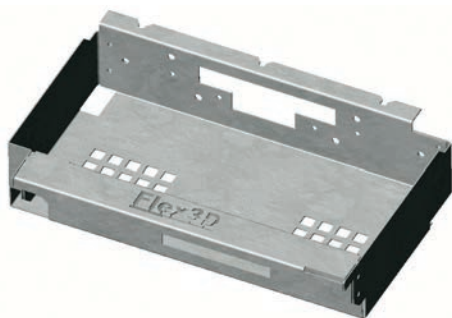# lantek flex3d

## Introduction

**Lantek Flex3d Unfolding** is a specific application from the **Lantek Flex3d** family of products for 3D part design and automatic unfolding. The result is the unfolded part in 2D.
**Lantek Flex3d Unfolding** is a stand-alone application and no additional software is needed to work with it.
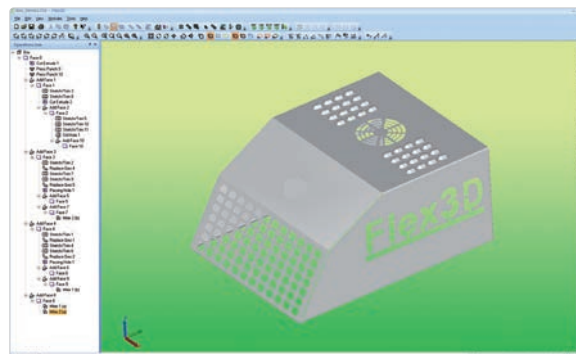


## Easy, flexible design

With **Lantek Flex3d Unfolding**, the design of any part in 3D is made simple. Starting from a solid base, the different faces are added to form the complete part. Once the part has been designed, the unfolding is immediate and automatic.
The application has a powerful help system with detailed explanations of each one of the options, so that the user may resolve any doubts quickly and simply.
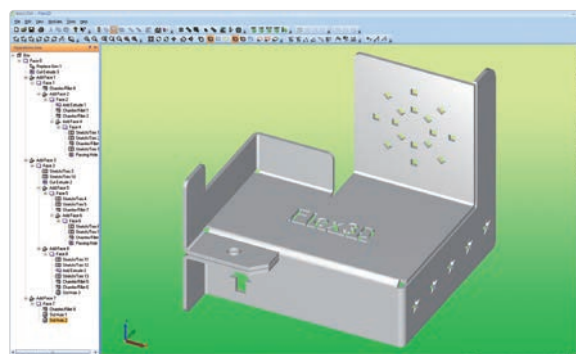
## Technical characteristics

- Dynamic coordinate system specific for boxes.

- Real viewing of the part.

- Powerful 2D design module.

- Automatic unfolding 3D to 2D and transfer in DXF format or directly to the database of **Lantek Expert** for nesting and machining (cutting or punching).

- Creation of the base face from 2D geometry or parameters introduced by the user.



- Parametric addition of any type of face to the base face:
  - Individual offsets at each end.
  - Individual chamfers.
  - Corner radius for each face.
  - Different angle input for each face.
  - Multiple options for dimensioning the faces.
  - Automatic rectangular or semi-circular notches.

- Creation of faces at 0° and 180°.

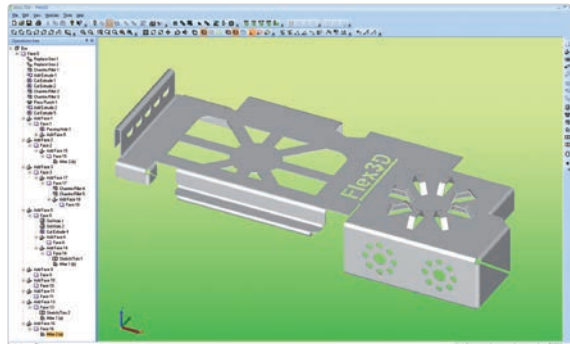- Creation of multiple faces from one profile.

## Construction options



- Creation of different extrusions.

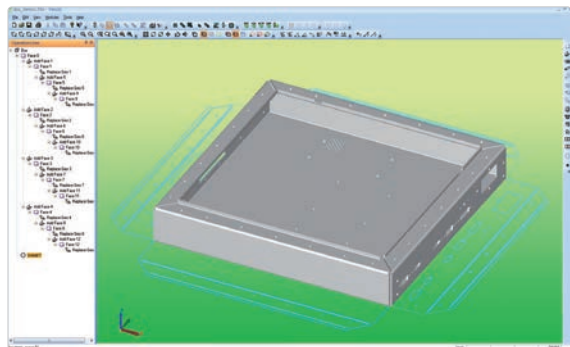- Creation of faces from 2D geometry.

- Standard form holes library or design of their geometry in 2D. Creation of dies for holes.

- Standard form tool library, with the ability to create additional dies.



- Rounding (filleting) of the parts in 3D.

- Automatic mitering (diagonal, 90°, 2D geometry) on two superimposed faces. This utility allows two superimposed faces to be separated.

- Lengthening and shortening of 2 faces:
  - At a set value.
  - To a parallel plane.
  - To a non parallel plane, with and without reference.
  - To vertex.
  - Lengthening and shortening of 2 faces until they meet.

# Unfolding options

- Automatic unfolding of the part based on its own unfolding rules, which depends on:
  - The K factor.
  - A technology table which can be configured by the user, in accordance with thickness, radius, and the machine.



- The unfolding provided by **Lantek Flex3d Unfolding** is totally configurable.

- There are different output formats:
  - Export to SAT format. Communication between 3D design systems.
  - Unfolding of geometry to DXF format file, completely user-configurable from the program (type of line, colour).
  - Direct unfolding to **Lantek Expert**'s database. No need to create intermediate files. The system allows the 2D geometry obtained to be directly transferred to the CAM cutting or punching system.