# Rho P10 200/HS

## Pre Installation Questionnaire

Edition 21.05.2014

# Table of contents

# 1 About this document

- Make sure that this document is accessible at all times.
- Insert all supplements received from Durst Phototechnik AG into this document.
- Read and comply with this document and all other documents in the service documentation.

## 1.1 Purpose and target group

This document is part of the service documentation and contains information about the site conditions and requirements for a safe and successful installation and commissioning of the printer.
This information applies to printers of the Rho P10 200/HS range of Durst Phototechnik AG and should be referred to by the following personnel:

- Durst service engineers (service engineer Durst group)
- General service technicians (service technician distributor)

## 1.2 Revisions

| Edition of the document | What is new? |
|---|---|
| 21.05.2014 | First edition |

*Tab. 1: Revision index*

## 1.3 Symbols and markers

| Symbol | Meaning |
|---|---|
|  | Note for easier or safer work |
| → | Cross-reference |

*Tab. 2: Symbols and markers*

# 2 Shipping and Transport

## 2.1 Dimensions

### 2.1.1 Shipping per truck

The machine is vacuum packed and loaded on a wooden pallet.

| | Rho P10 200 | Rho P10 200 HS |
|---|---|---|
| Length [mm (in)] | 5560 (219) | |
| Width [mm (in)] | 2250 (88) | |
| Height [mm (in)] | 2250 (88) | |
| Weight [kg (lbs)] | 4600 (10200) | |

*Tab. 3: Crate dimensions for truck load*

### 2.1.2 Shipping per air or sea

The machine is vacuum packed and loaded on a wooden pallet as per ISPM 15. Additionally there are walls and a roof to protect the printer.

| | Rho P10 200 | Rho P10 200 HS |
|---|---|---|
| Length [mm (in)] | 5600 (221) | |
| Width [mm (in)] | 2250 (88) | |
| Height [mm (in)] | 2350 (92) | |
| Weight [kg (lbs)] | 5200 (11500) | |

*Tab. 4: Crate dimensions for sea/air freight*

## 2.2 Fork lift standards

To handle the unit with any type of crane please contact Durst customer service since special equipment and instructions are needed for it.
Special crane lifting equipment and transport rolls can be rented at Durst Phototechnik Digital Technology GmbH.

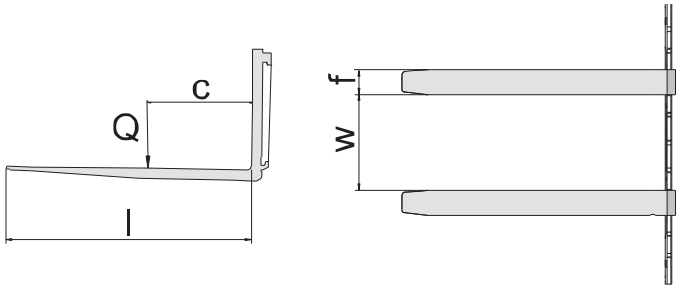


*Fig. 1: Fork lift dimensions.*

| | Rho P10 200 | Rho P10 200 HS |
|---|---|---|
| l (Minimum fork length) [mm (in)] | 1800 (70) | |
| W (Minimum fork distance) [mm (in)] | 1300 (51) | |
| F (Maximum fork width) [mm(in)] | - | |
| Q/c (real capacity) [kg/mm (lbs/in)] | 5500/1000 (12000/40) | |
| $Q/c_{nom.}$ (nominal capacity) [t/500mm (lbs/36in)] | 11 (13500) | |

*Tab. 5: Fork lift standards*

## 2.3 Storage

The lowest storage temperature prior to the installation is 4°C (40°F). The maximum period of storage depends on the shipping method. Contact Durst customer service for detailed information.

# 3 Site requirements

## 3.1 Power supply

Ask your local authorized electrician for
- Specifying the power supply cables and the safety switches or devices to match the national electrical safety regulations
- Carrying out the main power connection of the unit (mandatory)

A disconnecting switch to break all phases (incl. Neutral) simultaneously must be installed close to the system.

