

## voestalpine WORLDWIDE

LEADING MANUFACTURER OF COLD ROLLED PRECISION STRIP STEEL

voestalpine AG Group is a leading global technology and capital goods group with a unique combination of material and processing expertise. The Group focuses on high integrity nickel based alloys, stainless steels and other metals of the highest quality, in technology intensive industries with a combined turnover in excess of EUR 12 billion. Headquartered in Linz Austria, voestalpine employs around 50,000 people world-wide, and is represented by 500 Group companies located in more than 50 countries on 5 continents.

#### **ABOUT PRECISION STRIP**

voestalpine Precision Strip is one of the world's leading manufacturers of cold-rolled precision strip steel. Pioneering solutions from our Uddeholm and Bohler strip mills ensures our steel has superior mechanical properties for increased performance.

Our expertise in cold rolling with a focus on thin materials has made us the preferred partner in many sectors. voestalpine Precision Strip steel is a fundamental component in a variety of demanding applications including the printing and paper industry, textile knitting, wood band saws, industrial knives and surgical saw blades. Closer to everyday life, our steel can be found in razor blades, scalpels used by surgeons, shock absorbers in the cars we drive and compressor valves in our refrigerators and airconditioning.







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## voestalpine PRECISION STRIP UK

As part of voestalpine High Performance Metals, our specialist Precision Strip UK team support a wide range of demanding sectors, working closely with our mills to deliver tailor made solutions to our customers. We have the ability to hold extensive stock in our purpose built, award-winning UK warehouse facility, which is backed by stock at our Uddeholm and Bohler strip mills.

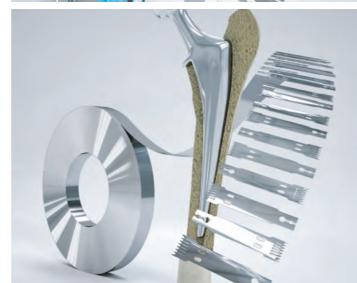
#### Based in the UK:

- specialist technical team
- purpose built stock facility
- customer service and support













#### **Technical consultation**

Book an onsite consultation with one of our experts to evaluate the strip steel that best suits your application.



#### Material solutions

Our expertise in cold rolled strip can be relied upon in the most demanding global applications.



#### Stock service

Ability to hold stock in our awardwinning purpose built warehouse facility in the Midlands.



#### Working in partnership

We have the technical know-how to work with you to provide fast cost effective solution for you application.



#### Apps on hand

The voestalpine Precision Strip App has been designed for people working in the international steel business.

The App gives the option to:

- select currencies
- calculate weights
- specify strip parameters





**voestalpine Precision Strip UK** supply cold rolled, hardened and tempered strip steel for the paper and printing industry. This includes semi-finished coater blades for paper and board manufacturers, creping blades for tissue manufactures and printing doctor blades for printing industry, as well as blades ready for use by the end customers.

#### PRINTING DOCTOR BLADES

Products include high carbon, martensitic stainless and high alloyed steel doctor blades.

voestalpine Precision Strip, with the uddeholmstrip® brand, offer customers printing doctor blades with a superior life time, stable production with less vibration and reduced production down time. Resulting in overall productivity gains and reduced production costs.

### **BENEFITS**

- Superior edges and tolerances
- Improved wear resistance
- Increased productivity
- Reduced production costs





#### **COATER DOCTOR BLADES**

Our portfolio includes steel blades and thermal coated coater doctor blades. We supply both blade material and finished products to doctor blade manufacturers and end users such as paper mills.

#### Productivity & runability

- Exceptional runability performance with our high quality coater blades
- Higher wear resistance for fewer blade changes
- Overall productivity gains and reduced production costs

#### Paper & board quality

- Improved profiles and PPS values
- Consistent coat weight

## CERAMIC COATED BLADES BENEFITS

- High carbon steel substrate
- Long stable production runs
- Excellent heat resilience
- Multiple bevel options

Carbide blades also available





#### **CREPING DOCTOR BLADES**

We supply both steel and thermal coated creping doctor blades to doctor blade manufacturers and end users such as tissue mills.

