

# Maximum Rating Tables

## Size 830 • NH 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 830**

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.*
<b>5</b>	2500	500	7.726	7.325	923	<b>NH8300001</b>	<b>NH8300013</b>	<b>NH8300025</b>	<b>NH8300501.XX</b>
	1750	350	6.683	6.285	1131				
	1170	234	5.645	5.249	1413				
	100	20	0.918	0.779	2454				
<b>7.5</b>	2500	333	7.145	6.713	1269	<b>NH8300002</b>	<b>NH8300014</b>	<b>NH8300026</b>	<b>NH8300502.XX</b>
	1750	233	6.049	5.624	1519				
	1170	156	5.210	4.779	1930				
	100	13	0.765	0.636	3003				
<b>10</b>	2500	250	6.344	5.897	1486	<b>NH8300003</b>	<b>NH8300015</b>	<b>NH8300027</b>	<b>NH8300503.XX</b>
	1750	175	5.450	5.005	1802				
	1170	117	4.586	4.144	2232				
	100	10	0.649	0.526	3312				
<b>15</b>	2500	166	4.858	4.404	1665	<b>NH8300004</b>	<b>NH8300016</b>	<b>NH8300028</b>	<b>NH8300504.XX</b>
	1750	116	4.207	3.751	2026				
	1170	78	3.507	3.062	2473				
	100	6.7	0.498	0.378	3573				
<b>20</b>	2500	125	3.720	3.288	1657	<b>NH8300005</b>	<b>NH8300017</b>	<b>NH8300029</b>	<b>NH8300505.XX</b>
	1750	87	3.233	2.799	2015				
	1170	58	2.717	2.291	2467				
	100	5.0	0.400	0.284	3584				
<b>25</b>	2500	100	3.170	2.737	1724	<b>NH8300006</b>	<b>NH8300018</b>	<b>NH8300030</b>	<b>NH8300506.XX</b>
	1750	70	2.768	2.332	2099				
	1170	46	2.319	1.895	2551				
	100	4.0	0.345	0.232	3653				
<b>30</b>	2500	83	2.717	2.287	1729	<b>NH8300007</b>	<b>NH8300019</b>	<b>NH8300031</b>	<b>NH8300507.XX</b>
	1750	58	2.382	1.949	2105				
	1170	39	2.004	1.582	2556				
	100	3.3	0.305	0.193	3656				
<b>40</b>	2500	62	2.063	1.645	1659	<b>NH8300008</b>	<b>NH8300020</b>	<b>NH8300032</b>	<b>NH8300508.XX</b>
	1750	43	1.822	1.402	2018				
	1170	29	1.557	1.144	2464				
	100	2.5	0.252	0.141	3559				
<b>50</b>	2500	50	1.727	1.320	1663	<b>NH8300009</b>	<b>NH8300021</b>	<b>NH8300033</b>	<b>NH8300509.XX</b>
	1750	35	1.535	1.125	2026				
	1170	23	1.312	0.912	2456				
	100	2.0	0.217	0.111	3505				
<b>60</b>	2500	41	1.430	1.045	1580	<b>NH8300010</b>	<b>NH8300022</b>	<b>NH8300034</b>	<b>NH8300510.XX</b>
	1750	29	1.279	0.891	1924				
	1170	19	1.100	0.722	2332				
	100	1.7	0.188	0.088	3327				
<b>80</b>	2500	31	0.972	0.671	1352	<b>NH8300011</b>	<b>NH8300023</b>	<b>NH8300035</b>	<b>NH8300511.XX</b>
	1750	21	0.895	0.585	1684				
	1170	14	0.757	0.463	1996				
	100	1.3	0.126	0.054	2731				
<b>100</b>	2500	25	0.656	0.424	1069	<b>NH8300012</b>	<b>NH8300024</b>	<b>NH8300036</b>	<b>NH8300512.XX</b>
	1750	17	0.603	0.367	1321				
	1170	11	0.511	0.289	1554				
	100	1.0	0.087	0.033	2100				

**How To Build a Part Number For Size NH830**

1. Select catalog number from the selection table
2. For hollow output, replace "XX" suffix with bore code (see next page for codes)