**EU-Norm**

| | Rho P10 200 | Rho P10 200 HS |
|---|---|---|
| Phases | 3 + N + PE 50/60 Hz | |
| Voltage [V] | 400 (± 5%) | |
| Max power input [kVA] | 28 | 30 |
| Max. current per phase [A] | 40 | |
| Max. fault current [mA] | 500 | |
| Terminal connection method | Fixed connection | |

*Tab. 6: Power supply for EU-Norm*

**US-Norm**

| | Rho P10 200 | Rho P10 200 HS |
|---|---|---|
| Phases | 3 + PE 50/60 Hz | |
| Voltage [V] | 190 - 240 | |
| Max power input [kVA] | 28 | 30 |
| Max. current per phase [A] | 78 @ 210V | |
| Max. fault current [mA] | 500 | |
| Terminal connection method | Fixed connection | |

*Tab. 7: Power supply for US-Norm*

## 3.2 Air supply

| | Rho P10 200 | Rho P10 200 HS |
|---|---|---|
| Pressure [bar (psi)] | 6 – 8 (87 – 116) | |
| Max. Consumption [l/min (gal/min)] | 75 (20) | |
| Class | Particle 1, Water 4, Oil 1 | |

*Tab. 8: Air supply*

## 3.3 Connection positions

### 3.3.1 Power/air supplied from floor

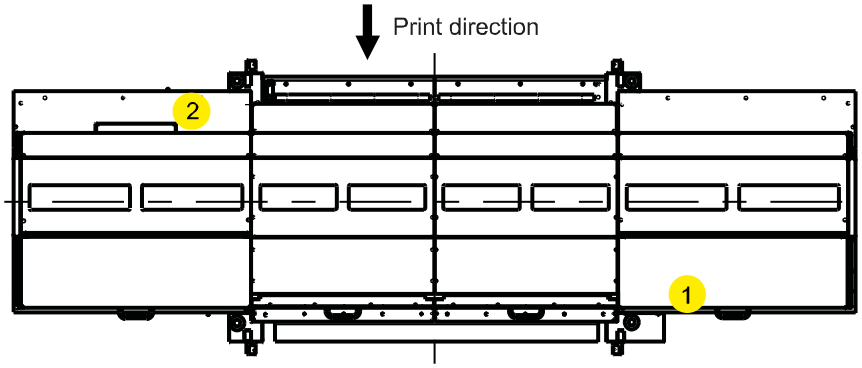


*Fig. 2: Connection position (supplied from floor)*

1 Power
2 Compressed air

### 3.3.2 Power/air supplied from ceiling

If needed the lines can enter the machine at the top (left or right), therefore it may be necessary to cut holes in the top cover(s).

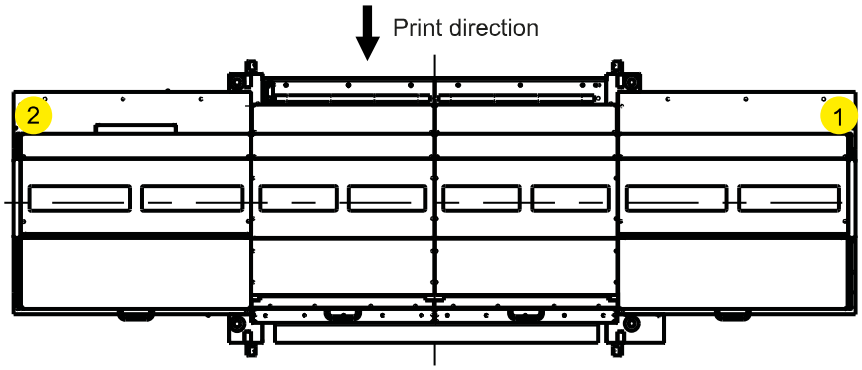


*Fig. 3: Connection positions*

1 Power and compressed air (left side in print direction)
2 Power and compressed air (right side in print direction)

## 3.4 Floor requirement

A smooth and well leveled floor is mandatory to keep the precision for the level and angle relations between main unit and peripheral devices.
The floor consistency may not be soft or easily deformable under the weight of the machine, because the main unit and tables need to stay precisely leveled.
E.g. asphalt may be such a problematic material.

