

# SPECIFICATIONS FOR COMPETITION EQUIPMENT AND COMMERCIAL MARKINGS

**EDITION 2012/2013 (JULY 2012)** 

# **INTERNATIONAL SKI FEDERATION**

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# **Specifications for Competition Ski Equipment**

# A. Definition

# **General Principles**

The FIS Council shall be the sole authority to finally determine whether the use of a name, designation, trademark, logo or any other distinctive sign complies with the FIS Rules and Guidelines; and

The FIS reserves the right to further interpret and/or supplement these Rules and Guidelines in order to help ensure that their spirit and purposes are respected.

# 1. Competition equipment

The term "competition equipment" implies all items of equipment used by athletes in competitive skiing, including clothing and implements that serve a technical function. The entire competition equipment forms a functional unit. In this connection the following points must be observed:

- a) the principle of safety
- b) the principle of fairness

# 1.1 Effective Manufacturer

"Effective Manufacturer" means the enterprise which itself manufactures the Competition Equipment and/or effectively controls and manages the manufacturing of the Competition Equipment under its own responsibility through customary subcontracting processes, and whose Competition Equipment is effectively offered on the market to end users. If requested by FIS, the manufacturer shall provide documentary evidence of such commercial activities at retail level (such as manufacturing activity in the market of the relevant Competition Equipment, including control over the manufacturing process, retail activity and marketing expenditures linking the brand to the relevant piece of equipment) as a condition for the commercial markings to be accepted as a Manufacturer's Identification as further defined in these Specifications. Given the specificity of jumping skis, the FIS Council may exceptionally accept an enterprise as an Effective Manufacturer without evidence of commercial activities at retail level relating to jumping skis.

# 1.2 Manufacturer's Identification

"Manufacturer's Identification" means the trade name, brand, logo, or other designation of the Effective Manufacturer under which the particular Competition Equipment is manufactured and commercially offered to the market.

The Manufacturer's Identification must be a sport equipment brand, which means that the Manufacturer's Identification is principally used for Competition Equipment and is (i) not principally used for non-sport equipment, and/or (ii) not confusing similar or identical to an identification used in another line of business, unrelated to Competition Equipment.

Given the specificity of jumping skis, the FIS Council may exceptionally accept the use of Manufacturer's identification, which does not fulfill the

above requirement, notably the use of commercial markings, which have already been previously accepted. It is clarified that this exception does not apply to sport events governed by the International Olympic Committee (IOC), which remain fully subject to rules issued by the IOC in relation commercial markings.

# 1.3 Competition implements

Competition implements refer to equipment which fulfil essential functions during the competition but which can be separated from the actual competition.

Examples: skis, bindings, boots, poles, clothing, helmets, ski goggles.

# 1.4 Additional equipment (accessories)

Additional competition equipment (accessories) are those components or implements which exert an influence on the technical function of the competition equipment and which are attached directly to the equipment by means of recognised fastenings. Such accessories do not perform essential functions during the competition.

Example: parablacks, plastic tip covers, additional weights, back protectors.

# 1.5 Auxiliary equipment

Auxiliary equipment refers to those components of the competition equipment which do not fulfil an essential function, and which do not fall under the heading of additional equipment

Example: measuring instruments.

# 2. Commercial Marking on Equipment

Specifications on pages 42 to 45

# B. Alpine Competition Equipment

Downhill, Slalom, Giant Slalom, Super G

Measurements are valid only if they have been carried out by appointed FIS equipment measurement experts using official FIS measurement tools.

Measurements are valid at the time of measurement, irrespective of previous measurements.

# 1. Alpine racing skis

### 1.1 Definition

Skis, predominantly for use in Downhill, Slalom, Giant Slalom and Super-G, racing on suitable terrain and utilising the force of gravity. In order to allow transmission of lateral forces, the edges of the running surface of the ski are made mainly of a hard material resistant to wear and tear.

# 1.2 Restrictions

# 1.2.1 Geometric features

Geometric features

For MAS racers the following specifications in regard to ski length (except Super G), radius and profile width are recommendations. The minimum ski length for Super G skis is compulsory for MAS racers.

No length, width or ski radius restriction for Ladies above 55 and Men above 65 years of age.

Specification for competition equipment applicable for WC, WSC, EC and WJC season 2012/13 is also allowed at COC and FIS races (ICR 201.3)

			WC L & M, EC L & M, WJC WSC	COC L & M, FIS L & M,	WC L & M, EC L & M, COC L & M, FIS L & M, WJC OWG
			2012	/2013	2013/2014
1.2.1.1	Ski length (Minimum)	DH Ladies	210	210**	210**
		DH Men	218	215**	218**
	Ski length measurement	SG Ladies	205	200**	205**
	tolerance of +/-1cm	SG Men	210	205**	210**
	** -5cm tolerance for	GS Ladies	188	180**	188**
	FIS	GS Men	195	185**	195**
	* Men U18 (Junior I) at	SL Ladies	155	155	155
	FIS -10cm tolerance	SL Men	165	165*	165
1.2.1.2.1	Profile width	DH Ladies	<=65	>=67	<=65
	under Binding	DH Men	<=65	>=67	<=65
		SG Ladies	<=65	>=65	<=65
		SG Men	<=65	>=65	<=65
		GS Ladies	<=65	>=65	<=65
		GS Men	<=65	>=65	<=65
		SL Ladies	>=63	>=63	>=63
		SL Men	>=63	>=63	>=63
1.2.1.2.2	Profile width	DH Ladies	<=95		<=95
	in front of Binding	DH Men	<=95		<=95
		SG Ladies	<=95		<=95
		SG Men	<=95		<=95
		GS Ladies	<=103		<=103
		GS Men	<=98		<=98
		SL Ladies			
		SL Men			
1.2.1.3	Radius (Minimum)	DH Ladies	50	45	50
		DH Men	50	45	50
		SG Ladies	40	33	40
		SG Men	45	33	45
		GS Ladies	30	23	30
		GS Men	35	27	35
		SL Ladies			
		SL Men			
2.1.2	Max. Standing height (ski	/plates/binding)	50	50	50

# U14 (K1) and U16 (K2)

	/ and 0 to (tt=/			
			U14 (K1)	U16 (K2)
			201	2/13
1.2.1.1	Ski length (Minimum)			
	Ski length measurement			
	tolerance of +/-1cm	SG Ladies		175
		SG Men		175
		SL Ladies	130	130
		SL Men	130	130
1.2.1.3	Radius (Minimum)			
		SG Ladies		27
		SG Men		27
		GS Ladies	14	17
		GS Men	14	17
2.1.2	Max. Standing height		50	50
	(ski/plates/binding)			

<u>Masters</u>			
	_		Masters
			2012/13
1.2.1.1	Ski length (Minimum)		
1)	For MAS racers the		
	specifications in regard to		
	ski length	SG Ladies **	180*
	(except SG) are	SG Men **	185*
	recommondations.		
	The minimum ski length	GS Ladies	180***
	for SG skis is compulsory	GS Men	185***
	* without tolerance		
	** GS Skis permitted		
	***- 5cm tolerance		
2.1.2	Max. Standing height		50
	(ski/plates/binding)		

1) No length, width or ski radius restriction for Ladies above 55 and Men above 65 years of age

# 1.2.1.1 Ski length

Minimum length "developed" length (unwound length) in accordance with ISO Norm including a measurement tolerance of +/- 1 cm. The ski length must be marked on the ski.

Precision for the length of Slalom Skis:

When a ski tip different from the main body of the ski is used, the measurement will only be taken into account to the extent it covers a surface corresponding to the natural shape of the ski.

The manufacturer must mark the tip showing the limit of the natural shape and thereby allow an easy measurement.

To prevent doubt, specific designs of ski tips as part of the main body of the ski are allowed.

Recommendation for children younger than 12 years

For children younger than 12 years: Use only one pair of skis in all events if the ski length is shorter than 130 cm.

### 1.2.1.2 Profile width

Minimum width of the running surface under the binding and in front of the binding without any tolerance according to art. 1.2.1.2.1 and 1.2.1.2.2.

# 1.2.1.2.1 Profile width under binding

See table

# 1.2.1.2.2 Profile width in front of binding

See table

### 1.2.1.3 Radius

The radius must be marked on the ski.

Radius measurement for DH skis with a preparation tolerance of -1 m.

# 1.2.1.4 Overall height of sectional view

No limitations.

# 1.2.1.5 Camber

No limitations.

# 1.2.1.6 Contour, length and height of shovel

Slalom and Giant Slalom: Downhill and Super G: minimum height per ski: 50 mm minimum height per ski: 30 mm

# 1.2.1.7 Contour of tail

Maximum height: 10 mm.

### 1.2.1.8 Running surface

No limitations

# 1.2.1.9 Running Groove

No limitations

# 1.2.2 Flexibility

No limitations with regard to the rigidity in all grades of flex.

# 1.2.3 Mass

No limitation with regard to weight and distribution of mass.

### 1.2.4 Construction

# 1.2.4.1 Type

No limitation with regard to composite structure.