The entire manufacturing route from steel substrate to coating and grinding is done in house, enabling full control of the end product. This gives outstanding mechanical properties and dimensional consistency providing excellent performance on machines especially at high production temperatures.

## CERAMIC COATED BLADES BENEFITS

- Proven performance
- High carbon steel substrate
- Reliable blade properties
- Excellent cost benefit ratio

Cermet blades also available

8 PRINT AND PAPER



voestalpine Precision Strip supply cold rolled and unhardened, martensitic stainless and high carbon strip steel for the manufacture of razor blades and medical scalpel products. Our strip is punched, hardened and fine ground to produce individual razor and scalpel blades. For over one hundred years uddeholmstrip® has developed and produced cold rolled strip for razor and scalpel manufacturers.





#### **BENEFITS**

- Tightly controlled width and thickness tolerances, that facilitate faultless grinding
- We offer the full range of thicknesses and widths in standard pancake coils
- Narrow and thin strip supplied in traverse wound coils resulting in vastly improved productivity opportunities
- Excellent technical support including process improvement recommendations

#### **Delivery Specifications**

- Both razor and scalpel strips are delivered unhardened.
- Slit to narrow dimensions with deburred or rounded edges.
- Delivered in pancake coils or traverse wound coils (for thin & narrow razor sizes).
- Packed in wooden boxes with a centre support.
- Enclosed in an anti-corrosion system.

10 RAZOR & SCALPEL E UK





The medical industry needs cold rolled steel that meets the high demands in this sector. We have a range of stainless steel grades suitable for the specific requirements needed.

UHB SS716 is a multipurpose stainless grade with outstanding mechanical properties. It is characterised by its superior fatigue properties, toughness and impact strength. The UHB SS716 can work in high temperatures and corrosive environments.

UHB AEB-L is the right choice for edge sharpness, wear resistance and has great corrosion resistance. The combination of 0.67% Carbon together with 13% Chromium gives a stainless grade that is optimal for all cutting applications.

UHB SS731 is an alternative to UHB SS716 and is often used in thicker applications.

#### **BENEFITS**

- Superior fatigue properties
- High degree of steel purity
- Excellent toughness
- Consistent and uniform quality

MEDICAL 1



#### **INDUSTRIAL KNIVES**

Our UHB AEB-L is a stainless grade with 13% chromium and has been the No.1 customer choice for industrial knife applications for decades. This stainless grade has been developed for one purpose, a perfect edge for cutting. UHB AEB-L is the right choice for edge sharpness, wear resistance and good corrosion resistance. We also offer a wide selection of carbon steels for knife applications. The benefit of the carbon grades is that you get a high hardness in the material, and an edge that will last.



