

EMF Calculator

Machine configuration

Printer geometry:

Supply voltage:

 V

Motor current:

 mA

Requested max. speed:

 mm/s

Number of motors connected in series:

Motor properties

Motor preset:

Motor step angle:

Rated holding torque:

 N.cm

Rated current:

 mA

Phase resistance:

 Ω

Phase inductance:

 mH

Drive

Microstepping:

Axis is driven by:

 Belt Leadscrew

Belt preset:

Belt pitch:

 mm

Pulley teeth:

Steps per mm:

Approximate peak back EMF due to rotation per motor: **8.3 V** at 200.0 mm/s

Approximate peak back EMF due to inductance per motor: **4.0 V** at 200.0 mm/s

Step pulse frequency: **16.0 kHz** at 200.0 mm/s

Speed at which torque starts to drop (low slip angle): 386.3 mm/s @ 52.5 kHz

Speed at which torque starts to drop (high slip angle): 496.6 mm/s @ 67.5 kHz