

# FLEXOSTAR

DIRECT LASER ENGRAVING SYSTEMS FOR IN-THE-ROUND FLEXO PRINTING

**lead**  
Lead lasers B.V.



## FLEXOSTAR

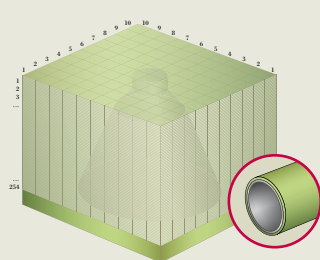
A high performance, direct laser engraving system, for processing digital sleeve and plates for continuous and high speed flexo printing. The ability of FlexoStar to engrave either continuous sleeves, or ITR flexo plates-on-sleeves, for wide web printing, gives both Trade-shops and Flexo printers the opportunity to optimise both printing quality and pre-press cost.

## ★★★ FEATURES OF DIRECT LASER ENGRAVING ★★★

*Direct Laser engraving, offers a complete digital workflow, from pre-press to printing press, giving users the ability to control dot profile, for optimum graphic quality, and to select sleeve/plate material for maximum printing performance.*

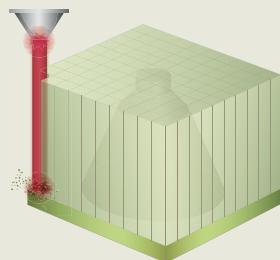
- Direct engraving on Elastomer or Polymer sleeve/plate materials
- Perfect registration plate/sleeve
- No chemical wash-out or thermal processing

## ★★★ DOT FORMATION IN DIRECT LASER ENGRAVING ★★★



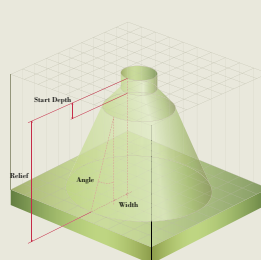
### Step 1

- ★ Elastomer/Polymer plate or sleeve
- ★ 3D calculation during engraving
- ★ Resolution 2540 DPI



### Step 2

- ★ Laser creates user defined Dot shape, start depth, angle and relief



### Step 3

- ★ The perfect dot

The user directly controls the shape of the dot cross section such as:

- dot shoulder angle
- dot shape for optimum printing performance and durability
- height adjustment of highlight dots
- exact control for relief depths (plate floor thickness)

# ★★★ DESIGN FEATURES OF FLEXOSTAR ★★★

*The unique design of FlexoStar uses a single, high power CO2 Laser, combined with a stable “moving laser” format, ensuring the most cost effective and fastest processing speed, and a robust and stable machine operation, for maximum reliability and performance. This assures the user of the FlexoStar of:*

- ★ *Maximum sleeve/plate processing speeds*
- ★ *Predictable and repeatable printing form quality*
- ★ *Easy & reliable performance for operation by semi skilled personnel*

## FLEXOSTAR LAYOUT

- Standard models: 1600, 2100 & 3100. Larger widths available in 500 mm (20”) increments.
- 650 watt, Sealed Tube Co2 “FlexoStar” Laser
- FlexoStar machine bed, complete with fixed headstock, moving tailstock for support of sleeves mandrels or plate cylinders, complete with interlocked sliding doors.
- Constant length optical beam system, controlling the single Laser beam from source to surface for maximum laser control.

## OPERATOR /MAINTENANCE SYSTEM INTERFACE

- Input, 1 bit tif
- Touch screen computer operation including Laser control and engraving software
- Dot Creation, Dot Shaping and Image view software
- Touch screen operator control panel
- Non-contact Laser focusing system for precision beam placement
- Cal-Kwik - Automatic plate material calibration system
- Auto-skip, automatic rapid traverse for non-engraved areas
- On-line remote software access of inspection and control of machine functions

## PRINTING FORM OPTIONS

FlexoStar can laser engrave a wide variety of printing forms, supported using a range of sleeves and engraving cylinders for example

- Flexo Sleeves, on air mandrels or Kwik-change
- Flexo plates, mounted on sleeves or plate cylinder
- Letterpress/Dry-Offset, mounted on magnetic or plate cylinder

## DIRECT LASER ENGRAVING PRODUCTION

- Image resolutions from 1250 to 5080 dpi for typical screens ranging up to 80 lpcm (200 L/In) plate screening
- Production rate from 0.4 to 1.2 m<sup>2</sup> / hour depending on relief depth & plate material.

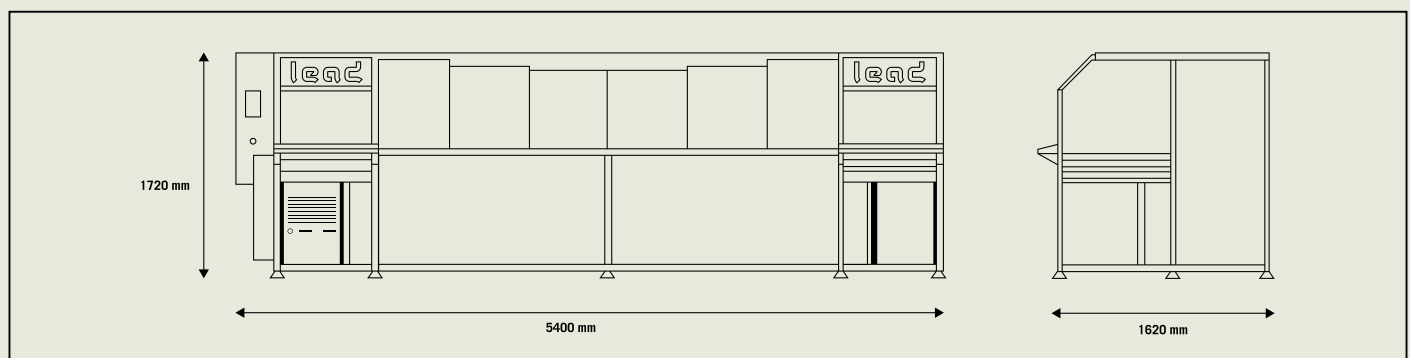
## FLEXOSTAR SERVICES

- Power: 3x400 V 50Hz, 25 amp operating current. (Optional USA 415 volt 60Hz)
- Compressed air: 6-9 bar, 200 L/min (90-130psi, 7cfm).
- Cooling water for CO2 laser, provided by External water chiller PC160\*
- Dust Extraction, provided by External Dust extraction DFPR03\*
- Optic Maintenance, provided by Opti-Clean\*

*\* see Data sheets for Individual specifications*

## ★★★ LEAD LASERS FLEXOSTAR 650 WATT Co2 ★★★

Model	1600	2100	3100
Weight	3200 kg (7,050 lbs)	3500 kg (7,720 lbs)	4000 kg (8,820 lbs)
Max Engraving Length	1750 mm (68.9”)	2285 mm (90”)	3250 mm (129.3”)
Min-Max Repeat Length	150-1570 mm (6”-61.8”)	150-1570 mm (6”-61.8”)	150-1570 mm (6”-61.8”)
Overall Machine Length**	4950 mm (195”)	5950 mm (234”)	6950 mm (273”)
Machine Height	1650 mm (65”)	1650 mm (65”)	1650 mm (65”)
Machine Width	1620 mm (63.8”)	1620 mm (63.8”)	1620 mm (63.8”)



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