

Praxair Leads With Experience and Solutions for the Paper Industry

As the world leader for over 50 years in wear- and corrosion-resistant coatings and services, Praxair Surface Technologies, Inc. specializes in providing solutions for the critical performance applications for the paper industry. From the former to the winder, we provide the most advanced technology for coating applications throughout the paper-making process.

As pioneers in surface coating technologies and inventors of the plasma spray, HVOF and detonation gun processes, Praxair is uniquely qualified to satisfy your surface enhancement needs. With over one hundred carbide, ceramic and metallic coating materials to choose from, we can offer a cost-effective solution to almost any application. Thus, you can expect not only increased machine efficiency, but also higher quality production for a longer period of time.

Praxair's New Castle, Pennsylvania and Dusseldorf, Germany facilities are especially equipped to service paper industry rolls up to 600 inches in length and weighing up to 100 tons. In addition, Praxair has more than 30 plants worldwide that provide the most comprehensive array of coating chemistries and application systems including:

SUPER D-GUN™ coating apparatus

D-GUN™ coating apparatus

HVOF thermal spray coating process

LASER CLADDING

PLASMA SPRAY

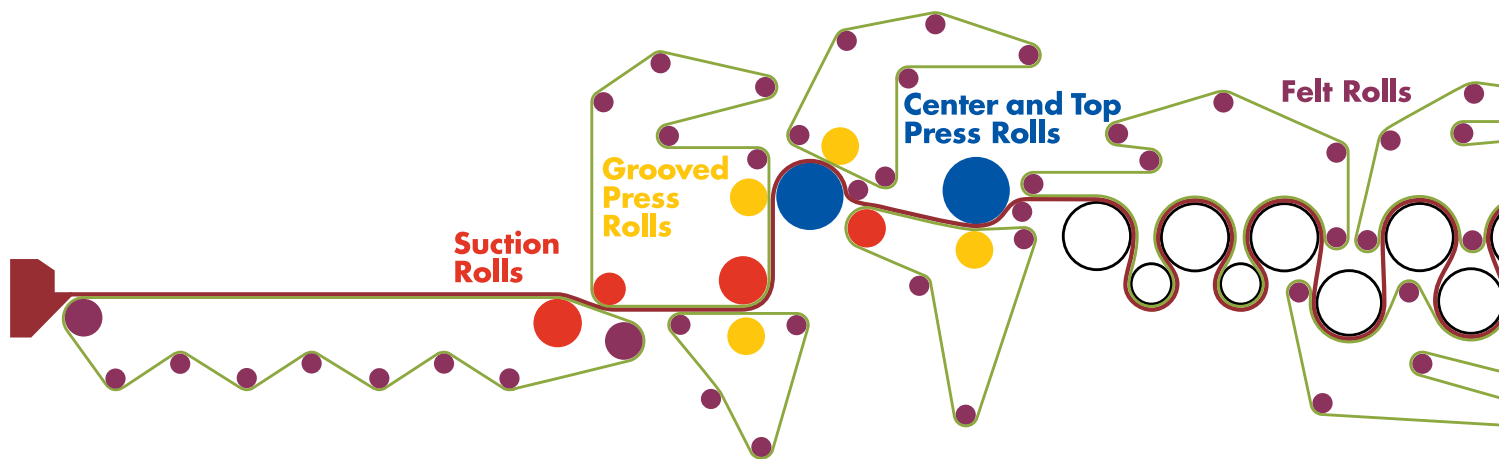
WIRE SPRAY

Praxair's quality system, developed to satisfy aviation industry standards, ensures absolute consistency in materials and processes worldwide. The same procedures, testing and inspections used to meet stringent requirements for aircraft engine components are used on calender rolls, press rolls and all other coated components.

Praxair® coatings on paper mill rolls are ground and polished by Precision Roll Grinders, an authorized distributor. Through this partnership we offer precision grinding to as fine as 40 millionths of an inch tolerance and superfinishing to 0.5 micro-inch Ra. The combination of Praxair's premier coatings and Precision's outstanding finishing capabilities results in tremendous value for our customers.



