

## FRONTAL RING TOOL

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**Abstract:** In this paper, is proposed a methodology for peripheral primary surface profiling of the frontal ring tool, for helical surface generation, tool often used for the threading of the long screw – swirl threading.

The helical surface generation using surfaces of revolution may be making, apart from the known systems: generating with disk-tool, end mill and ring tools, also by a method specifically, first of all, for grinding processes, when the tool’s axis is disjunctive regarding the axis of helical surface.

The proposed method, developed based on the reciprocally enveloping surfaces theorem, is based on the approximate representation of the helical surface, by knowing a small number of points (3 or 4) along the generatrix, by approximate Bezier polynomials. They are presented numerical examples, regarding the results obtained with exactly profiling methods, proofing, in this way, the method quality.

Was created, using the java language, a software for tool’s profiling.

**Key words:** frontal ring tool, Bezier approximating polynomial