# 1.2.4.2 Ski components

Running surface: no limitations with regard to material and dimensions.

Torsion box: no limitations with regard to material and dimensions.

Edges: no limitations with regard to material and dimensions.

Top surface: no limitations with regard to material and dimensions.

Core: no limitations with regard to material and dimensions.

# 1.2.5 Durability

With regard to the mounting of bindings, national norms and at least the "Ö-Norm 4030", i.e. the equivalent of DIN- and ISO-norms, must be observed.

# 1.2.6 Additional equipment

# 1.2.6.1 No additional equipment is permitted which

- a) makes use of foreign energy (e.g. heaters, chemical energy accumulators, electric batteries, mechanical aids, etc.)
- b) causes or intends to cause changes in the outer conditions of the competition to the disadvantage of fellow competitors (e.g. changes to piste or snow)
- c) increases the risk to the users or other persons, when used for the purpose for which it was intended.

# 2. Safety bindings

Safety bindings function as strain limiters. That is, these devices transfer specific demands occurring during skiing to an acceptable limit, and when this limit is overstepped, they release their firm hold on the ski.

# 2.1 Anti-vibration plates

Anti-vibration plates can be mounted if the following conditions are taken into consideration:

### 2.1.1 Width of ski surface

The width of the plates must not exceed the width of the ski surface.

# 2.1.2 Maximum height

Maximum height (distance between the bottom of the running surface of the ski and the ski boot sole) for all categories is 50 mm (Ladies, Men and Children's).

# 2.2 Ski stoppers

The ski stopper is a braking apparatus for skis, the function of which following the release of the safety binding is to stop or bring to a standstill the loose ski within the immediate vicinity of the skier's fall. The use of skis without ski stoppers during competitions or official training runs is prohibited. The functioning of the release mechanism must not be

compromised by the method of its mounting. It is the manufacturers' responsibility to ensure that the ski stopper functions correctly.

# 3. Ski boots

3.1 Ski boots are robust footwear developed specifically for skiing, offering protection against jolts and bumps as well as injury from ski edges and other external influences. The ski boot encloses the foot firmly, while at the same time allowing the movement necessary for skiing techniques, in that the ankle has the room it needs to flex, but at the same time facilitating the transfer of every steering movement completely to the ski.

The relevant national and international guidelines and norms establish the requirements.

### 3.2 Thickness of ski boot soles

Distance between the ski boot sole and the base of the heel including all hard and soft parts:

Ladies, Men, U14 (K1) & U16 (K2) maximum 43 mm
Ladies & Men MAS maximum 45 mm (Recommendation)

Recommendation for children younger than 12 years

The height of the skis and the boots should be the same as in the categories U14 (K1) and U16 (K2).

# 4. Ski poles

The ski pole is an item of equipment, the function of which is to aid the skier and facilitate balance. National and international rules establish the minimum requirements for ski pole tips, grips, shafts, baskets, straps, length, etc. Owing to risk of injury, metal baskets are not permitted.

# 5. Racing suits

Competition suits and clothing worn underneath, such as undergarments, etc., must have a textile surface on the inside and the outside. The surfaces may not be plasticised or treated by any chemical means (gaseous, liquid or solid) and must have a minimum permeability of 30 litres per m2/sec. Seams may only exist in order to join the portions of the suit. Outer tucks and darts are not allowed. The suits must be equally porous in all parts, both from the outside in and from the inside out. Minimum air permeability is established whereby the unstretched fabric must show a medium air permeability of a minimum of 30 litres per m2/sec under 10 mm of water pressure.

Competitors are allowed to protect all parts of the body with so called protectors in all events:

- In Downhill, protectors may not be integrated into the competition suit itself.
- In all events these protectors must be worn underneath the plombed racing suit. (Exception forearm protection used in SG, GS and SL and shin protection used in SL)

Protectors must fulfil the 30 litre permeability rule with the exception of the shoulder, scapular region, chest, arms and legs. The anatomical body shape may not be changed.

# 5.1 Examination of materials, suits

The guidelines for minimum air permeability established by the Control Procedures/Equipment Working Groups in collaboration with the Federal Institute for Materials Control are valid. Multi-layered materials are accordingly permitted for alpine racing suits and undergarments, as long as they conform to the air permeability requirements in question.

# 6. Crash helmets

The use of crash helmets is compulsory for all events.

Only helmets are permitted whose shell and padding cover the head and ears. The National Ski Associations are advised to provide their teams only with crash helmets which satisfy the minimum requirements for the respective event and which have been certified by recognised institutes.

Helmets with spoilers or edges that protrude are not permitted.

Certain helmets must show a smooth top surface for safety reasons.

Helmets used in FIS Snowsports shall be specifically designed and manufactured for the respective discipline and shall bear a CE mark and conform to recognized and appropriate standards such as CEE 1077 or US 2040, ASTM F2040, SNELL S98 or RS 98, etc.

Soft ear protections are only allowed for SL events.

For World Cup events (DH/Super-G), the helmets must fulfil the following specific additional requirement: the maximum deceleration measured during the impact established based on the test described in the norm EN 1077 Class A must be equal or lower to 230g (NB: according to standard EN 1077 Class A: equal or lower to 250g). The helmet must bear a specific label / marking of minimum 1sqcm applied by the manufacturer on the outside shell and stating "DH/SG" confirming that such requirement is fulfilled.

# 7. Ski goggles

Ski goggles are devices protecting the eyes against weather and rays with optically correct lenses. Their aim is to guarantee good, contrast-free visibility in all weather conditions. The use of ski goggles is recommended. It is prohibited to reshape the ski goggles in order to obtain aerodynamic advantages.

# 8. Ski gloves

Gloves offer protective covering against weather and external forces. The wearing of gloves is urgently recommended. Reshaping the glove, the application of a plastic coating on the outer surface, or the use of skai (imitation leather) with the aim of attaining more aerodynamic features, are not allowed. The glove must not reach beyond the elbow. Protective padding along the entire length of the glove is permitted. The use of protective guards in the form of shields, which are pulled over the glove, is permitted.

# 9. Back protectors

### 9.1 Definition

The back protector is an additional item of equipment, which protects the athlete's back against weather and external forces.

# 9.2 Specifications

The back protector must adapt to the anatomical bend of the athlete's spine and lie flat against the body. The top edge of the back protector must be situated in the area of the spinal column and may not go above the 7th cervical vertebrae (C7). The maximum thickness must be in the middle part and may not exceed 45 mm; the thickness reduces at the edges of the back protector. Designs with the view to improve aerodynamic properties are forbidden. The back protector must be worn underneath the competition suit.

# 9.3 Recommendation for specifications for children

Children under 12 years should use back protectors, also for U14 (K1) and U16 (K2).

# C. Nordic Competition Equipment

**Cross-Country Skiing** 

# 1. Cross-Country racing skis

### 1.1 Definition

The cross-country racing ski is a type of ski, whose features guarantee the best possible application of the gliding techniques to master cross-country pistes (uphills, bumpy terrain, downhills). The basic features of this type of ski are defined in these rules.

### 1.2 Restrictions

# 1.2.1 Geometric features

### 1.2.1.1 Ski length

Minimum: height of skier minus 100 mm

# 1.2.1.2 Ski width

In the binding fixation area of the ski defined by ISO 9119 or Ö-Norm S4072

Minimum 40 mm

# 1.2.1.3 Tip

The minimal shovel curvature is 30 mm.

# 1.2.1.4 Tail

The tail must not rise more than 30 mm on the unweighted ski when laying on a flat surface.

### 1.2.1.5 Overall height of sectional view

Maximum 35 mm

Minimum 20 mm

### 1.2.1.6 Same construction

Both skis must be constructed in the same way, and must be the same length.

# 1.2.2 Flexibility

No restrictions with regard to the rigidity in all grades of flex.

### 1.2.3 Mass

Skis must weigh at least 750 g per pair. No limitations with regard to the distribution of mass.

# 1.2.4 Construction

# 1.2.4.1 Type of construction

No limitations.

# 1.2.4.2 Ski components

# 1.2.4.2.1 Running surface

The entire width of the running surface can be smooth or slightly grooved length-wise. With the exception of the running groove, however, the level must be constant in the entire length and width. Climbing aids in the form of scale patterns or step patterns are permitted. Models driven by means of foreign energy of any kind are not permitted.

# 1.2.4.2.2 Top surface

No limitations

# 1.2.4.2.3 Edges

The edges must not face up and outwards, making the running surface narrower than the top surface (no wedge shape).

# 1.2.5 Durability

No limitations

# 1.2.6 Additional equipment

# 1.2.6.1 No additional equipment is permitted which

- a) makes use of foreign energy (e.g. heaters, chemical energy accumulators, electric batteries, mechanical aids, etc.)
- b) causes or intends to cause changes in the outer conditions of the competition to the disadvantage of fellow competitors (e.g. changes to piste or snow)
- c) increases the risk of injury to users or other persons, when used for the purpose it was intended for.

# 2. Cross-Country racing bindings

No limitations with regard to material and make, subject to decisions 1.2.6 b) and c).