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Additional Capabilities

NEMA C Input Flange ▲	Style BM			Style HM	Style BMQ			Style HMQ	Ratio
	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	
182-4TC 213-5TC	NH8300109 NH8300145	NH8300121 NH8300157	NH8300133 NH8300169	NH8300537.XX NH8300549.XX	NH8300253 NH8300289	NH8300265 NH8300301	NH8300277 NH8300313	NH8300585.XX NH8300597.XX	5
182-4TC	NH8300110	NH8300122	NH8300134	NH8300538.XX	NH8300254	NH8300266	NH8300278	NH8300586.XX	7.5
143-5TC 182-4TC	NH8300075 NH8300111	NH8300087 NH8300123	NH8300099 NH8300135	NH8300527.XX NH8300539.XX	NH8300219 NH8300255	NH8300231 NH8300267	NH8300243 NH8300279	NH8300575.XX NH8300587.XX	10
143-5TC 182-4TC	NH8300076 NH8300112	NH8300088 NH8300124	NH8300100 NH8300136	NH8300528.XX NH8300540.XX	NH8300220 NH8300256	NH8300232 NH8300268	NH8300244 NH8300280	NH8300576.XX NH8300588.XX	15
143-5TC 182-4TC	NH8300077 NH8300113	NH8300089 NH8300125	NH8300101 NH8300137	NH8300529.XX NH8300541.XX	NH8300221 NH8300257	NH8300233 NH8300269	NH8300245 NH8300281	NH8300577.XX NH8300589.XX	20
143-5TC 182-4TC	NH8300078 NH8300114	NH8300090 NH8300126	NH8300102 NH8300138	NH8300530.XX NH8300542.XX	NH8300222 NH8300258	NH8300234 NH8300270	NH8300246 NH8300282	NH8300578.XX NH8300590.XX	25
143-5TC 182-4TC	NH8300079 NH8300115	NH8300091 NH8300127	NH8300103 NH8300139	NH8300531.XX NH8300543.XX	NH8300223 NH8300259	NH8300235 NH8300271	NH8300247 NH8300283	NH8300579.XX NH8300591.XX	30
56C 143-5TC	NH8300044 NH8300080	NH8300056 NH8300092	NH8300068 NH8300104	NH8300520.XX NH8300532.XX	NH8300188 NH8300224	NH8300200 NH8300236	NH8300212 NH8300248	NH8300568.XX NH8300580.XX	40
56C 143-5TC	NH8300045 NH8300081	NH8300057 NH8300093	NH8300069 NH8300105	NH8300521.XX NH8300533.XX	NH8300189 NH8300225	NH8300201 NH8300237	NH8300213 NH8300249	NH8300569.XX NH8300581.XX	50
56C 143-5TC	NH8300046 NH8300082	NH8300058 NH8300094	NH8300070 NH8300106	NH8300522.XX NH8300534.XX	NH8300190 NH8300226	NH8300202 NH8300238	NH8300214 NH8300250	NH8300570.XX NH8300582.XX	60
56C 143-5TC	NH8300047 NH8300083	NH8300059 NH8300095	NH8300071 NH8300107	NH8300523.XX NH8300535.XX	NH8300191 NH8300227	NH8300203 NH8300239	NH8300215 NH8300251	NH8300571.XX NH8300583.XX	80
56C 143-5TC	NH8300048 NH8300084	NH8300060 NH8300096	NH8300072 NH8300108	NH8300524.XX NH8300536.XX	NH8300192 NH8300228	NH8300204 NH8300240	NH8300216 NH8300252	NH8300572.XX NH8300584.XX	100

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

▲ Consult Factory for other motor flanges available.

\* Catalog numbers are for hollow output shaft reducers.

