

SPECIAL APPLICATION NEEDLE SAN® 6
DEVELOPED FOR SEWING APPLICATIONS
IN THE PROCESSING OF JEANS CLOTHING



High productivity combined with protective handling of the fabric stands for the SAN® 6.

Feedback from industry confirms the progress of the SAN® 6 GEBEDUR®. The SAN® 6 GEBEDUR® catches on especially when sewing jeans. Needle breakage, skip stitches and thread breakage are avoided.

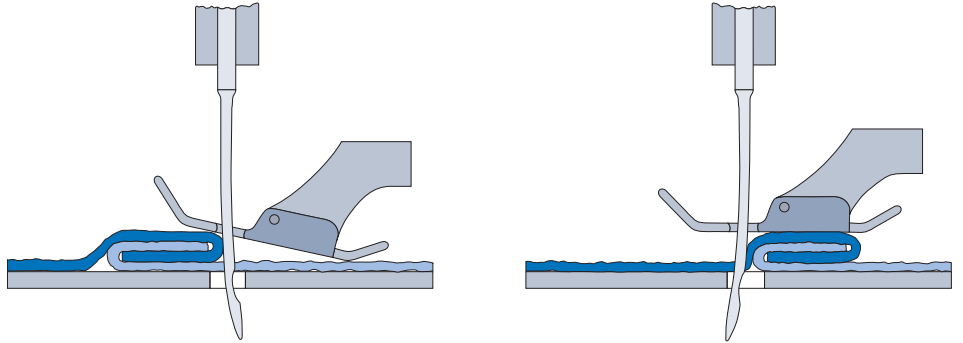
GEBEDUR®

The titanium nitride coated
needle of Groz-Beckert

THE SAN® 6 GEBEDUR® NEEDLE AND ITS ADVANTAGES

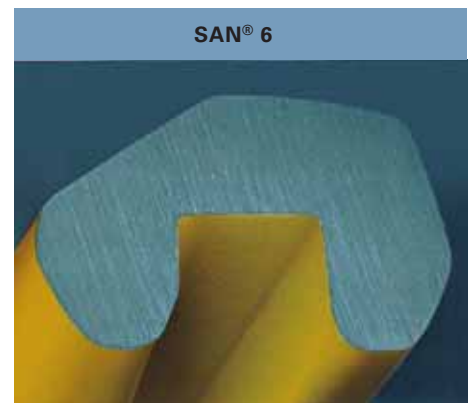
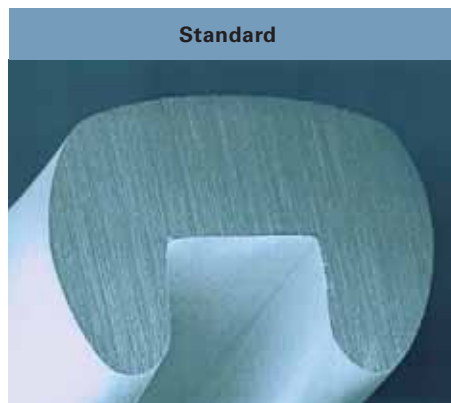
Needle stability

Skip stitches and needle breakage mostly arise by a strong needle deflection at sewing cross seams. High sewing speeds and heavy materials lead to needle deflection, especially at cross seams. The weaker the needle, the stronger the needle deflection. To counteract this, increased demands on the needle stability are required.



Scarf cross section

The special shape of the scarf cross section gives the SAN® 6 needle a higher stability in the scarf area. Almost all SAN® 6 needles have a lateral looper chamfer at the scarf. This protects the looper point from damages.

