

# QUICK SELECTIONS



## 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 657 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   |
| 5              | 350        | 813                         | 813 | 813 | 813 | 813 | 813 | 815   | 818   | 821  | 824 | 830*  | 832** | 842  | 852  | 852  | 860  | 870  | 880  | 8100 | 8100 |
| 7.5            | 233        | 813                         | 813 | 813 | 813 | 813 | 813 | 815   | 818   | 821  | 824 | 826   | 832   | 842  | 852  | 852  | 860  | 870  | 880  | 8100 | 8100 |
| 10             | 175        | 813                         | 813 | 813 | 813 | 813 | 815 | 818   | 821   | 824  | 824 | 830   | 832** | 842  | 842  | 852  | 860  | 870  | 880  | 8100 | 8100 |
| 15             | 117        | 813                         | 813 | 813 | 813 | 815 | 815 | 818   | 821   | 824  | 826 | 832   | 842   | 842  | 852  | 870  | 870  | 880  | 8100 | 8100 |      |
| 20             | 88         | 813                         | 813 | 813 | 813 | 815 | 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   | 818   | 821   | 824 | 826   | 832** | 842  | 852  | 852  | 860  | 870  | 870  | 880  | 8100 | 8100 |
| 7.5            | 233        | 813                         | 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 | 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 horsepower. Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 22-48.

▲ Refer to page 20 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.

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

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

**Refer To Pages 539-568 for K Series Helical-Bevel right angle gear reducers for higher horsepower selections not covered here**

**1.50 Service Factor**

| Nominal Ratio <sup>▲</sup> | 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 <sup>▲</sup> | 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 | 8100 |      |
| 10                         | 175        | 813                         | 813 | 813 | 815 | 818  | 821   | 824   | 824   | 830 | 842   | 842   | 852  | 870  | 880  | 8100 | 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 <sup>▲</sup> | 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 | 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 horsepower. Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 22-48.

▲ Refer to page 20 for exact ratio of single reduction worm gear reducers.

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

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

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