Super D-Gun™ coating of a calender roll



Applications Benefits

Increased time between regrinds

Maintained crown profile and surface finish (Ra)

Plus these additional benefits for specific applications

Suction Rolls

- Extended shell life
- Increased productivity
- Improved fabric life

Stainless Steel Grooved Press Rolls

- Extended life
- Maintained groove profile
- Reduced vibration

Press Rolls (Center and Top)

- Improved, more-consistent sheet release
- Excellent corrosion resistance
- Improved doctorability

Drying Cylinders

- Extended shell life
- Improved, consistent heat transfer
- Improved, more-consistent sheet release

Calender Rolls (Hard Nip, Soft Nip, Supercalender)

- Improved, more-consistent gloss
- Improved, more-consistent smoothness
- Improved cover life on mating rolls
- Elimination of deckle marks

Coater and Size Press Rolls

- Improved doctoring and cleanability
- More consistent fluid transfer

Reel Drums, Winder Drums

- Improved, more-consistent sheet traction

Fabric Rolls, Vacuum Rolls, Paper Rolls

- Excellent corrosion resistance
- Improved fabric life
- Improved, consistent sheet release



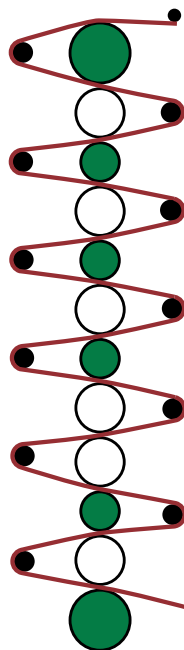
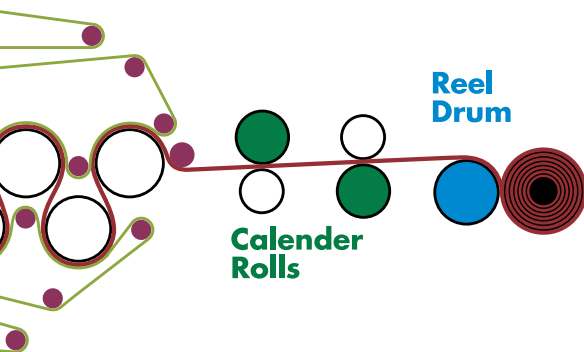
Praxair roll service centers available to give you the ultimate in support and expertise

Praxair has the right solution.

Praxair® coatings maintain roll profile and surface finish over extended periods of time providing papermakers with:

- Better, more consistent sheet profile, smoothness and gloss
- Improved machine efficiency and productivity.
- Reduced maintenance and roll replacement costs.

You are assured of the highest coating and finishing quality available in the industry. You can rest easy knowing Praxair's worldwide production, technology, sales, service and customer support are just a phone call away, anytime of day or night. See back page for addresses and phone numbers.



Supercalender Rolls



For more information on these and other Paper related applications, call: 1-800-822-7284 or contact one of these plant locations.

United States

3225 Honeybee Lane
New Castle, PA 16105
Tel (724) 598-1300
FAX (724) 656-1745

9200 Telephone Road
Houston, TX 77075
Tel (713) 991-8700
FAX (713) 991-8707

4101 W. 124th Place
Alsip, IL 60803-1809
Tel (708) 239-7100
FAX (708) 239-7149

8501 Old Statesville Road
Charlotte, NC 28269
Phone: (704) 921-5400
Fax: (704) 921-5425

Brazil

Praxair Surface Technologies LTDA
Av. Maringa, 400
CEP83324-010
Pinhais, PR
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Fax: 55.41.868.2550

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Okegawa Plant
Phone: 81.485.91.0731
Fax: 81.485.92.3441

Singapore

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55 Loyang Drive
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Singapore, 508967
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08185 Llica de Vall-Barcelona
Espana
N.I.F. A-614 19198
Phone: 34.93.844.57.40
Fax: 34.93.843.75.23

Switzerland

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25, rue de Veyrot
P.O. 146
CH-1217 Meyrin
(Geneva) Switzerland
Phone: 41.22.989.8989
Fax: 41.22.989.8913

Precision Roll Grinders Locations

6356 Chapmans Road
Allentown, PA 18106
(610) 395-6966
Fax: (610) 481-9130

400 Barnes Drive
Carrollton, GA 30117
(770) 830-6323
Fax: (770) 830-7024

200 Industrial Park Road
Lewisport, KY 42351
(270) 295-4990
Fax: (270) 295-4999



Authorized Praxair Distributor in the United States