

**TABLE 2: SUGGESTED MAXIMUM CAPACITOR RATINGS USED FOR HIGH EFFICIENCY MOTORS AND OLDER DESIGN (PRE "T-FRAMES") MOTORS\***

| Induction Motor Horsepower Rating | No. of Poles and Nominal Motor Speed in RPM |                     |                |                     |                |                     |                |                     |                |                     |                |                     |
|-----------------------------------|---|---------------------|----------------|---------------------|----------------|---------------------|----------------|---------------------|----------------|---------------------|----------------|---------------------|
|                                   | 2<br>3600 RPM                               |                     | 4<br>1800 RPM  |                     | 6<br>1200 RPM  |                     | 8<br>900 RPM   |                     | 10<br>720 RPM  |                     | 12<br>600 RPM  |                     |
|                                   | Capacitor KVAR                              | Current Reduction % | Capacitor KVAR | Current Reduction % | Capacitor KVAR | Current Reduction % | Capacitor KVAR | Current Reduction % | Capacitor KVAR | Current Reduction % | Capacitor KVAR | Current Reduction % |
| 3                                 | 1.5   | 14                  | 1.5            | 15                  | 1.5            | 20                  | 2              | 27                  | 2.5            | 35                  | 3              | 41                  |
| 5                                 | 2   | 12                  | 2              | 13                  | 2              | 17                  | 3              | 25                  | 4              | 32                  | 4              | 37                  |
| 7.5                               | 2.5   | 11                  | 2.5            | 12                  | 3              | 15                  | 4              | 22                  | 5              | 30                  | 6              | 34                  |
| 10                                | 3   | 10                  | 3              | 11                  | 3              | 14                  | 5              | 21                  | 6              | 27                  | 7.5            | 31                  |
| 15                                | 4   | 9                   | 4              | 10                  | 5              | 13                  | 6              | 18                  | 8              | 23                  | 9              | 27                  |
| 20                                | 5   | 9                   | 5              | 10                  | 6              | 12                  | 7.5            | 16                  | 9              | 21                  | 12.5           | 25                  |
| 25                                | 6   | 9                   | 6              | 10                  | 7.5            | 11                  | 9              | 15                  | 10             | 20                  | 15             | 23                  |
| 30                                | 7   | 8                   | 7              | 9                   | 9              | 11                  | 10             | 14                  | 12.5           | 18                  | 17.5           | 22                  |
| 40                                | 9   | 8                   | 9              | 9                   | 10             | 10                  | 12.5           | 13                  | 15             | 16                  | 20             | 20                  |
| 50                                | 12.5  | 8                   | 10             | 9                   | 12.5           | 10                  | 15             | 12                  | 20             | 15                  | 25             | 19                  |
| 60                                | 15  | 8                   | 15             | 8                   | 15             | 10                  | 17.5           | 11                  | 22.5           | 15                  | 27.5           | 19                  |
| 75                                | 17.5  | 8                   | 17.5           | 8                   | 17.5           | 10                  | 20             | 10                  | 25             | 14                  | 35             | 18                  |
| 100                               | 22.5  | 8                   | 20             | 8                   | 25             | 9                   | 27.5           | 10                  | 35             | 13                  | 40             | 17                  |
| 125                               | 27.5  | 8                   | 25             | 8                   | 30             | 9                   | 30             | 10                  | 40             | 13                  | 50             | 16                  |
| 150                               | 30  | 8                   | 30             | 8                   | 35             | 9                   | 37.5           | 10                  | 50             | 12                  | 50             | 15                  |
| 200                               | 40  | 8                   | 37.5           | 8                   | 40             | 9                   | 50             | 10                  | 60             | 12                  | 60             | 14                  |
| 250                               | 50  | 8                   | 45             | 7                   | 50             | 8                   | 60             | 9                   | 70             | 11                  | 75             | 13                  |
| 300                               | 60  | 8                   | 50             | 7                   | 60             | 8                   | 60             | 9                   | 80             | 11                  | 90             | 12                  |
| 350                               | 60  | 8                   | 60             | 7                   | 75             | 8                   | 75             | 9                   | 90             | 10                  | 95             | 11                  |
| 400                               | 75  | 8                   | 60             | 6                   | 75             | 8                   | 85             | 9                   | 95             | 10                  | 100            | 11                  |
| 450                               | 75  | 8                   | 75             | 6                   | 80             | 8                   | 90             | 9                   | 100            | 9                   | 110            | 11                  |
| 500                               | 75  | 8                   | 75             | 6                   | 85             | 8                   | 100            | 9                   | 100            | 9                   | 120            | 10                  |

\* For use with 3-phase, 60 hertz NEMA Classification B Motors to raise full load power factor to approximately 95%

