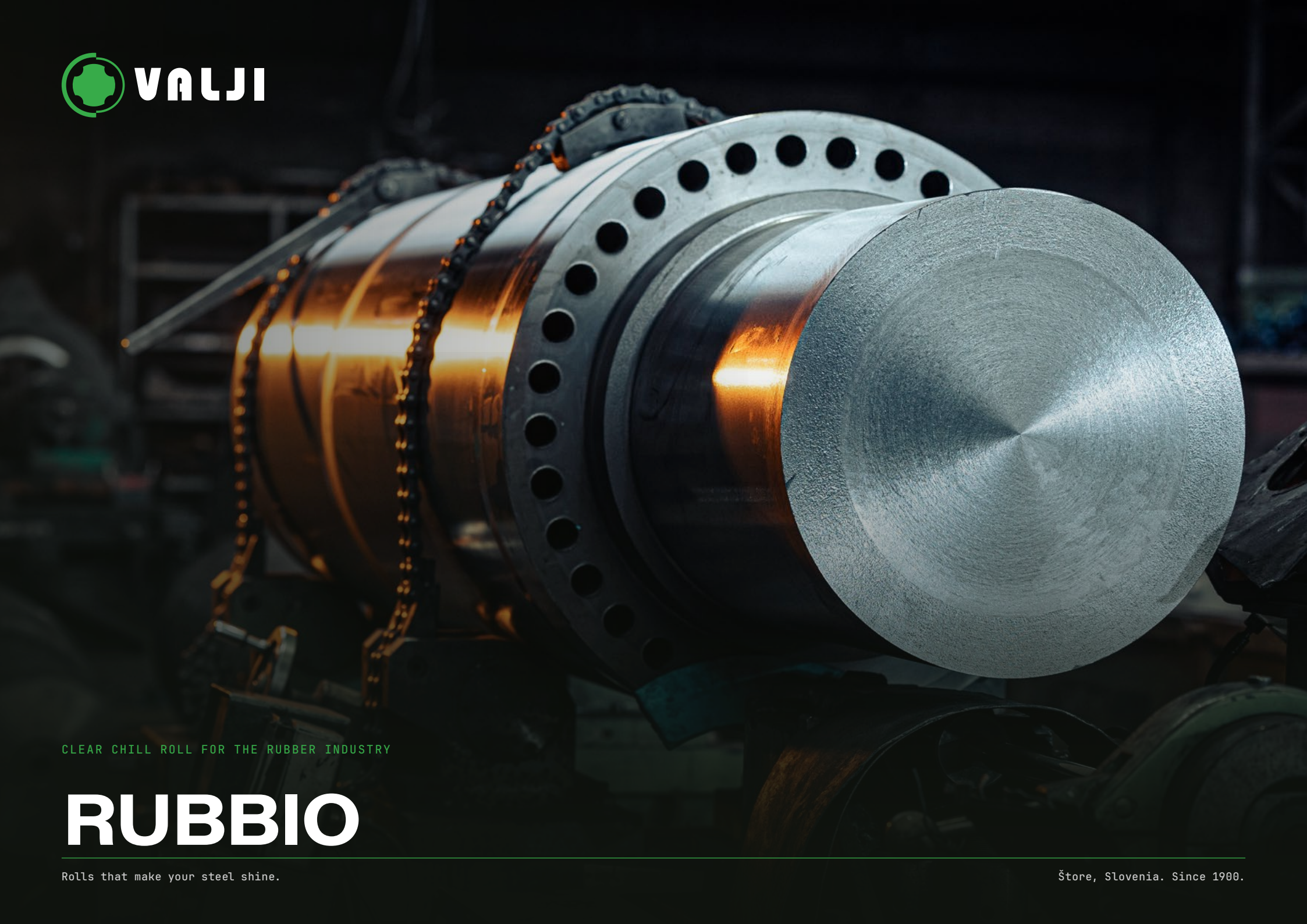


VALJI

CLEAR CHILL ROLL FOR THE RUBBER INDUSTRY

RUBBIO

Rolls that make your steel shine.

