

Guidelines for Measuring Procedure (dated 10.07.2022)

Ski Jumping Suits

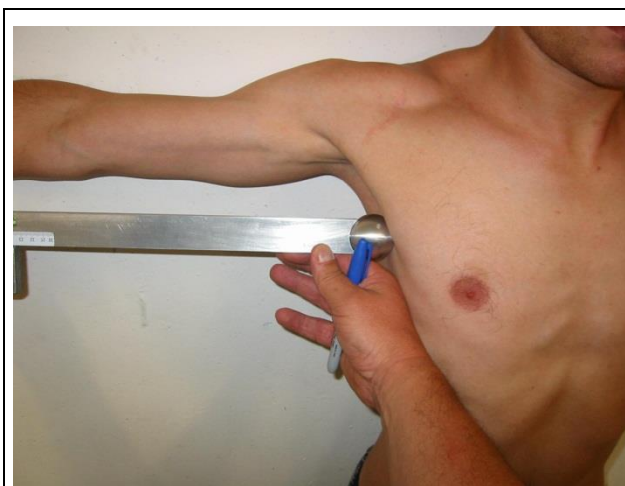
Measuring the Athlete

Athlete must be standing up in a relaxed position during the measuring. Athlete must be stripped down to shorts and barefoot. Only "slip-type" of underwear is allowed.

~~Athlete will have to change her/his piece of underwear in the presence of the controller prior to the measurement.~~

Circumference of the body and legs and arms will be measured in 90 degrees to the axis with the following exceptions:

- A) Arm length: measured in an extended horizontal position of both arms from the torso. Length will be measured on the anterior side from the point between the chest muscle and rib cage (see picture #1) to the wrist bone (marked position at the end of the forearm – (processus styloideus unlae) see picture #2).



Picture 1



Picture 2

B) body height and crotch measurement

the athlete's body length is measured with laser tool, when the athlete lies on a flat surface (table) with his/her head, shoulder blades, buttocks, calves, and heels touching the surface, legs together

sitting height is measured when the athlete is sitting on a flat surface (table) in an upright position with legs 90 degrees knee angle, feet apart, arms stretched at 90 degrees

the crotch height is defined by deducting the measured sitting height from the measured body height.

~~Crotch: Vertical measurement from the ground to the crotch. Legs must be straight and feet 30-40 cm apart. Heels, calves and buttocks, shoulders and head must contact the wall.~~

Standard measuring elements:

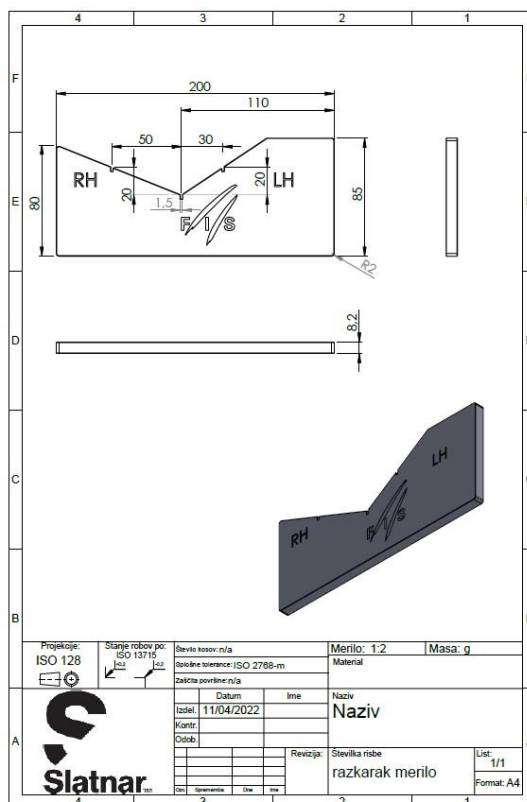
- Body height
- Crotch length (see B, C)
- Arm length (see A)
- Neck size
- Foot length

By an athlete's request a re-measuring may occur. However, only a larger value (height, length) will be considered.

Measuring the Suit

Suit is measured on the outer surface. Be sure that the suit is stretched flat and there are no folds. The suit will be marked and measured at the selected point, the athlete is then marked and measured at the corresponding body position.