**TABLE 3: SUGGESTED MAXIMUM CAPACITOR RATINGS "T-FRAME" NEMA "DESIGN B" MOTORS\***

| Induction Motor Horsepower Rating | No. of Poles and Nominal Motor Speed in RPM |                     |                |                     |                |                     |                |                     |                |                     |                |                     |
|-----------------------------------|---|---------------------|----------------|---------------------|----------------|---------------------|----------------|---------------------|----------------|---------------------|----------------|---------------------|
|                                   | 2<br>3600 RPM                               |                     | 4<br>1800 RPM  |                     | 6<br>1200 RPM  |                     | 8<br>900 RPM   |                     | 10<br>720 RPM  |                     | 12<br>600 RPM  |                     |
|                                   | Capacitor KVAR                              | Current Reduction % | Capacitor KVAR | Current Reduction % | Capacitor KVAR | Current Reduction % | Capacitor KVAR | Current Reduction % | Capacitor KVAR | Current Reduction % | Capacitor KVAR | Current Reduction % |
| 2                                 | 1   | 14                  | 1              | 24                  | 1.5            | 30                  | 2              | 42                  | 2              | 40                  | 3              | 50                  |
| 3                                 | 1.5   | 14                  | 1.5            | 23                  | 2              | 28                  | 3              | 38                  | 3              | 40                  | 4              | 49                  |
| 5                                 | 2   | 14                  | 2.5            | 22                  | 3              | 26                  | 4              | 31                  | 4              | 40                  | 5              | 49                  |
| 7.5                               | 2.5   | 14                  | 3              | 20                  | 4              | 21                  | 5              | 28                  | 5              | 38                  | 6              | 45                  |
| 10                                | 4   | 14                  | 4              | 18                  | 5              | 21                  | 6              | 27                  | 7.5            | 36                  | 8              | 38                  |
| 15                                | 5   | 12                  | 5              | 18                  | 6              | 20                  | 7.5            | 24                  | 8              | 32                  | 10             | 34                  |
| 20                                | 6   | 12                  | 6              | 17                  | 7.5            | 19                  | 9              | 23                  | 10             | 29                  | 12.5           | 30                  |
| 25                                | 7.5   | 12                  | 7.5            | 17                  | 8              | 19                  | 10             | 23                  | 12.5           | 25                  | 17.5           | 30                  |
| 30                                | 8   | 11                  | 8              | 16                  | 10             | 19                  | 15             | 22                  | 15             | 24                  | 20             | 30                  |
| 40                                | 12.5  | 12                  | 15             | 16                  | 15             | 19                  | 17.5           | 21                  | 20             | 24                  | 25             | 30                  |
| 50                                | 15  | 12                  | 17.5           | 15                  | 20             | 19                  | 22.5           | 21                  | 22.5           | 24                  | 30             | 30                  |
| 60                                | 17.5  | 12                  | 20             | 15                  | 22.5           | 17                  | 25             | 20                  | 30             | 22                  | 35             | 28                  |
| 75                                | 20  | 12                  | 25             | 14                  | 25             | 15                  | 30             | 17                  | 35             | 21                  | 40             | 19                  |
| 100                               | 22.5  | 11                  | 30             | 14                  | 30             | 12                  | 35             | 16                  | 40             | 15                  | 45             | 17                  |
| 125                               | 25  | 10                  | 35             | 12                  | 35             | 12                  | 40             | 14                  | 45             | 15                  | 50             | 17                  |
| 150                               | 30  | 10                  | 40             | 12                  | 40             | 12                  | 50             | 14                  | 50             | 13                  | 60             | 17                  |
| 200                               | 35  | 10                  | 50             | 11                  | 50             | 11                  | 70             | 14                  | 70             | 13                  | 90             | 17                  |
| 250                               | 40  | 11                  | 60             | 10                  | 60             | 10                  | 80             | 13                  | 90             | 13                  | 100            | 17                  |
| 300                               | 45  | 11                  | 70             | 10                  | 75             | 12                  | 100            | 14                  | 100            | 13                  | 120            | 17                  |
| 350                               | 50  | 12                  | 75             | 8                   | 90             | 12                  | 120            | 13                  | 120            | 13                  | 135            | 15                  |
| 400                               | 75  | 10                  | 80             | 8                   | 100            | 12                  | 130            | 13                  | 140            | 13                  | 150            | 15                  |
| 450                               | 80  | 8                   | 90             | 8                   | 120            | 10                  | 140            | 12                  | 168            | 14                  | 160            | 15                  |
| 500                               | 100   | 8                   | 120            | 9                   | 150            | 12                  | 160            | 12                  | 180            | 13                  | 180            | 15                  |

\* For use with 3-phase, 60 hertz NEMA Classification B Motors to raise full load power factor to approximately 95%