# 3. Cross-Country racing boots

No limitations with regard to material and make.

# 4. Cross-Country racing poles

# 4.1 Definition

The cross-country racing pole is a pole, whose features guarantee the best possible application of the gliding techniques to master cross-country pistes (uphills, bumpy terrain, downhills).

### 4.2 General rules

# 4.2.1 Poles of equal length

Two poles of equal length must be used in competition, with one pole held in each hand.

# 4.2.2 Pole length

The maximum pole length must not exceed the competitor's height, nor measure below the hips (measurements are taken by placing the tip of the pole on the ski in front of the binding).

# 4.2.3 Constant length

The pole must have a constant length. It may not, for example, possess a telescopic system.

# 4.2.4 Foreign energy

The pole must not create a foreign energy to favour push-off (e.g. springs or mechanical devices).

# 4.2.5 Weight

No limitations regarding the weight of the pole.

# 4.2.6 Construction

The poles may be constructed asymmetrically (e.g. there may be a difference between left- and right-hand poles).

# 4.3 Technical Specifications

# 4.3.1 Grip

The grip must be attached to the shaft. There are no limitations with regard to geometric features or material.

# 4.3.2 Straps

The straps must be joined to the grip or the shaft. They may be adjustable in length and width.

### 4.3.3 Shaft

There are no limitations with regard to material and make of the shaft or distribution of mass.

### 4.3.4 Baskets

Baskets with varying geometric features and materials are permitted to master various snow conditions. The baskets, however, must not change the condition of the track, so that other competitors suffer disadvantages.

# 4.3.5 Tip

Tips may be joined to the shaft at any angle. It is permitted to use one or more tips per pole. There are no limitations with regard to material.

# D. Nordic Competition Equipment

**Ski Jumping** 

# 1. Jumping skis

# 1.1 Definition

Jumping Skis are manufactured especially for use on Ski Jumping hills. Their construction is adapted to the requirements of Ski Jumping.

### 1.2 Restrictions

### 1.2.1 Geometric features

# 1.2.1.1 Ski length

According to the body weight/height relationship (BMI = body weight / body height<sup>2</sup> in  $Kg/m^{-2}$ ,). See enclosure.

However, the maximum ski length is 145 % of the total body height of the competitor a minimum BMI of 21 for Ladies and 21 for Men has to be reached. For athletes with less than minimum BMI a grading table of 0,125 BMI per 0,5 % of ski length will be applied.

# Exception:

For Youth competitions, the maximum ski length is limited to 140 % from the body height only (no BMI formula will be applied).

# 1.2.1.2 Profile width (see enclosure)

The curvature from A through B to C indicates the shape of the ski side cut. This curvature must be equal on both sides and symmetrical to the ski centre line. As a maximum the line connection from A to B, as well as B to C should appear as a straight line.

Minimum width of the running surface at the point of balances 95 mm, maximum width 105 mm.

The edges must form a 90° angle to the running surface and the top surface along the entire length of the ski.

Rounded top-to-bottom edges must never be more than 2 mm.

The difference between the above-mentioned measurement of the width of the ski tip and the ski tail may not exceed 5 mm.

# 1.2.1.3 Contour, length and height of shovel

The ski tip may be individually modified as long as it remains symmetric and centred to the middle part and that the minimum distance to the ground of 30 mm is observed.

### 1.2.1.4 Contour of tail

According to the sketch (see page 39) Maximum height 10 mm

# 1.2.1.5 Running surface

Running surface must be flat and may have a fine base structure in a longitudinal direction. With the exception of the grooves, the entire ski base cannot have any additional shapes. There can be one or more grooves; however the total of the measured surface area of all the grooves may not exceed 50% of the minimal width of the ski. The width of a single groove may not exceed 10 mm. The base must be of a polyethylene material.

# 1.2.2 Shape and Flexibility

Aerodynamic coverings on the tips, as well as fins in the form of stabilizers on all sides are not allowed. A design, which makes a desired aerodynamic flex possible during flight, is not allowed. Otherwise there are no limitations with regard to rigidity in all grades of flex. The top surface of the ski must be smooth and flat.

### 1.2.3 Mass

A single non-mounted ski must have a minimum weight conforming to its length (the weight in dkg results of the ski length in cm: e.g. 250 cm = 2,50 Kg, 262 cm = 2,62 Kg). Lead-weights used for balancing the centre of gravity are not considered (see 1.2.6.2).

# 1.2.4 Construction

# 1.2.4.1 Ski components

Torsion box: No limitations with regard to material and dimensions. Edges: see 1.2.1.2.

# 1.2.5 Durability

The jumping ski must have screw retention strength of 1600 N in the area of the binding mounting.

# 1.2.6 Additional equipment

# 1.2.6.1 No additional equipment is permitted which

- a) makes use of foreign energy (e.g. heaters, chemical energy accumulators, electric batteries, mechanical aids, etc.).
- b) causes or intends to cause changes in the outer conditions of the competition to the disadvantage of fellow competitors (e.g. changes to piste or snow).
- c) increases the risk of injury to users or other persons, when used for the purpose it was intended for.

# 1.2.6.2 Additional weights

Additional weights for balancing the centre of gravity are permitted.

# 2. Jumping ski bindings

Safety bindings in Ski Jumping function as strain limiters. That is, these devices transfer specific demands occurring during skiing to an acceptable limit, and when this limit is overstepped, they release their firm hold on the ski

Additional devices creating foreign energy of any kind as an aid to take-off are forbidden.

The complete binding system must be mounted so, that the Ski Jumping shoes are fixed to the skis symmetrically, parallel and centrally to the running direction. After fixing the front part of the jumping shoe into the front part of the binding it must stay fixed and horizontal to the top surface of the ski. The outline of the heel wedge of the shoe sole in its normal production form may not protrude over the side-walls of the Jumping ski.

# 2.1 Binding wedges

Binding wedges are permitted to improve the in run position. The entire height of the boot sole and binding wedge must not exceed 70 mm.

# 2.2 Mounting of the bindings

The binding must be mounted in such a way that maximum 57% of the entire ski length is used as the front part. Measured from the ski tip (with shovel curvature) to the shoe cap (leather part). (The 57% will be rounded up or down to full centimetres).

# 3. Ski Jumping boots

The shoe size and form must equal the foot size and form. Reshaping the boots in order to attain more aerodynamic features is not allowed. The boot sole may not exceed 45 mm.

# 4. Ski Jumping suits

All portions of the ski jumping suit must be made of the same material (see 4.2) and must show the same air permeability from the outside in and from the inside out.

The suit must close by means of a zipper placed at the centre of the front. The closed zipper strap must exceed the collar end with 1,5 to 5 cm. The maximum zip length is allowed to end at least 10 cm before the cross part of the crotch. The width of this zipper may not exceed 15 mm. During the jump the zipper must be completely closed. The design of the suit (seams) must conform to the image "Ski Jumping Suits" in the enclosure.

See enclosure 1

The suit must be close-fitting in any part of the body. The measured circumference of any unstretchd part of the suit must not exceed the respective body measurement. It is not allowed to fix the sleeves of the suit to the gloves.

Exception is to accommodate the fit of the suit around the boot with a maximum tolerance of 10 cm. This tolerance may start from the close-fitted part below the knee with a transition to the bottom hem of the leg panel.

### Additional restrictions

- Marking of the suit (for measuring and control) is allowed.
- The thickness of all parts of the suit must be the same.

- No additional chemical (gaseous, liquid or solid) or mechanical treatment of the material or suits is allowed.
- The height difference between the front and the back of the collar may not exceed 5 cm (see the illustration mark X1 and X2).
- Outer tucks and darts, folds and padding are not allowed.
- Only one fixed (non-adjustable) strap per leg is allowed for fixing the suit around the ski boot. The strap is of one continuous piece and without clips, buckles or other means of fastening multiple pieces of material. The fixation of either strap must be made at the hem of the suit in the middle of the posterior and anterior seam of the leg panels (see the illustration - mark S).
- Length of the sleeve must reach the wrist joint. The lower hem of the sleeve is cut evenly and has no integrated hole for fingers.
- All hems must be sown by a singular piece and the entire piece must have the same physical material characteristics.
- Standardized measuring control points:
- Anterior arm length (see the illustration mark 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 maximum tolerance of 4 cm.
- Anterior crotch length (see the illustration mark SL) is measured from the intersection of the seams at the crotch of the suit (see the illustration - mark SX) following the anterior seam to the hem of the leg part of the suit.

Measured length of the suit must be no shorter than the measured length of the controlled crotch height.

