PzaToTpa

2.2.0

Import from PZA format to TpaCAD

Tecnologie e Prodotti per l'Automazione

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1   Overview

This document describes the functioning specifications of the PzaToTpa import module from the PZA format to the TCN format, included in the standard installation.
The conversion process must be obviously enabled by the machine constructor during the machine configuration.

Conversion settings are assigned in a dialog box, divided in several pages. Access level to the configuration window is chosen by the manufacturer of the machine.
The import maintains the program unit of the PZA program, in [mm] or [inch].

PZA is a native format of Leptom Systems®.

2   General

Page settings:
- **Feedthrough Z (milling and saw)**: this option sets the exit position to add to feedthrough Z milling and saw workings.
- **Feedthrough Z (drilling)**: this option sets the exit position to add to drilling workings.
- **Maximum size for blade groove:** this option sets the maximum value interpreted as a cavity made by a blade work. A cavity whose size is less or equal to the value set is interpreted as a cavity made by a blade work; otherwise, it is interpreted as a closed path carried out by an internal contouring.
- **Workpiece rotates if height > length**: select the field to enable the rotation of the original workpiece, if the value of the height is greater than the length. If the field is not selected, you can apply the next field, if it is significant.
- **Max. executable height (if > the workpiece rotates)**: a positive value requires the rotation of the original workpiece, if the value of the height is greater than the value set.
- **Activate error management**: select to manage as errors the transcoding cases that are not feasible for one or more workings programmed in the original file.

3   Drilling

Page settings allow to customize the import of drilling workings.
The elements in PZA format are identified by the type **Agujero**.

During the programming of a drilling, the diameter is set: a maximum diameter is defined in order to maintain the typology of workings, for values which are higher than the hole, a cycle of emptying is programmed.

- **Drilling maximum diameter**: drills, which have a diameter up to the value set, are converted as holes. The set value must be included between 1.0 and 50.0, measure units [mm]. The minimum value is 1.0.

Hole emptying technology
for diameters higher than the value of the previous field, the import process programs a cycle of emptying that has to be perform through the milling technology assigned in the follow fields:

- **Machine, Group:** set a value included between 0 and 100
- **Spindle:** set a value between 0 and 10000
- **Tool:** set a value between 0 and 10000
- **Diameter:** set a value from 1.0 to the **Maximum diameter of drilling**
- **Typology:** set a value between 0 and 1000
- **Counter-clockwise:** select the field to perform the cycle of emptying in counter-clockwise

If you cannot find an useful technology and if a milling cutter is configured (see later) that can carry out the working as an isolated setup or by an emptying cycle, please, opt for this latter. Otherwise, the working is imported but as a comment working, so it will not carried out or the import is terminated with an error (according to the selection in the page of **General**).

4   Groove technologies

Page settings assign the technologies to use for groove workings (sawing).
The elements in PZA format are identified by the type **Calado**.
It is possible to distinguish a technology for horizontal groove (on X axis) or for vertical groove (on Y axis).

If the technology assigns a blade aggregated tool (**Typology** field, values 50,51,52), the working is transcoded as a blade working (along X or Y), otherwise the profile technology is interpreted with the tool set here or by selecting the technology that better fits the width of the groove (see next page).

If the width of the groove is longer than the tool diameter, the import develops a cycle of more blades or of profile, in order to realize the required width.

If the working is transcoded as a blade working whose initial/final point is inside the piece, *Calculate chord* option is selected.

If it is not possible to find an useful technology, the working is imported as a comment working, that's why it will be not executed or the import is interrupted by an error (as selection on **General** option page).

5   Profile technologies

Page settings assign the technologies to use for profile workings.
The elements in PZA format are identified by the typology **Polygon**.
It is possible to assign up to 10 technologies and the association with the programmed entities in PZA

format is valued through the value of the diameter: to a specific diameter is associated a technology.