

# Features of DOETech® Pool Pump

Revision: 2. Released on 05/23/2023

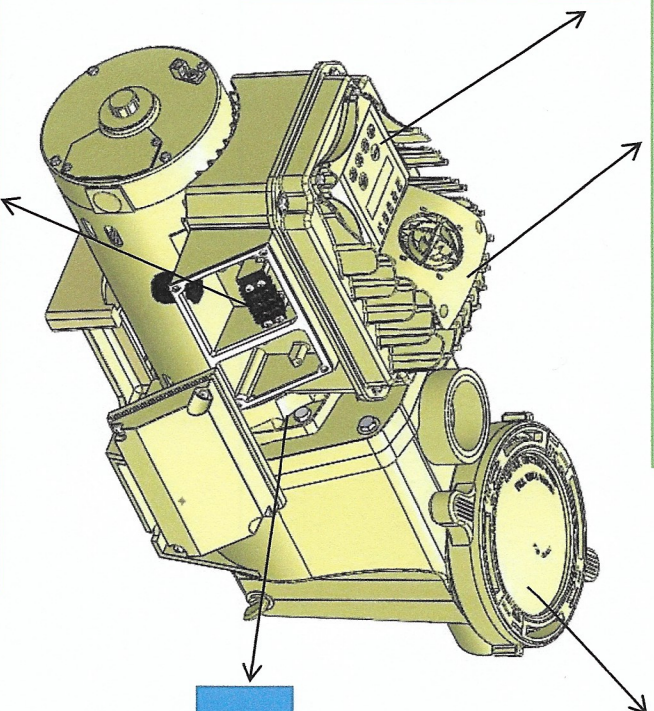
## MSPY150, 1.5HP, Single Phase 230V

**1** Single phase 230V, IP66 rated VFD. cCSAus Certified to NSF/ANSI 372 Compliant. DOE Compliant (to be third party verified).

**2** Simple 4-Speed Drive, 4 buttons preset at 3450RPM, 2800RPM, 1700RPM, 1300RPM respectively. 3450RPM Function will automatically reset to 2800RPM with 12 hours of operation. Drive will take in single phase 230V power and convert it to three phase 230V to high efficiency motor.



**4** Powerful full rated 1.5HP pump performance; Optional High quality Viton seal with SS 316 hardware good for salty environment; Quiet operations at full speed ranges.



