

WEE NEE HO 26 B - 3 ϕ POWER CONTROL

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82732 VARIABLE SPEED DRIVES

AC MOTOR SPEED

$$N = \frac{120 f}{p}$$

f = SUPPLY FREQUENCY

N = SPEED RPM

p = NO. OF POLES.

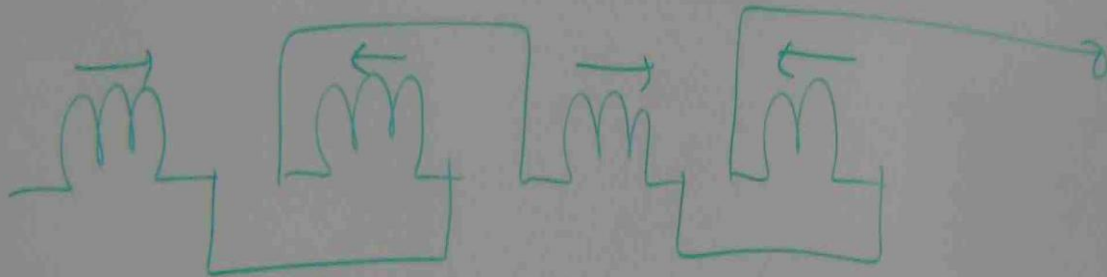
p IS CHANGED
(OR)

f IS CHANGED

} \rightarrow TO ACHIEVE
VARIABLE SPEED

POLE CHANGING

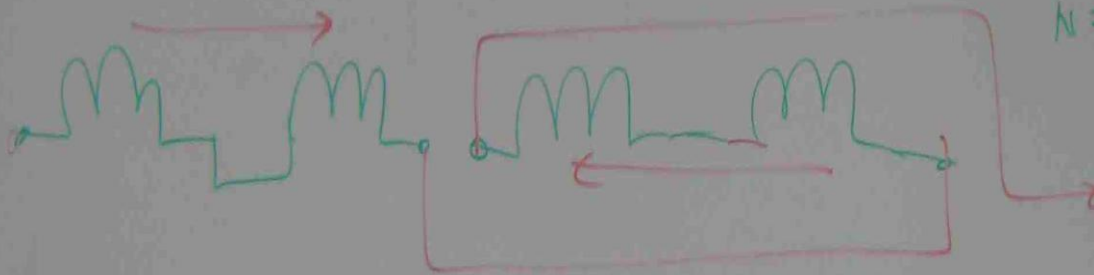
4 pole



4 pole

$$N = \frac{120f}{p} = \frac{120 \times 50}{4} = 1500 \text{ RPM}$$

2 pole

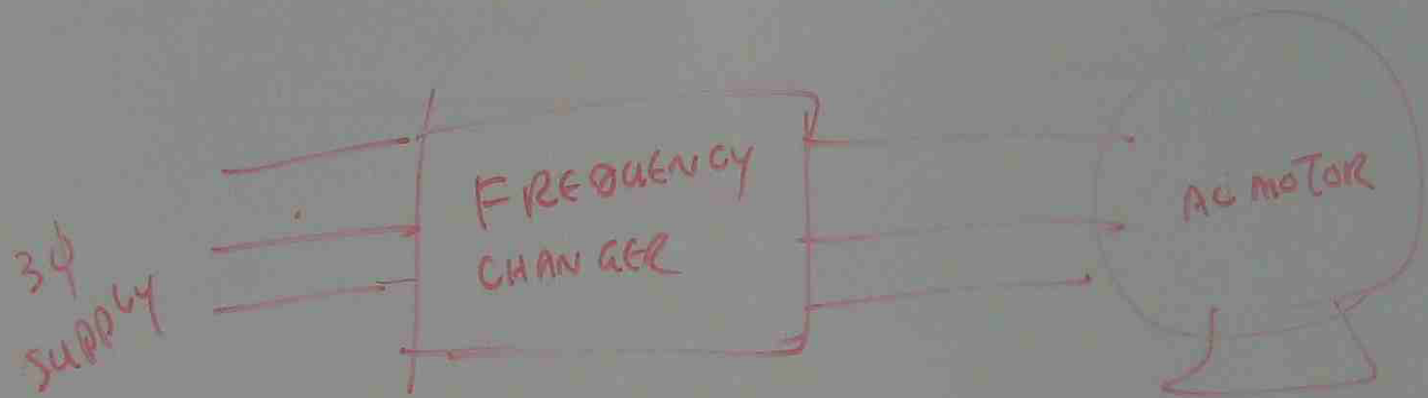


$$N = \frac{120f}{p} = \frac{120 \times 50}{2} = 3000 \text{ RPM}$$

DUAL SPEED MOTOR

ON THE NAME PLATE, THE METHODS TO MAKE DIFFERENT CONNECTION IS INSTRUCTED.

VARIABLE FREQUENCY METHOD



FREQUENCY CHANGER PROVIDES VARIABLE
FREQUENCY

$K = \text{CONSTANT}$

$I_a = \text{ARMATURE CURRENT}$

$T = \text{TORQUE}$

$$N = \frac{E_g \times 60 \times a}{d \times z \times p}$$

$$N \propto \frac{1}{\phi}$$

By CHANGING FIELD RHEOSTAT

RESISTANT, FIELD CURRENT,

FLUX AND SPEED CAN BE CHANGED.