COMPARING SPECIFICATION

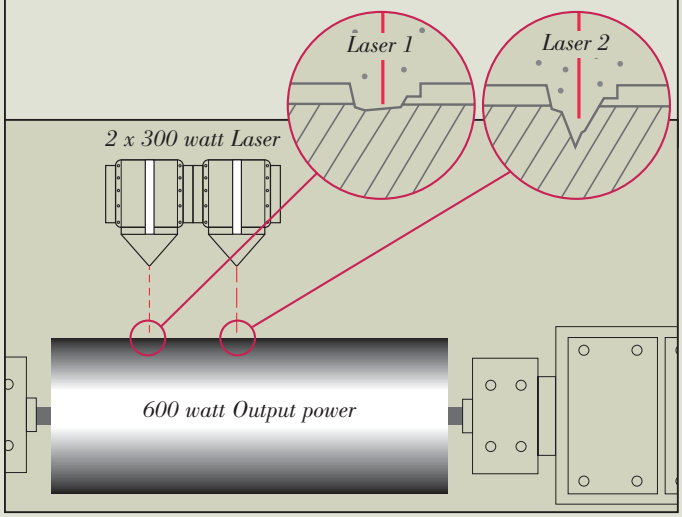
SINGLE LASER VERSUS MULTIPLE LASER

Laser power and processing speed are directly related to the production output from the direct engraving system. Laser reliability and stability are essential to minimise maintenance and downtime.

HIGH LASER POWER = FAST PROCESSING SPEED = MAXIMUM PRODUCTION OUTPUT

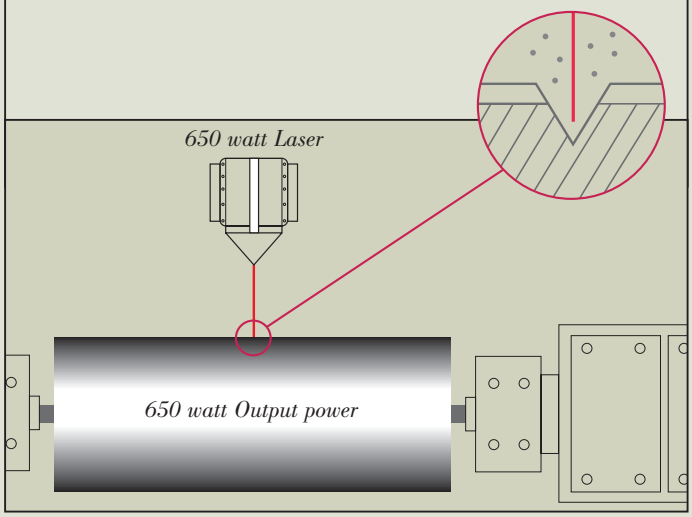
★★★ MULTIPLE LOW POWER SYSTEM ★★★

1) Restriction on graphic resolution because laser mechanics and image processing speed, can not cope with speed of data transfer – typical 1270 DPI on many designs;
2) Increasing the number of lasers, gives proportional increase in chance of mis-alignment of the multiple laser beams;
3) Beam in-stability is more frequent, leading to higher downtime and maintenance time;
4) Rapid traverse SKIP can only happen in areas > 50 mm (2").

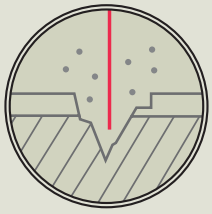


★★★ SINGLE HIGH POWER LASER SYSTEM ★★★

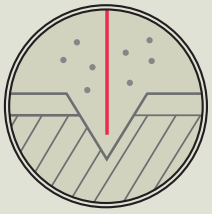
1) Fastest possible data transfer, to optimize graphic resolution and production speed – 3000 DPI possible for MOST images, all size designs;
2) Simple and reliable beam alignment;
3) Beam stability is consistent;
4) Rapid traverse SKIP happens automatically for full engraved areas >1mm (0.04").



★★★ 2 LASERS DO NOT ALWAYS EQUAL TWICE THE SPEED ★★★



Multiple lasers:
Less stable beam alignment
Higher potential downtime
Higher potential maintenance
Lower SKIPPING rate



Single laser:
Stable beam alignment
Reliable engraving
Low maintenance
Maximum SKIPPING rate

SINGLE LASER SYSTEM

= stable beam alignment
= reliable engraving
= lower maintenance
= higher SKIPPING potential

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COMPARING SPECIFICATION

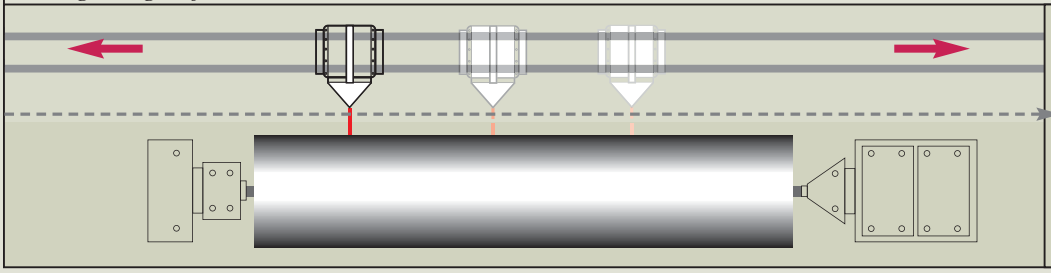
MOVING LASER ▸ VS MOVING OPTICS ▸ VS MOVING CYLINDER

The movement between the laser and the engraved roll surface is critical for high graphic and high reliability direct engraving of flexographic printing sleeve and plates.