**5** High efficiency induction motor, full rated 1.5 HP SF 1.25, 230V.

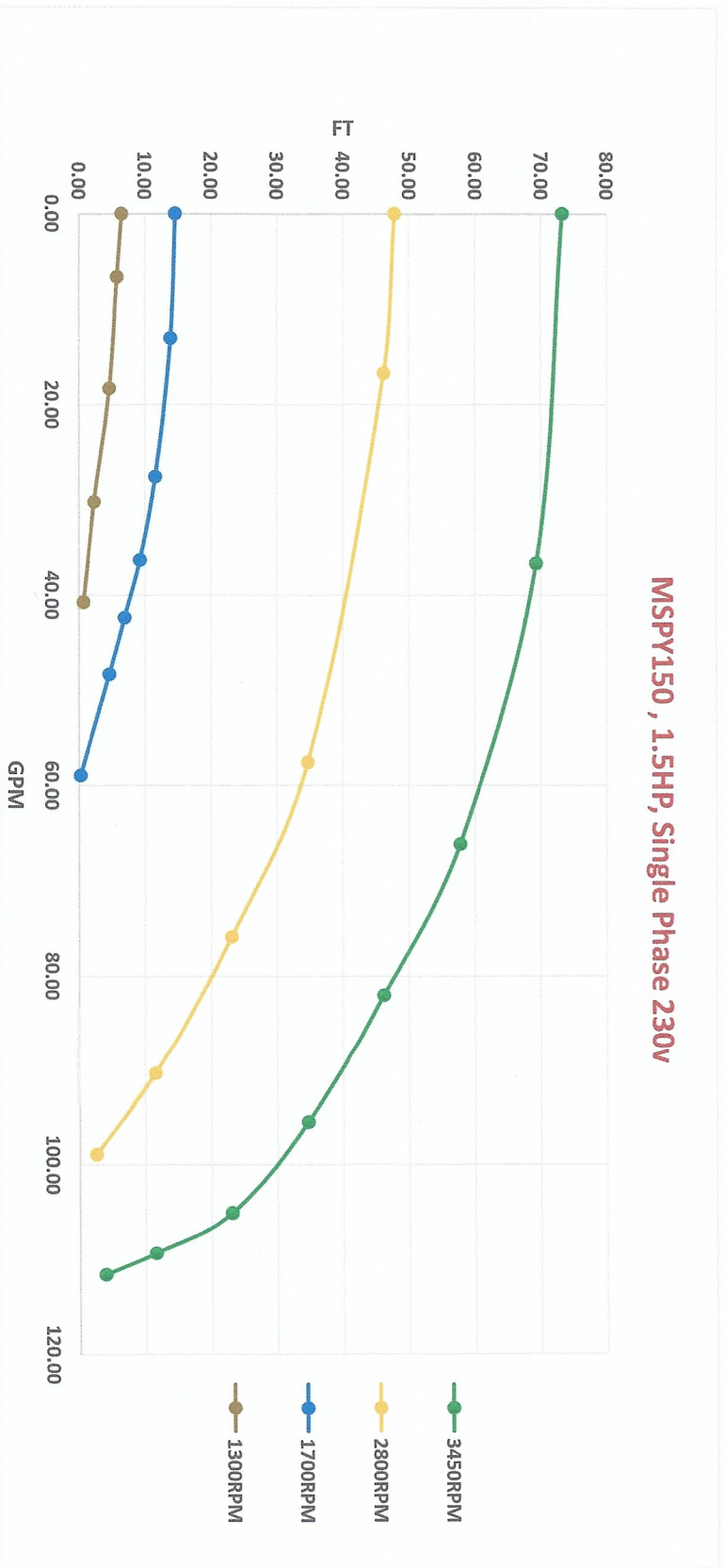
**3** Spacious L1-L2-Ground Wiring Terminal Box. Reserved a second chamber for our premium variable speed pumps.

# 6

## Performance Curve

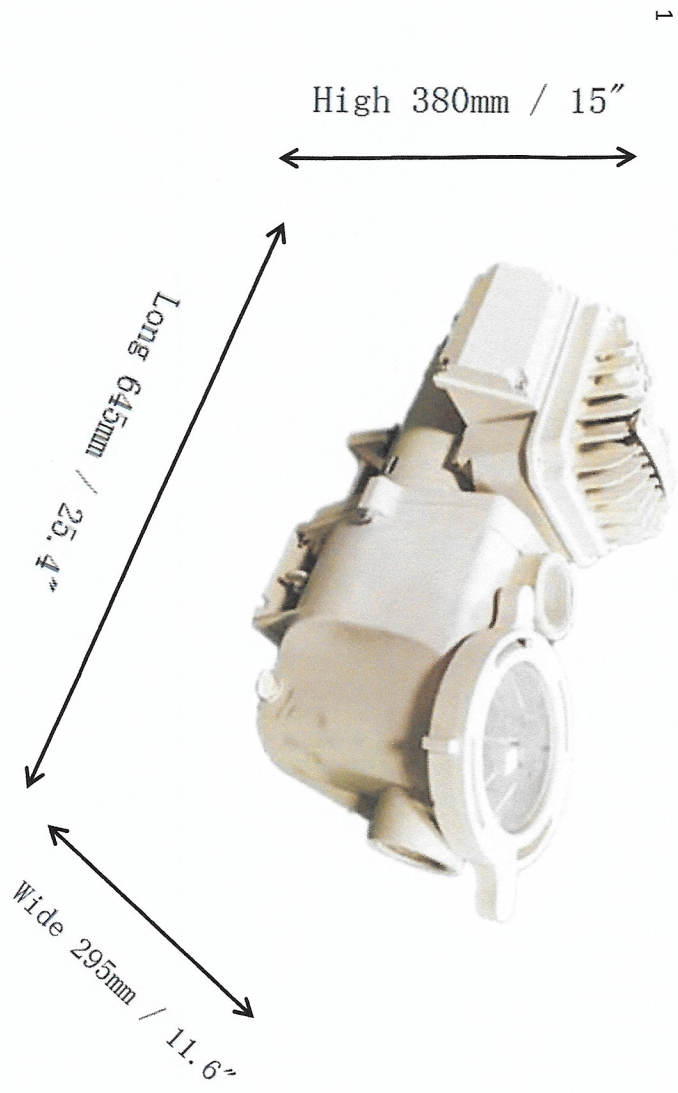
Single Phase 230V Power-in, Class F Insulation System; RPM: 3450/2800/1700/1300. 1.5HP Full Rated Impeller.

