

# LASERSTAR E

## Packaging

The **DLS (Direct Laser System)** with the award-winning **LASERSTAR**, offers a process to produce the highest quality images and line work in Gravure printing. The imaging process is a direct, touchless method using a high energy laser beam, requiring no manual operator intervention or adjustments. The entry level model of the **LASERSTAR** with 35 kHz, has multiple productivity abilities compared to electro-mechanical systems. The engraving speed of this model can be doubled to 70 kHz.

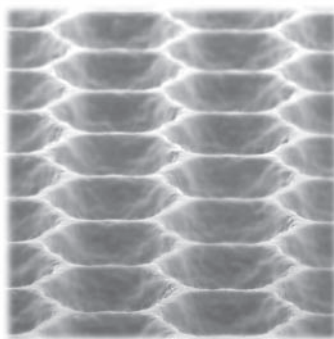
### PRODUCT INFORMATION

- Highest reproduction and repeats.
- Smooth ink release with uniform ink layers.
- Touch-free imaging without wear of mechanical parts.
- Optimum match with printing substrates and inks by free choice of cell geometry.
- Ink savings.
- Widest range of screens and angles available.

*SEM images by courtesy of Prof. L. Schlapbach, Solid State Physics Departement, University of Fribourg/Switzerland.*

### New Cell Shape & Geometric

- The thermal energy force of the laser creates a round cell with adjustable profile in the zinc layer.
- The **SHC (Super Half-autotypic Cell)** option allows independent adjustments to the depth and the diameter (profile) of each cell. This yields a ink formula with much tighter tolerances in all tonal values: The ink formula can be adjusted and optimized for higher press speeds or reduced solvent applications.
- The max. cell depth with a screen resolution of 120 l/cm is approximately 35 µm.
- Synthesized screen patterns, such as Masterscreen, allow for printing on critical substrates with the highest details.



*Close-up of DLS Masterscreen Cells*

### Data Transfer

- Fully automated workflow with **COLLAGE** and **DL-Manager**, production parameters can be imported from handling systems.

### Screens

- The screens are placed in spiral form onto the cylinder.
  - Halfautotypical: 70–220 l/cm
  - Conventional: 70–160 l/cm
  - Masterscreen (with or without outline): 25–110 l/cm, eff. Resolution: 400 l/cm.
  - Screen angle: 0° and 30°–62°.

### DLS Engraving Head

- T.I.R. of cylinder up to ± 100 µm are automatically detected and compensated. A highly efficient suction unit removes the ablated zinc dust. The zoom optic warrants a continuous stepless adjustment of the maximum cell sizes.
- The laser beam source is connected to the engraving head via fiber optic. The layout of the laser table and engraving unit can be design flexible.
- The performance of 35 kHz respectively, 70 kHz is not dependant on the screen resolution (Example: With 100 l/cm at 70 kHz 23.8 min/m<sup>2</sup>).

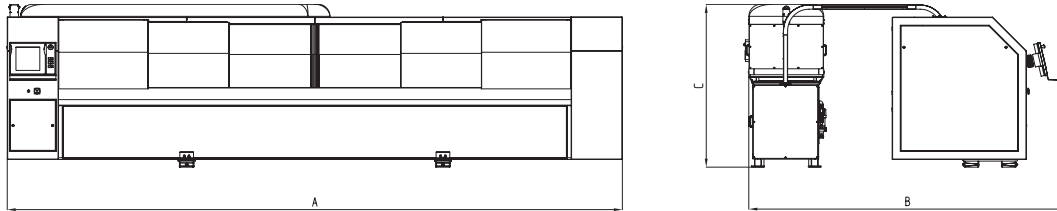


LASER

**Daetwyler**



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### Machine Dimensions

| Type             | P 1814    | P 2815    |
|------------------|-----------|-----------|
| Machine Length A | 6'200 mm  | 7'200 mm  |
| Machine Depth B  | 3'990 mm  | 3'990 mm  |
| Machine Height C | 1'900 mm  | 1'900 mm  |
| Machine Weight   | 15'000 kg | 17'000 kg |

### Cylinder Dimensions

| Shafted or<br>Hollow Cylinder | P 1814   | P 2414   |
|-------------------------------|----------|----------|
| Circumference min.            | 280 mm   | 280 mm   |
| Circumference max.            | 1'570 mm | 1'570 mm |

### Shafted Cylinder

|                    |          |          |
|--------------------|----------|----------|
| Total Length min.* | 1000 mm  | 1'000 mm |
| Total Length max.* | 2'800 mm | 3'800 mm |
| Face Length min.*  | 500 mm   | 500 mm   |
| Face Length max.*  | 1'800 mm | 2'800 mm |

### Hollow Cylinder

|                   |          |          |
|-------------------|----------|----------|
| Face Length min.* | 540 mm   | 540 mm   |
| Face Length max.* | 1'800 mm | 2'800 mm |

\* Depending on cone/shaft configuration and chucks. Provide cylinder drawings for details.

**Electrical Data:** Power supply: 3 x 400 or 440 V, 50 or 60 Hz  
Power consumption: 54 kVA

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<http://www.daetwyler.com>

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INNOVATIONS FOR THE PRINTING INDUSTRY