## RELIABLE AND RESISTANT

SOME OF THE PRODUCTS IN THE BUMAX-FAMILY ARE UNIQUE AND CANNOT BE FOUND ANYWHERE ELSE ON THE MARKET TODAY.

#### Corrosion

Corrosion can be defined as the degradation of a material due to a reaction with its environment. Metals corrode because we use them in environments where they are chemically unstable. Degradation implies deterioration of physical properties of the material and can cause severe failures. We have the knowledge and products to give you a safe, reliable and long lasting fastener solution for every application and corrosive environment.

#### Temperature resistance

All metals have different mechanical properties at different temperatures. Fracture toughness and strength are especially effected. Bumax fasteners can be custom made and, dependent on grade, handle operating temperatures between -200°C to 800°C.

#### Magnetic permeability

Relative permeability refers to a material's ability to attract and conduct magnetic lines of flux. The more conductive a material is to magnetic fields, the higher its permeability. Bumax fasteners can be supplied with extremely low permeability and are often used in advanced applications like nuclear, fusion reactors or particle accelarators. Of course we can also supply fasteners with very high magnetic permeability and low coercive field strength and high saturation magnetization.

#### Strenath

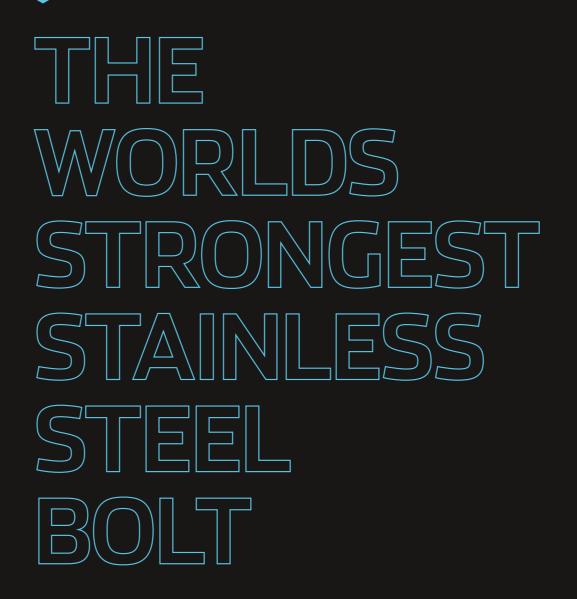
We have delivered fasteners with a strength exceeding class 15.9 for applications where down sizing, clamping force and strength are critical. In our product range we offer stainless fasteners ranging from strength class 8.8 to 16.9. Despite the high strength our unique materials offers a unique combination of ultra high strength and good ductility.

### Fatique strength

Fatigue fracture occurs when a fastener is subjected to repeated cyclic loading. Even maximum stresses below the materials yield point can lead to the formation of microscopic cracks that eventually lead to a failure. The starting point of a fatigue fracture is often stress concentration in inclusions, slags or surface defects. Test shows that Bumax material has superior fatigue resistance compared to commodity fasteners. High quality raw material made with the best metallurgical processes together with good surface properties and high strength guarantees excellent fatigue strength.

## QUALITY AND ENVIRONMENT

The majority of our fasteners are cold forged in our own facilities in Sweden where we have made cold forged stainless fasteners since 1926. Cold forging gives a superior product with increased strength and improved fatique resistance. Raw material is sourced from premium suppliers in Europe with rigid specifications regarding chemical composition with low content of trace elements as well as low inclusion and slag content. All our products are delivered with full traceability and 3.1 certificate. Bumax 88 can also be delivered with PED approval under the European Union's pressure equipment directive (PED97/23) as well as with CE marking as structural bolt according to EN 15048. Our facilities are approved according ISO 9001 and 14001.





BUMAX<sup>®</sup> A BUFAB GROUP BRAND



Phone: +46 (0)585-521 00 | Fax: +46 (0)585-521 15 | www.bumax.se | info@bumax.se



# **BUMAX**<sup>®</sup> **STARTS** WHERE STANDARD ENDS

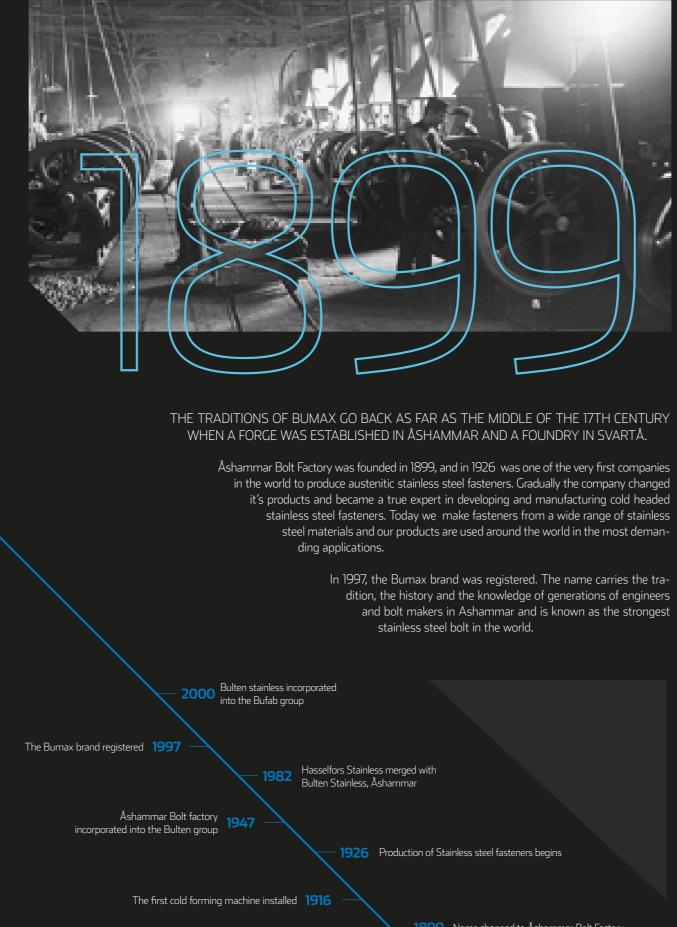
BUMAX IS BUFAB'S REGISTERED TRADEMARK, KNOWN AS THE STRONGEST STAINLESS STEEL FASTENER IN THE WORLD. BUMAX IS MANUFACTURED IN BUFAB'S OWN PLANTS IN SWEDEN AND MEETS THE REQUIREMENTS OF HIGH DEMANDING CUSTOMERS. WHEN IT COMES TO QUALITY, CORROSION RESISTANCE, HIGH STRENGTH, FATIGUE STRENGTH, TRACEABILITY AND HEAT RESISTANCE, WE DELIVER SAFETY AND RELIABILITY.

Our customers can be found in oil and gas, pulp and paper, marine, petrochemical, energy and many other industries where standard fasteners simply cannot do the job.

Some of the products in the Bumax-family are completely unique and cannot be found anywhere else on the market. All Bumax products have full traceability (3.1 certificates available for each item) and are sourced solely from premium European stainless steel manufacturers according to rigid specifications.

We work constantly to find the best fastener solutions with our customers and are eager to participate and contribute at an early stage in our customers development projects. Thanks to our expertise in fasteners and material we have developed many extraordinary nuts and bolts for special uses. Your problem is our challenge!

A Swedish brand



1899 Name changed to Åshammar Bolt Factory