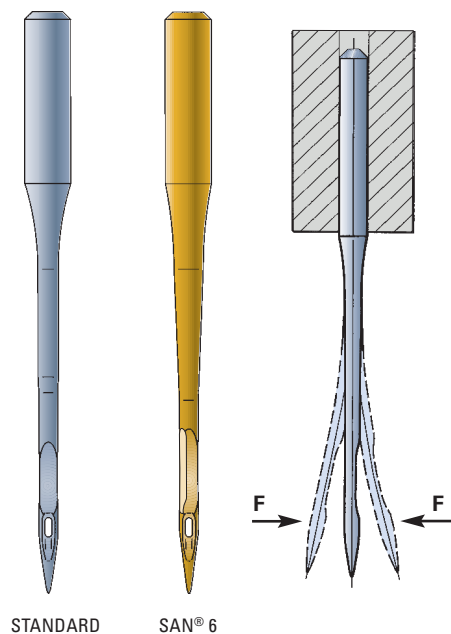


SCARF CROSS SECTION

Blade profile

The conical blade and the newly designed scarf cross-section give the Groz-Beckert SAN® 6 a higher bending resistance of 20 - 40% in comparison to the standard needle.

Scarf and blade profile prevent needle breakage, skip stitches and thread breakage. The looper point is protected.



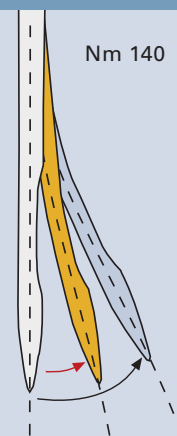
STANDARD

SAN® 6

Bending resistance

Nm 140 Needle size

- Standard needle
- SAN® 6

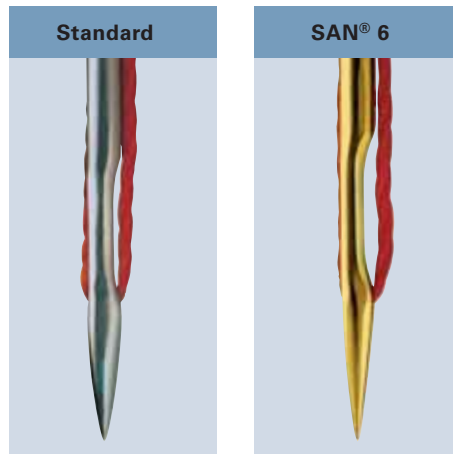


SAN® 6
20 - 40% higher bending resistance

Improved loop formation

The guiding of the thread in the eye and scarf area causes a significant improvement of the thread protection and pick up of the thread by the looper. Even with an extremely poor loop formation the looper has the possibility to pick up the needle thread.

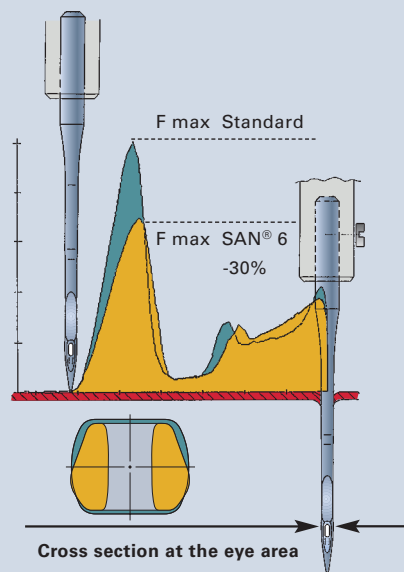
Needle breakages and skip stitches are removed to a large extent.



Force distribution during penetration

The consequent development leads to the special blade shape and to a further improvement of the needle.

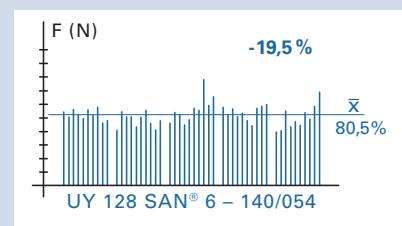
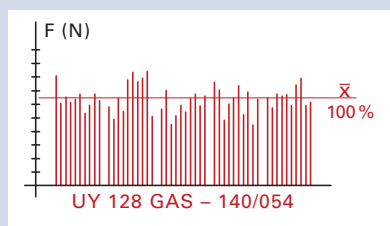
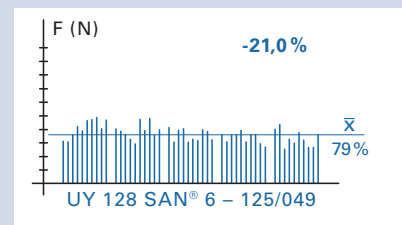
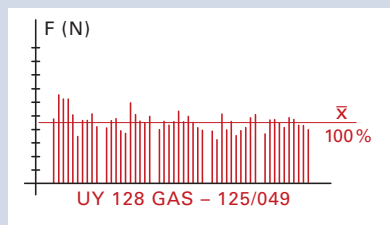
The reduction of the cross section at the eye area was a further step to reduce the penetration force.



