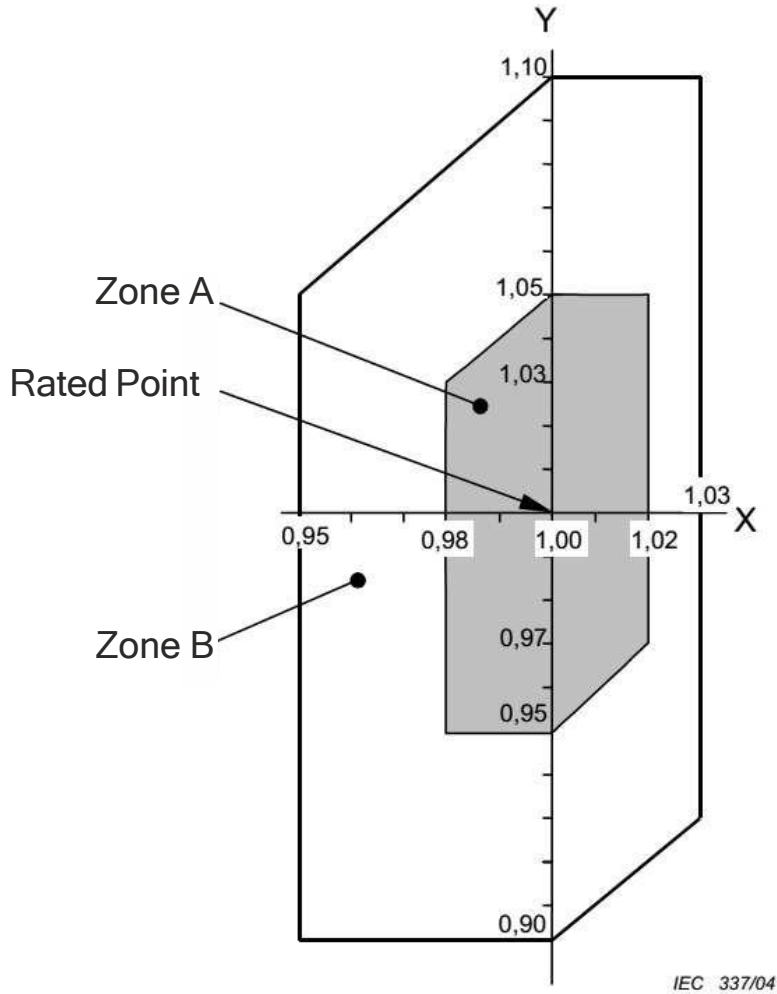


Voltage and frequency limits for motors are as follows :

Y- Voltage
X- Frequency



Voltage and frequency variations during operation (paragraph 7.3 of the IEC 60034-1 standard)

Zone A

Electric motors must be capable of performing continuously within Zone A but do not need to comply fully with the performance at rated Voltage & Frequency. The motors may exhibit some deviations. Temperature rises may be higher than at the rated Voltage & Frequency. The limits within Zone A are as follows:

- $\pm 5\%$ voltage deviation
- $\pm 2\%$ frequency deviation

Zone B

When electric motors operate within Zone B, they may exhibit greater deviations. Temperature rises can be higher compared to Zone A. Prolonged operations at the limits of Zone B can shorten the motor's lifespan. Therefore, extended operation in this zone is not recommended. The limits within Zone B are as follows:

- $\pm 10\%$ voltage deviation
- $+3\% / -5\%$ frequency deviation