#### **WOOD BAND SAW**

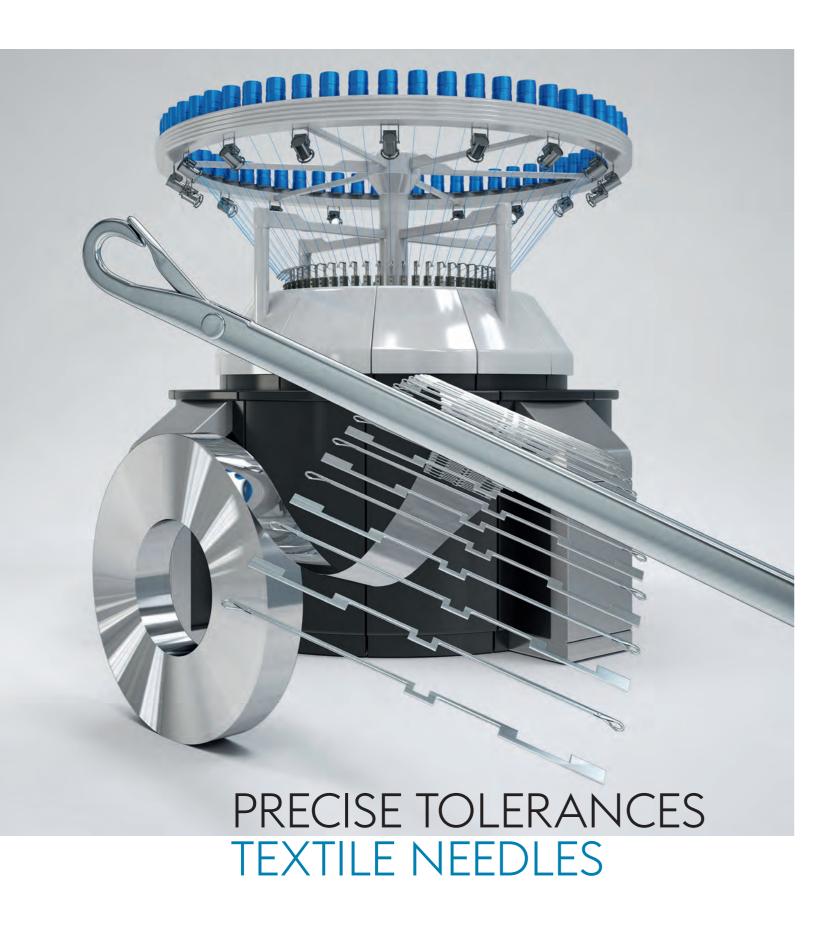
Wood band saw blades have a tough life as they are subjected to severe stresses. Teeth hitting the wood at extremely high speeds give rise to shock stress. Heat, particularly at the edges of the teeth, creates thermal stresses, which must be absorbed by the rest of the saw blade to avoid distortion. Thanks to the high purity of the basic materials we use, and the precise control of the heat treatment methods used in our production lines our band saw steel easily copes with the exacting demands placed on it. Our experience ensures that voestalpine Precision Strip band saw steel has the right combination of hardness and flexibility for the job.



#### **BENEFITS**

- High wear resistance
- High fatigue strength
- Uniform blade quality
- Good elasticity and resilience
- Supplied in coils or cut to length

KNIFE & BAND SAW



**voestalpine Precision Strip** consistently delivers excellent strength, stability and wear resistance making it the ideal material choice for textile needles.





The textile industry demands needles with high fatigue strength and high wear resistance. Developed specifically for latch needles, UHB 20MC1 is a 1% carbon low chromium steel developed in close cooperation with leading needle manufacturers.

It is characterised by a high degree of purity, a uniform fine grain structure ensuring reliability in needle manufacture and good durability after hardening. The needle strip steel has precise thickness tolerances to ensure optimum cross-sectional shape and needle function.

Additional steel grades for other products in the textile industry such as sinkers, springs, wear parts etc. are available on request.

#### **BENEFITS**

- Best available wear resistance
- High degree of steel purity
- Excellent durability after hardening
- Consistent and uniform quality

16 TEXTILE



**voestalpine Precision Strip** valve steel meets the challenging demands on material properties such as high ultimate tensile strength, flatness, surface finish and steel cleanness.

The flapper valve is the heart of the compressor, during its lifetime it has to open and close billions of times without failure and without maintenance, which places challenging demands on material properties. The fatigue strength of the hardened steel is of the highest importance, as the flapper valve is subject to bending and impact stresses.

Our martensitic hardened and tempered steels exhibit the ultimate material characteristics when superior fatigue performance is required. The surface finish and the metallurgical cleanness enhance the performance required by our customers, which include stampers, compressor manufacturers, OEM's in white goods and car manufacturers.

#### **BENEFITS**

- Reliable operation
- Long lasting service life
- Consistently superior quality
- Uniformity and high strength

#### We can offer product specific:

- Impact fatigue testing
- Fracture studies
- Wear profiles and angles
- Full material analysis
- XRD and SEM studies





**voestalpine Precision Strip** is used in A/C compressors in cars, air brake compressors in trucks and valves/shims in shock absorbers.





Inspection and selection of raw materials and subsequent operations are carried out with the greatest care and precision. Our special inspection lines ensure a consistent and superior quality of the strip steel. A uniform and high strength is achieved through accurate and controlled heat treatment.

The superior surface finishing eliminates potentially dangerous imperfections and stress raisers. The flatness delivers the guarantee of perfect valve sealing. Our martensitic steels are available in both high carbon and stainless grades, and all meet the stringent demands of our discerning customers.