- Number of parts of the material of which the suit consists is:

  One part for each sleeve (see the illustration mark 3). The sleeve must be joined to the main part of the suit and must reach the wrist joint. In addition, when the arm is extended from the torso, the anterior seam of the sleeve must be aligned with the torso seam.
  - Three parts for the torso (upper body above the waist seam): left and right front panels (see the illustration mark 1) and back part (see the illustration mark 4) Starting from the armpit down to the waist seam, the front and back part must be equal.
- 2 for each leg (under the waist seam): the front leg panels (see the illustration mark 2) and the back leg panels (see the illustration mark 5). Starting from the crotch down, the size of the panels must be equal front and back. The alignment of the posterior and anterior seams is entered along the length of the leg. The front and back crotch seams must connect with the anterior leg seams at the lowest point of the crotch (see the illustration mark SX).
- Zipper, elastics and strings for the attachments do not count as a separate part of the suit.
- The waist seam must be placed in relationship to the body within 5 cm above and below the hip bone (narrow part of the waist). The seam must go around the torso horizontally.
- The seam connecting the upper front and side panel must align vertically with the seam of the leg panels from the armpit to the posterior ankle bone.

- The bottom hem of the leg panels may be altered to accommodate the fixing of the binding at the heel of the boot.
- Seams may only exist in order to join the portions of the suit. Seams must be inside the suit. It is not allowed to edge-stitch (sew) the ends of the material; it is not allowed to join (sew) the maximum seam of 10 mm (material behind the seam to the edge). All seams must be straight or formed differently only to fit the form of the body. Any additional seams or transformation of the seams, any strings, rods, folds, tapes, etc., inside or outside the suit in order to attain greater volume or more aerodynamic features is not allowed (the same for the underwear).
- The enclosed suit illustrations are the determining bases for these written rules. Exception for Youth competitions: no limit for number of parts and cutting of the suits.

# Additional specifications for the Ladies Ski Jumping suit

Number of parts of the material of which the suit consists of is:

- 7 parts for the upper body (see the illustration mark 1, 7, 4 and 8).
- 8 parts for the lower body (see the illustration mark 2, 9, 6 und 10). The waist seem must go around the torso horizontally and must be placed at the part of the body with the smallest circumferences.
- Two parts for each sleeve including shoulder: front part of the sleeve (see the illustration mark 3) and back part of the sleeve (see the illustration mark 5). Each sleeve starts from the neck opening and extends over the shoulder maximally to the wrist joint. Starting from the armpit down the size of the panels must be equal front and back. The alignment of the posterior seam must be centered along the length of the sleeve and parallel to the torso seam. In addition, when the arm is extended from the torso, the anterior seam of the sleeve must be aligned with the torso seam.
- Side parts (Pos. 9 and Pos. 10)
   Both the side parts end at the height of the athlete's knee. The tolerance for the end of both parts, above and below the knee, is +/- 15 cm.

Upper front parts (Pos 1, A1)

The upper area of front part 1 must have a width of at least 10 cm. The front seam between the side part 1 and 7 must run over the middle part of the breast.

### 4.1 Material, Fabric

The structure of the surface of the material and the composition of the material for all parts of the suit must be the same. The only exceptions are different colours of the same material.

The thickness of the suit may not exceed 5.0 mm, nor be less than 4.0 mm.

Construction of the Ski Jumping suit is a five-layer laminated fabric and consists of:

- outer fabric/ first layer
- foam
- elastic membrane
- foam

# - lining fabric

The components are laminated together by either a hot-melt process or flame laminated, where 4 acts are necessary to laminate the fabric.

The controlled air permeability of 40 l/m2/sec. (FIS Rules) is reached by perforation and guarantees a constant value.

# Outer fabric / first layer

The outer fabric for the ski jumper laminate is a bi-elastic warp-knit fabric, called Charmeuse (pattern notation). This material is produced on a 2-thread system warp knitting machine.

### Material:

81 % Polyamid gloss dtex 44f12 19 % Elasthane (Lycra) dtex 44f1

### Weight:

180/190 g/m<sup>2</sup> approx.

### Elasticity:

Length 150-160% Width approx. 85-95%

# Finishing:

The quality is dyed in a classical piece dying method (acid dyestuff). Beside the dyestuff and eventual dyeing assistant there is no use of other chemical stuff allowed, which would change the characteristics of the surface.

Material has two different sides:

- a) Lengthwise stripe "rip fabric (even side)"
- b) Transverse thread connection, called satin-side

  The satin side is the visible outside of the jumping suit. The satin side
  must be chinzed. There are no other additional treatments like chemical
  or mechanic surface changes allowed (for example by aluminium
  steam, foil application, shaping or others).

# Lining fabric

Lining fabric is identical with the outer fabric (material and weight) but only white.

# Inside fabric / foam and elastic membrane

The inner life of the material is a three-layer laminate built up of a two 2,1 mm foam layers (volumetric weight ca. 55g) and with an elastic membrane in the middle. This laminate is perforated to reach the defined air permeability.

# 4.2 Air permeability of the suit material

The material of a jumping suit must show a minimum air permeability which is the same from the outside in and from the inside out. Minimum air permeability is established as follows:

The unstretched fabric must show a medium air permeability of a minimum of 40 litres per m<sup>2</sup>/sec with 10 mm water pressure.

This value is compulsory at the time of distribution by the manufacturer that means at the moment of plumbing. At controls in competitions it must not be less than 40 litres.

Although usage may result in some stretching of the material, the back portion of the suit must show air permeability as high or higher than the other parts of the suits.

# 4.3 Underwear

- The thickness of the underwear must not exceed 3,0 mm (cumulative all layers and parts of the underwear together).
- Air permeability of the underwear must exceed 60 l/m<sup>2</sup>.
- The size, fit and form of underwear must conform the size and shape of the body. Up to a maximum over size tolerance of 10 cm at any measurable body part is permitted.
- No form of a hood is allowed.
- No fixations (i.e. integrated holes for fingers) are allowed.

### 4.4 Examination of materials, suits

The guidelines for minimum air permeability established by the FIS Control Procedures/Equipment Working Group in collaboration with the Federal Institute for Materials Control are valid.

Multi-layered materials are accordingly permitted for Ski Jumping suits, as long as they conform to the technical specifications and air permeability requirements and all portions of the suit are made from the same material.

# 5. Crash helmets

The use of crash helmets is compulsory for all events. The shape of the helmet must conform to the shape of the head. The shell and padding shall completely cover the head and ears. The shell does not need to extend to the ears which shall however be adequately covered and protected (soft ear padding permitted).

The distance measured at any point between the outside surface of the helmet and the head shall not exceed 7 cm.

The surface (shell) of the helmet shall be smooth for safety reasons.

Helmets with visors or integrated face shields, detachable or not are not permitted.

The helmets used shall conform to recognized safety standards adapted for Ski Jumping including CEE 1077 or US 2040. Conformity to standard shall be attested by a marking/label affixed on or inside the helmet.

# 6. Ski goggles

Ski goggles are devices protecting the eyes against weather and rays with optically correct lenses. Their aim is to guarantee good, contrast-free visibility in all weather conditions. The use of goggles is recommended. Reshaping the ski goggles in order to attain more aerodynamic features is not allowed.

# 7. Ski gloves

Gloves offer protective covering against weather and external forces. The use of gloves is urgently recommended.

The glove size must correspond to the hand size. Thickness of the material is maximally 5mm.

Only gloves with fingers (for all fingers) are allowed. The gloves may not be fin-shaped.

# E. Freestyle competition Equipment

# 1. Definition

Competition equipment

The term "competition equipment "embraces all items of equipment used by the athletes in competition skiing, including clothing and implements that serve a technical function. The entire competition equipment forms a functional unit. In this connection the following points must be observed:

- a) The principle of safety
- b) The principle of fairness

# 1.1 Competition implements

Competition implements refer to those parts of the equipment, which fulfil essential functions for the competition and which are separable from the competition.

Examples: skis, bindings, boots, poles, clothing, helmets, ski goggles.

# 1.2 Additional equipment (accessories)

Additional equipment (accessories) to competition equipment are those components or implements which have an influence on the technical function of the competition equipment and which are attached directly to the equipment by means of recognised fastenings. Accessories do not perform essential functions for the competitions.

Example: plastic tip covers, additional weights.

# 1.3 Auxiliary equipment

Auxiliary equipment refers to those components of the competition equipment which do not fulfil an essential function, and which do not fall under the heading of additional equipment.

Example: measuring instruments.

# 2. Commercial Markings on Equipment

Specifications on page 42 - 45 and refer to ICR 207.

# 2.1. Freestyle Competition Equipment

Only measurements which are carried out by the appointed FIS equipment measurement experts using the official FIS measurement tools are valid. The results of measurements carried out at the time are valid and final, irrespective of previous measurements.

# 2.2 Freestyle skis

### 2.2.1 Definition

Skis employed in Freestyle competition events where the principal source of motive power is gravity. To assist with directional and speed control, the edges of the running surface are constructed from hard materials and sealed into the ski.

# 2.2.2 Criteria

# 2.2.3 Geometric features

There are no limitations or restrictions for ski length and radius.

# 2.2.4 Ski length

No limitations. (See 4306.1.1 is, 4206.1.1)

### 2.2.5 Profile width

No limitations

### 2.2.6 Radius

No limitations

# 2.2.7 Overall height of sectional view

No limitations.

### 2.2.8 Camber

No limitations.