Depending on the needle system, the penetration force (F max) lies up to 30% below a standard needle.

Measuring of the penetration force - example: UY 128

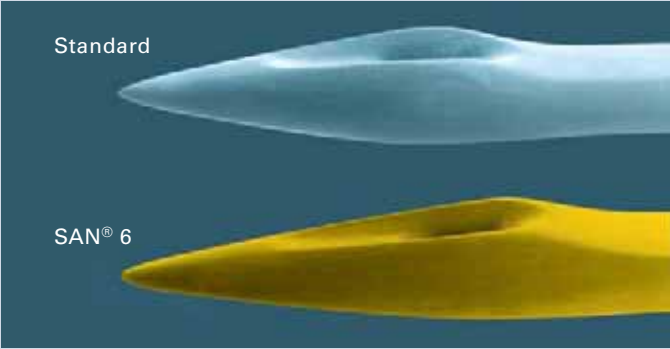
50 penetrations each in comparison:
The medium penetration force at the UY128 SAN® 6, Nm 125/049 is by 21% lower, at Nm 140 by 19.5%.



This means – the needle load is less and produces a lower temperature. The machine runs quieter and has more security in function. The sewing material, the needle and the sewing machine are protected.

THE SPECIFIC FEATURES OF THE RG-BALL POINT

RG-point – optimised point shape



Standard

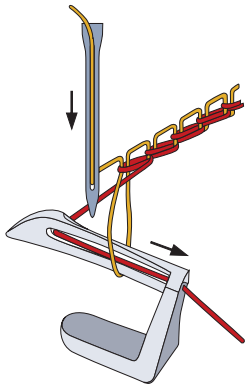
SAN® 6

POINT SHAPE

The especially slim shaped point style and small ball-point tip guarantee remarkable protection of the fabric during the sewing process.

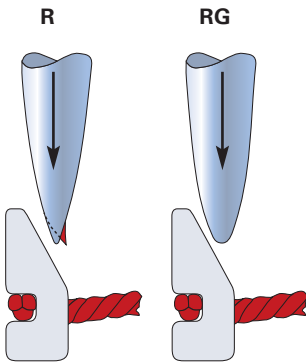
The special shape of the Groz-Beckert RG-point and the extremely hard titanium nitride surface coating protect the fabric from damages.

The penetration work of the needle is reduced, the lifetime of the point is extended.

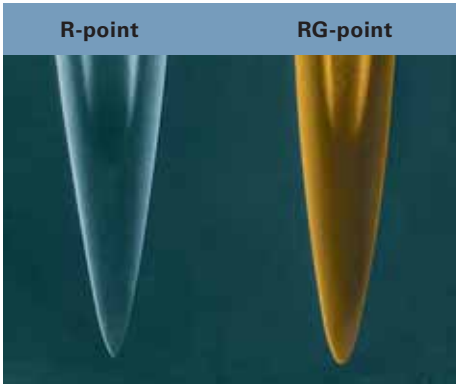


Use on chain stitch machines

The sensitive, sharp R-point is already damaged after a short sewing time by contact with the backside of the hardened looper.

