









## Motor Directives & Grundfos Machine Tool Products

Product	Power range	Voltage range	Efficiency Class EuP IE2 (Europe)	Physical change	Efficiency Class EuP IE3 (Europe)	Physical change	Efficiency Class Kemco ( Korea )	Physical change	Efficiency Class EISA ( USA )	Physical change
MTR/SPK/MTS	0.75kw-45kw	220-240V 50Hz 380-415V 50Hz	yes	no	on request	yes on some motor sizes	yes	no	no	-
	0.75kw-45kw	220-255V 60Hz 380-480V 60Hz	yes	no	on Request	yes on some motor sizes	yes	no	no	-
	0.75kw-45kw	200-220 V 50Hz 346-380V 50Hz	yes	no	on request	yes on some motor sizes	no	no	no	-
	0.75kw-45kw	200-230V 60Hz 380-400V 60Hz	yes	no	on Request	yes on some motor sizes	no	no	no	-
	1hp - 75hp	208-230V 60Hz 460V 60Hz	-	no	-	-	-	no	yes	yes on some motor sizes
MTH	0.75 kw-1.1 kw	220-240V 50Hz 380-415V 50Hz	yes	no	no	-	yes	no	no regulations	-
	0.75 kw-1.1 kw	220-255V 60Hz 380-480V 60Hz	yes	no	no	-	yes	no	no regulations	-
	0.75 kw-1.1 kw	200-220 V 50Hz 346-380V 50Hz	yes	no	no	-	yes	no	no regulations	-
	0.75 kw-1.1 kw	200-230V 60Hz 380-400V 60Hz	yes	no	no	-	yes	no	no regulations	-
MTA	0.75 Kw	220-240V 50Hz 380-415V 50Hz	yes	no	yes	no	yes	no	no regulations	-
	0.75 Kw	220-255V 60Hz 380-480V 60Hz	yes	no	yes	no	yes	no	no regulations	-
	0.75 Kw	200V 50Hz	yes	no	yes	no	yes	no	no regulations	-
	0.75 Kw	200-220V 60Hz	yes	no	yes	no	yes	no	no regulations	-

Country		voltage	Motor Directive	Regulation of minimum efficiency 2011
Europe		3*400V 50Hz	EuP	IE2
China		3*380V 50Hz	GB 18613 (2008)	IE2 (EFF1)
Korea		3*380V 60Hz	Kemco	IE2
USA		3*208-230/460V 60Hz	EISA	IE3
Canada		3*480/575V 60Hz	CSA C390 Premium	IE3
Japan		3*200V 50/60Hz	(none)	no regulation
Brazil		3*220/380V 60Hz	ABNT / NBR 17094	IE2
India		3*415/690V 50Hz	BEE IS 12615	voluntary EFF1