# 2.2.9 Contour, length and height of shovel

No limitations

### 2.2.10 Contour of tail

No limitations.

# 2.2.11 Running surface

No limitations.

# 2.2.12 Running Groove

No limitations.

# 2.2.13 Flexibility

No limitations with regard to the rigidity in all grades of flex.

### 2.2.14 Mass

No limitation with regard to weight and distribution of mass.

### 2.3 Construction

# 2.3.1 Type

No limitation with regard to composite structure.

# 2.3.2 Ski components

Running surface: no limitations with regard to material and dimensions.

Torsion box: no limitations with regard to material and dimensions.

Edges: no limitations with regard to material and dimensions.

Of top surface: no limitations with regard to material and dimensions.

Core: no limitations with regard to material.

# 2.3.4 Durability

With regard to the mounting of bindings, national norms and at least the "Ö-Norm 4030", that is the equivalent of DIN- and ISO-norms, must be fulfilled.

# 3. Additional equipment

No additional equipment is permitted which

- a) makes use of foreign energy (e.g. heaters, chemical energy accumulators, electric batteries, mechanical aids, etc.)
- b) causes or intends to cause changes in the outer conditions of the competition to the disadvantage of fellow competitors (e.g. changes to piste or snow)
- c) increases the risk for the users or other persons, when used for the purpose it was intended for

# 3.1 Safety bindings

Safety bindings function as strain limiters. That is, these devices transfer specific demands occurring during skiing to an acceptable limit, and when this limit is overstepped, they release their firm hold to the ski. (See 4306.1.2, 4206.1.2, 4008.2.2)

# 3.2 Anti-vibration plates

Mounting of such plates is permitted under the following conditions:

### 3.3 Width of ski surface

The plates may not exceed the width of the ski surface.

### 3.4 Maximum height

For FIS, ENL, U14 (K1) and U16 (K2) events the maximum height is 50 mm.

# 3.5 Ski stoppers

The ski stopper is a catching apparatus for skis, whose function is to stop or bring to a standstill the loose ski following the release of the safety binding within the intermediate area of the skiers fall. In competitions and official training skis without ski stoppers are not permitted. Ski Stoppers must be mounted in such a way as not to impede the operation of the device. The manufacturer is responsible for a perfect function of the ski stoppers.

# 4. Ski boots

Ski boots are robust footwear developed especially for skiing, offering protection against jolts and bumps as well as injury from ski edges and other external causes. The ski boot encloses the foot firmly, while at the same time allowing the movement necessary for skiing techniques, in that the ankle has the room it needs to move, but at the same time allowing the transfer of every steering movement completely to the ski.

The relevant national and international guidelines and norms establish the requirements.

Thickness of ski boot soles

Distance between the ski boot sole and the base of the heel including all hard and soft parts:

Ladies & Men

maximum 43 mm

# 5. Ski poles

The ski pole is a sports article whose function should aid the skier, facilitate balance and, if necessary, enable stopping. The national and international guidelines and norms establish the minimum requirements for ski pole tips, grips, shaft, baskets, straps, length, etc. Due to risk of injury, metal baskets are not permitted.

# 6. Competition suits

# 6.1 Ski Cross

(From Freestyle ICR Ski Cross 4511.4)

Ski suits

Ski suits must be two pieces; pants and a separate top.

Suits worn in the Alpine events of Downhill (DH), Super-G (SG), Giant Slalom (GS), Slalom (SL) and Speed Skiing are not allowed.

Suite base material shall be textile fabrics excluding rubber, neoprene, leather or vinyl like materials or fabrics. Patches of different material are allowed provided that textile fabrics shall remain, in any event, predominant.

Non-protruding body protection and padding is recommended.

Protection equipment including back protector or any other padding or body amour must be worn on the body and separate from the ski suit (outer wear). Protection and padding must not be built into the ski suit or attached to the ski suit by a zipper, Velcro or any other means. Fastening devices such as elastic straps, zippers, nylon straps, buttons, snaps, velcro, one or 2 sided tape, or any other methods shall not be used to tighten the suit material closer to the body or prevent the natural fall of the clothing.

The gap in the material must be a minimum of 80mm, measured everywhere around the circumference of each leg from the mid thigh to the top of the ski boot and 60 mm everywhere around the elbow and the bicep.

Ski Suit Measurement Method

Body position and stance for taking measurements:

Any competitor shall appear in full race wear with ski boots on. They shall stand with feet shoulder-width apart, in an upright standing position with arms relaxed at the sides and the legs relaxed forward into the support of the cuffs of their boots. ("full race wear" includes all under layers and padding that is worn while competing.)

The measurement shall take place before or after each qualification run, as decided by the Jury and announced at the First Team Captains Meeting. The measurement shall take place after each heat in the KO Final by first measuring each eliminated competitor prior to exiting the

finish area. All competitors in the Final and Small Final heats will be measured prior to exiting the finish area.

The material gap shall be found everywhere at the measuring control points, without stretching or pulling the fabric apart from the underwear. The measurement tool shall be certified through the FIS Office.

Standardized measuring control points:

# Lower Body:

Anywhere below the person's mid point of the thigh to the bottom of the pant leg.

The pant leg must cover the top of the skier's boot (top of ski boot is the area directly above the upper most buckle of the boot)

# Upper Body:

Mid-bicep (mid-bicep is found by finding the mid-point between the tip of one's elbow and the point on the top of the shoulder where the Acromion bone in the shoulder meets the head of the Humerus.)

# 6.2 Moguls

No limitations.

### 6.3 Aerials

No limitations.

# 6.4 Halfpipe

No limitations.

### 6.5 Helmets

The use of helmets is compulsory for all events. (See ICR 3054.6, 4008.2.1, 4306.1.3, 4206.13, 4511.3)

The National Ski Associations shall require their athletes to use helmets which conform to recognized and appropriate standards including CEE 1077 or US 2040, ASTM F2040, etc.

# 7. Ski goggles

Ski goggles are devices protecting the eyes against weather and rays with optically correct lenses. Their aim is to guarantee good, contrast-free visibility in all weather conditions. The use of ski goggles is recommended.

# 8. Ski gloves

Gloves offer protective covering against weather and external forces. The wearing of gloves is strongly recommended. Protective padding along the entire length of the glove is permitted. The use of protective guards in the form of shields, which are pulled over the glove, is permitted.

# 9. Back protectors

### 9.1 Definition

The back protector is an additional item of equipment, which protects the athlete's back against weather and external forces. The use of back protections is recommended.

# **Specifications**

The back protector must adapt to the anatomical bend of the athlete's spine and lay flat against the body. The top edge of the back protector has to be situated in the area of the spinal column. Fastening of the back protector may take place with a stomach belt, straps or suspenders. The maximum thickness has to be in the middle part and may not exceed 45 mm; the thickness reduces towards the edges of the back protector. The back protector may be worn exclusively under the competition suit.

# 10. Competition data and event presentation

For the purpose of improved television presentation and the technical development of the event, the Freestyle Committee has introduced the collection of digital information on the performance competitor with the use recorders and transmission devices worn by the competitor using systems approved by Freestyle Committee and the Equipment Committee.

# F. Bibs

Alpine:

Downhill / Slalom / Giant Slalom / Super G

Nordic:

Cross-Country / Ski Jumping

Examples: See Enclosure

# 1. FIS Specifications for Alpine bibs

# 1.1 Advertising

According to "FIS Advertising Rules"

### 1.2 Numbers

According to "FIS Advertising Rules"

# 1.3 Assignment

Bibs must be assigned as follows:

Ladies sizes: with elastic band Men's sizes: with elastic band

# 1.4 Fabric, Material

T-shirt style bibs, 100% Polyester / Interlock

# 1.5 Elasticity (stretch)

Measured on a piece of material 10 cm wide:

Stretch ability in the width 24 cm.

# 1.6 Seams, Sewing

Side seams: Material is sewn together, hemmed and stitched - overlock. Neckline and armholes are trimmed with edging and double-stitched. Waistband with 2 cm wide seam, double-stitched with an elastic band pulled trough. (See enclosure)

# 2. FIS Specifications for Cross-Country starting bibs

# 2.1 Advertising

According to "FIS Advertising Rules"

### 2.2 Numbers

According to "FIS Advertising Rules"

# 2.3 Assignment

Starting bibs must be assigned as follows and must be cut in such a way that the skier's shoulders are allowed free movement:

Ladies size: without elastic band Men's size: without elastic band.

# 2.4 Fabric, material

T-shirt starting bibs in smooth material quality 100% Polyester / Interlock or 100 % polyester knitwear (meshed or non-meshed).

# 2.5 Elasticity (stretch)

Meshed starting bibs: measured on a piece of fabric 10 cm wide:

Stretch ability in the width 18,5 cm

None meshed starting bibs: measured on a piece of fabric 10 cm wide:

Stretch ability in the width: 24 cm (see enclosure)

# 3. FIS Specifications for Ski Jumping starting bibs

# 3.1 Advertising

According to "FIS Advertising Rules"

### 3.2 Numbers

According to "FIS Advertising Rules"

# 3.3 Assignment

Starting bibs are assigned to the men in men's sizes.

