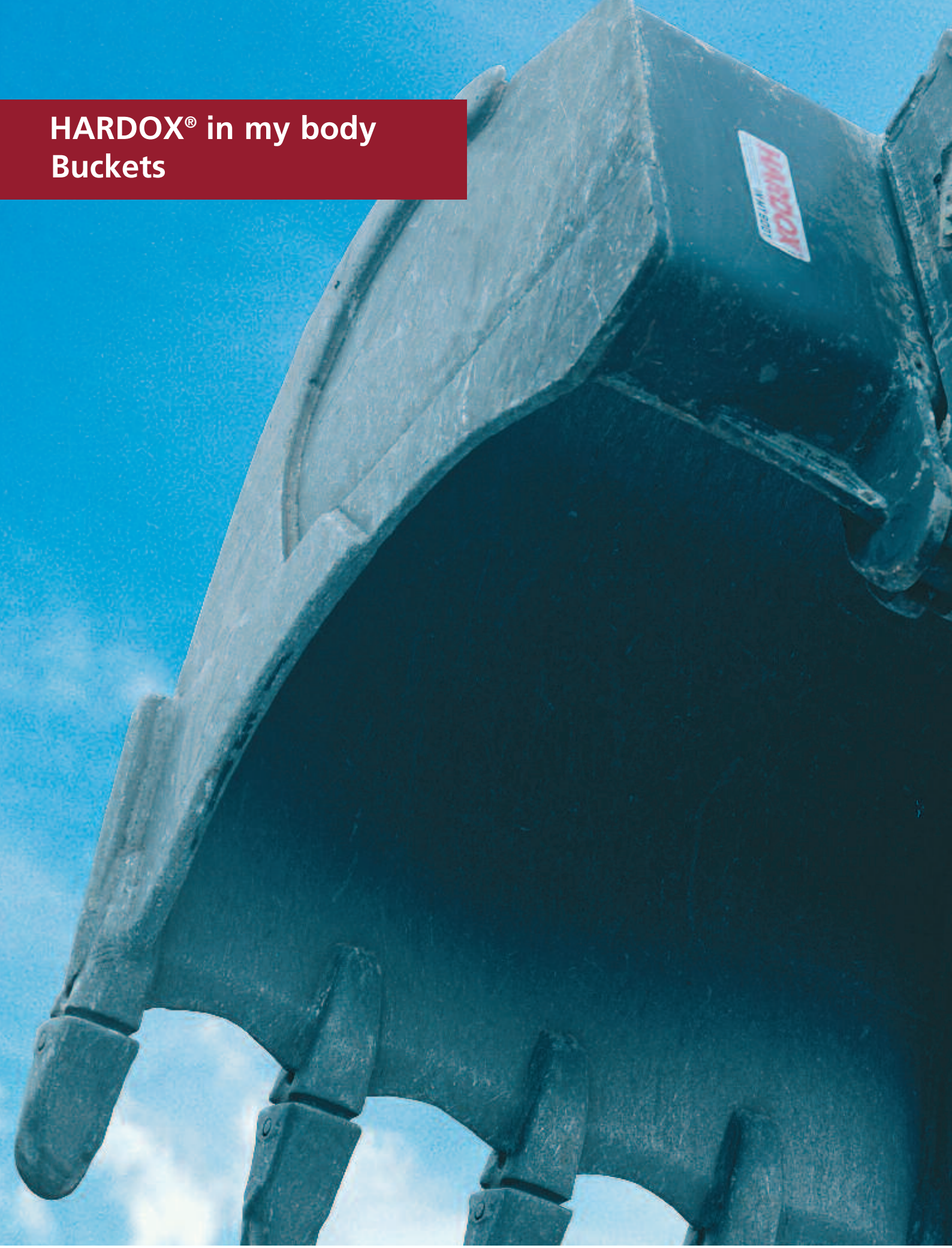
# HARDOX® in my body
# Buckets



HARDOX®
WEAR PLATE

# HARDOX® - a part of your success

## HARDOX in my body™

The "HARDOX in my body" sign guarantees that the steel used for your bucket meets all of the strict demands made on wear steel for buckets. The sign guarantees that the user of the bucket has invested in a first-class product in terms of wear resistance, impact strength and weldability.

Only makers of buckets who have been carefully vetted and approved by SSAB Oxelösund are entitled to use the sign. The sign is your guarantee that the bucket meets very strict quality demands.

