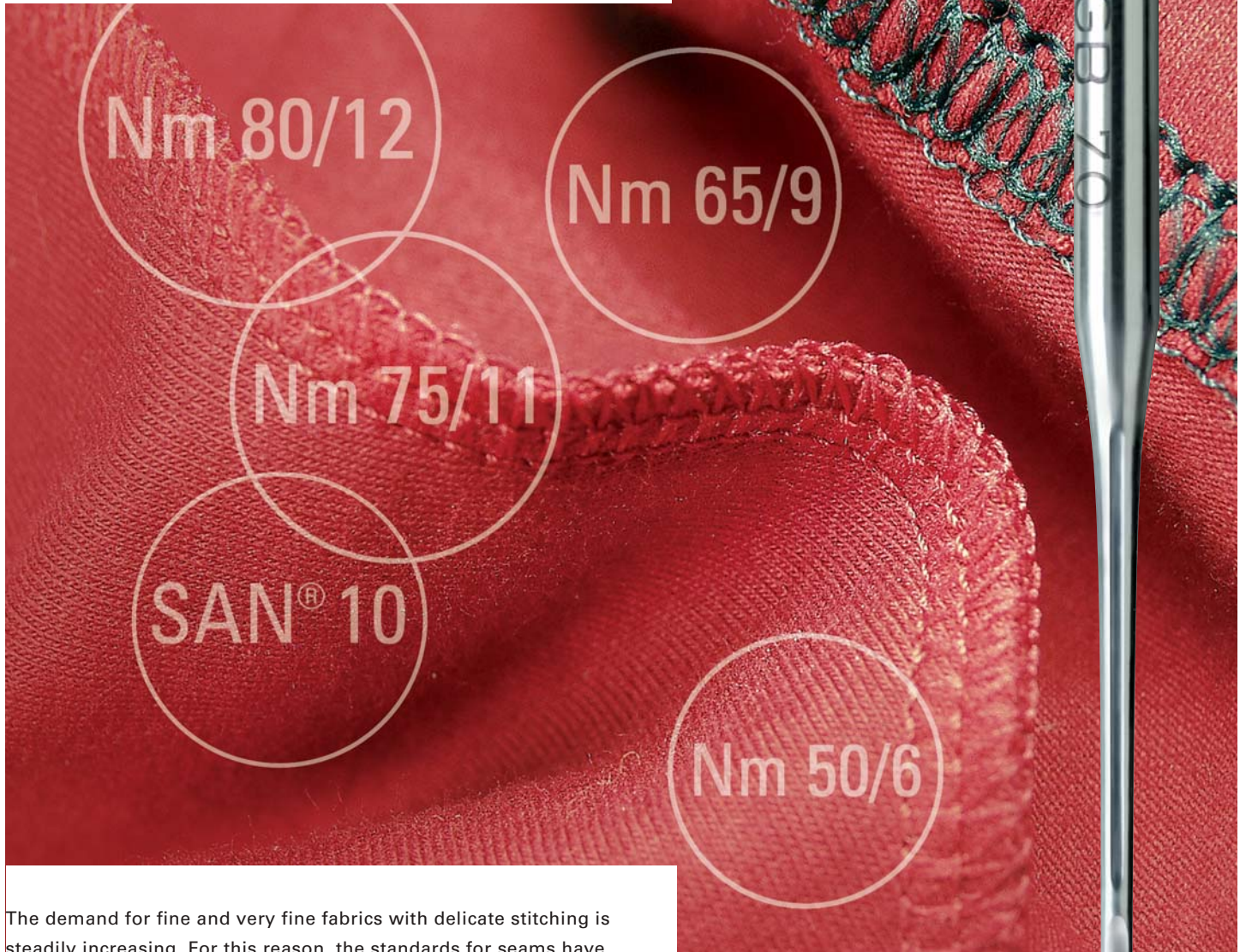


THE RIGHT NEEDLE –
FOR PROBLEM FREE PROCESSING
OF FINE KNITWEAR – SAN® 10



The demand for fine and very fine fabrics with delicate stitching is steadily increasing. For this reason, the standards for seams have also increased. As soon as seams are worn directly next to the skin, not only elegance and attractiveness are important – softness and comfort also come into play.