# 3.4 Fabric, material

T-Shirt starting bibs 100 % Polyester with an air permeability of 40 litres per m2/sec under 10 mm of water pressure.

# 3.5 Elasticity (stretch)

Measured on a piece of fabric 10 cm wide: Stretch ability in the width 24 cm.

### 3.6 Seams, sewing

Side seams: material is sewn together, hemmed and stitched - overlook.

Neckline and armholes are trimmed with edging and double-stitched. Waistband with 2 cm wide seam, double-stitched (see enclosure).

# Procedures for the Acceptance of Innovations in Competition Equipment

# Article 222.4 of the ICR reads as follows:

New developments must be submitted by May 1<sup>st</sup>, at the latest, for the following season. During the first year new developments can only be approved provisionally for the following season and must be definitively approved prior to the subsequent competition season.

# 1. Eligible applicants

- a) Manufactures or distributors of the innovation
- b) National Associations
- c) Members of the Committee for Competition Equipment

# 2. Items for application

Any significant innovation or further development of existing products which is to be used as equipment in competition skiing, may be submitted for acceptance. It is solely the responsibility of the Committee for Competition Equipment to decide whether an innovation or further development conforms to the FIS "Competition Equipment Specifications". The Committee can at any time, however, arrange the execution of an application with regard to items of equipment to be used in competition sport, in accordance with the decisions of these guidelines.

# 3. Prototype, samples

The application must include a detailed description of the innovation. A prototype or sample must be submitted with the application. Relevant reports by scientific experts, as well as reports of experiences made by trainers or participants are to be submitted.

# 4. Decisions of the Committee for Competition Equipment

The Committee for Competition Equipment deals with these applications at its next meeting. If the Committee is of the opinion that the item being presented conforms fully to the valid Specifications for Competition Equipment, this decision will be recorded in a relevant decision.

If the Committee reaches the conclusion that the innovation could be accepted in accordance with the relevant principles and decisions of the FIS Specifications for Competition Equipment in competition sports, the innovation can be provisionally approved for testing for the duration of the following season.

This approval can, however, also be conditionally accepted. On the grounds of fairness, exceptions can be made for certain competitions (Olympic Winter Games, World Championships, etc.).

However, the Committee for Competition Equipment can also take the following measures before provisional approval. These can be dealt with individually or together:

- a) requesting further information from the applicants, such as reports by experts and technical data
- b) seeking reactions of the FIS Technical Committees. These opinions must be submitted in writing and take the following factors into consideration:
  - explanation with regard to the usefulness and necessity of the innovation
  - 2. opinions with regard to the safety of the innovation
  - 3. assurance that in accepting the innovation, the principle of fairness will be guaranteed
- c) soliciting reports by experts and further information through the Committee for Competition Equipment itself.

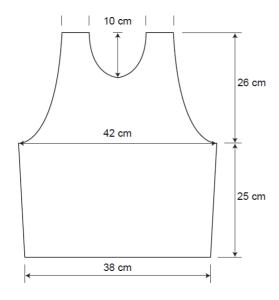
Should the innovation not conform to the principles of the FIS Specifications for Competition Equipment, either through the application itself, or during the course of the procedures, the use of the innovation in question will be forbidden for competition sport. This will also occur if, during the item's probation period, circumstances result which lead the Committee to decide that the innovation does not conform to the principles of the FIS Specifications for Competition Equipment. In such a case, the provisional approval will be rescinded, with immediate effect.

# 5. FIS Council

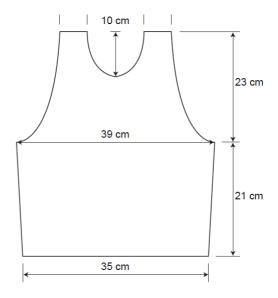
Changes in the Specifications for Competition Equipment can be proposed to the FIS Council only through the Committee for Competition Equipment - either by means of an initiative from the Committee itself or through an application of one of the National Ski Associations or Technical Committees to the Committee for Competition Equipment.

## Ski Jumping

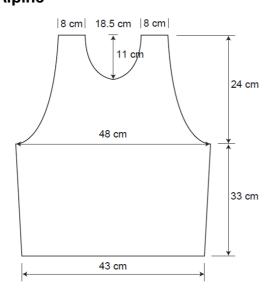
Ski Jumping - Men: without elastic band



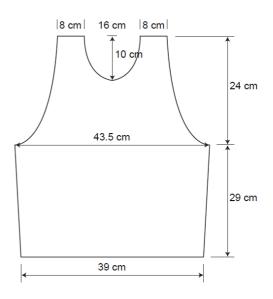
Ski Jumping - Ladies: without elastic band



## **Alpine**

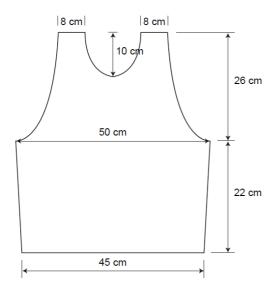


Alpine - Men: with elastic

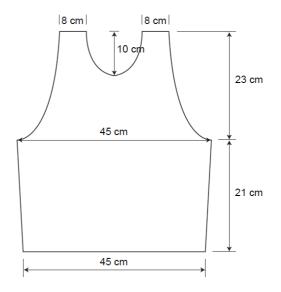


Alpine - Ladies: with elastic

### **Freestyle Bibs**

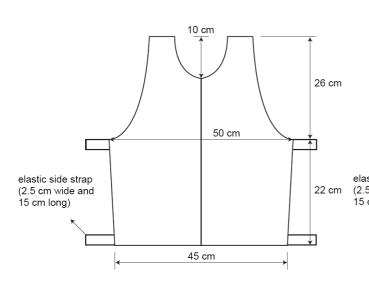


Aerials - Men: with elastic band

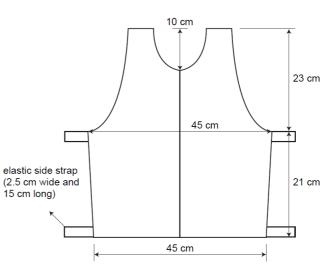


Aerials - Ladies: with elastic band

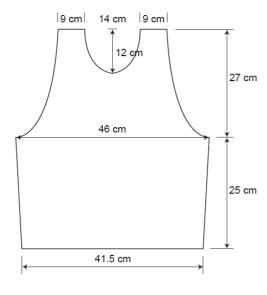
Moguls, Halfpipe, Ski Cross - Men: open sides and 4 elastic straps



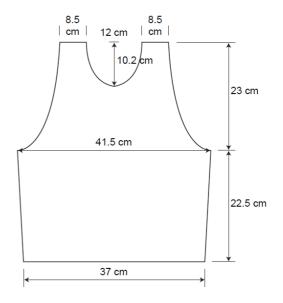
Moguls, Halfpipe, Ski Cross - Ladies: open sides and 4 elastic straps



## **Cross Country**



Cross-Country - Men



Cross-Country - Ladies

Measurement table for ski length and weight – BMI 21.0 – LADIES and MEN (valid from summer 2012)