cCSAus Safety Certification and DOE Compliant (to be verified by a third party lab.)





**7** Shape Size: cCSAus Certified to NSF/ANSI 372 Compliance. DOE Compliant (to be validated). CSA Tested to UL 778 and UL 1081 Compliance.



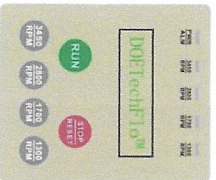
# Features of DOETech® Pool Pump

Revision: 2. Released on 05/23/2023

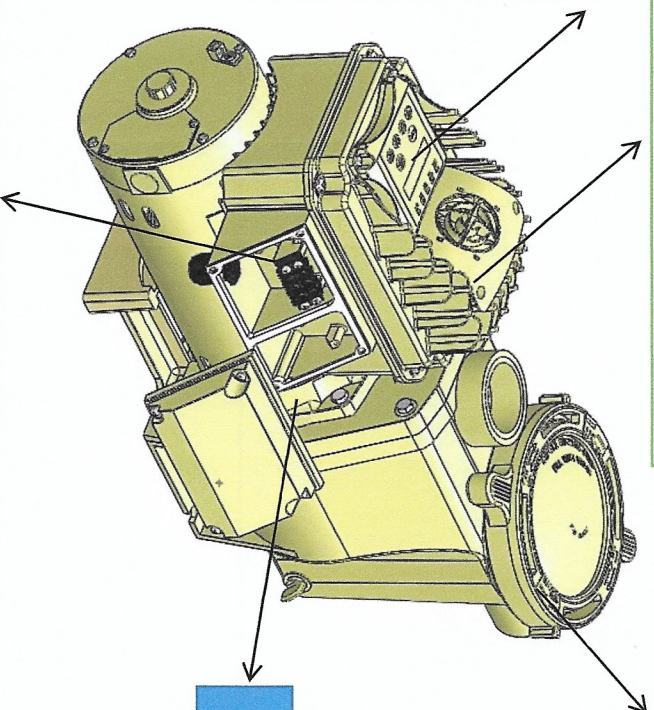
## MSPY200, 2HP, Single Phase 230V

**1** Single phase 230v, IP66 rated VFD. cCSAus Certified NSF/ANSI 372 Compliant. DOE Compliant (to be third party verified).

**2** Simple 4-Speed Drive, 4 buttons preset at 3450RPM, 2800RPM, 1700RPM, 1300RPM respectively. 3450RPM Function will automatically reset to 2800RPM with 12 hours of operation. Drive will take in single phase 230v power and convert it to three phase 230v to high efficiency motor.



**4** Powerful full rated 2HP pump performance; Optional High quality Viton seal with SS 316 hardware good for salty environment; Quiet operations at full speed ranges.