▷ Make sure that the floor meets the required specifications

| | Rho P10 200 | Rho P10 200 HS |
|---|---|---|
| Required work area with well floor conditions [m (ft)] | 5.5 x 8 (18 x 26) | |
| Max. level difference between main feet positions [mm (in)] | 10 (0.4) | |
| Max. level difference between main unit and tables [mm (in)] | 40 (1.6) | |
| Supporting surface per main feet [cm² (in²)] | 92 (14.26) | |
| Max. mass per main foot [kg (lbs)] | 1400 (3100) | |
| Nr. of machines main feet on printer | 4 | |
| Nr. of machines sec. feet on printer | 2 | |
| Nr. of roll feet on tables | 4 | |

*Tab. 9: Floor requirements*

### 3.4.1 Position and size of machine feet

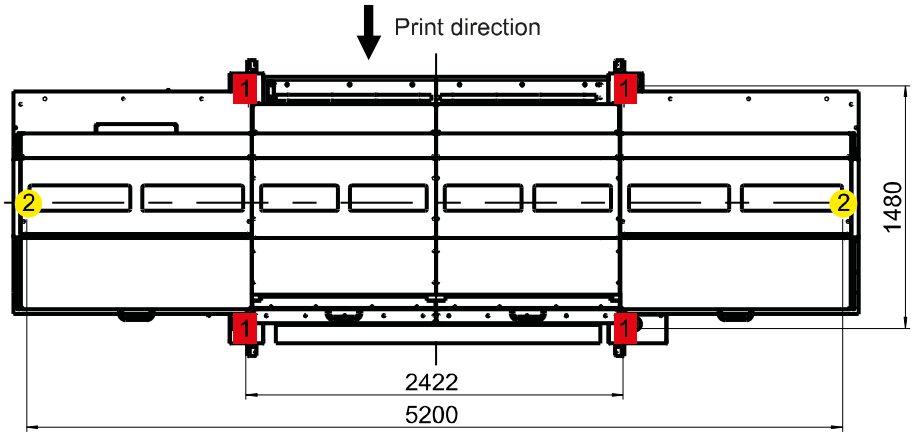


*Fig. 4: Position of machine feet*

1 Main feet
2 Secondary feet

| | Rho P10 200 | Rho P10 200 HS |
|---|---|---|
| Dimension of main feet [mm (in)] | 80 x 115 (3.15 x 4.52) | |
| Diameter of secondary feet [mm (in)] | 100 (3.94) | |

*Tab. 10: Dimensions of machine feet*

## 3.5 Exhaust

To prevent from over temperature problems and to exhaust possible exhalations we recommend installing a ventilation system.

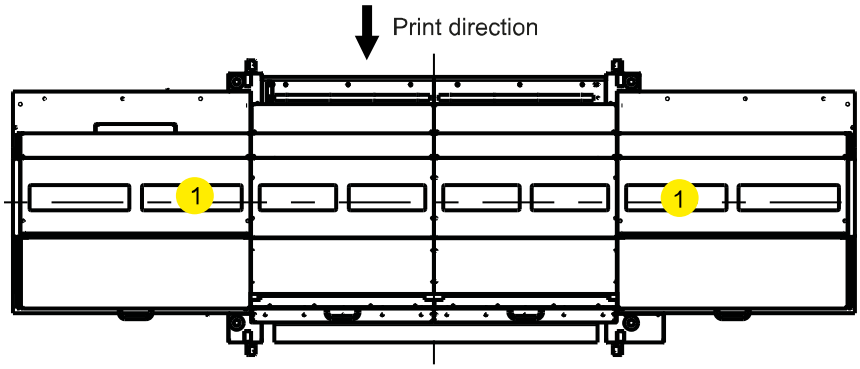


*Fig. 5: Connections of exhaust pipes*

1 Position of exhaust hose connectors

| | Rho P10 200 | Rho P10 200 HS |
|---|---|---|
| Recommended minimum fan capacity [m3/h (ft3/h)] | 2 x 500 (2 x 17000) | |
| Connection diameter of exhaust pipes [mm (in)] | 150 (6) | |

*Tab. 11: Exhaust*

## 3.6 Environment conditions

| | Rho P10 200 | Rho P10 200 HS |
|---|---|---|
| Max. Altitude (above sea level) [m (ft)] | 2400 (8000) | |
| Temperature Range [°C (°F)] | 18 - 30 (64 – 86) | |
| Relative Air Humidity [%] (Max Range, non condensing) | 25 – 80 | |
| Recommended Relative Air Humidity [%] | 45 - 60 | |

*Tab. 12: Environment conditions*

A high relative air humidity improves the material properties of corrugated material and reduces electrostatic load.