## HARDOX wear steel in buckets

HARDOX wear steel has unique properties for digger buckets. HARDOX combines high hardness with valuable workability properties. This means that the bucket will last longer and that wear parts will be easier to change. The "HARDOX in my body" sign on the bucket is your safeguard that, in addition to buying a bucket with the highest possible wear resistance, you also have a bucket that will retain its shape and is weldable.


The HARDOX in my body sign guarantees that the steel used for the bucket is of the highest quality – the bucket will have a long useful life, can withstand blows and is weldable.

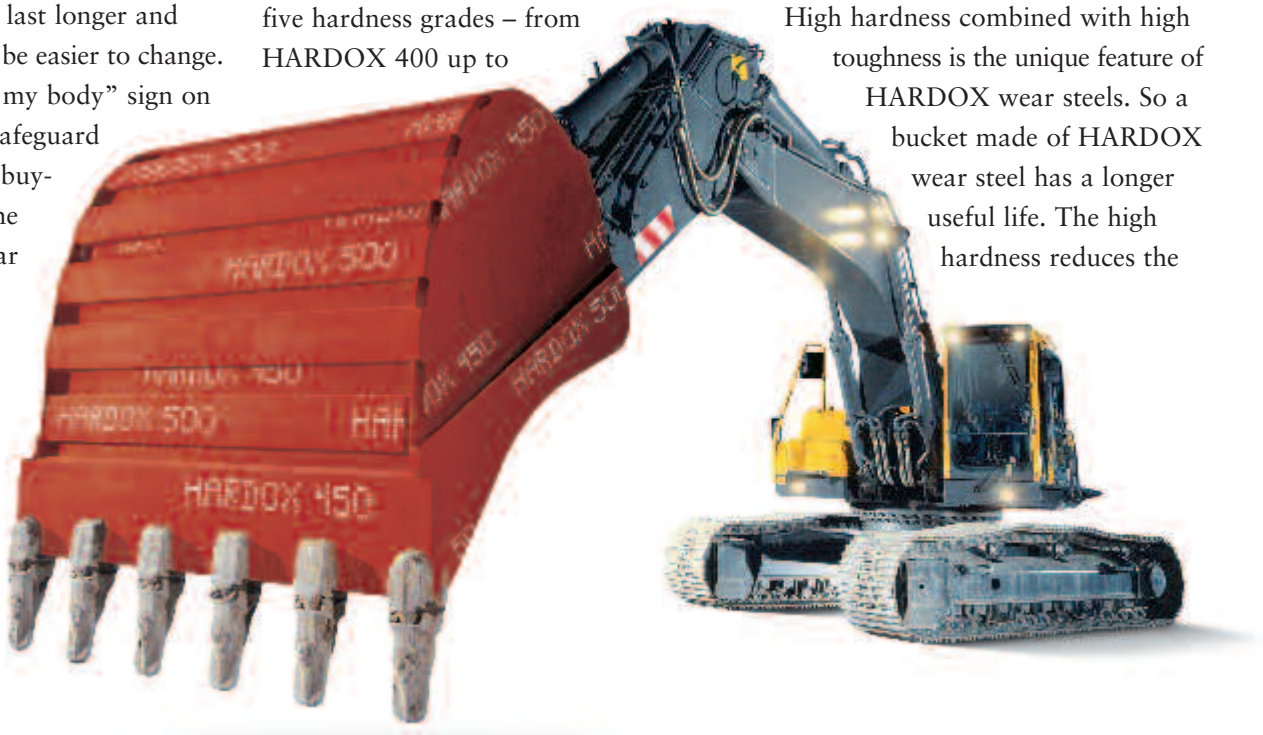
## HARDOX offers a longer useful life

The hardness of HARDOX wear steel is high and uniform. This means that the steel can withstand wear very effectively. HARDOX 400 has a guaranteed hardness range of 370-430 HBW, while the guaranteed hardness range of HARDOX 450 is 425-475 HBW.

HARDOX wear steel is available in five hardness grades – from HARDOX 400 up to the extreme HARDOX 600 wear steel. All hardness grades have their optimum places in a bucket. HARDOX 450, for example, is very well suited for the body of the bucket, while HARDOX 500 is intended for the cutting edges. HARDOX HiTuf is an excellent steel for very thick cutting edges of large buckets.

