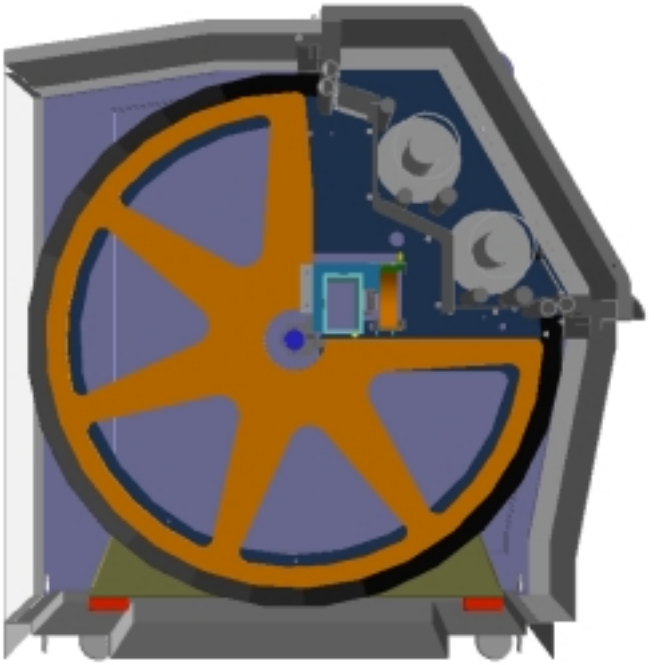
LightJet® Wide Format Photo Printers

Internal Drum Imaging for Consistently Superior Image Quality

What is an internal drum?

Océ Display Graphics Systems uses an internal drum architecture in all its photo-laser products. This method of holding media stationary while imaging, ensures the best possible accuracy from one edge of the image to the other. LightJet images onto a 270 degree drum. During imaging, the media is held flat and stationary against the inside of the cylinder wall. Laser light, which exposes the media, is reflected by a spinning mirror moving along the axis of the cylinder, onto the surface of the media.



side view of the internal drum assembly

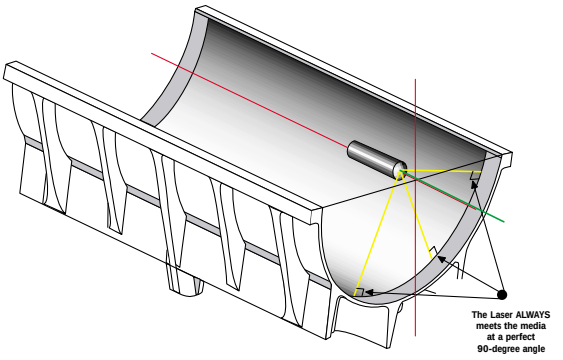
What are the benefits?

Internal drum imaging has many benefits over other imaging technologies, including:

- better image sharpness
- highest density and color uniformity
- uniform image quality over the entire imaging surface
- uniform spot size and shape over the entire imaging surface
- highest geometric accuracy over the entire imaging surface

These benefits are a result of the following factors:

- The media is held stationary during exposure, and the rotating mirror is precisely moved along the axis of the drum. This method is far simpler and more accurate than moving the media under a stationary light source.
- Internal drum architecture ensures that the exposure timing (the amount of time the spot exposes a specific point on the media), the spot size, distance between adjacent spots, and spot intensity, are always the same.
- The accuracy of the internal drum is ensured by meticulous machining processes so that the image sizing and scaling are extremely precise (geometric accuracy).



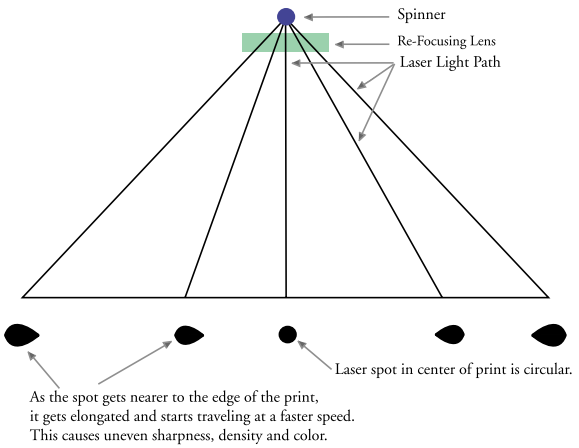
cut-away view of the imaging surface

LightJet® Technology Backgrounder

The internal drum system offers the following benefits over other technologies:

- The consistency of sizing and scaling over the entire image makes the alignment of images to other elements much more accurate (including die-cut panels and frames, multi-panel displays, etc.).
- Critical applications such as mapping can rely on measurements taken directly from the prints.
- Color and density uniformity ensures the highest image quality standards for even the most demanding clients.
- Uniform spot size and shape ensures that even the edges and corners of an image are as razor-sharp as the center. This uniformity is better than any obtained from the best optical printing techniques. In other technologies, such as typical capstan drive systems (see illustration below), the media moves under a stationary light source, and does not always expose the media at a 90 degree angle. In this case, as the spot moves across the media, its size, shape, speed, and intensity can all change. The resulting uniformity performance (color/density/sharpness/ geometry) is of lower quality than internal drum imaging.

Typical Capstan-Type Printing System



LightJet Wide Format Photo Printers

The LightJet family of wide format photo printers is designed and built by Océ Display Graphics Systems. Our high-quality printers are used in photo labs, repro shops, and service bureaus around the world.

LightJet 500XL

LightJet 430

LightJets have won more awards than any other printer in its class:

- **DIMA Shoot-Out at PMA**
  1997, 1998, 1999, 2000, 2001
- **DPI Product of the Year**
  1996, 2001
- **Cool² Award**
  1997, 1998, 1999, 2000
- **COMFOT Mexico Shoot-Out**
  2001
- **Photographic Processing Top Products**
  2001

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