

## PUNCH CUTTING/LASER CUTTING COMPARISON

The cutting and stamping of flat products is one of the pillars of product processing:

- The precision of the cuts is essential for assemblies.
- The edges of the cuts must be good quality.
- Operating costs need to be minimal.

### CUTTING BY PUNCH CUTTING

#### PROS

- Low initial investment.
- Well-known technology, easy to implement.

#### CONS

- For each form, a tool is required (purchase).
- Two-part tooling (punch and die).
- Noisy.
- Punched edge with burrs.
- Expensive specific tooling design.
- Fine and complex shapes are impossible to achieve.
- Limited sheet thickness.
- Regular mechanical maintenance (wear and tear).
- Requires contact with the product.

### LASER CUTTING

#### PROS

- No tooling (laser), versatility.
- Significant sheet thickness
- Quieter.
- Depending on the configuration, little burring is produced when cutting.
- Free, complex, fine forms may be created.
- Low operation and maintenance cost (electricity).
- Contactless process.
- Cutting can take place after assembly operations.
- Robust equipment, low maintenance, no tool breakage.

#### CONS

- Regulated integration (laser risk to be treated).
- High initial investment cost.
- Presence of a Thermally Affected Zone (TAZ).



### Questions to ask yourself when integrating a cutting solution

- What production volume, materials and formats are involved?
- What surface is available and is the surface accessible for cutting?
- How versatile will the production equipment be?

### Key economic points laser vs punch cutting

- Availability rate of over 99%.
- Low maintenance cost (few consumables).
- Superior laser cutting quality and definition.
- Low energy cost.

