Making our world more productive

Laser-Engraving

Anilox Rolls and Sleeves

Worldwide Service

New Castle, US | Ratingen, DE | Kozuki, JP | Novara, IT

Regardless of your location, Linde Printing Industry Service Centers are readily accessible to offer you assistance. Our dependable Operational Excellence System, in conjunction with our extensive global agent and distributor network, enables us to offer timely solutions and consistent and reliable results. Whether we are creating a new roll or refurbishing an existing one in the Americas, Europe, or Asia, you can place your trust in the caliber of our processes, coatings, and engravings.

Industry Associations

FTA
(Flexographic Technical Association)
Flexo Quality Consortium—
founding member

DFTA
(German Flexographic Technical Association)

ATF
(French Flexographic Technical Association)

ABFlexo/FTA Brazil

ATIF
(Italian Technical Association for the Development of Flexography)

FTA
(Flexographic Technical Association)
Flexo Quality Consortium—
founding member

Contact Us Today

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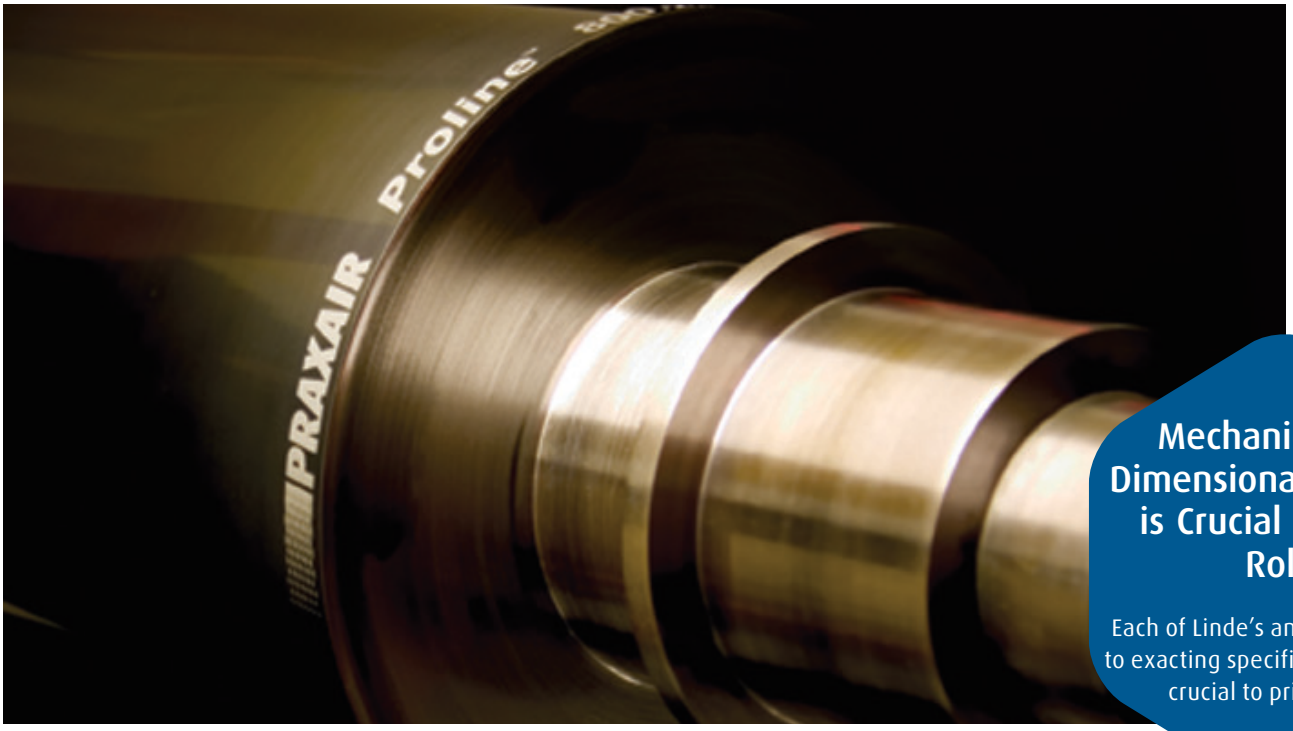
Laser Engraved Anilox Rolls and Sleeves. Our high standards in manufacturing and engraving ensure that your reputation is protected.



Mechanical and Dimensional Integrity is Crucial for Base Rolls

Each of Linde's anilox rolls is built to exacting specifications, which is crucial to print quality.

When Your Reputation Is On The Line, We Protect It.

At Linde Advanced Material Technologies (AMT), we take pride in producing the industry's best laser-engraved anilox rolls and sleeves. Our high standards in manufacturing and engraving ensure that your reputation is protected. We control every step of the production process, from making our coating powders and gases to developing our coating technology and equipment and finishing the engraving in-house. This level of control ensures top quality in every product and gives you peace of mind knowing your reputation is protected every time you're in the press.

Support When and Where You Need It

In addition to our innovative manufacturing, we also offer roll audits and full product technical support to help you get the best performance, repeatability, and quality from your equipment. Our worldwide Printing Industry Service Centers network means we're always close by to offer support when and where you need it. With your reputation on the line, don't settle for anything less than the best with Linde AMT.

