High-Productivity Thanks to Advanced On-Press Imaging Technology

Advanced New Imaging System with a 16μm Laser Spot Size

Presstek's newly developed ProFire® Excel Imaging System is equipped with two imaging heads with built-in lasers. The two imaging heads can simultaneously form an image onto the plates for four colors with precise registration on each plate cylinder. The laser spot size* of 16μm provides a resolution of 2,540 dpi, ensuring high-precision printing reproducibility. This imaging system can handle AM screening up to 300 lines per inch (120 l/cm) and FM (stochastic) screening (option), providing the flexibility to meet the growing demand for a diverse range of short-run color printing.

*Spot size as measured on a ProFire® Digital Media plate after imaging.

Waterless Plate (ProFire® Digital Media)

The 3404X-DI and 3404E-DI both use ProFire® Digital Media, a roll-type waterless plate. High-powered lasers form the print image on the plate. Each plate lasts for approximately 20,000 impressions, and will accommodate both short runs as
well as longer, large-lot production*. The number of plate impressions depends on the printing conditions such as the ink type and paper stock.

**Fully Automatic Plate Advance and Take-Up Mechanism**

With the simple click of a button, new printing plates are positioned automatically and the used plates are wound onto take-up spools. An optional plate saver kit advances each plate the minimum distance necessary for each color according to image size.

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**The High Printing Quality of an Offset Press**

**Compact Design Based on a Unique Cylinder Arrangement**

The 3404X-DI and 3404E-DI use a satellite V-shaped 5-cylinder system consisting of two sets of double-diameter blanket cylinders and plate cylinders, which rotate around a tripliodiameter impression cylinder. Paper is tightly held by the impression cylinder grippers and rotated twice without a gripper change for precise 4-color printing. The large diameter of the impression cylinder reduces paper curling as well as damage to the printed material. Thanks to this cylinder arrangement, the RYOBI 3404X-DI and 3404E-DI achieve a remarkably compact design that is about the same size as a conventional 2-color press.

**Ink Roller Temperature Control System**

Roller temperature is maintained at the optimum level by circulating temperature-controlled water (warm water and cold water) inside the oscillating rollers and fountain rollers. By minimizing fluctuations in ink roller temperature, consistent printing quality is maintained, even during long print runs.

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**An Ideal Work Flow for Digitalization**

**Supports Both PostScript and PDF**

The RYOBI 3404X-DI and 3404E-DI support both PostScript and PDF files created in either a Macintosh or Windows® environment. The 3404X-DI and 3404E-DI are open and flexible systems that fuse the prepress and press processes. Features include the optional RYOBI DI Converter, which converts 1-bit TIFF data created on raster image processors (RIPs) from other manufacturers into 3404X-DI/3404E-DI-ready print data.

**Advanced RIP (Raster Image Processor)**

The RIP for the RYOBI 3404X-DI and 3404E-DI utilizes Harlequin RIP (PostScript Level 3 compatible), which has a proven track record of performance and offers high speeds and reliability.

- [MIS Connection Software (for CIP4-JDF)]

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**User-Friendly Operation Thanks to Automation**
Convenient Auto Print Function

The RYOBI 3404X-DI and 3404E-DI feature a convenient Auto Print function. Printing starts by just selecting the Auto Print command on the operation stand's monitor screen. Plate advancing, imaging, printing and blanket cleaning are all carried out with the click of a button.

- **RYOBI Program Inking**
- **Printing Density Control System [RYOBI PDS-E] (option)**
- **Printing Density Control System with Color Profile Setter [RYOBI PDS-ProE] (option)**

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**Wide Range of Paper, from Thin to Heavy Stock**

**Wide Paper Range**

They are also flexible enough to handle a variety of paper qualities, from regular printing paper to label stock and envelopes.

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**Simple, Easy Paper Size Changes to Match the Job**

Both the feeder table and the delivery table dolly are hoisted by motors. A convenient paper size change button allows quick and easy resetting of the paper guides for different sized stock. Paper sizes can be changed quickly and efficiently whenever the operator needs to start a new print job.

*3404X-DI: Standard, 3404E-DI: Mechanical (manual)*

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**Shortened Drying Times with an Infrared Dryer**

The delivery section can be equipped with an infrared dryer to shorten drying time for printed materials, especially effective for jobs with short turnaround times. It also allows the use of powder sprays to be reduced for a cleaner working environment.

*3404X-DI: Standard, 3404E-DI: Option*

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**Optional UV Curing Unit to Enhance Productivity and Versatility**

**UV Printing Capability**

The UV curing unit quickly dries surfaces printed with an exclusive waterless UV curing ink, eliminating the time normally spent waiting for the ink to dry, so work can move immediately to subsequent processes such as back side printing, sheet cutting and bookbinding. Job turnaround time is dramatically reduced and there is no need for extra drying space. Combining UV printing with the high print quality of offset printing greatly enhances versatility.
Designed for Safety and a Better Work Environment

The cold type system adopted for the UV curing unit generates very low levels of ozone and less unwanted heat. The heat from the UV lamps is reduced by an air-cooled pipe, a water-cooled housing and a water-cooled tube. A water-cooled plate assures greater safety when transferring printed materials. Odor and unwanted heat at the delivery section are discharged via an exhaust duct to maintain a clean work environment.

Specifications

<table>
<thead>
<tr>
<th></th>
<th>3404X-DI</th>
<th>3404E-DI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of printing units</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Max. Paper size (W x L)</td>
<td>340 x 460 mm (13.39” x 18.11”)</td>
<td></td>
</tr>
<tr>
<td>Min. Paper size (W x L)</td>
<td>90 x 100 mm (3.54” x 3.94”)</td>
<td></td>
</tr>
<tr>
<td>Max. Printing Area (W x L)</td>
<td>330 x 450 mm (12.99” x 17.72”)</td>
<td></td>
</tr>
<tr>
<td>Paper Thickness</td>
<td>Standard: 0.06 - 0.3 mm (0.0024” - 0.012”)</td>
<td>Option: 0.06 - 0.5 mm (0.0024” - 0.02”)</td>
</tr>
<tr>
<td>Printing Speed</td>
<td>1,500-7,000 S.P.H.*1</td>
<td></td>
</tr>
<tr>
<td>Number of Imaging units</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>2,540dpi</td>
<td></td>
</tr>
<tr>
<td>Number of laser diodes</td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td>Imaging Time</td>
<td>approx. 4 min. 30 sec.</td>
<td>approx. 9 min.</td>
</tr>
<tr>
<td>Feeder Pile Capacity</td>
<td>400 mm (15.75”)</td>
<td></td>
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<tr>
<td>Delivery Pile Capacity</td>
<td>Standard: 400 mm (15.75”) with UV Curing Unit: 450 mm (17.72”)</td>
<td></td>
</tr>
</tbody>
</table>

Design and specifications are subject to change without notice.

*1 The local conditions, ink, stock, and printing plate types, and printing quality required will affect the max. printing speed.