



POWER SORT[®]
DALCOS[®]

SEPARATING AND SORTING SYSTEM FOR LASER CUTTING



DALCOS[®]
by  **DALLAN**[®]
ROLLFORMERS AND SYSTEMS

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POWER SORT[®]
for **LIXN**

SEPARATING AND SORTING SYSTEM

EASY PART SEPARATION,
ZERO FLASHBACK AND
MACHINABILITY OF EXTREMELY
THIN MATERIALS



SUSPENDED LASER CUTTING

The latest developments in laser cutting automation open up a wide range of new possibilities for sheet metal manufacturers. Modern and innovative **Powersort** system for **Dalcos LNX** machines, allows the **laser cutting** of the material in **suspension**, with these main advantages:

- Simple separation of the parts
- Possibility to process materials without the underlying supporting blades, thus eliminating the flashback phenomenon
- Easy disposal of large cutouts in the material
- Easy elimination of the skeleton
- Simple processing of thin - to very thin material (range 0,15 to 2mm)

EASY PART SEPARATION



Material tensioning

First of all the machine introduces and **tensions** the material with two opposite grippers and keep it in **suspension** in the longitudinal direction.



Scrap cutting

Once the material is tensioned, the laser head cuts of the **internal scrap** that fall into a dedicated scrap tray, easy to reach and to empty.



External shape cutting

The laser head cuts the **external shapes** of the parts. The parts can be left **micro-jointed**, ready to be separated from the skeleton.



Parts separating

A moving **belt conveyor** slides underneath the material, and the laser cuts out the micro joints, leaving the part free to fall on the underneath belt conveyor. This operation is repeated for all the internal shapes.



Products sorting

The belt conveyor slides away from the cutting zone, the skeleton is cut by the laser cutting head and it falls into the scrap tray underneath. The **finished parts** are ejected from the machines by a secondary belt conveyor.

ZERO FLASH BACK

Flashback is the phenomenon that takes place when, cutting material on the traditional supporting bed for laser machines, the laser **beam cuts** where one of the underlying nails stands. The beam, after cutting the material, interacts with the metal of the supporting bed and the portion of the material around the flashback area is damaged.

The suspended laser manufacturing, by eliminating the supporting bed, completely eliminates this problem.



EASY DISPOSAL OF LARGE CUTOUTS OF THE MATERIAL

Traditional lasers, to get rid of large scraps or cutouts, need to destroy them by cutting them into smaller pieces allowing them to fall through the underlying supporting system.

With the suspended laser manufacturing, having eliminated the supporting bed, **large cutouts can be easily cut** and disposed of and they fall directly into the scrap tray.

Easy elimination of the skeleton

Just like large scrap, the skeleton can be disposed of by separating the part entirely (no need for micro joints) and by letting it fall into the scrap bin, along with the rest of the scrap.

SIMPLE CUTTING OF THIN MATERIALS

When laser cutting thin materials, most sheet metal manufacturers encounter the problem of the vibration in the material, due to the action of the compressed gas that is blown on the material surface.

The suspended laser manufacturing greatly **reduces the material vibration**, since the material is firmly held by the two opposite grippers and kept in an adjustable tension.

Suspended laser manufacturing allows the machining of materials as thin as 0,15mm, up to 2mm and 1500mm wide.





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