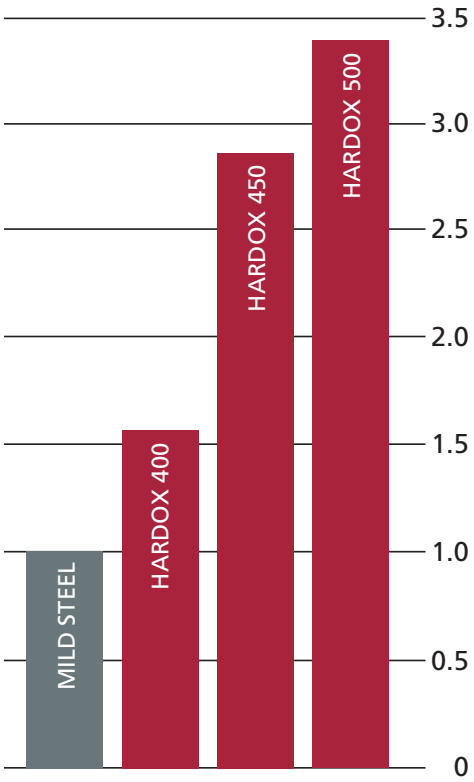
## HARDOX for better economy

High hardness combined with high toughness is the unique feature of HARDOX wear steels. So a bucket made of HARDOX wear steel has a longer useful life. The high hardness reduces the



wear rate of the bucket. The toughness ensures that the bucket will be better able to withstand blows and that it will retain its shape. Practical tests in which we dropped 300 kg (661,4 Lbs) weights onto HARDOX wear steel demonstrate the exceptional toughness and resistance to blows and denting.

HARDOX 450 has a yield strength of around 1200 MPa (175 KSI) and has very high toughness. The bucket can




Relative useful life. Comparison between mild steel (150 HBW), HARDOX 400, HARDOX 450 and HARDOX 500.

In sliding wear, the higher hardness of HARDOX 450 compared to HARDOX 400 always improves the wear resistance. In favourable cases, such as if the wearing material is granite, the useful life or wear time may be 75% longer.


The SSAB Oxelösund method of testing resistance to blows. The test simulates rigidly mounted plates that are subjected to the impact of a 300 kg (661,4 Lbs) weight dropped from a height of 2.85 metres (112''). HARDOX steels suffer much less denting than other steels.

therefore be subjected to heavy blows without sustaining any serious permanent deformation. The wear is uniformly distributed and the useful life increases, which results in better overall economy. If subjected to extremely hard duties, it is important for the steel to be pure, since this ensures high resistance to cracking. HARDOX wear steel is made from exceptionally pure ore from northern Sweden. The high purity is unique to HARDOX wear steels.

## HARDOX opens new opportunities

Due to the good weldability of HARDOX wear steel, repairs and replacement of wear parts are greatly simplified. HARDOX wear steel can obviously be welded by any of the usual methods, using normal filler metals. It is the combination of low carbon content and high purity that imparts such good weldabilty to HARDOX wear steels. The purity of the steel reduces the risk of cracking during welding. The high toughness is also very beneficial in welding.

The “HARDOX in my body” sign on your bucket is your safeguard that the bucket is made of HARDOX wear steel – a wear steel that will not restrict your work with the bucket.

The various hardness grades of HARDOX steel have optimum locations in the bucket. HARDOX 450, for example, is very well suited for the body of the bucket, while HARDOX 500 is appropriate for the cutting edge. HARDOX HiTuf is eminently well suited for very thick cutting edges of large buckets.

SSAB Oxelösund is currently the world's biggest producer of hardened structural steels and wear plate. Our products - HARDOX, WELDOX, ARMOX and TOOLOX - are sold in more than 100 countries. The heavy plate produced in our rolling mill is given unique properties by advanced hardening and post-treatment processes.

We also produce standard structural and pressure vessel plate. The steel slabs produced in Oxelösund are delivered to our own rolling mill and to the SSAB Tunnplåt rolling mill in Borlänge.

Steel production at the then Oxelösund Järnverk began back in 1917. Towards the end of the 1950s and in the early 1960s, the plant was expanded to a fully integrated steelworks, with heavy plate as its main product. The world's most modern rolling mill for heavy plate came on stream in 1998. A new line for hardening and finishing thin plate was started in 2001. The Oxelösund steelworks now has a workforce of 2400 employees.

SSAB Oxelösund is a member of the SSAB Swedish Steel Group. The parent company was founded in 1978 and was introduced on the Stockholm Stock Exchange in 1989.

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