	A trom summer		В		С		D	)	Е		F	•
Body Height	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length	Weight with suit and boots		Weight with suit and boots	Ski length	Weight with suit and boots	Ski length
BMI / %	21.000	145.0	20.875	144.5	20.750	144.0	20.625	143.5	20.500	143.0	20.375	142.5
140	<b>kg</b> 41.2	<b>cm</b> 203	<b>kg</b> 40.9	<b>cm</b> 202	<b>kg</b> 40.7	<b>cm</b> 202	<b>kg</b> 40.4	<b>cm</b> 201	<b>kg</b> 40.2	cm	<b>kg</b> 39.9	<b>cm</b> 200
141	41.8	203	41.5	202	41.3	202	41.0	201	40.2	200 202	40.5	200
142	42.3	206	42.1	205	41.8	204	41.6	204	41.3	203	41.1	202
143	42.9	207	42.7	207	42.4	206	42.2	205	41.9	204	41.7	204
144	43.5	209	43.3 43.9	208	43.0	207	42.8	207	42.5	206	42.2	205 207
145 146	44.2 44.8	210 212	44.5	210 211	43.6 44.2	209 210	43.4 44.0	208 210	43.1 43.7	207 209	42.8 43.4	207
147	45.4	213	45.1	212	44.8	212	44.6	211	44.3	210	44.0	209
148	46.0	215	45.7	214	45.5	213	45.2	212	44.9	212	44.6	211
149 150	46.6	216 218	46.3	215	46.1	215	45.8	214	45.5	213	45.2	212
151	47.3 47.9	218	47.0 47.6	217 218	46.7 47.3	216 217	46.4 47.0	215 217	46.1 46.7	215 216	45.8 46.5	214 215
152	48.5	220	48.2	220	47.9	219	47.7	218	47.4	217	47.1	217
153	49.2	222	48.9	221	48.6	220	48.3	220	48.0	219	47.7	218
154	49.8	223	49.5	223	49.2	222	48.9	221	48.6	220	48.3	219
155 156	50.5 51.1	225 226	50.2 50.8	224 225	49.9 50.5	223 225	49.6 50.2	222 224	49.3 49.9	222 223	49.0 49.6	221 222
157	51.8	228	51.5	227	51.1	226	50.8	225	50.5	225	50.2	224
158	52.4	229	52.1	228	51.8	228	51.5	227	51.2	226	50.9	225
159	53.1	231	52.8	230	52.5	229	52.1	228	51.8	227	51.5	227
160	53.8	232	53.4	231	53.1	230	52.8	230	52.5	229	52.2	228
161 162	54.4 55.1	233 235	54.1 54.8	233 234	53.8 54.5	232 233	53.5 231 54.1 232		53.1 53.8	230 232	52.8 53.5	229 231
163	55.8	236	55.5	236	55.1	235	54.8	234	54.5	233	54.1	232
164	56.5	238	56.1	237	55.8	236	55.5	235	55.1	235	54.8	234
165	57.2	239	56.8	238	56.5	238	56.2	237	55.8	236	55.5	235
166 167	57.9 58.6	241 242	57.5 58.2	240 241	57.2 57.9	239 240	56.8 57.5	238 240	56.5 57.2	237 239	56.1 56.8	237 238
168	59.3	244	58.9	243	58.6	242	58.2	241	57.9	240	57.5	239
169	60.0	245	59.6	244	59.3	243	58.9	243	58.6	242	58.2	241
170	60.7	247	60.3	246	60.0	245	59.6	244	59.2	243	58.9	242
171 172	61.4 62.1	248 249	61.0 61.8	247 249	60.7 61.4	246 248	60.3 61.0	245 247	59.9 60.6	245 246	59.6 60.3	244 245
173	62.9	251	62.5	250	62.1	249	61.7	248	61.4	247	61.0	247
174	63.6	252	63.2	251	62.8	251	62.4	250	62.1	249	61.7	248
175	64.3	254	63.9	253	63.5	252	63.2	251	62.8	250	62.4	249
176 177	65.0 65.8	255 257	64.7 65.4	254 256	64.3 65.0	253 255	63.9 64.6	253 254	63.5 64.2	252 253	63.1 63.8	251 252
178	66.5	258	66.1	257	65.7	256	65.3	255	65.0	255	64.6	254
179	67.3	260	66.9	259	66.5	258	66.1	257	65.7	256	65.3	255
180	68.0	261	67.6	260	67.2	259	66.8	258	66.4	257	66.0	257
181 182	68.8 69.6	262 264	68.4 69.1	262 263	68.0 68.7	261 262	67.6 68.3	260 261	67.2 67.9	259 260	66.8 67.5	258 259
183	70.3	265	69.9	264	69.5	264	69.1	263	68.7	262	68.2	261
184	71.1	267	70.7	266	70.3	265	69.8	264	69.4	263	69.0	262
185	71.9	268	71.4	267	71.0	266	70.6	265	70.2	265	69.7	264
186 187	72.7 73.4	270 271	72.2 73.0	269 270	71.8 72.6	268 269	71.4 72.1	267 268	70.9 71.7	266 267	70.5 71.2	265 266
188	74.2	273	73.8	272	73.3	271	72.9	270	72.5	269	72.0	268
189	75.0	274	74.6	273	74.1	272	73.7	271	73.2	270	72.8	269
190	75.8	276	75.4	275	74.9	274	74.5	273	74.0	272	73.6	271
191 192	76.6 77.4	277 278	76.2 77.0	276 277	75.7 76.5	275 276	75.2 76.0	274 276	74.8 75.6	273 275	74.3 75.1	272 274
192	78.2	280	77.8	279	77.3	278	76.8	277	76.4	276	75.1	274
194	79.0	281	78.6	280	78.1	279	77.6	278	77.2	277	76.7	276
195	79.9	283	79.4	282	78.9	281	78.4	280	78.0	279	77.5	278
196 197	80.7 81.5	284 286	80.2 81.0	283 285	79.7 80.5	282 284	79.2 80.0	281 283	78.8 79.6	280 282	78.3 79.1	279 281
197	82.3	286	81.8	285	80.5	285	80.0	283	79.6 80.4	282	79.1	281
199	83.2	289	82.7	288	82.2	287	81.7	286	81.2	285	80.7	284
200	84.0	290	83.5	289	83.0	288	82.5	287	82.0	286	81.5	285

	G	i	н		ı		J		К	·	L	
dy Jht					t with and ts	ngth		1			t with and ts	ngth
Body Height	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length
BMI / %	20.250	142.0	20.125	141.5	20.000	141.0	19.875	140.5	19.750	140.0	19.625	139.5
cm 140	<b>kg</b> 39.7	<b>cm</b> 199	<b>kg</b> 39.4	<b>cm</b> 198	<b>kg</b> 39.2	<b>cm</b> 197	<b>kg</b> 39.0	<b>cm</b> 197	<b>kg</b> 38.7	<b>cm</b> 196	<b>kg</b> 38.5	<b>cm</b> 195
141	40.3	200	40.0	200	39.8	199	39.5	198	39.3	197	39.0	197
142 143	40.8 41.4	202 203	40.6 41.2	201 202	40.3 40.9	200 202	40.1 40.6	200 201	39.8 40.4	199 200	39.6 40.1	198 199
144	42.0	204	41.7	204	41.5	203	41.2	202	41.0	202	40.7	201
145	42.6	206	42.3	205	42.1	204	41.8	204	41.5	203	41.3	202
146 147	43.2 43.8	207 209	42.9 43.5	207 208	42.6 43.2	206 207	42.4 42.9	205 207	42.1 42.7	204 206	41.8 42.4	204 205
148	44.4	210	44.1	209	43.8	209	43.5	208	43.3	207	43.0	206
149 150	45.0 45.6	212 213	44.7 45.3	211 212	44.4 45.0	210 212	44.1 44.7	209 211	43.8 44.4	209 210	43.6 44.2	208 209
151	46.2	214	45.9	214	45.6	213	45.3	212	45.0	211	44.7	211
152	46.8	216	46.5	215	46.2	214	45.9	214	45.6	213	45.3	212
153 154	47.4 48.0	217 219	47.1 47.7	216 218	46.8 47.4	216 217	46.5 47.1	215 216	46.2 46.8	214 216	45.9 46.5	213 215
155	48.7	220	48.4	219	48.1	219	47.7	218	47.4	217	47.1	216
156 157	49.3 49.9	222 223	49.0 49.6	221 222	48.7 49.3	220 221	48.4 49.0	219 221	48.1 48.7	218 220	47.8 48.4	218 219
158	50.6	223	50.2	224	49.3	223	49.0	222	49.3	221	49.0	220
159	51.2	226	50.9	225	50.6	224	50.2	223	49.9	223	49.6	222
160 161	51.8 52.5	227 229	51.5 52.2	226 228	51.2 51.8	226 227	50.9 51.5	225 226	50.6 51.2	224 225	50.2 50.9	223 225
162	53.1	230	52.8	229	52.5	228	52.2	228	51.8	227	51.5	226
163	53.8	231	53.5	231	53.1	230	52.8	229	52.5	228	52.1	227
164 165	54.5 55.1	233 234	54.1 54.8	232 233	53.8 54.5	231 233	53.5 54.1	230 232	53.1 53.8	230 231	52.8 53.4	229 230
166	55.8	236	55.5	235	55.1	234	54.8	233	54.4	232	54.1	232
167 168	56.5 57.2	237 239	56.1 56.8	236 238	55.8 56.4	235 237	55.4 56.1	235 236	55.1 55.7	234 235	54.7 55.4	233 234
169	57.8	240	57.5	239	57.1	238	56.8	237	56.4	237	56.1	236
170	58.5	241	58.2	241	57.8	240	57.4	239	57.1	238	56.7	237
171 172	59.2 59.9	243 244	58.8 59.5	242 243	58.5 59.2	241 243	58.1 58.8	240 242	57.8 58.4	239 241	57.4 58.1	239 240
173	60.6	246	60.2	245	59.9	244	59.5	243	59.1	242	58.7	241
174 175	61.3	247	60.9	246	60.6	245	60.2	244	59.8	244	59.4	243
176	62.0 62.7	249 250	61.6 62.3	248 249	61.3 62.0	247 248	60.9 61.6	246 247	60.5 61.2	245 246	60.1 60.8	244 246
177	63.4	251	63.0	250	62.7	250	62.3	249	61.9	248	61.5	247
178 179	64.2 64.9	253 254	63.8 64.5	252 253	63.4 64.1	251 252	63.0 63.7	250 251	62.6 63.3	249 251	62.2 62.9	248 250
180	65.6	256	65.2	255	64.8	254	64.4	253	64.0	252	63.6	251
181	66.3	257	65.9	256	65.5	255	65.1	254	64.7	253	64.3	252
182 183	67.1 67.8	258 260	66.7 67.4	258 259	66.2 67.0	257 258	65.8 66.6	256 257	65.4 66.1	255 256	65.0 65.7	254 255
184	68.6	261	68.1	260	67.7	259	67.3	259	66.9	258	66.4	257
185 186	69.3 70.1	263 264	68.9 69.6	262 263	68.5 69.2	261 262	68.0 68.8	260 261	67.6 68.3	259 260	67.2 67.9	258 259
187	70.1	266	70.4	265	69.9	264	69.5	263	69.1	262	68.6	261
188	71.6	267	71.1	266	70.7	265	70.2	264	69.8	263	69.4	262
189 190	72.3 73.1	268 270	71.9 72.7	267 269	71.4 72.2	266 268	71.0 71.7	266 267	70.5 71.3	265 266	70.1 70.8	264 265
191	73.9	271	73.4	270	73.0	269	72.5	268	72.0	267	71.6	266
192 193	74.6 75.4	273 274	74.2	272	73.7 74.5	271 272	73.3 74.0	270	72.8 73.6	269 270	72.3 73.1	268 269
193	75.4 76.2	275	75.0 75.7	273 275	75.3	274	74.0	271 273	74.3	270	73.1	269
195	77.0	277	76.5	276	76.1	275	75.6	274	75.1	273	74.6	272
196 197	77.8 78.6	278 280	77.3 78.1	277 279	76.8 77.6	276 278	76.4 77.1	275 277	75.9 76.6	274 276	75.4 76.2	273 275
198	79.4	281	78.9	280	78.4	279	77.9	278	77.4	277	76.9	276
199	80.2	283	79.7	282	79.2	281	78.7	280	78.2	279	77.7	278
200	81.0	284	80.5	283	80.0	282	79.5	281	79.0	280	78.5	279