#### **BENEFITS**

- High fatigue strength
- Reliable and proven performance
- Consistently superior quality
- Uniformity and high strength
- Excellent surface finish

20 SHOCK ABSORBERS 2

## BESPOKE SOLUTIONS



**voestalpine Precision Strip** offers customised strip steel solutions for demanding applications. Our expertise in cold rolling, with a focus on thin materials, makes us a highly valued partner for manufacturers of special products.

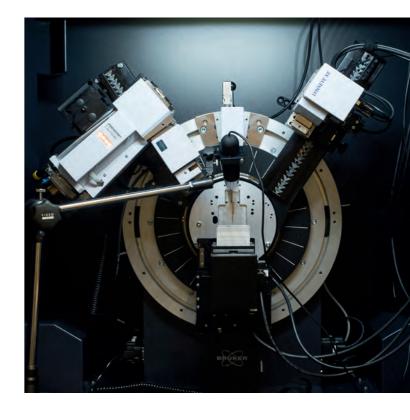
We continually invest in research and development, from pioneering steel properties to enhancing production efficiencies for our customers. Our advanced cold rolling technology enables us to consistently manufacture extremely thin materials, within tight tolerances. Our state of the art annealing and hardening facilities allows us to optimise the hardness, toughness and durability of the material to meet the requirements of each customer.

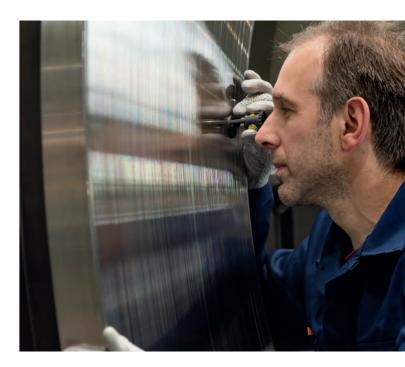
We work in partnership with our customers and encourage you to involve us at an early stage in your development process.

## INNOVATION AND R&D OUR FUTURE



As part of the voestalpine Group, our mills control all quality parameters, starting from the specific selection of steel grades to developing project-specific alloys in collaboration with our customers. These innovation initiatives move our business into new product areas and markets. Redefining the limits of what is possible.





## OUR EXPERTISE IS QUALITY ASSURED

Every step, from selecting materials to the final inspection, packaging and service, is monitored and documented to ensure the highest quality.

Every little detail counts. Product properties such as strength, surface, thickness and flatness are evaluated, along with customer service, delivery precision and overall customer satisfaction.

In our world, quality is a shared responsibility, with our success entirely dependent on the attitude, commitment and performance of every employee. Each employee on our team safeguards, supports and improves our processes so that we can meet and exceed the expectations of our customers.



In a long and complex manufacturing route, the hotrolled strip steel is refined into thin steel products tailored to the unique requirements of each customer.

With high compressive and tensile strength, the steel is cold-rolled down to extremely thin dimensions, with properties customised to the material's end use.

The rolling takes place in several stages. Between each stage, the steel is annealed to make it ductile.

Properties such as hardness, toughness and durability are influenced by the subsequent tempering.

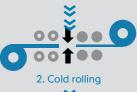
In the final stage, the strip steel is slit to the required widths. The strips can also be cut to specified lengths.

Quality assurance procedures are stringently regulated throughout the manufacturing process through our management system, formulated and certified in accordance with ISO 9001, TS 16949 and ISO 14001.



COLD ROLLING PROCESS

















9. Inspection



10. Packing/despatch

# UK FACILITY OLDBURY, WEST MIDLANDS

Precision Strip UK team work closely with our mills to deliver tailor made solutions to our customers.

All voestalpine Precision Strip steel stocks are held in our award winning, purpose-built warehouse facility, located at our Headquarters in Oldbury, West Midlands. The new KASTO system is the tallest in the UK and one of the largest in Europe.

The UK facility is accredited with ISO certifications 9001, 18001 and AS9120, so you can be rest assured that the services provided are of the highest quality.

#### **BENEFITS**

- Specialist technical team
- Purpose built stock facility
- Customer service and support
- Quality assured systems







