The World’s Best
Intelligent Substrate Transport System

High Speed Accurate Positioning at ± 5 μm

Modular design for professional inkjet systems

Paper - Corrugated board - Foil - Glass - Decor Panels
VEXAR | Technology

- High accuracy at high speeds
- Substrate fixation by vacuum clamping
- Axially movable segmented rollers (patented)
- Engraved encoder pattern on belt
- Print-head interface included
- Stainless steel belt with different hole patterns
- Suitable for paper, foil, corrugated board, decor panels, glass and metal
- Modular and scalable design

VEXAR steering principle

The lateral steering of the belt is controlled by the independent movement of the segments of the rollers with information from two belt edge sensors. The motion in transport direction is controlled by a direct drive torque motor and an engraved encoder pattern on the belt.
VEXAR | Patented positioning system

The steel belt conveyor system is developed for accurate transport of substrates underneath inkjet print heads. Due to the vacuum clamping the print quality becomes independent of the mechanical properties of the substrates.

A positioning accuracy of 5 µm in both lateral (X) and transport (Y) direction is being obtained by a unique patented steering mechanism in combination with an advanced motion control system. Compared to traditional paper transport systems (roller-beds and drums), this method results in a higher accuracy and can therefore meet the highest standards required in the professional printing industry of 1200 dpi and more.

VEXAR sensor module

At two locations along the belt the lateral and transport position of the belt is being measured with a belt edge sensor and an encoder sensor.
VEXAR 60, often used in R&D departments with an accuracy of ± 5 μm

Engraved encoder pattern

Designed for professional inkjet systems

Slotted holes for a wide variety of paper qualities

Smaller holes for thin and low porosity paper qualities
<table>
<thead>
<tr>
<th></th>
<th>VEXAR 60</th>
<th>VEXAR 80</th>
<th>VEXAR 120</th>
<th>VEXAR Special*</th>
</tr>
</thead>
<tbody>
<tr>
<td>X accuracy</td>
<td>± 5 µm</td>
<td>± 5 µm</td>
<td>± 5 µm</td>
<td>± 20 µm</td>
</tr>
<tr>
<td>Y accuracy</td>
<td>± 5 µm</td>
<td>± 5 µm</td>
<td>± 5 µm</td>
<td>± 20 µm</td>
</tr>
<tr>
<td>Belt width</td>
<td>560 mm</td>
<td>800 mm</td>
<td>1245 mm</td>
<td>1400 - 2300 mm</td>
</tr>
<tr>
<td>Print width</td>
<td>500 mm</td>
<td>700 mm</td>
<td>1150 mm</td>
<td>1200 - 2100 mm</td>
</tr>
<tr>
<td>Roller center to center</td>
<td>2150 mm</td>
<td>3350 mm</td>
<td>3950 mm</td>
<td>Up to 10000 mm</td>
</tr>
<tr>
<td>Active vacuum length</td>
<td>1800 mm</td>
<td>3230 mm</td>
<td>3830 mm</td>
<td>t.b.d.</td>
</tr>
<tr>
<td>Roller diameter</td>
<td>200 mm</td>
<td>200 mm</td>
<td>200 mm</td>
<td>700 mm</td>
</tr>
<tr>
<td>Maximum speed</td>
<td>150 m/min</td>
<td>130 m/min</td>
<td>130 m/min</td>
<td>80 m/min</td>
</tr>
</tbody>
</table>

* Suitable for large, rigid plates, such as decor panels, corrugated boards.
Vexar is a 100% Sioux Group subsidiary. The strength of Sioux lies in the unique combination of high-quality competences in the field of software, mechanics, optics, physics, mechatronics, electronics and mathematics all of which are combined in Vexar.

Vexar takes care of the development and marketing & sales of high-tech accurate transport technology.

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