Ensuring Superior Quality Worldwide

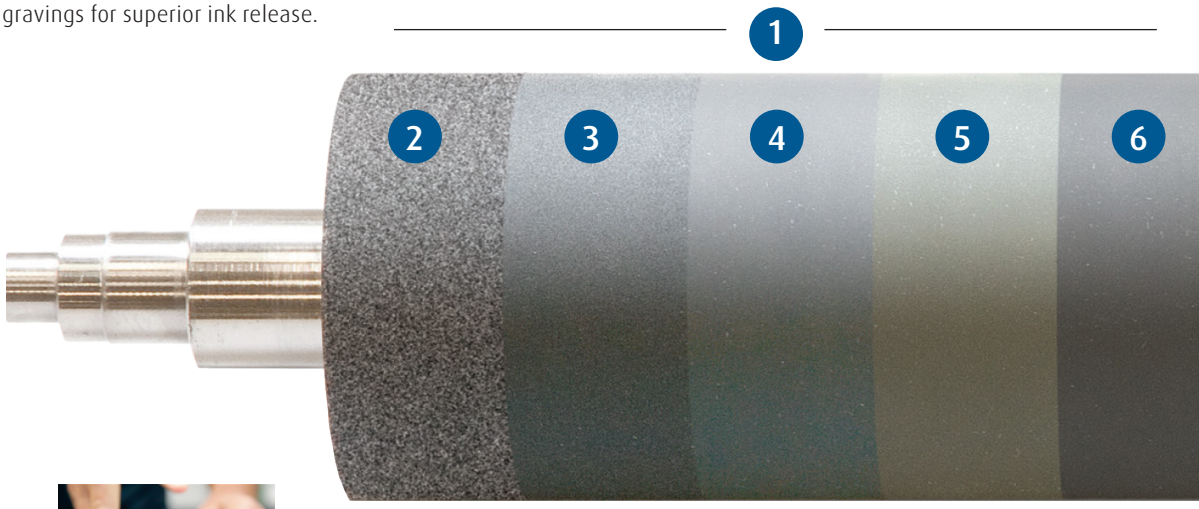
Linde AMT places a strong emphasis on the superior quality of our Anilox rolls. This commitment to excellence is upheld by our global network of quality technicians who utilize our state-of-the-art MET (Metallurgical) labs equipped with advanced testing instrumentation and software. Our skilled technicians thoroughly evaluate and certify every anilox roll or sleeve for critical parameters such as coating thickness, hardness, line and screen count, coating adhesion, erosion, and volume count. This ensures that every product adheres to the same high standard of quality, regardless of location.

Our Design Optimization Unit functions as a vital technical support team, collaborating with ink and plate suppliers to ensure the entire operation is optimized and any issues are promptly resolved.

To ensure the highest levels of quality and safety, our facilities are certified to the ISO 9001:2008 standard, providing our customers with the peace of mind that our products are produced in a controlled and secure environment.

Our Manufacturing Process

We combine our know-how from high-tech industries such as aerospace, oil exploration, and energy to provide you with the coating and engraving techniques we have developed over the years. The result is uncompromisable high-precision engravings for superior ink release.

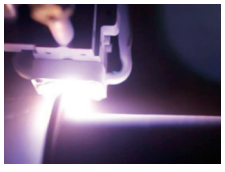


1. Inspection/Base Repair

Before beginning the process, Linde AMT service technicians inspect each roll or sleeve. They carefully check for patterns, screen count, volume, cleanliness, damage, and other relevant conditions. The technicians also examine the depth of the cells and any signs of wear. Using a high-powered microscope, photographs are taken, and any damage, such as dents, are repaired before restoring the registration correctly.

2. Grit Blast

Rolls ready to be coated undergo a process called “grit blasting.” This process involves using abrasive particles to create an accurate rough surface on the roll. Solid contaminants such as oxides can be removed by directing abrasive materials to specific registration areas.

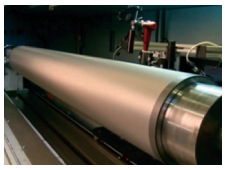


3. Coating/Sealing

Utilizing a proprietary thermal spray powder and plasma torch to create a dense, hard, low-porosity chrome oxide ceramic coating and a proven sealing technology makes our rolls more corrosion-resistant than many others. This high-integrity, uniform layer extends the life of rolls and sleeves.

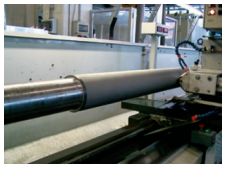
4. Grinding/Lapping

The newly coated surface is ground to precise dimensions, removing all excess materials, and polished to create a smooth surface.



5. Engraving

The laser engraves a microscopic pattern into the roll or sleeve specific to the type of print application. We can engrave from eight lines per inch to high-resolution patterns of 1300 lines per inch and over a million cells per inch. This proper cell volume and structure allows customers to achieve accurate color reproduction.



6. Super-Finishing

This process removes the rough peaks from the cell walls, creating a smooth surface. Super-finishing reduces blade vibration, premature blade wear, and ink pooling, ensuring consistent ink delivery over time.