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

**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	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35



# NH Series Dimensions

Styles: UMQ, UM, U

**CAST IRON**  
**NH SERIES**

Single Reduction  
Worm Gear Reducers

Double Reduction  
Worm - Worm Gear Reducers

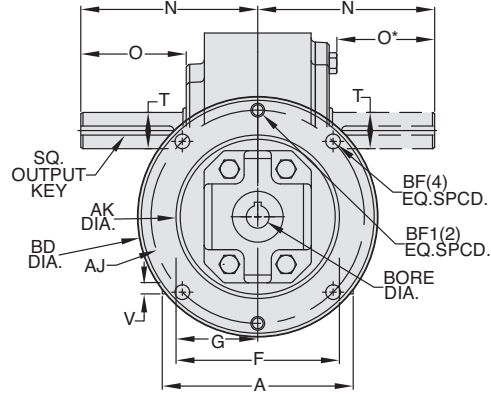
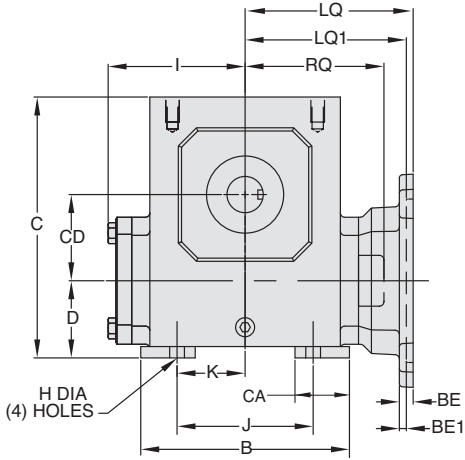
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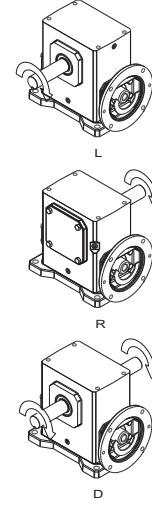
Accessories and  
Additional Capabilities

## Style UMQ

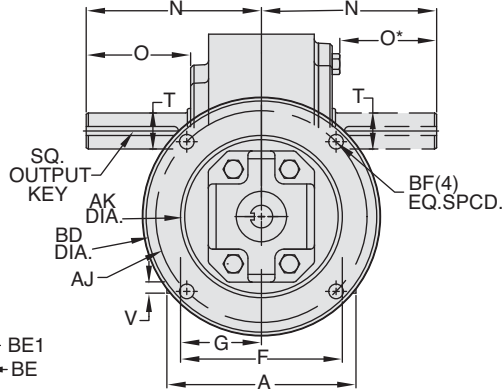
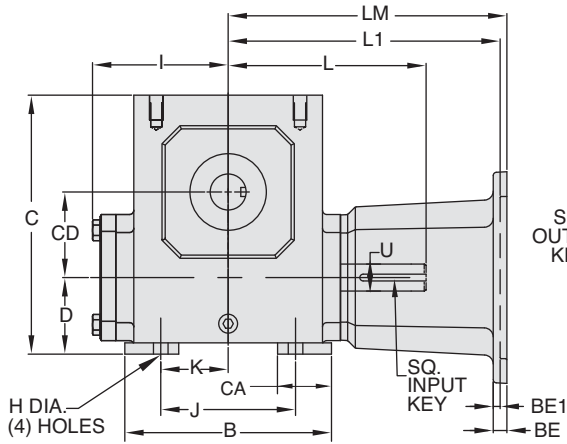


WARNING: "FLANGE MAY EXTEND BELOW BASE."

### ASSEMBLIES

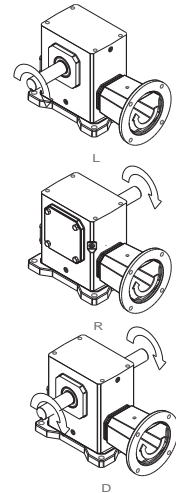


## Style UM

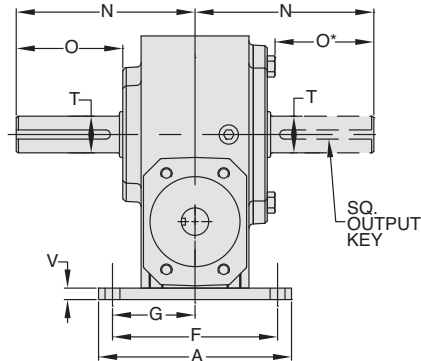
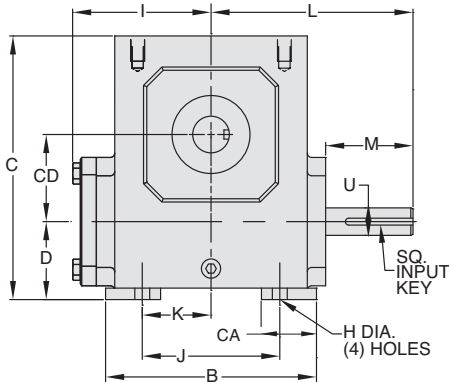