Flawless sewing results with such fine materials call for very high quality standards for the needles. Often, needles designed for special applications must be used in order to guarantee process reliability during sewing.

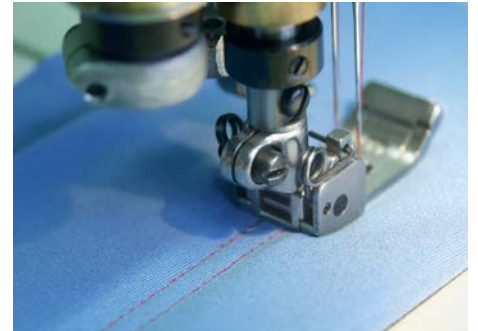
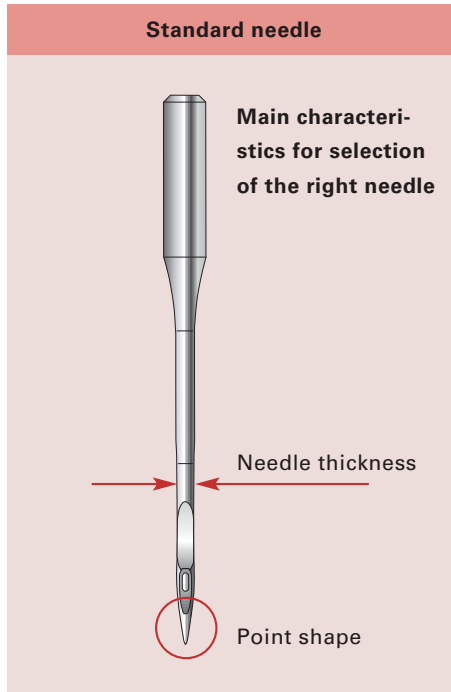
Choosing the "right" sewing machine needle is one of the most important requirements.

CHOOSING A NEEDLE SYSTEM

Which needle system is used is generally dictated by the type of machine used and the sewing job in question. Within this needle system, there are variants that a user can choose from to meet specific requirements.

This choice involves the following questions:

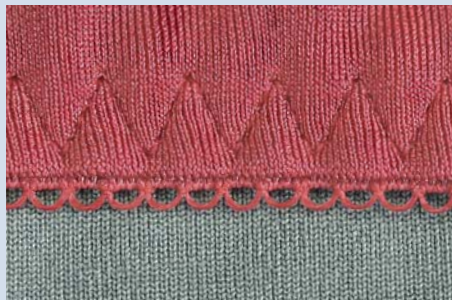
- Which needle thickness?
- Which point shape?
- Use of a standard needle or a special application needle?



The advantages of Groz-Beckert needles

As your partner, Groz-Beckert guarantees:

- Innovative needle development that is close to the market
- Optimised needle geometry and excellent mechanical properties
- Needles with top uniformity and close tolerances
- Technical service and application advice
- World-wide availability



The user benefits from:

- High needle quality
- High process reliability
- Cost reduction
- Improvement in quality
- Less machine downtime
- Solutions for new fabrics and trends
- Support with solving sewing problems
- Support with quality planning

SELECTING THE IDEAL NEEDLE THICKNESS

Guideline: as thick as possible and as thin as necessary.

Using very thin standard needles can solve quality problems at the expense of output.



