

W1.102

**Effect of variation of Voltage and frequency on
The performance of motors**

Table 1

characteristics	voltage		frequency	
	110 %	90 %	105 %	95 %
torque				
Starting & maximum	Increase 21%	Decrease 19%	Decrease 10%	Increase 11 %
speed				
Synchronous speed	No change	No change	Increase 5 %	Decrease 5 %
Full load	Increase 1 %	decrease 1.5 %	Increase 5%	Decrease 5 %
current				
No load	Increase 10-15%	Decrease 10-12 %	Decrease 5-6 %	Increase 5-6%
starting	Increase 10-12%	Decrease 10-12 %	Decrease 5-6 %	Increase 5-6%
Full load	Decrease 7 %	Increase 11%	Slight decrease	Slight decrease
efficiency				
Full load	Increase 0.5-1%	Decrease 2 %	Slight increase	Sight decrease

Source : Crompton manual

For guidance. To use updated version