PRECISE AND CONSISTENT MOVEMENT IS ESSENTIAL. VARIATIONS IN MOVEMENT = WASTE

★★★ LEAD LASERS MOVING LASER SYSTEM ★★★

1) Laser movement is remote from engraving head, eliminating variations due to contamination of mechanics
2) Minimizes number of moving parts between laser and engraving surface
3) Laser movement and control is totally independent from sleeve weight, size or dynamic balance;
4) Stable fixed laser beam. Optimal laser performance.



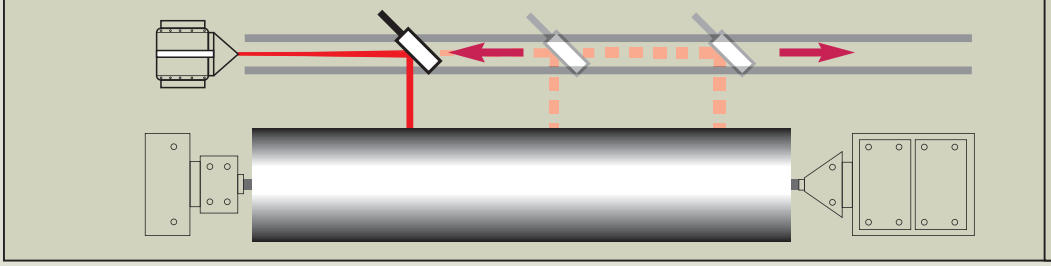
Laser beam fixed and stable

Laser movement protected from contamination

Engraving Cylinder has only rotational movement, no axial change.

★★★ MOVING OPTIC SYSTEMS ★★★

1) Moving optic has variable beam path. Dot size and shape can change across width.



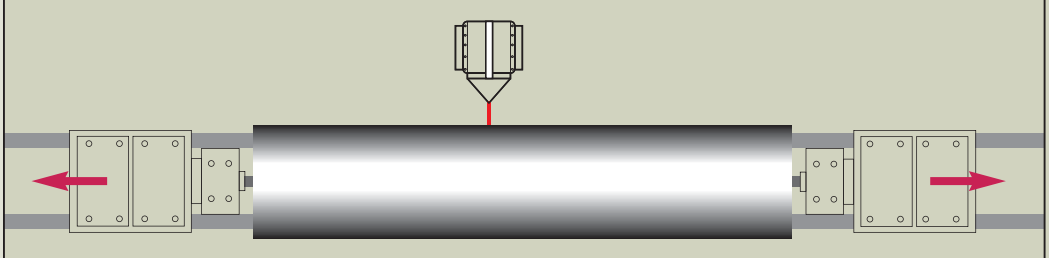
Moving optics = Variable laser beam

Controllable for narrow width, up to 1200mm (48")

Not suitable for wide width imaging

★★★ MOVING CYLINDER SYSTEMS ★★★

1) Sleeve movement is adjacent to engraving head, giving high potential for contamination of precision mechanics;
2) Has maximum (14) number of dynamic contact points. High risk of movement during engraving;
3) Sleeve movement can change according to roll weight or size or balance. Depends upon good dynamic balance and consistent weight of the sleeve, for good accuracy and performance.



Laser beam fixed and stable

Sleeve movement exposed to contamination

Engraving Cylinder has high number of dynamic contact points

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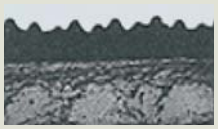
COMPARING SPECIFICATION
PRINT PLATE TECHNIQUES

	Film imaged polymer plate	Digital CTP imaged polymer plate	Direct CTP engraved elastomer plate
Reversed line 0,1 mm	 Width : 0,077 mm Depth : 0,026 mm	 Width : 0,125mm Depth : 0,052mm	 Width : 0,095mm Depth : 0,121mm
Positive line 0,1 mm	 Width : 0,077 mm Depth : 0,515 mm	 Width : 0,125mm Depth : 0,687mm	 Width : 0,095mm Depth : 0,600mm
Reversed line 0,5 mm	 Width : 0,476 mm Depth : 0,076 mm	 Width : 0,461mm Depth : 0,191mm	 Width : 0,496mm Depth : 0,380mm
Positive line 0,5 mm	 Width : 0,512 mm Depth : 0,497mm	 Width : 0,444mm Depth : 0,669mm	 Width : 0,495mm Depth : 0,602mm
2% screen (120 lpi)			

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