TOSHIBA

Ink re-circulating type inkjet head

CF3/CF3R 600npi: 1color/300npi: 2colors

Unique and only industrial inkjet head having both 300npi/row (twice as much) with ink re-circulation through all channels

- Inherits high jetting reliability and eco-friendly enabled by ink re-circulation through all channels
- Suitable for jetting ink with larger particle size and higher gravity
- Use of 2 colors in one head enabling the printer be more compact
- Nozzle by nozzle drop volume control to minimize density variation

Mechanism of ink re-circulating through all channels

[Image Chart]

Stable jetting of ink that easily sediments with higher viscosity and gravity

Without ink re-circulation

Without Fine Adjustment

Variation in drop volume and drop speed

With Fine Adjustment

Uniformed quality by Fine Adjustment!!

Nozzle by nozzle drop volume control (Fine Adjustment)

The function to control firing drop volume control nozzle by nozzle, contributes to enhance image quality much further.

Feature of TOSHIBA TEC ink re-circulating through all channels inkjet head

Without ink re-circulation

Typical ink re-circulation

Stable jetting of ink that easily sediments with higher viscosity and gravity

ink re-circulated through all channels, preventing sedimentation and reducing nozzle blockages drastically.

Because the ink path is simple, it is excellent at eliminating air bubbles or unwanted particles.
## Specifications

### CF3 / CF3R

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<th>CF3R</th>
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<td>On-Demand piezo technology</td>
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<td>Ink re-circulation through all channels</td>
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<td><strong>Print Width</strong></td>
<td>53.95mm</td>
<td>53.91mm</td>
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<td><strong>Nozzles</strong></td>
<td>1278</td>
<td>639×2 colors</td>
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<td><strong>Nozzle Resolution</strong></td>
<td>600npi</td>
<td>300npi×2 colors</td>
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<td><strong>Number of Lows</strong></td>
<td>2</td>
<td></td>
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<tr>
<td><strong>Nozzle Spacing (Row to row distance)</strong></td>
<td>7.94mm</td>
<td></td>
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<tr>
<td><strong>Grayscale Level</strong></td>
<td>6 levels/0～5drops</td>
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<td><strong>Drop Volume</strong></td>
<td>20pL/5drops</td>
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<td><strong>Minimum Drop Volume</strong></td>
<td>3～4pL</td>
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<td><strong>Frequency</strong></td>
<td>9.2kHz/5drops</td>
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<td><strong>Power Supply Voltage for Driving the Head</strong></td>
<td>+7V～+15V, −7V～−15V</td>
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<td>5V, 24V</td>
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<td><strong>Ink Type</strong></td>
<td>UV-curing &amp; oil-based (consult us for compatibility assurance)</td>
<td></td>
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<td><strong>Built-in Temperature Sensor</strong></td>
<td>Included</td>
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<tr>
<td><strong>Head Cooling Method</strong></td>
<td>CF3:Air-cooling</td>
<td>CF3R:Water-cooling (include water cooling port)</td>
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<tr>
<td><strong>Size, Weight</strong></td>
<td>CF3:96.7mm(W)×29.3mm(D)×100.7mm(H), 255g</td>
<td>CF3R:96.7mm(W)×31.3mm(D)×100.7mm(H), 285g</td>
</tr>
</tbody>
</table>

### Dimensions (mm)

#### CF3

- 100.2
- 66.3
- 25.6
- 94.1

#### CF3R

- 100.2
- 66.3
- 25.6
- 94.1
- 31.3

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1. CF3 is a native 600 npi head with 1st and 2nd row nozzles laterally offset from each other by 1/600”. Dot positions for 2 colors are offset accordingly.
2. Gradation levels and drop volumes depend upon the type of ink used. Maximum printing speed and linear frequency can be increased by reducing the number of drops per dot (dpd).
3. The specifications above may change.

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