**5** High efficiency induction motor, full rated 2HP SF 1.35, 230V.

**3** Spacious L1-L2-Ground Wiring Terminal Box. Reserved a second chamber for our premium variable speed pumps.

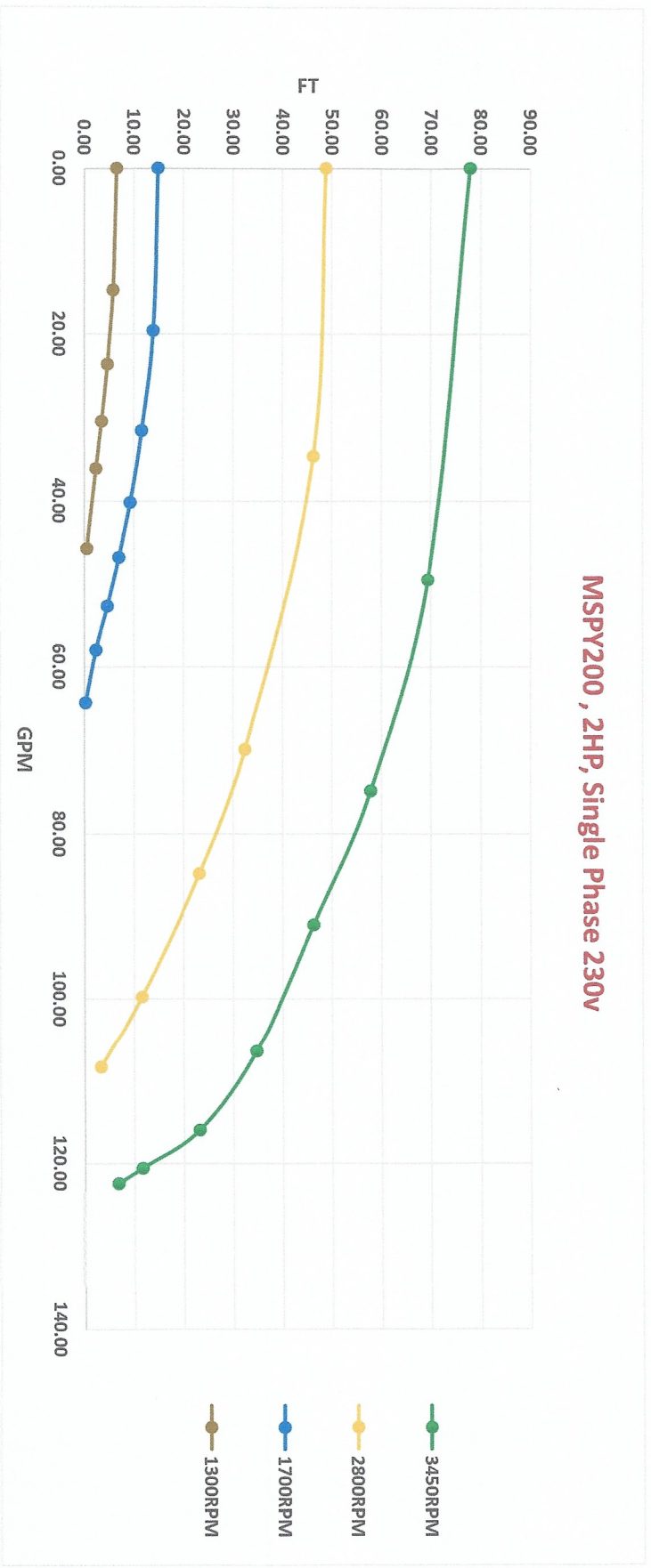


# 6

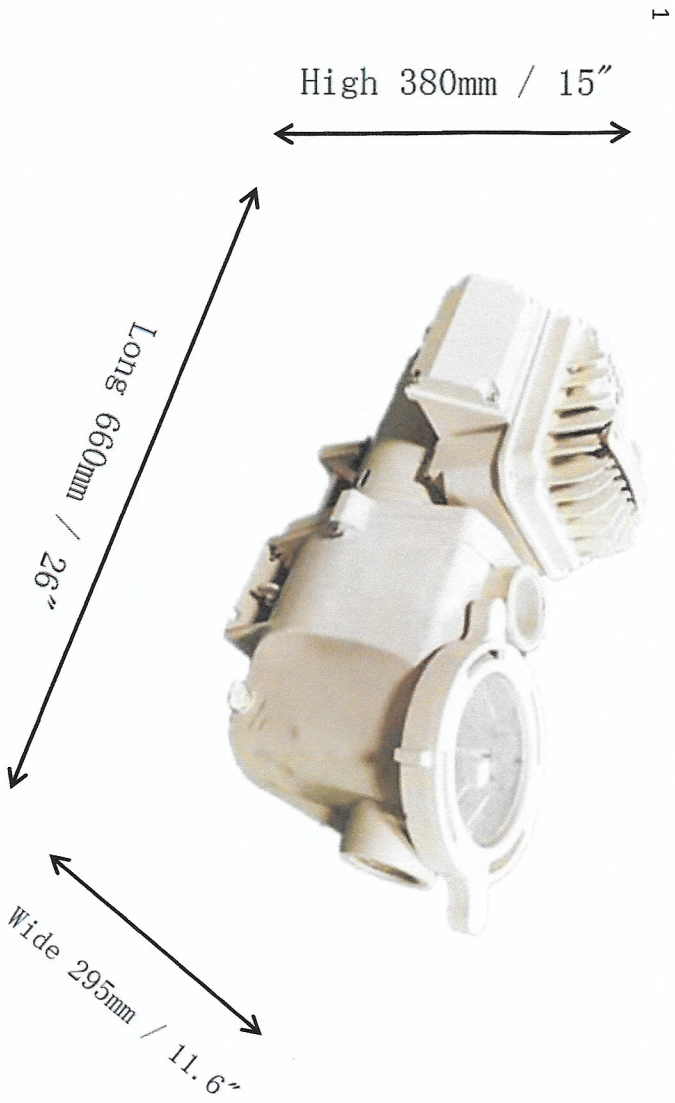
## Performance Curve

Single Phase 230V Power-in, Class F Insulation System; RPM: 3450/2800/1700/1300. 2HP Full Rated Impeller.

ccsAus Safety Certification and DOE Compliant (to be verified by a third party lab.)



**7** Shape Size: cCSAus Certified to NSF/ANSI 372 Compliance. DOE Compliant (to be validated). CSA Tested to UL 778 and UL 1081 Compliance.





## 4-Speed Pool Pump Drive Control Logic

Updated June 6, 2023

4-Speed Pool Pump design is to provide a simple yet energy saving solution to replace single speed pumps economically. They meet minimum DOE/CEC requirements.

When 4-Speed Motor is first wired up, L1-L2-Ground (the same way as wiring a single speed motor), RUN button needs to be pressed to start the motor. Motor will run at highest speed (3450rpm for 1.5hp and 2hp; 3350rpm for 3hp) for 5 minutes to prime up the pump, it will automatically revert down to 2850rpm for 24/7 operation. Motor will NOT respond to other speed buttons during 5-minute priming cycle.