▷ Keep the relative air humidity within the recommended range.

## 3.7 Caldera workstation

The **Caldera Print Server** which is responsible for the file preparation is a complete computer set (tower, display, keyboard and mouse). No table or computer stand comes with this set.

This PC can be placed depending on the customer's workflow close to the machine or in an office or in a server room and be remotely operated. The Caldera Server can be connected directly or over the local network to the printer (→ Fig. 6, p. 11).

This computer can be supplied with EU or US power standards.
This computer will be shipped with European cords, which can be exchanged with your local power cords.

### 3.7.1 Network topologies

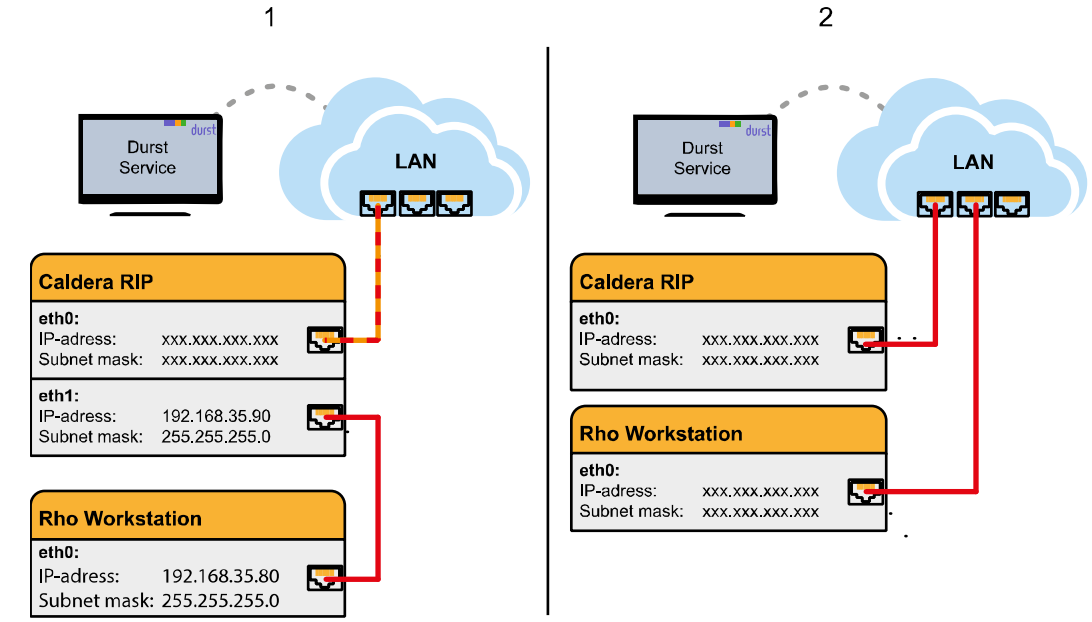


*Fig. 6: Network topologies*

1 Network topology for direct connection between Caldera and Rho workstation
2 Network topology for connection between Caldera and Rho via the local area network

| | Rho P10 200 | Rho P10 200 HS |
|---|---|---|
| Network cable specification between Rho workstation and Caldera station | Cat6 (Cat5e) | |
| Data transfer rate of network components for connection via LAN (switches, …) | Gigabit-Ethernet | |

*Tab. 13: Network specifications*

For the possibility of remote diagnostic we strongly recommend an internet connection of the Caldera station.
- ▷ No proxy server
- ▷ Open port 443

# 4 Length/Mass dimensions

## 4.1 Numerical

| | Rho P10 200 | Rho P10 200 HS |
|---|---|---|
| Width [mm (in)] | 5394 (212.36) | |
| Total max. width [mm (in)]<br>(incl. Light Trap, Ink Refill Door) | 6565 (258.47) | |
| Length (main unit) [mm (in)] | 1726 (67.95) | |
| Total length (with tables) [mm (in)] | 4551 (179.17) | |
| Height – closed doors [mm (in)] | 1957 (77.04) | |
| Height – opened doors [mm (in)] | 2378 (93.62) | |
| Working height [mm (in)] | 1044 ± 20 (41.10 ± 0.8) | |
| Weight (main unit) [kg (lbs)] | EU: 3400 (7500)<br>US: 3500 (7700) | |

