

B E T T S O M E T E R

Fabric and Sewing Degradation Tester

Introduction:

Bettsometer is an instrument that tests degradation of fabric and sewing.

Bettsometer is a tear resistance tester designed to be used on fabrics and sewings of aircrafts, sails, parachutes, paragliders, hot-air ballons, gliders, kites, textiles and technical yarns.

Bettsometer allows to test in field admissible strength of large elements, that cannot be delivered to testing laboratory.

What's very important about our bettsometer that testing procedure causes no damage to the material under scrutiny. It takes advantage of the direct relationship between strength and resistance to tearing and it is being done without disturbing the structures or surfaces under scrutiny. Only in case where tearing resistance of tested material is below minimum level set by appropriate authority, norms or parameters fixed by the manufacturer it can lead to tearing of the material, but in such case the replacement is inevitable !

Operating conditions, especially factors such as UV, salt, exposure to acid, gas, abrasion, line stress make fabric and stitching even of high durability lose their strength in the course of time. That is why it is so important to test regularly with a bettsometer which in turn results in higher safety level for users of these equipments.

Both manufacturer and dealer are not to be held responsible for any damage to the material under scrutiny with the use of bettsometer.

Using bettsometer means making a hole in the tested fabric or yarn. It weakens tested material in some way.

It is a duty of the user to make sure that bettsometer is used in a place of low stress.

Neither manufacturer nor dealer hold no responsibility for tearing norms set up by appropriate authority.

It is advised to calibrate bettsometer every 12 months.

Directions for use:

Testing Fabric

1. Fabric is tested using fabric needle (see photo-silver needle)
2. The fabric-covered surface should be tested using the flattest available area laid evenly, free from any support or obstruction beneath.
3. Establish the orientation of the fabric i.e. the warp and weft fibre direction.
4. Firmly insert the fabric needle into the fabric until the base of the fabric needle reaches fabric surface. Swing the barrel of the instrument to lie along either the warp or weft direction.
5. Holding the barrel firmly and keeping the head down on the fabric surface pull steadily and slowly along either the warp or weft direction while carefully watching the scale reading appearing at the top part of the slider base (see photo)
6. Continue to pull steadily until you reach the pull force according to the figure laid down by the appropriate authority. **DO NOT INCREASE THE PULL & THE READING BEYOND THAT VALUE.** It can damage tested surface.
7. Now repeat this test positioning the needle in an adjacent spot, pulling at 90 degrees to the previous test – checking the other fibre direction.
8. There may have been the sound of a thread or two parting, but no more. If the fabric has weakened through UV and other ageing factors which resulted in smaller or longer tear (in either one or both of the directions) then it means that tear strength is below required value. It means that using it is forbidden.

Testing Stitching

1. Stitching is tested using stitch needle (see photo-golden needle)
2. Insert the stitch needle through a stitch loop, you have to be careful to pick up the entire thread.
3. Pull the thread steadily and slowly in the direction of the stitching, as close to the plane of the fabric as possible while closely watching the scale reading.
4. Continue to pull steadily until you reach the pull force laid down by the appropriate authority. **DO NOT INCREASE THE PULL & THE READING BEYOND THAT VALUE** as it may lead to breaking the thread. If the thread breaks before you reach required breaking strength it means that its strength is insufficient and it needs to be replaced as it cannot be admitted

Insert needle cover on the fabric needle and put bettsometer in the pouch.

