

Pool & Spa OEM Pump/Motor Replacement Guide

Square Flange and C-Flange Motors

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Motors and pumps need to be properly matched to one another to provide consistent, predictable performance. When selecting your NIDEC replacement motor you will need to know six important pieces of information:

- 1) Pump Mounting (ie. Square Flange, C-Flange, etc.)
- 2) Horsepower
- 3) Service Factor
- 4) Voltage
- 5) Frequency
- 6) Phase

Most of this information can be attained from the motor nameplate. Always be sure that the total of horsepower times service factor of your new NIDEC motor is equal to or greater than the total of horsepower times service factor of the original motor.

$$\text{Total Output HP} = (\text{horsepower}) \times (\text{service factor}) \\ = \text{THP or SFHP}$$

| PUMP OEM | BRAND NAME | CATEGORY |
|------------------|--|----------|
| Aqua Flo | Ultra Flow | C |
| Aqua Flo | Dominator | S |
| Astral | 2000 Series | J |
| Baker Hydro | Hydron | J |
| Carvin Pool | Cygnat | S |
| Carvin Pool | Magnum & Magnum Force | J |
| Hayward | Super Pump | J |
| Hayward | Super Pump II | J |
| Hayward | Max-Flo | J |
| Hayward | Max-Flo II | S |
| Hayward | NorthStar | N |
| Hayward | TriStar | T |
| Jacuzzi Brothers | Bronze | C |
| Jacuzzi Brothers | Magnum & Magnum Force | J |
| Jandy/Zodiac | SHPF / SHPM | S |
| Jandy/Zodiac | JHP / JHPU | J |
| Jandy/Zodiac | MHP / MHPU | J |
| Pentair/Sta-Rite | DuraGlas / Max-E-Glas | S |
| Pentair/Sta-Rite | DuraGlas II / Max-E-Glas II | S |
| Pentair/Letro | Legend | P |
| Pentair/American | Ultra-Flow | S |
| Pentair/American | American Eagle | C |
| Pentair/Pac Fab | Challenger | S |
| Pentair/Pac Fab | WhisperFlo | S |
| Pentair/Pac Fab | Hydro Pump | C |
| Pentair /Purex | Pinnacle | S |
| Speck Pumps | Models 72, S90, Super Pro, 433, & ES90 | J |
| Waterco | Hydrostorm, Hydrostar | S |
| Waterway | SVL56, Champion, SMF | S |
| Zodiac Pool | Polaris Vac-Sweep, PB4 Booster Pump | P |

CATEGORY "N" HAYWARD NORTHSTAR C-FLANGE THREADED SHAFT

| HP | SERVICE FACTOR | VOLTAGE | ENERGY EFFICIENT EXTREME E® 6.5" Frame |
|-------|----------------|-------------|--|
| 3/4 | 1.85 | 208-230/115 | ESN1072 |
| 1 | 1.40 | 208-230/115 | EUSN1102 |
| 1 | 1.85 | 208-230/115 | ESN1102 |
| 1 1/2 | 1.25 | 208-230/115 | EUSN1152 |
| 1 1/2 | 1.60 | 208-230/115 | ESN1152 |
| 2 | 1.20 | 208-230/115 | EUSN1202 |
| 2 | 1.35 | 208-230 | ESN1202 |
| 3 | 1.20 | 208-230 | EUSN1302 |
| 3 | 1.60 | 208-230 | ESN1302 |

CATEGORY "C" NEMA C-FLANGE KEYED SHAFT

| HP | SERVICE FACTOR | VOLTAGE | STANDARD EFFICIENCY 6.5" FRAME | ENERGY EFFICIENT EXTREME E® 6.5" Frame |
|-----|----------------|---------|--------------------------------|--|
| 1/2 | 1.60 | 230/115 | ASB120 | ASB656 |
| 3/4 | 1.50 | 230/115 | ASB121 | ASB634 |
| 1 | 1.40 | 230/115 | ASB122 | ASB653 |
| 1.5 | 1.30 | 230/115 | ASB123 | ASB795 |
| 2 | 1.20 | 230 | ASB124 | ASB808 |
| 3 | 1.15 | 208-230 | | ASB817 |