*Tab. 14: Length/mass dimensions*

## 4.2 Illustrations

### 4.2.1 Front view

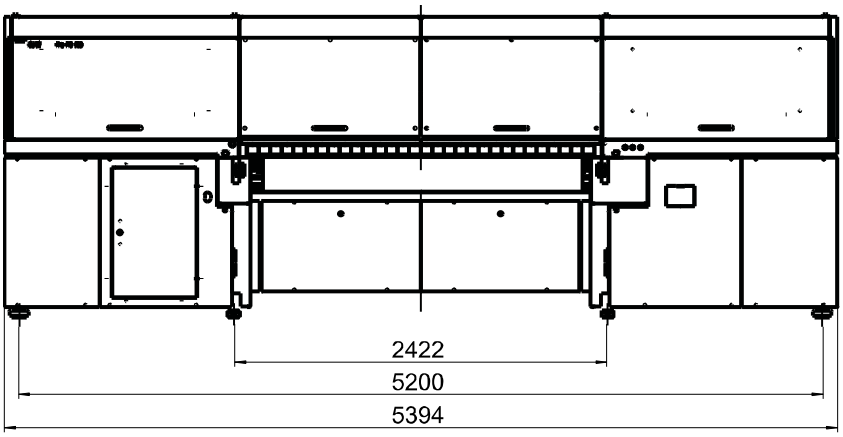


*Fig. 7: Front view*

### 4.2.2 Side view

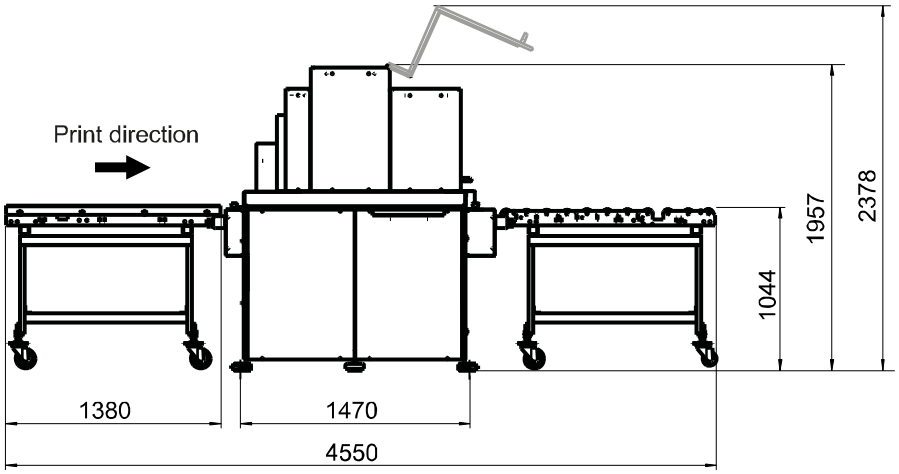


*Fig. 8: Side view*

### 4.2.3 Top view

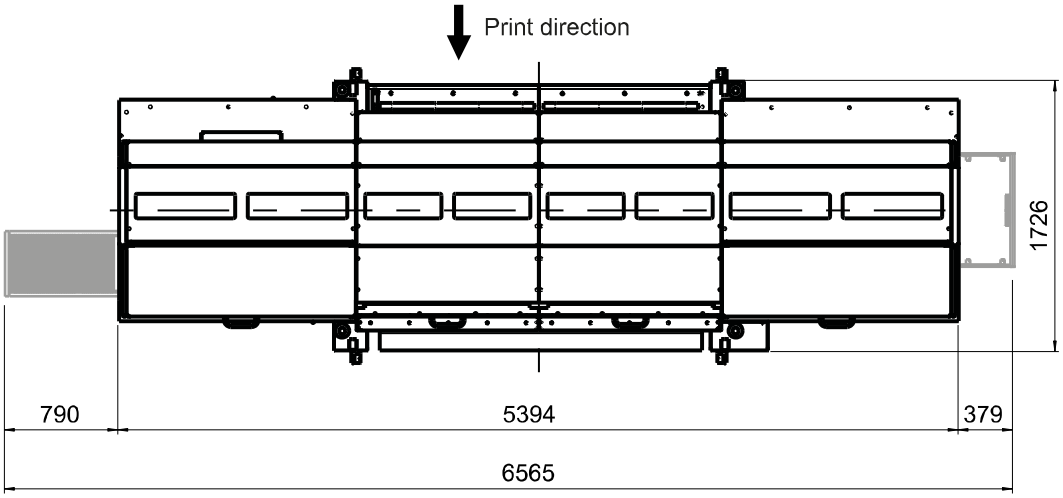


*Fig. 9: Top view*

### 4.2.4 Top view with standard roller tables

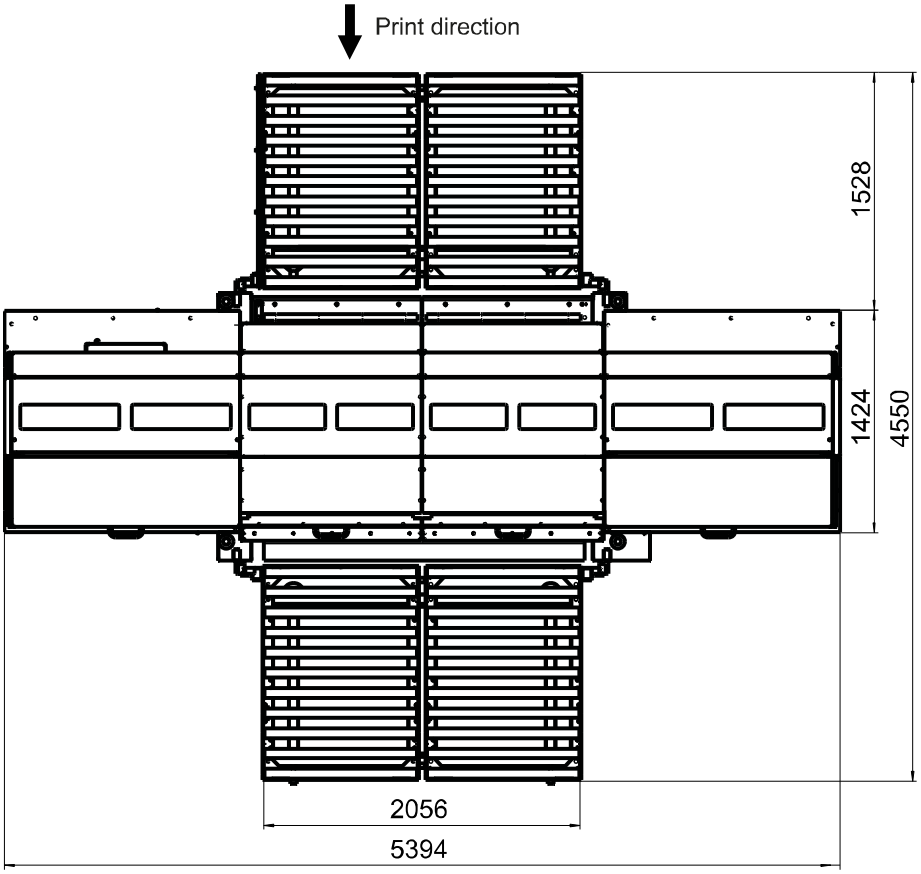


*Fig. 10: Top view with standard roller tables*

