

ELECTRIC SPINDLE WARM-UP PROCEDURE

On the first daily starter of the electric spindle is necessary to warm-up it to allow an equable thermal expansion of the bearings tracks.

We suggest, therefore, the following warm-up cycle with the system cooling connected, **with the tool-holder installed** and without applying load:

SPEED (rpm)	TIME (min.)
50% of the maximum speed	3'
75% of the maximum speed	3'
100% of the maximum speed	2'

We suggest, also, to execute that warm-up cycle when the machine remains stop for a sufficient time to cool the electric spindle till the room temperature.

Only for the HSK execution **do not run the electric spindle without the tool-holder installed.** Run the electric spindle HSK without tool-holder can get the electric spindle unbalanced and damage the clamping group HSK.