CATEGORY "T" HAYWARD TRISTAR REPLACEMENTS-SQUARE FLANGE

| HP | SERVICE FACTOR | VOLTAGE | STANDARD EFFICIENCY 6.5" FRAME | ENERGY EFFICIENT EXTREME E® 6.5" Frame |
|-----|----------------|-------------|--------------------------------|--|
| 1/2 | 1.98 | 208-230/115 | | ET3205 |
| 3/4 | 1.85 | 208-230/115 | | ET3207 |
| 3/4 | 1.25 | 230/115 | ASB852 | |
| 1 | 1.85 | 208-230/115 | | ET3210 |
| 1 | 1.25 | 230/115 | ASB853 | |
| 1.5 | 1.60 | 208-230/115 | | ET3215 |
| 1.5 | 1.10 | 230/115 | ASB854 | |
| 2 | 1.35 | 208-230 | | ET3220 |
| 2 | 1.10 | 230/115 | ASB859 | |
| 2.5 | 1.04 | 230 | ASB840 | |
| 3 | 1.15 | 208-230 | ASB844 | |

CATEGORY "J" NEMA C-FLANGE THREADED SHAFT

| HP | SERVICE FACTOR | VOLTAGE | STANDARD EFFICIENCY | | ENERGY EFFICIENT EXTREME E® | | ENERGY EFFICIENT VARIABLE SPEED |
|-----|----------------|---------|---------------------|------------|-----------------------------|------------|---------------------------------|
| | | | 6.5" FRAME | 5.5" FRAME | 6.5" FRAME | 5.5" FRAME | |
| 1/2 | 1.60 | 230/115 | ASB126 | EST1052 | ASB657 | ECT1052 | |
| 3/4 | 1.00 | 230/115 | ASB227 | EUST1072 | | | |
| | 1.50 | 230/115 | ASB127 | EST1072 | ASB638 | ECT1072 | |
| 1 | 1.00 | 230/115 | ASB228 | EUST1102 | | | NPTT125 |
| | 1.40 | 230/115 | ASB128 | EST1102 | ASB654 | ECT1102 | |
| 1.5 | 1.00 | 230/115 | ASB229 | EUST1152 | | | NPTT165 |
| | 1.30 | 230/115 | ASB129 | EST1152 | ASB796 | | |
| 2 | 1.00 | 230/115 | ASB230 | EUST1202 | | | NPTT225 |
| | 1.20 | 230 | ASB130 | EST1202 | ASB809 | | |
| 2.5 | 1.00 | 230 | ASB231 | EUST1252 | | | NPTT270 |
| 3 | 1.15 | 208-230 | | | ASB818 | | AVSJ3 |
| 5 | 1.00 | 208-230 | | | ASB819 | | |

CATEGORY "S" SQUARE FLANGE

| HP | SERVICE FACTOR | VOLTAGE | STANDARD EFFICIENCY | | ENERGY EFFICIENT EXTREME E® | | ENERGY EFFICIENT VARIABLE SPEED |
|-----|----------------|---------|---------------------|------------|-----------------------------|------------|---------------------------------|
| | | | 6.5" FRAME | 5.5" FRAME | 6.5" FRAME | 5.5" FRAME | |
| 1/2 | 1.30 | 230/115 | | EUSQ1052 | | | |
| | 1.90 | 230/115 | ASB846 | ESQ1052 | ASB845 | EQC1052 | |
| 3/4 | 1.27 | 230/115 | ASB852 | EUSQ1072 | | EUQC1072 | |
| | 1.65 | 230/115 | ASB847 | ESQ1072 | ASB661 | EQC1072 | |
| 1 | 1.25 | 230/115 | ASB853 | EUSQ1102 | | EUQC1102 | NPTQ125 |
| | 1.65 | 230/115 | ASB848 | ESQ1102 | ASB841 | EQC1102 | |
| 1.5 | 1.10 | 230/115 | ASB854 | EUSQ1152 | | EUQC1152 | NPTQ165 |
| | 1.50 | 230/115 | ASB858 | ESQ1152 | ASB842 | | |
| 2 | 1.10 | 230/115 | ASB859 | EUSQ1202 | | | NPTQ225 |
| | 1.30 | 230 | ASB748 | ESQ1202 | ASB843 | | |
| 2.5 | 1.04 | 230 | ASB840 | EUSQ1252 | | | NPTQ270 |
| 3 | 1.15 | 208-230 | ASB844 | | ASB844 | | AVSS3 |
| 5 | 1.00 | 208-230 | | | ASB850 | | |

CATEGORY "P" POOL CLEANERS

| HP | SERVICE FACTOR | VOLTAGE | BRAND | NIDEC 56™ 6.5" Frame |
|-----|----------------|---------|---------|----------------------|
| 3/4 | 1.50 | 230/115 | Polaris | ASB625 |
| | 1.50 | 230/115 | Letro | ASB668 |