



water solutions

Hard Cast Iron

This material is used to make high-resistance impellers suited for use with unstrained, particularly heavily loaded and abrasive liquids.

Why Hard Cast Iron?

The need for components with increasingly higher mechanical properties has led to the development of a new material we call **Hard Cast Iron**.

Due to its complex chemical composition, *Hard Cast Iron* is stronger than commonly used grey cast iron and has a hardness value between 450 and 500 HB.

This conveys unique characteristics of strength and toughness to the Hard Cast Iron, making it the perfect material for making parts subjected to strong stresses.



Applications

Hard Cast Iron is generally used where other materials fail because of the mechanical and chemical stresses of the working environment and is particularly suitable in presence of abrasive fluids.

It is used in presence of acidic and aggressive liquids in the chemical and metallurgical industry, with heavily loaded and sandy water on construction sites and mining plants, and for lifting unstrained wastewater and sewage in sewage treatment plants.



This solution increases the resistance of the hydraulic components of the shredding pumps **UNIQA Chopper Series** (ZUG CP) for longer product life and exceptional reliability.

By combining with the action of an AISI 440C steel blade, the UNIQA Chopper impeller made of *Hard Cast Iron* can **cut solids and filaments** contained in the wastewater avoiding potential **blockage** or clogging. It has a high cutting strength and is particularly resistant to **abrasion**.

Chemical composition of Hard Cast Iron

Name	ASTM A532	Class	II	Type	A
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The many elements found in the composition of Hard Cast Iron provide a high-performing material which does not need any further surface treatments, such as coating with ceramics or other material.