CHECKING SEAMS: SLIGHT PULLING AND SHEARING MOVEMENTS MAKE MATERIAL DAMAGE VISIBLE (FIG. 2)

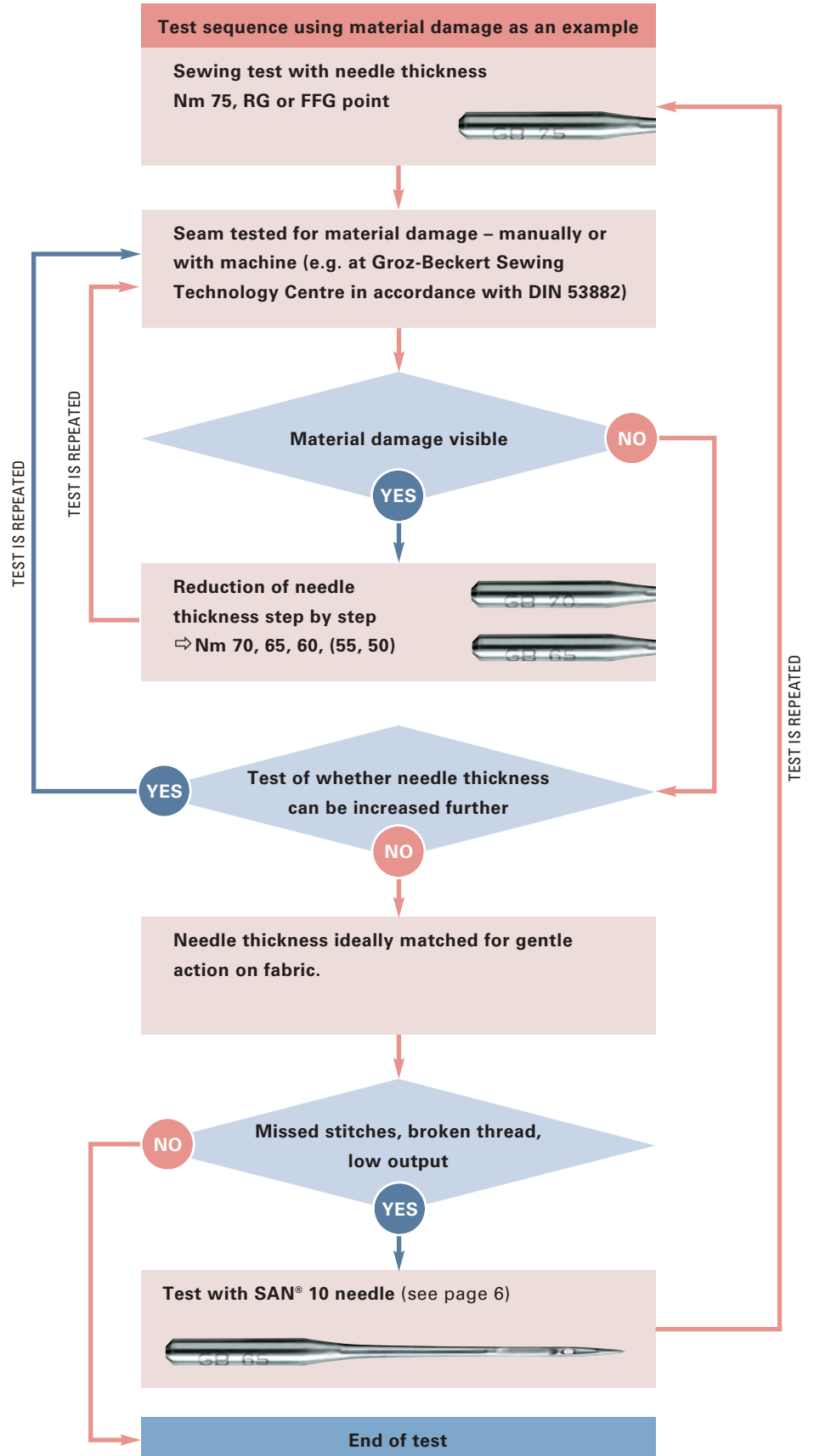


STITCHES IN THE KNITTING ARE DAMAGED – TEST IS CONTINUED WITH THE NEXT SIZE DOWN OF NEEDLE THICKNESS.



NO MORE MATERIAL DAMAGE VISIBLE – CORRECT NEEDLE THICKNESS HAS BEEN FOUND.

The test sequence described here can also be used with the causes of faults described on page 5.