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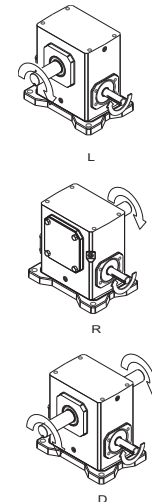
### ASSEMBLIES



## Style U



### ASSEMBLIES



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



# NH Series Dimensions

Styles: UMQ, UM, U



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## STYLE UMQ, UM, U DIMENSIONS (Inches)

Size	A	B	C	CA	CD	D	F	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*‡	Output Key
NH813	4.00	5.01	4.97	1.50	1.33	1.92	3.25	1.63	0.28	2.61	4.25	2.13	3.82	1.76	4.00	2.16	1.94	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	5.25	5.19	5.31	1.50	1.54	1.90	4.50	2.25	0.34	3.14	4.19	2.09	4.35	1.76	4.25	2.56	2.35	0.31	0.750	0.625	3/16 X 1.38	3/16 X 1.50
NH818	4.62	5.89	5.82	1.88	1.75	2.00	3.50	1.75	0.41	3.24	4.63	2.31	4.45	1.76	4.75	2.94	2.73	0.38	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH821	5.25	5.19	6.31	1.50	2.06	1.94	4.50	2.25	0.34	3.61	4.19	2.09	4.82	1.76	4.34	2.66	2.45	0.31	0.875	0.625	3/16 X 1.38	3/16 X 1.50
NH824	5.25	5.75	7.19	1.50	2.38	2.13	4.50	2.25	0.41	3.77	3.75	1.88	5.51	2.38	4.88	2.91	2.69	0.31	1.000	0.750	3/16 X 1.63	1/4 X 1.75
NH826	6.13	6.51	7.69	2.00	2.63	2.13	4.13	2.06	0.41	4.34	4.75	2.38	6.07	2.38	5.25	3.28	3.07	0.31	1.125	0.750	3/16 X 1.63	1/4 X 1.75
NH830	6.13	7.74	8.56	2.25	3.00	2.19	4.13	2.06	0.41	4.84	6.00	3.00	6.57	2.38	5.77	3.56	3.31	0.31	1.250	0.875	3/16 X 1.63	1/4 X 1.75
NH832	7.50	9.25	10.44	2.50	3.25	3.00	6.50	3.25	0.41	5.02	7.75	3.88	6.76	2.38	7.03	4.24	3.99	0.38	1.500	0.875	3/16 X 1.63	3/8 X 2.25
NH842	6.75	10.99	12.00	2.50	4.25	3.25	5.75	2.88	0.56	6.10	9.75	4.88	9.57	3.47	7.50	3.88	3.59	0.50	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	8.25	13.24	13.82	3.00	5.25	3.69	7.00	3.50	0.69	7.50	12.00	6.00	10.88	3.38	9.00	4.72	4.47	1.13	2.000	1.250	1/4 X 3.00	1/2 X 2.50

## Motor Mounting Dimensions

### NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ 48CZ/ 56C/140TC	180TC	LQ1		250TC	RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC			180TC	210TC		250TC	48CZ/ 56C/140TC	180TC	210TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63	5.06	N/A	N/A	N/A	4.09	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19	5.62	N/A	N/A	N/A	4.82	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69	6.12	6.56	N/A	N/A	5.32	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88	6.31	6.75	N/A	N/A	5.51	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45	7.21	7.21	7.77	7.77	6.04	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85	8.61	8.61	9.17	9.17	7.35	7.98	7.98	8.54

### NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
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)\*

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07	N/A	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	4.59	5.22	5.22	5.57	N/A	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	4.78	5.41	5.41	5.76	N/A	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	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

◆ Keyway width by depth

■ 48CZ not available

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

\* Style U and UM only.

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. Contact Factory for selection assistance.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

## GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
UBF	UMQ
UBFC	UM
UB	U

Refer to page 8 for complete interchange guide for original Grove Gear OE Series products.