	826	830*	842	842	852	870	8100	8100					
25	70	813	813	815	818	821	824	830	832	842	852	870	880	8100						
30	58	813	815	815	821	824	826	830*	832**	842	852	870	880	8100						
40	44	813	815	818	821	824	830	832**	842	842	860	880	8100							
50	35	813	815	821	824	826	830*	842	842	852	870	8100	8100							
60	29	815	818	821	824	830*	832**	842	842	852	880	8100								
70	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	870	8100									
80	22	821	824	826	830	842	842	852	860											
100	18	824	830	830	842	852	852													

2.00 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM																	
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50
5	350	813	813	813	813	815	818	821	824	826	832**	842	852	852	870	870	880	8100	8100
7.5	233	813	813	813	813	815	821	824	824	830	842	842	852	860	870	880	8100	8100	
10	175	813	813	813	815	818	821	824	826	830*	842	852	852	870	880	8100	8100		
15	117	813	813	815	815	821	824	826	830	832**	842	852	870	880	8100	8100			
20	88	813	813	815	818	821	824	826	832	842	852	860	880	8100	8100				
25	70	813	815	815	821	824	824	830*	832**	842	852	870	880	8100					
30	58	813	815	818	821	824	826	832	842	842	852	880	8100						
40	44	813	815	821	824	826	830*	842	842	852	870	8100	8100						
50	35	815	818	821	824	830	832**	842	842	852	880	8100							
60	29	815	821	821	826	830*	832**	842	852	860	8100								
70	25	N/A	N/A	N/A	N/A	N/A	N/A	870	870	880	8100								
80	22	824	826	830	832	842	852	860											
100	18	826	830	832	842	852	852												

Note: This chart is meant as a guide for reducer selections at specific motor horsepowers.

Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 32-58.

♠ Refer to page 30 for exact ratio of single reduction worm gear reducers.

* Size 832 must be used for NH Series for this selection.

** Size 842 must be used for NH Series for this selection.

indicates a selection where a smaller reducer (1 case size) can be used with redesigned product due to rating increase.

indicates a selection where a smaller reducer (2 case sizes) can be used with redesigned product due to rating increase.

Refer To Pages 522-581 for K Series Helical-Bevel right angle gear reducers for higher horsepower selections not covered here

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Exact Ratios

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

Unit	5	7.5	10	15	20	25	30	40	50	60	70	80	100
813	X	X	X	X	X	X	X	X	X	X	NA	X	X
815	X	X	X	X	X	X	X	X	X	X	NA	X	X
818	X	X	X	X	X	X	X	X	X	X	NA	X	X
821	X	X	X	X	X	X	X	X	X	X	NA	X	X
824	X	X	X	X	X	X	X	X	X	X	NA	X	X
826	5 1/6	X	X	X	X	X	X	X	X	X	NA	X	X
830	X	X	X	X	X	X	X	X	X	X	NA	X	X
832	5 1/6	X	X	X	X	X	X	X	X	X	NA	X	X
842	5 1/6	X	X	X	X	X	X	X	X	X	NA	X	X
852	5 1/8	X	X	X	X	X	X	X	X	X	NA	X	X
860	X	X	X	X	X	X	X	X	X	X	NA	X	X
870	5 1/8	7 2/5	9 3/4	14 2/3	20 1/2	24 1/2	29 1/2	X	X	X	X	NA	NA
880	5 1/8	7 2/5	9 3/4	14 2/3	20 1/2	24 1/2	29 1/2	X	X	X	X	NA	NA
8100	5 1/8	7 1/3	9 3/4	14 2/3	20 1/2	24 1/2	29 1/2	X	X	X	X	NA	NA

HOLLOW SHAFT BORE SIZES (Inches)*

Fraction Size	Decimal Size	Output Bore Code	813	815	818	821	824	826	830	832	842	852	860	870	880	8100	Keyway**
5/8	0.625	10	■	■	■												3/16 x 3/32
11/16	0.688	11			■												3/16 x 3/32
3/4	0.750	12			■												3/16 x 3/32
7/8	0.875	14			■												3/16 x 3/32
1	1.000	16			■	■	■	■									1/4 x 1/8
1-1/8	1.125	18				■	■	■									1/4 x 1/8
1-3/16	1.188	19				■	■	■	■	■							1/4 x 1/8
1-1/4	1.250	20				■	■	■	■	■							1/4 x 1/8
1-7/16	1.438	23				■	■	■	■	■	■						3/8 x 3/16
1-1/2	1.500	24				■	■	■	■	■	■						3/8 x 3/16
1-5/8	1.625	26							■	■	■						3/8 x 3/16
1-11/16	1.688	27							■	■	■						3/8 x 3/16
1-3/4	1.750	28							■	■	■						3/8 x 3/16
1-7/8	1.875	30							■	■	■						1/2 x 1/4
1-15/16	1.938	31							■	■	■						1/2 x 1/4
2	2.000	32							■	■	■	■	■				1/2 x 1/4
2- 3/16	2.188	35							■	■	■	■	■				1/2 x 1/4
2-1/4	2.250	36										■	■				1/2 x 1/4
2-7/16	2.438	39										■	■	■			5/8 x 5/16
2-1/2	2.500	40										■	■	■			5/8 x 5/16
2-11/16	2.688	43										■	■	■			5/8 x 5/16
2-15/16	2.938	47										■	■	■			3/4 x 3/8
3	3.000	48										■	■	■			3/4 x 3/8
3-3/16	3.188	51										■	■				3/4 x 3/8
3-7/16	3.438	55										■	■	■	■	■	7/8 x 7/16
3-15/16	3.938	63												■	■	■	1 x 1/2
4-3/16	4.188	67													■		1 x 1/2
4-7/16	4.438	71													■	■	1 x 1/2
4-15/16	4.938	79														■	1-1/4 x 5/8
5-7/16	5.438	87														■	1-1/4 x 5/8

■ Stock Bore Sizes.

* Other bore sizes are available. Contact Factory for sizes and availability.

** Dimensions refer to customer driven shaft.

NOTE: Specify the required bore size when ordering. The suffix "XX" can be substituted with the bore code from table above.

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