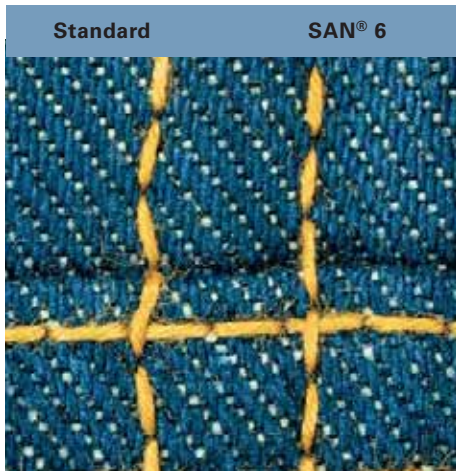
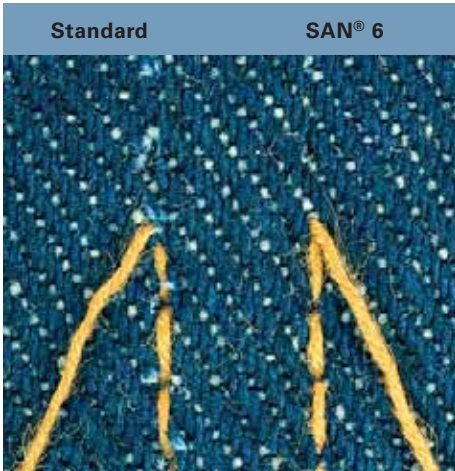


Due to the light ball point and the special shape of the point, which is adapted to the backside of the looper, the RG-Point has an increased working time without any damage.



Advantages:

- **Less material damages, reduced penetration forces**
- **Less needle deflection (skip stitches, needle breakage, thread breakage)**
- **High process security**

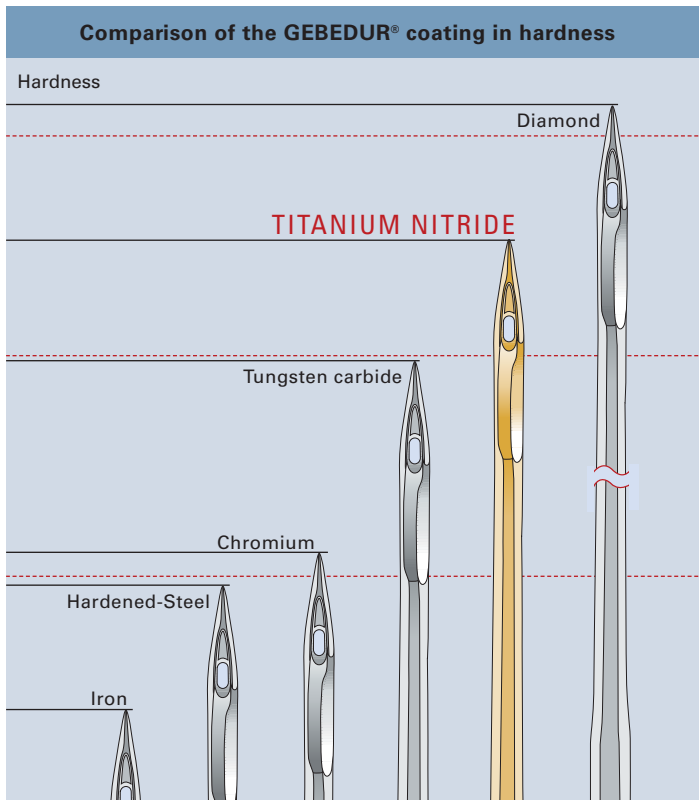


Gentle fabric processing with SAN® 6

With the slim and rounded RG-point and the special blade shape the Groz-Beckert SAN® 6 stands for:

- **High seam quality**
- **Less material damage**
- **Less skip stitches**
- **Straight seams**

THE GROZ-BECKERT SAN® 6 – THAT SUBTLE DIFFERENCE



GEBEDUR®

The titanium nitride coated needle of Groz-Beckert

The titanium nitride coating provides the SAN® 6 needle with better protection from wear and tear as well as damages.

Feedback from industry confirms the progress of the SAN® 6 GEBEDUR®. Especially when sewing Jeans the Groz-Beckert SAN® 6 GEBEDUR® achieves a longer working time.

The results are:

- High seam quality
- High productivity
- Long lifetime

The main problems in the jeans production

High productivity combined with protective handling of the fabric stands for the SAN® 6.

The following problems in production are substantially reduced:

Skip stitches

They mostly appear at seam cross sections and on thick material parts.



Needle breakage

Frequent causes are high penetration forces and strong needle deflection.



Thread breakage

Caused by poor loop formation and insufficient space between thread and needle for picking up by the looper.



Point damages

As a rule, the cause is the contact with the hardened looper.

