

NEPTUNE Hybrid™

Variable Speed Motor & Control



Product Overview

Nidec U.S. MOTORS® is proud to introduce the Neptune Hybrid, with a patented BPM + PSC variable speed motor and Control integration which makes a design that was recognized by Pool & Spa News as a Top 50 product for 2024.

It complements the portfolio of Neptune® professional-grade products that have a premium efficient design and can help reduce utility expenses associated with operating a swimming pool pump by up to 80% when utilizing the preprogrammed settings on the on-board user interface.

- Fully compliant with Title 20 regulations and Title 21 New York regulation, CEC requirements and the DOE Regulations which take effect in Sept 2025

- Totally Enclosed Fan Cooled (TEFC) motor enclosure shields electrical components from moisture and debris
- Preprogrammed variable speed drive and on-board user interface – no complex wiring required
- Easy to install, direct replacement motor for any square flange or 56J mount pump motor -- no plumbing work required if keeping the current pump
- Dual Voltage 1.40THP and 1.65THP products
- Right-size your variable speed replacement motor to the existing pump with 1.40THP, 1.65THP and 2.25THP products available



Product Features

- Capable of running at low speed setting resulting in ultra-quiet performance
- An IPX5 rated enclosure for the electrical components which helps prevent moisture and debris ingress
- Simple top-down power connection wiring area
- GFCI compatible
- Premium powder coating paint to provide a long-lasting finish
- Total Horsepower (THP) Rated simplifies the process of finding the correct replacement motor
- UL1081 approvable, UL60730-1 approved, & CE conformance
- Intuitive & easy to operate user interface
- Built-in real-time clock with battery backup to ensure time settings are saved during most power outages
- Factory programmed for out-of-the-box energy savings functionality. Just set the time of day
- Up to seven program schedules per day allow for maximum functionality each day
- One-touch Clean button which runs the motor at full speed, 3450 RPM, for 30 minutes to help quickly clean the pool
- Fully adjustable priming speed and priming time
- Low temperature monitor with adjustable settings
- Menu keypad lockout feature prevents tampering with optimized programming schedules
- DOE settings enable proper water filtration in the most energy efficient manner possible



NEPTUNE Hybrid Variable Speed Motor/Control

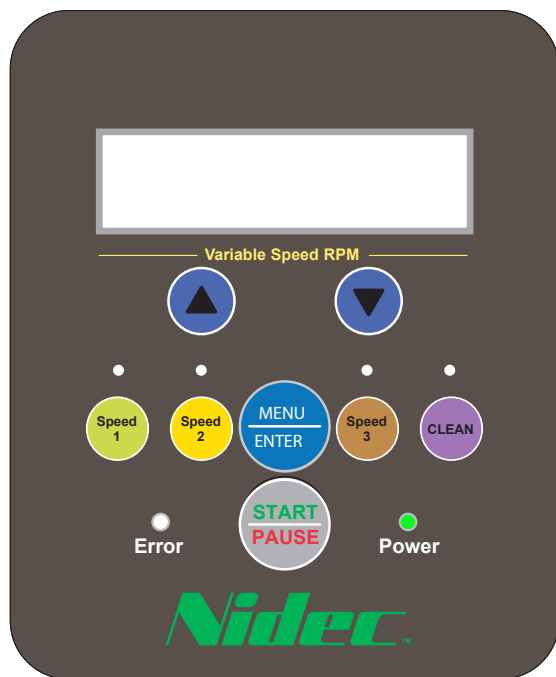
Premium Energy Efficient, Variable Speed, Square Flange, Category “S”

THP	RPM	Voltage	Freq	SF Amps	Efficiency	Catalog Number	Motor Frame	Length Less Shaft	Wgt.
1.40 THP	600-3450	230/115	50/60	9.0/16.3	80% min.	NPHQ125	48Y	11.48	26
1.65 THP	600-2760/3450	230/115	60	8.5/16.0	80% min.	NPHQ165	48Y	14.98	36
2.25 THP	600-2760/3450	230	60	10.2	80% min.	NPHQ225	48Y	14.98	37

Premium Energy Efficient, Variable Speed, 56J Mounting, Category “J”

THP	RPM	Voltage	Freq	SF Amps	Efficiency	Catalog Number	Motor Frame	Length Less Shaft	Wgt.
1.40 THP	600-3450	230/115	50/60	9.0/16.3	80% min.	NPHT125	56J	10.7	24
1.65 THP	600-2760/3450	230/115	60	8.5/16.0	80% min.	NPHT165	56J	14.07	34
2.25 THP	600-2760/3450	230	60	10.2	80% min.	NPHT225	56J	14.07	35

NEPTUNE Hybrid User Interface



Simple & Intuitive Neptune User Interface

- Up to Seven On/Off Time & Speed schedules available. Preprogrammed with Three energy savings schedules.
- One-touch speed settings closely tie to the Proposed 2021 DOE Rule speed settings: Speed 1 = 1350 RPM, Speed 2 = 1725 RM & Speed 3 = 2760 RPM
- One-touch Clean button which runs the motor at 3450 RPM for 30 minutes
- Up and Down arrows allow for navigation through menu options and allow for one-touch +/- 10 RPM speed changes for fine tuning flow rates
- LCD screen displays three sets of data:
 - Time of Day with Present Speed
 - Present Operation and time remaining in this operation
 - Current running watts

For additional information, please refer to our Pool & Spa Motors Catalog or contact your U.S. MOTORS representative.

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