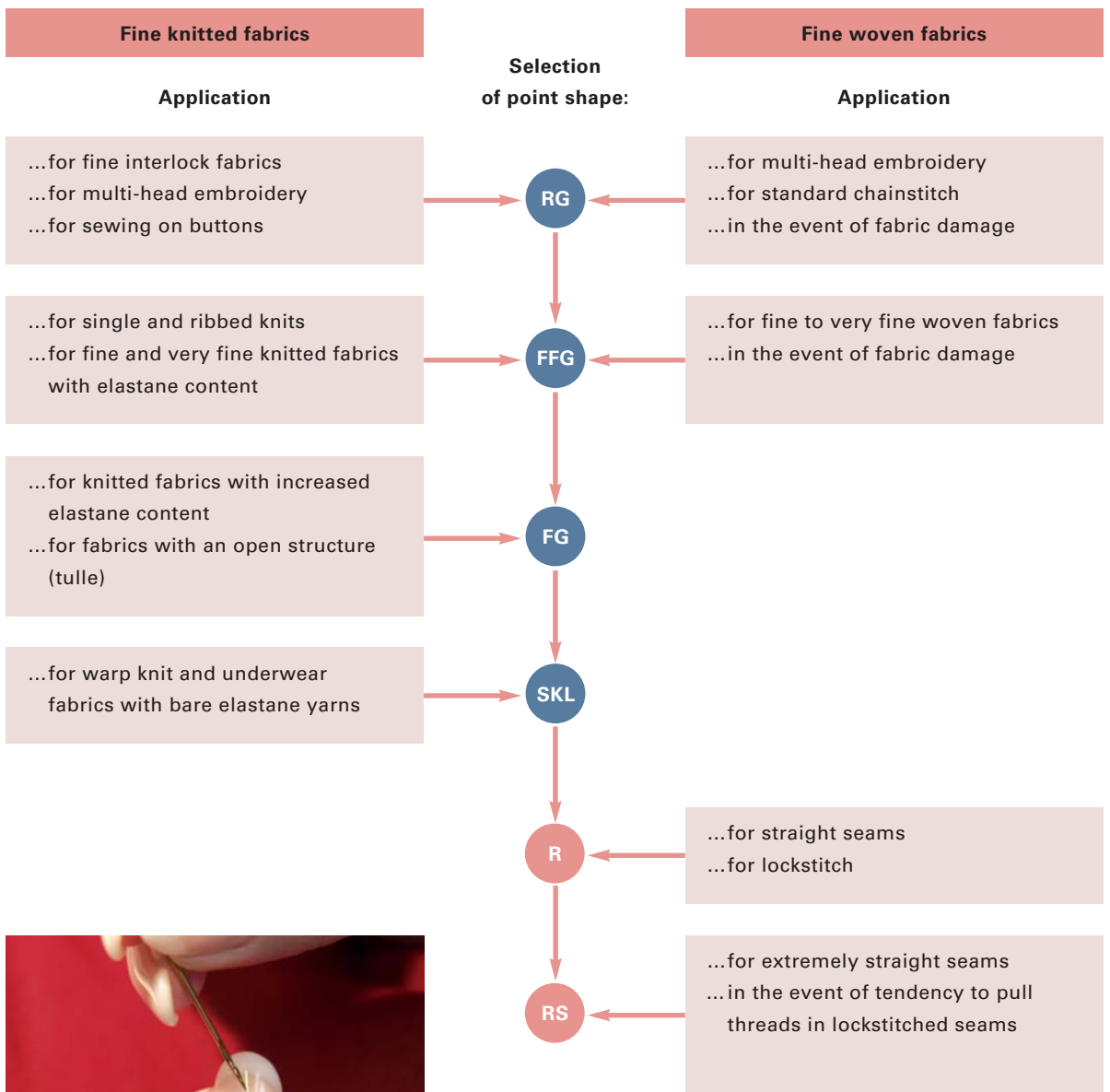
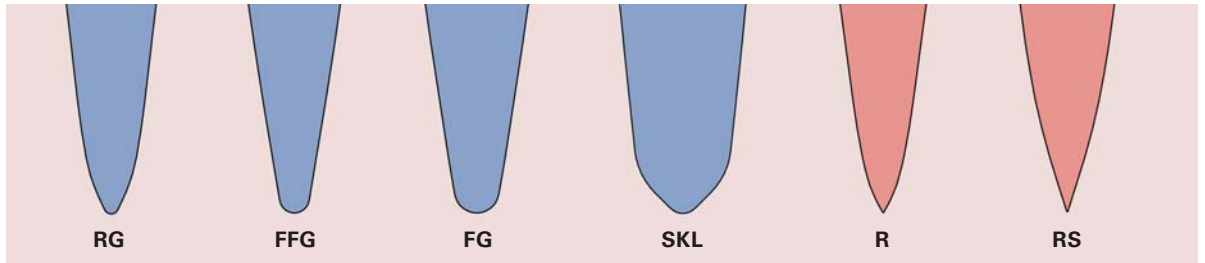


