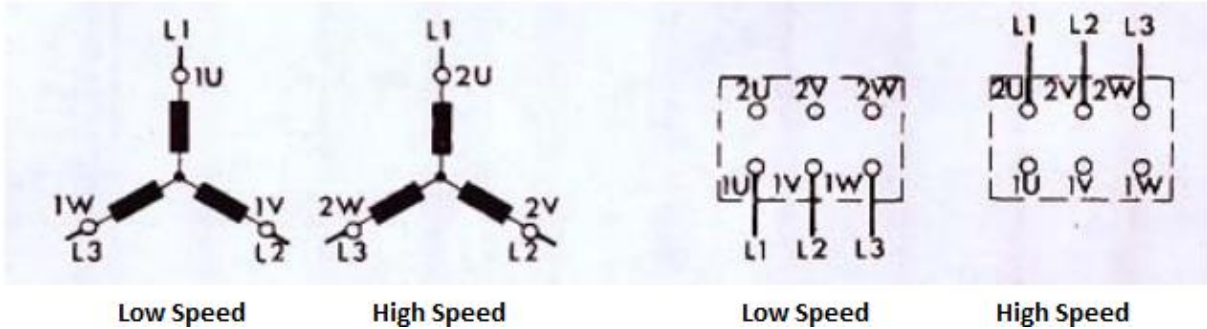


**TWO SPEED MOTORS**

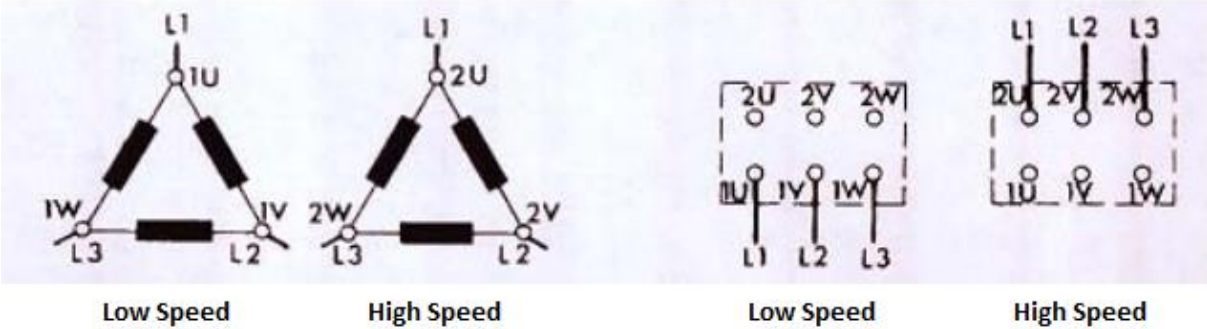
Two speed electric motors are usually divided into two main groups: two separate winding and dahlander winding. Two separate winding motor has many desired different polarities which offers the possibility of different speed ratios. With the dahlander winding, it is only possible to reach a pole number ratio of for example 2:4, 4:8 or 6:12. The power ratings of two speed winding can be very different within certain limits which are determined by the torque or power at a certain speed of the driven machine or device by the motor. In some applications the required torques and powers are identical to each other at different motor speeds for example milling and turning machine applications, also in some applications the required torques and powers can be different for example fan applications.

The connection types of  $\Delta/\Delta$ ,  $Y/Y$ ,  $\Delta/Y$  can be applicable in two separate windings. On the other hand, the connection type of  $\Delta/YY$  at the same torque of both low speeds and type of  $Y/YY$  at low torque of high speeds can be applied in the dahlander windings.

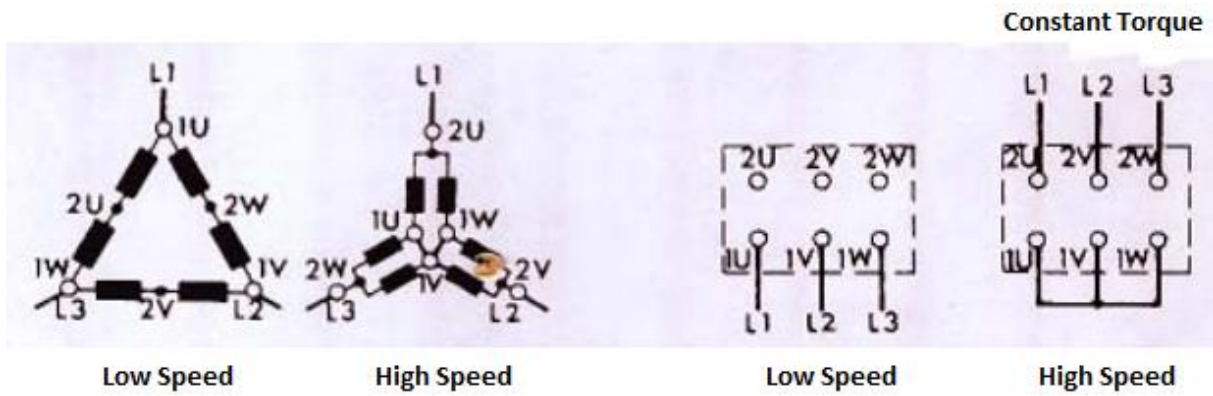
1. Two separate winding – Connection:  $Y/Y$



2. Two separate winding – Connection:  $\Delta/\Delta$



3. Dahlander Connection:  $\Delta/YY$



4. Dahlander Connection:  $Y/YY$