### 4.2.5 3D view seen from input side

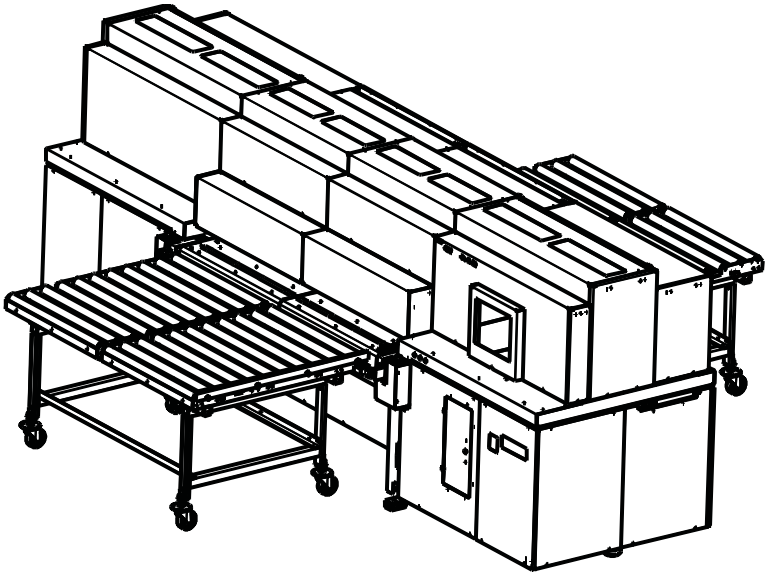

*Fig. 11: 3D view seen from input side*

### 4.2.6 Recommended space for transport belt exchange

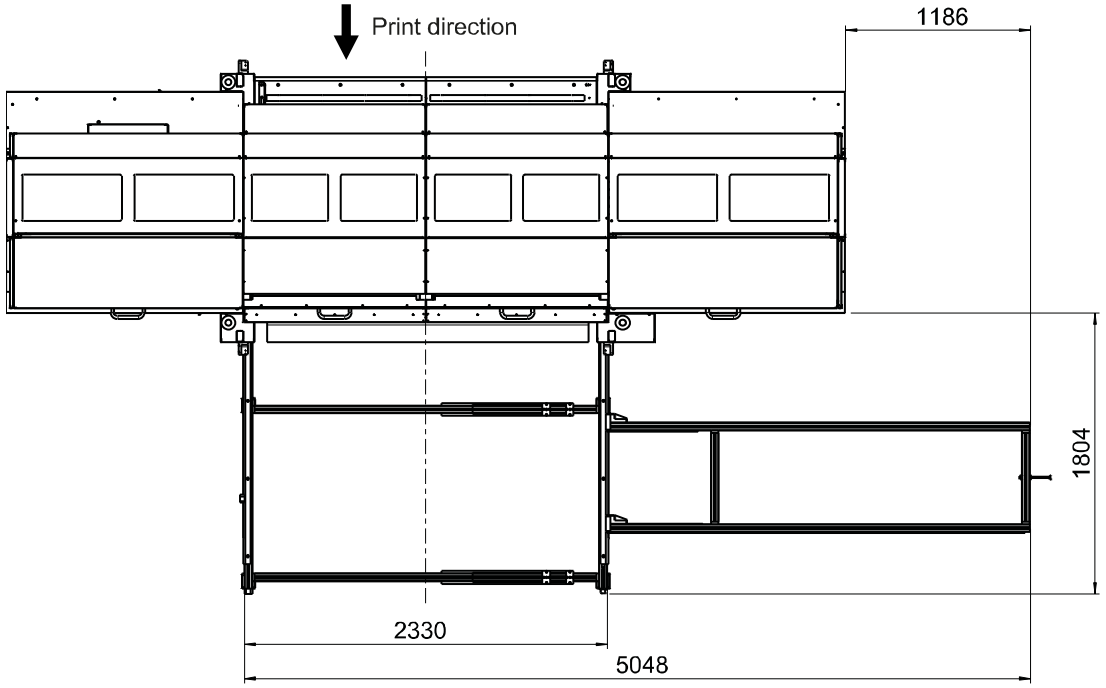


*Fig. 12: Space requirements for exchange of the media transport belt*

# 5 Acceptance

All dimensions in English and Imperial units are without guarantee! The Rho Printer Software is available in the languages English, German, Italian and Spanish only.

The latest technical developments are constantly being incorporated into Durst products. Illustrations and descriptions are therefore subject to modification.


**Special notes**

.....

.....

.....

.....

.....

**Distributor info**

Distributor Name: .....

Sales Person: .....

**Customer info**

Company name: .....

Street: .....

City, State, Country: .....

1st contact person: .....

Phone: .....

E-Mail: .....

Web: .....

Place, Date: .....

Signature Customer: .....

Signature Distributor: .....