- A) Anterior arm length (AL) is measured from the intersection of the seams at the armpit, following the seam to the end of the sleeve. Measured length must be no greater than the length of the arm and no shorter than a maximal tolerance of 4 cm.
- B) Anterior crotch length (SL) is measured from the intersection of the seams at the crotch of the suit (SX) following the anterior seam to the hem of the leg part of the suit. Measured length must be no shorter than the measured crotch length of the athlete.
- C) Crotch: vertically from the ground to the crotch. Athlete must wear the jumping-suit and jumping boots in the same way (attached to the boots) as during the jump / during start control before the jump on the jumping before the jump. During the measuring feet must be 30 40 cm apart and the legs must be fully extended. Measured crotch length must conform to the crotch length measured on the athlete's body.
~~The control of crotch length and suitability must be done at the very same time.~~
- D) Intersection of seams at the crotch (Sx) must be the lowest point of the suit. This intersection must be positioned in the middle of the suit (front-to-back) with the maximum tolerance of 2 cm both ways.
- ~~E) Inside the suit just above the hip bones of the athlete a non-stretchable strap must be sewn around horizontally from zipper to zipper. This strap must be 2-4 cm wide and maximum 2 mm thick.
The measured circumference of this part of the suit - 5 cm above and 5 cm below the lower seam of the strap, incl. the strap itself, even when the suit is stretched, must not exceed the respective body measurement. The transition from the close-fitted part of the suit (+/- 5 cm from the strap) to the allowed tolerance in the suit size must be gradual, without any additional curves.~~
- E) Crotch – At the height of 2 cm, the front seam must protrude maximum 3 cm to the front from the intersection of the crotch seams, while back seam must protrude maximum 5 cm to the back from the intersection of the crotch seams according to the below template, while the suit is placed inside out. Intersection of the crotch seams must always be the lowest part.



Competition equipment control

Any point on the athlete's body can be measured and compared to the corresponding point on the suit. When the athlete is wearing the suit – the athlete must stretch his arms so, that the elbows are 30 cm from the body, when the measurements are taken. Legs are also straight, feet 30 40 cm apart. Athlete must stand up in an upright position.

The jumping suit must in all places and parts be tight-fitting the athlete's body.

The measurements of the suit must conform the measurement of the body in an upright position with a tolerance of at least 2 4 cm in addition and a maximum of 4 3 cm to the body at any part of the suit (~~For Ladies at least 2 cm in addition and a maximum of 4 cm~~). An exception is the part around the boot: the jumping suit can be maximally 10 cm larger (beginning at the knee) than the value which is measured around the jumping ~~boot~~ and must cover the boot. The suit must be made in such a way as to be able to move up and down along the length of the body. The suit cannot be fixed at any place of the body.

Body weight control

The body weight control takes place without helmet and goggles, gloves, ski jumping boots and wedges.

Zip of the Ski Jumping Suit

The Ski Jumping suit must be closed by means of a zipper that is cantered vertically in the middle of the front part of the suit and must reach over the collar bone by minimum 1.5 cm, and maximum 5 cm. The zipper must be completely closed. The minimum distance from the lower end of the zipper and the crotch seam is 10 cm.

Crash helmets, Ski Jumping boots

Measuring the size of the helmet and the boot with a standardized measuring tool and measuring procedure.

~~The measured inner sole of the boot may not exceed a maximum tolerance of the measured foot size plus 2 cm. The ski jumping boot is measured from inside to outside.~~