When motor is running at 2850rpm, one can press either 3450/3350RPM, 1700RPM or 1300RPM buttons to change to respective speeds. However, if 3450RPM is pressed (during pool servicing?), motor will automatically revert down to 2850RPM after 12 hours for 24/7 operation. CEC/DOE mandates that 3450RPM (highest speed) can't be run more than 24 hours.

Other Features:

### 1. Self-on Mode

Once power is cut off (a black out or a timer), drive needs to go back on automatically once power is restored. It will run 3450RPM (for priming) for 5 minutes then reverts down to 2850RPM for continuous running.

### 2. 3450RPM Button for 12 hours (or a desired duration to be set during production)

Once 3450RPM Max Speed Button is pressed (say during pool servicing), it will run max speed for 12 hours then reverts down to 2850RPM. ( During production: This 12 hours default setting can be shortened to any desired hours, say 2 hours or 3 or 4 hours. 12-hour selection is based on the understanding that most pools would have been turned over twice after 12 hours at 3450/3350RPM.

### 3. If one presses each of the three other speed buttons (2850RPM, 1700RPM, 1300RPM), drive will run motor 24/7.

### 4. If STOP button is pressed, drive stops the motor and will require

pressing RUN button to restart ( 3450RPM for 5-minute priming then reverting to 2850RPM).