Štore, Slovenia. Since 1900.

MATERIAL SPECIFICATION

RUBBIO

Built for the abrasive work of mixing mills and calenders.

Our rolls are engineered to meet the rigorous demands of the rubber and plastic industries, particularly for mixing mills and calenders. The working layer is composed of low-alloyed white cast iron with a high cementite content in a pearlitic-bainitic matrix, offering exceptional hardness, wear resistance, and the complete absence of graphite for optimal durability during abrasive applications.

The roll core is crafted according to customer demands from special cast iron, specifically designed to provide high tensile strength and resistance to bending. This ensures mechanical stability, even with drilled central and peripheral boreholes. Our centrifugal casting process enhances material homogeneity and ensures a strong bond between the core and working layer, surpassing the performance of traditional static double-layer casting.

To achieve precise mechanical properties, our production process includes pre-machining, drilling, heat treatment to relieve internal stresses, and final grinding to deliver the specified geometric and surface requirements.

For even higher wear demands, the working layer is also available in high chromium iron with 16 to 18 % Cr and hard M_7C_3 carbides.

Graphite-free

White cast iron shell in a pearlitic-bainitic matrix

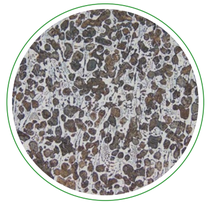
Centrifugally cast

Strong bond between core and working layer

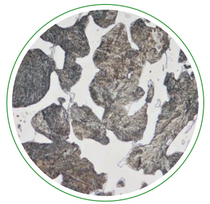
Drilled to order

Central and peripheral boreholes, stable core

MICROSTRUCTURE

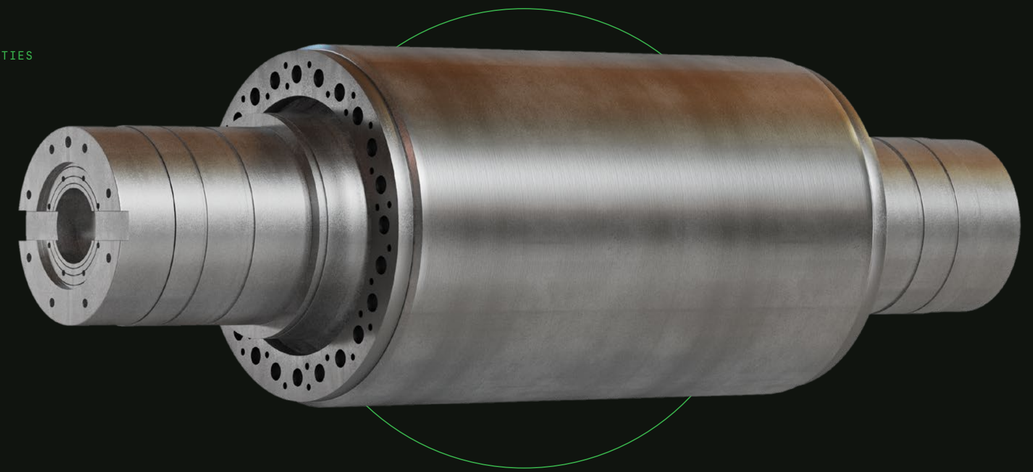


Clear chill cast iron 100x



Clear chill cast iron 500x

PROPERTIES



Chemical composition, %

Clear chill cast iron	C	Si	Mn	Cr	Ni	Mo	P	S
Min.	3.00	0.30	0.50	0.10	0.30	0.10	<0.05	<0.05
Max.	3.80	0.50	1.00	1.50	2.00	0.30		

Typical hardness

	ShC	LD	HRc	HB
Typical	63–78	692–764	46.6–55.0	450–577

Shore C range on the Valji hardness scale

60 70 80 90

Scan for more.

VALJI

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Scan for more.

A member of Rudolf Weinberger Holding. ISO 9001:2015 / ISO 14001:2015