~~Boots must have the same thickness on both sides.~~

SCE 3

Air Permeability

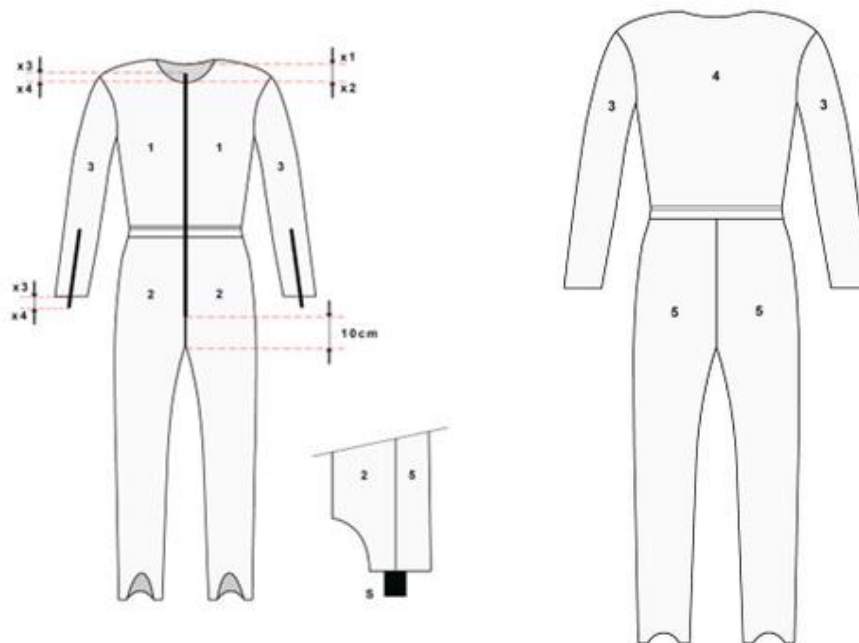
Maximal difference in air permeability of the material measured at any part of a jumping suit is 12 litres, which is the same from the outside in and from the inside out.

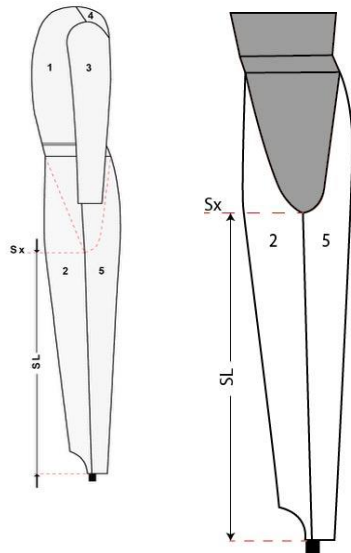
Measurement Armpit-Shoulder Part

The measurement of the circumference armpit-shoulder area is measured when the athlete is wearing the suit. The arms are extended at a 45° angle from the body. The athletes are also measured when they are not wearing the suit, with the circumference of the armpit-shoulder area measured with the arms stretched at an angle of 45° from the body.

Seams Ski Jumping suits men

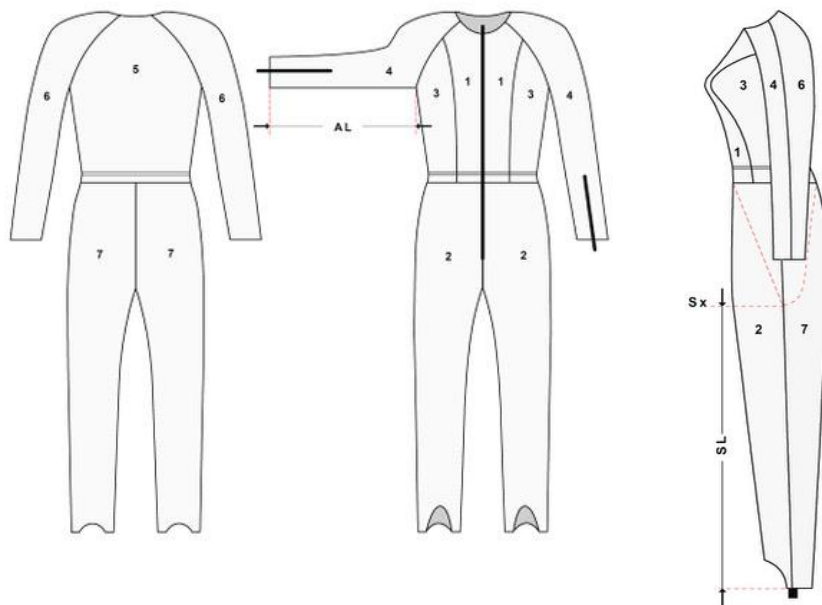
The basis for the seam contours is the attached drawings:



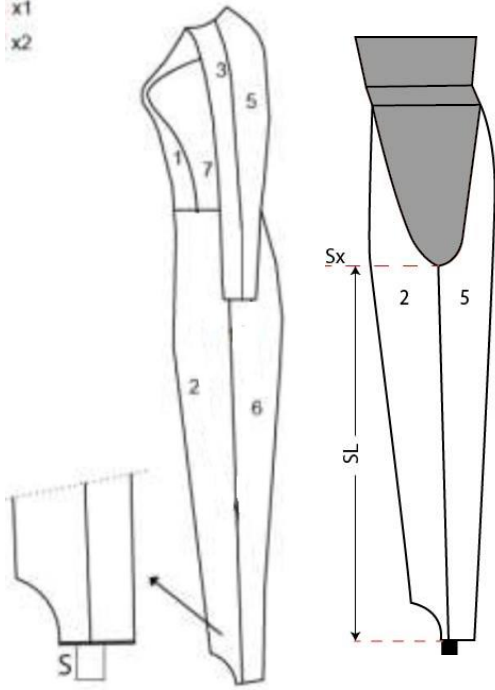


Seams Ski Jumping suits women

The basis for the seam contours is the attached drawings:



x1
x2



Underwear

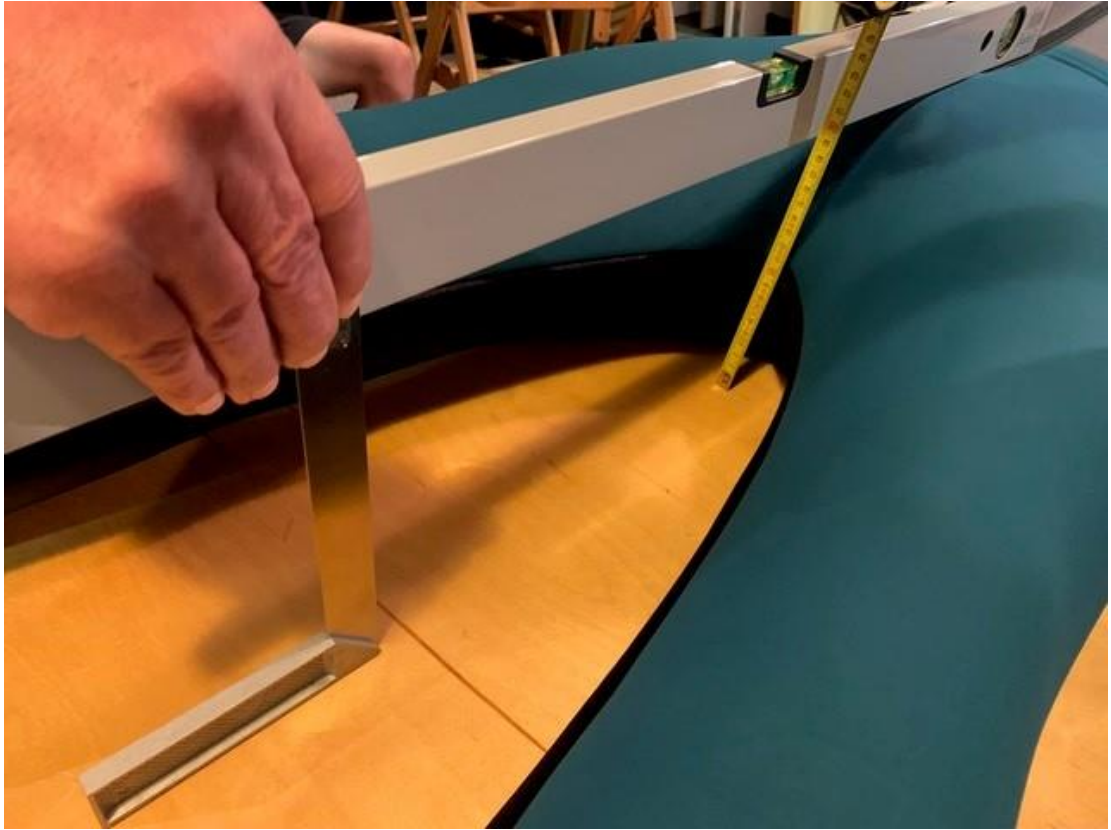
The underwear is consisting of two parts (shirt and pants), made of elastic material:

- A zipper in the middle of the front part of the shirt is allowed
- When using a back protector inside the shirt, a full-length zipper is mandatory

It is not allowed to attach or fix the underwear to any part of the body or the suit (straps, hooks, tapes, or other fixing or helping material, etc.). The arm sleeve must end before the elbow. The leg of the pant must end before the knee. Overlapping of the stockings/socks and the pants is not allowed.

It is not allowed to place one's hair inside the suit or underneath the starting bib. Hair must be left loose outside the suit or placed within the helmet.





Gloves

The seams of the gloves must be inside the gloves.

Transponders and Motion Sensors

Transponders and Motion Sensor delivering live and recorded data that are provided by the official data and scoring provider and approved by FIS. ~~must be worn on competition equipment by the competitors~~ They must be fastened to the front part of the bindings by the competitors in official trainings and competitions for some events. Transponders and Motion Sensors deliver external data from competitors such as speed and positioning. The service will be provided by the official timing and data provider and the generated data must be provided to NSA's and FIS free of charge.

Wedges

~~Wedges need to be symmetric (see templates and drawings). The following maximum sizes are allowed:~~

~~Back part: 5.5 cm~~

~~The back part of the wedge needs to touch the rear part of the template regardless of the wedges' radius.~~

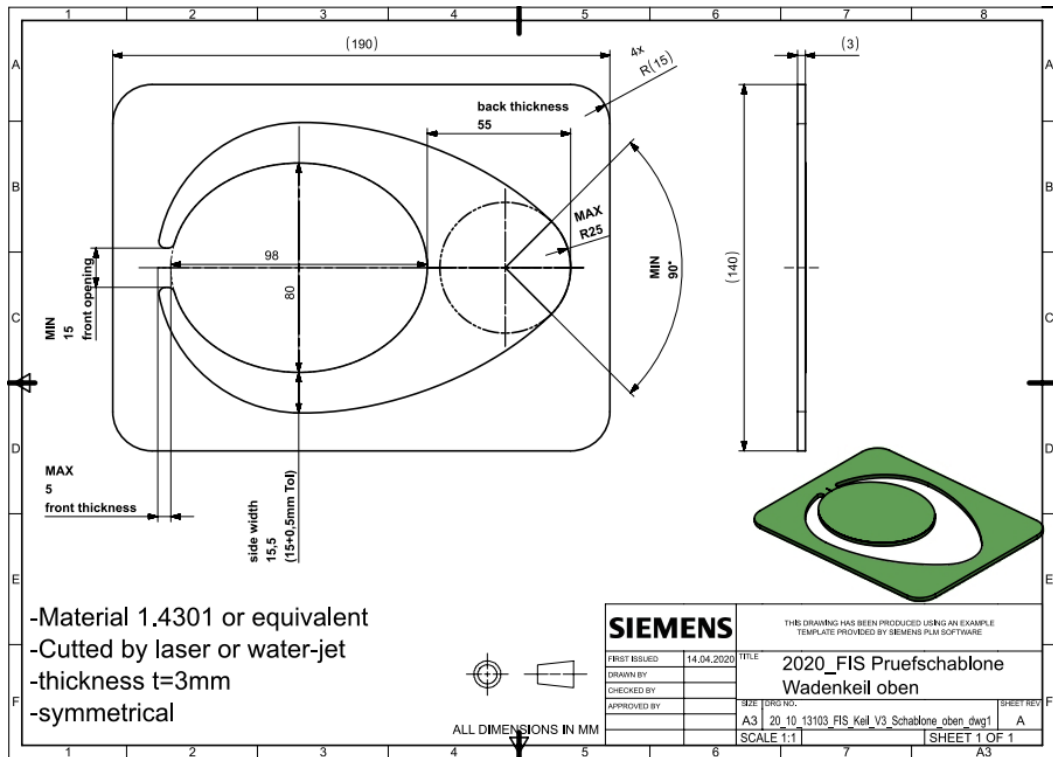
~~Side: 1.5 cm on each side~~

~~Front part: 0.5 cm~~

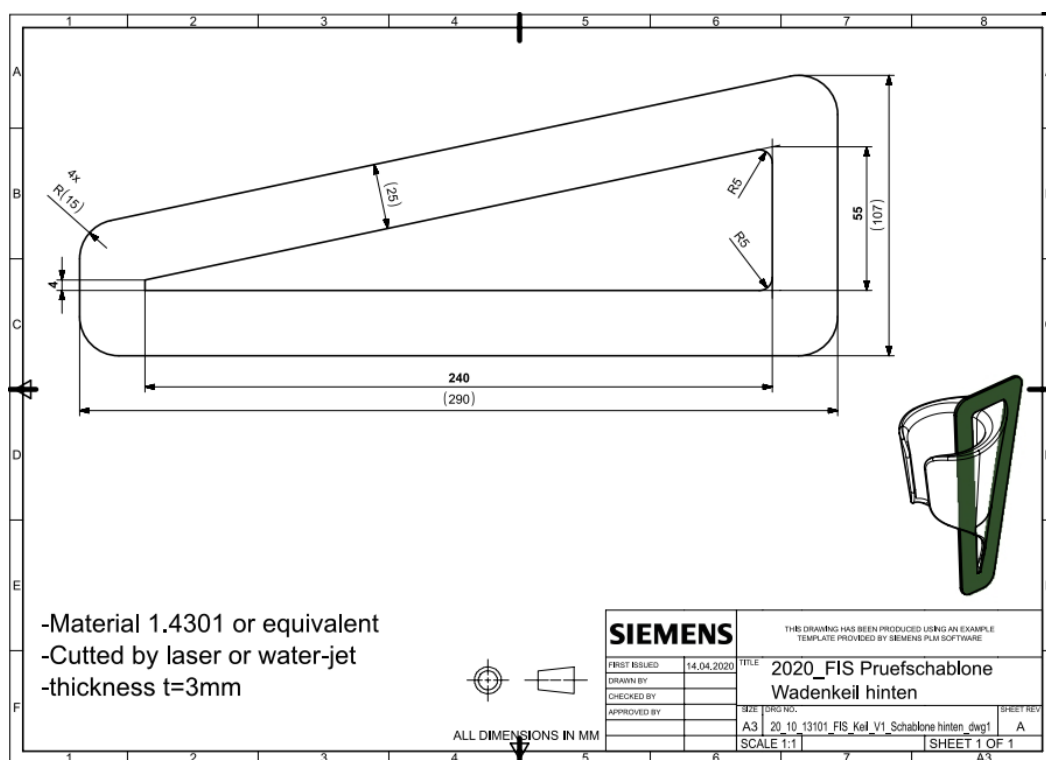
~~The wedge opening might only be positioned in its central front part. Opening on either side is not allowed.~~

~~During the jump, the upper edge of wedges must be placed on the same level as that of the upper edge of jumping boots.~~

SCE 3.3



- Material 1.4301 or equivalent
- Cutted by laser or water-jet
- thickness $t=3\text{mm}$
- symmetrical



Back protector

Definition

The back protector is an additional item of equipment, which protects the athlete's back against external forces. It has to be worn on the back only.

Specifications of the back protector

The material of the protector consists of visco elastic soft foam with outstanding shock absorption values according to EC EN1621-2:2014 with given form (see Photo 1). The back protector must adapt to the anatomical bend of the athlete's spine and lie flat against the body in upright position.

The maximum size and thickness must conform to the performance level 1 or 2.

The thickness reduces at the edges of the back protector. Designs with the view to improve the aerodynamic efficiency are forbidden. The back protector must be worn in an adequate pocket in the shirt and is removable. The pocket is an integrated part of the shirt.

Sizes of back protectors

S	for body size	120 - 140 cm
M		135 - 155 cm
ML		150 - 170 cm
L		165 - 185 cm
XL		180 - 205 cm

Photo 1 up



Down