SELECTING THE MOST SUITABLE NEEDLE POINT

The following are available:

Ball points **RG, FFG, FG** and **SKL**

Round points **R, RS**
(not for knitted fabrics)



Requirement for optimum process stability:

- Regular testing of the point is essential
- Replacement of a needle in good time increases the process stability


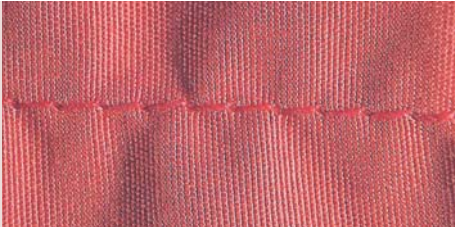
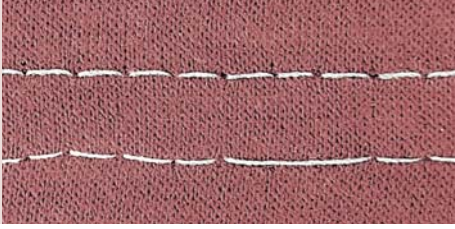




NEEDLE POINT TEST: DRAW NEEDLE POINT LIGHTLY OVER FINGERNAIL AND SEE IF IT LEAVES SCRATCH MARKS.

PROBLEMS IN USE

There is currently a wide variety of materials available that are fine and difficult to sew, and consequently problems often occur in use.

The causes of sewing problems are very diverse. They can be due to the machine, the fabric, the machine operator, the climate, the sewing thread or the needle. In addition, users often want different seam structures and seam types combined with varying numbers of fabric layers and thicker areas. In this document, we shall deal only with needle-related faults.

Possible needle-related causes	Effect	Possible solutions
<p>Material damage</p> <ul style="list-style-type: none"> • Needle too thick • Wrong point shape • Damaged needle point 		<ul style="list-style-type: none"> • Use a thinner needle • Select a suitable needle point • Check the needle point • Use a Groz-Beckert SAN® 10 needle
<p>Seam puckering</p> <ul style="list-style-type: none"> • Needle too thick • Wrong needle point 		<ul style="list-style-type: none"> • Use a thinner needle • Select a suitable needle point • Use a Groz-Beckert SAN® 10 needle
<p>Missed stitches</p> <ul style="list-style-type: none"> • Needle too thin • Thread not suitable for needle thickness 		<ul style="list-style-type: none"> • Use a thicker needle • Match the thread thickness to the needle thickness • Use a Groz-Beckert SAN® 10 needle
<p>Broken thread</p> <ul style="list-style-type: none"> • Needle too thin • Thread not suitable for needle thickness 		<ul style="list-style-type: none"> • Use a thicker needle • Match the thread thickness to the needle thickness • Use a Groz-Beckert SAN® 10 needle
<p>Broken needle</p> <ul style="list-style-type: none"> • Needle too thin • Wrong point shape 		<ul style="list-style-type: none"> • Use a thicker needle • Select a suitable needle point • Use a Groz-Beckert SAN® 10 needle

