



## Rho 312R

The fastest 3.2 m roll-to-roll UV inkjet printer with 12 picoliters and Variodrop technology



The Rho 312R is the most productive 3.2 m roll-to-roll printer of its class. Its performance defines a new quality standard for industrial backlit- and fine art applications

The Rho 312R comes equipped with Durst Quadro Array 12M printheads. With more than 24,000 nozzles and a droplet size of 12 picoliters, it achieves an outstanding print quality of up to 800 dpi. The integrated Variodrop technology enables the Rho 312R to produce up to 274 m<sup>2</sup> per hour, and provides the option of printing parallel on two 1.6 m rolls with separate print queues. Variodrop technology doesn't only increase productivity and print quality, it also reduces the potential for error in the Grayscale printing process.

The Rho 312R can print up to six colors, with the high pigmentation of the ink significantly reducing the ink consumption. This leads to lower production costs per m<sup>2</sup> and a higher return. The Durst Roll Ink is eco-friendly, free of volatile organic compounds (VOC) and was certified according to the stringent Nordic Swan environmental guidelines. Other features of the Rho 312R include the unattended print of large rolls, reverse side print and integrated border cutting.



The Rho 312R is most suited for digital- and offset printing companies wanting access to the large format market or planning to expand their portfolio. The high flexibility, productivity and print quality, makes the Rho 312R a profitable solution for backlights, fine art prints, POP, banners, wallpaper and facade decorations.

**Available Color Configurations:**

- 4-color print in CMYK
- 6-color print in CMYK + Light Cyan, Light Magenta, process colors (PCA) or White (White as base coat/overprint and White as color)



Courtesy of Magnacrom, Mexico

## Advantages of the Rho 312R

- Highest print quality for backlit signs and fine art applications
- Durst Quadro Array 12M printheads with Grayscale and Variodrop technology
- Unattended print of large rolls of up to 480 kg per roll, with Big Roll winders with separate drive motors and sensor-controlled unwinding and take-up
- Partial matt-/gloss- print mode
- No speed reduction for light colors
- Optimal image quality with Pass-Overlapping settings
- Highest reliability on the market, 24/7-production with SMS alert function (optional available)
- Simple and quick media exchange reduces loss of material to a minimum
- Easy operation with Durst Rho touch-screen software
- Accurate double sided Printing System with CCD-Camera monitoring and Image Position Software Control Tools during printing (optional available)
- Rho operating software with MIS management features, remote job monitoring via web-interface with status reports and statistics
- Efficient workflow with Caldera GrandRIP+ Server
- 100% VOC-free, UV-curing Rho pigment ink with Nordic Swan certification and level 8 on the Blue Wool scale for indoor and outdoor applications
- Also available co-branded Durst Rho Roll 3M Premium UV Inks that qualify for 3M™ MCS™ Warranty

## Rho 312R Roll-to-Roll UV Inkjet Printer

The new quality standard for large format backlit and fine art applications up to 3.2m print widths. With Durst Quadro Array 12M printheads and Variodrop technology for high print speeds.





# Technical Data

## General specifications

### Dimensions:

Width: 680 cm (22.30 ft.)  
Depth: 163 cm (5.35 ft.)  
Height: 210 cm (6.89 ft.)

### Weight:

Approx. 4500 kg (9900 lb.)

### Safety standards:

Complies with currently valid guidelines: European Machine Rules 2006/42/EG (98/37/EWG), EG-Low Voltage Directive 2006/95/EG i.vs.93/68/EWG, EG-Directive electromagnetic compatibility 2004/108/EG, vs. 92/31/EWG 2002/95/EC RoHS Directive



\* The 3M<sup>TM</sup> MCS<sup>TM</sup> Warranty backs graphics printed with 3M co-branded ink and select 3M media according to 3M MCS<sup>TM</sup> Warranty Matrix related to Durst printer; see [www.3MGraphics.com/eu/warranties](http://www.3MGraphics.com/eu/warranties) for details

## Printing specifications

### Printing system:

- Roll to Roll transport system with Quadro Array 12M Technology
- Motorized head media distance adjustment, via user software with storage capability for each media channel
- Integrated border cutting system (optional)
- Textile printing option for printing Mesh without a liner (optional)
- Big Roll Winders for unattended printing of big rolls, max. weight of 480 kg (1.000 lb.)

### Resolution:

800 dpi

### Colors:

- Standard: CMYK
- Optional: Light Cyan, Light Magenta, White, selected spot colors (on request)

### Inks:

Rho Roll Ink – UV-curable pigment inks accredited with the Nordic Swan certification, for indoor and outdoor applications. The Rho Roll Ink, pigments classified at Blue Wool scale 8. The inks are VOC free. Also available co-branded Durst Rho Roll 3M Premium UV Inks that qualify for 3M<sup>TM</sup> MCS<sup>TM</sup> Warranty\* if the output is printed on 3M media.

### UV drying:

UV-lamp system with 2 independent air-cooled UV-lamps (7.2 kW), adjustable in 15 power steps

### Ink supply:

Integrated ink tank with 10-liter capacity per ink, refillable during the printing process. The refill inks are in 5-liter containers, easily disposed in collapsed condition, thus avoiding pollution to the machine and the environment.

### User Software/RIP:

- Durst Rho Touch Screen Linux Software for very fast processing with minimum storage capacity on the hard disk.
- External Caldera RIP Server with GrandRIP+ Software

### Software:

- Glossy and Matte selectable printing option
- Simultaneous file ripping, data transfer and printing
- True Skip White function (X and Y direction)
- Ink cost calculation
- Integrated cellular capability for SMS notification of printer status and maintenance (optional)
- Dual Roll Option with separate print queues
- Software and hardware for creating media ICC-profiles (hardware optional)

### Productivity:

Up to 274 m<sup>2</sup> (2.950 sq.ft./hour). No speed reduction when using light colors (6c print mode)

## Media specifications

### Media types:

Wide range of uncoated and coated media types like vinyl banners, canvas, paper, self-adhesive PVC, PVC/PA-transparent media types, Mesh etc.

### Maximum printing width:

320 cm (10.5 ft.)

### Max. printing length:

Limited only by roll length/diameter with respect to weight

### Maximum thickness:

2 mm (depending on media)

### Max. roll diameter/weight:

- Standard version: 450 mm (17 in.) outside diameter; max. weight, approx. 300 kg (660 lb.)
- Big roll version: outside diameter, 600 mm (24 in.); max. weight, approx. 480 kg (1.000 lb.)

## Ambient conditions

### Space requirement:

Standard version: Approx. 9 x 4 m (30 x 13 ft.)

### Max. sea level of installation:

2400 m above sea level (8000 ft.)

### Max. ambient temperature:

+15 °C to +30 °C (+59 °F to 86 °F)

### Max. humidity:

25-80 %, not condensing

**Durst Phototechnik  
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### Large Format Printing

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IX261EN - 03/2015