	M		N	1 (		)	Р		Q		R	
Body Height	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length
BMI / %	19.500 <b>kg</b>	139.0 <b>cm</b>	19.375 <b>kg</b>	138.5 <b>cm</b>	19.250 <b>kg</b>			137.5 <b>cm</b>	19.000 <b>kg</b>	137.0 <b>cm</b>	18.875 <b>kg</b>	136.5 <b>cm</b>
140	38.2	195	38.0	194	37.7 193 3		<b>kg</b> 37.5	193	37.2	192	37.0	191
141	38.8	196	38.5	195			38.0	194	37.8	193	37.5	192
142 143	39.3 39.9	197 199	39.1 39.6	197 198	38.8 39.4	196 197	38.6 39.1	195 197	38.3 38.9	195 196	38.1 38.6	194 195
144	40.4	200	40.2	199	39.9	199	39.7	198	39.4	197	39.1	197
145 146	41.0 41.6	202 203	40.7 41.3	201 202	40.5 41.0	200 201	40.2 40.8	199 201	39.9 40.5	199 200	39.7 40.2	198 199
147	42.1	203	41.9	202	41.6	203	41.3	202	41.1	201	40.2	201
148	42.7	206	42.4	205	42.2	204	41.9	204	41.6	203	41.3	202
149 150	43.3 43.9	207 209	43.0 43.6	206 208	42.7 43.3	206 207	42.5 43.0	205 206	42.2 42.8	204 206	41.9 42.5	203 205
151	44.5	210	44.2	209	43.9	208	43.6	208	43.3	207	43.0	206
152	45.1	211	44.8	211	44.5	210	44.2	209	43.9	208	43.6	207
153 154	45.6 46.2	213 214	45.4 45.9	212 213	45.1 45.7	211 213	44.8 45.4	210 212	44.5 45.1	210 211	44.2 44.8	209 210
155	46.8	215	46.5	215	46.2	214	45.9	213	45.6	212	45.3	212
156	47.5	217	47.2	216	46.8	215	46.5	215	46.2	214	45.9	213
157 158	48.1 48.7	218 220	47.8 48.4	217 219	47.4 48.1	217 218	47.1 47.7	216 217	46.8 47.4	215 216	46.5 47.1	214 216
159	49.3	221	49.0	220	48.7	219	48.3	219	48.0	218	47.7	217
160	49.9	222	49.6	222	49.3	221	49.0	220	48.6	219	48.3	218
161 162	50.5 51.2	224 225	50.2 50.8	223 224	49.9 50.5	222 224	49.6 50.2	221 223	49.2 49.9	221 222	48.9 49.5	220 221
163	51.8	227	51.5	226	51.1	225	50.8	224	50.5	223	50.1	222
164	52.4	228	52.1	227	51.8	226	51.4	226	51.1	225	50.8	224
165 166	53.1 53.7	229 231	52.7 53.4	229 230	52.4 53.0	228 229	52.1 52.7	227 228	51.7 52.4	226 227	51.4 52.0	225 227
167	54.4	232	54.0	231	53.7	230	53.3	230	53.0	229	52.6	228
168 169	55.0	234	54.7	233	54.3	232	54.0	231	53.6	230	53.3	229
170	55.7 56.4	235 236	55.3 56.0	234 235	55.0 55.6	233 235	54.6 55.3	232 234	54.3 54.9	232 233	53.9 54.5	231 232
171	57.0	238	56.7	237	56.3	236	55.9	235	55.6	234	55.2	233
172 173	57.7	239	57.3	238	56.9	237	56.6	237	56.2	236 237	55.8	235
173	58.4 59.0	240 242	58.0 58.7	240 241	57.6 58.3	239 240	57.2 57.9	238 239	56.9 57.5	238	56.5 57.1	236 238
175	59.7	243	59.3	242	59.0	242	58.6	241	58.2	240	57.8	239
176 177	60.4 61.1	245 246	60.0 60.7	244 245	59.6 60.3	243 244	59.2 59.9	242 243	58.9 59.5	241 242	58.5 59.1	240 242
178	61.8	247	61.4	247	61.0	246	60.6	245	60.2	244	59.8	243
179	62.5	249	62.1	248	61.7	247	61.3	246	60.9	245	60.5	244
180 181	63.2 63.9	250 252	62.8 63.5	249 251	62.4 63.1	248 250	62.0 62.7	248 249	61.6 62.2	247 248	61.2 61.8	246 247
182	64.6	253	64.2	252	63.8	251	63.3	250	62.9	249	62.5	248
183	65.3	254	64.9	253	64.5	253	64.0	252	63.6	251	63.2	250
184 185	66.0 66.7	256 257	65.6 66.3	255 256	65.2 65.9	254 255	64.7 65.5	253 254	64.3 65.0	252 253	63.9 64.6	251 253
186	67.5	259	67.0	258	66.6	257	66.2	256	65.7	255	65.3	254
187	68.2	260	67.8	259	67.3	258	66.9	257	66.4	256	66.0	255
188 189	68.9 69.7	261 263	68.5 69.2	260 262	68.0 68.8	259 261	67.6 68.3	259 260	67.2 67.9	258 259	66.7 67.4	257 258
190	70.4	264	69.9	263	69.5	262	69.0	261	68.6	260	68.1	259
191	71.1	265	70.7	265	70.2	264	69.8	263	69.3	262	68.9	261
192 193	71.9 72.6	267 268	71.4 72.2	266 267	71.0 71.7	265 266	70.5 71.2	264 265	70.0 70.8	263 264	69.6 70.3	262 263
194	73.4	270	72.9	269	72.4	268	72.0	267	71.5	266	71.0	265
195	74.1	271	73.7	270	73.2	269	72.7	268	72.2	267	71.8	266
196 197	74.9 75.7	272 274	74.4 75.2	271 273	74.0 74.7	270 272	73.5 74.2	270 271	73.0 73.7	269 270	72.5 73.3	268 269
198	76.4	275	76.0	274	75.5	273	75.0	272	74.5	271	74.0	270
199	77.2	277	76.7	276	76.2	275	75.7	274	75.2	273	74.7	272
200	78.0	278	77.5	277	77.0	276	76.5	275	76.0	274	75.5	273

	S		Т		U		V	,	Z	
_ <u>_</u>				th						
Body Height	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length	Weight with suit and boots	Ski length
BMI / %	18.750	136.0	18.625	135.5	18.500	135.0	18.375	134.5	18.250	134.0
140	<b>kg</b> 36.8	<b>cm</b> 190	<b>kg</b> 36.5	<b>cm</b> 190	<b>kg</b> 36.3	<b>cm</b> 189	<b>kg</b> 36.0	<b>cm</b> 188	<b>kg</b> 35.8	<b>cm</b> 188
141	37.3	192	37.0	191	36.8	190	36.5	190	36.3	189
142 143	37.8 38.3	193 194	37.6 38.1	192 194	37.3 37.8	192 193	37.1 37.6	191 192	36.8 37.3	190 192
144	38.9	196	38.6	195	38.4	194	38.1	194	37.8	193
145	39.4	197	39.2	196	38.9	196	38.6	195	38.4	194
146 147	40.0 40.5	199 200	39.7 40.2	198 199	39.4 40.0	197 198	39.2 39.7	196 198	38.9 39.4	196 197
148	41.1	201	40.8	201	40.5	200	40.2	199	40.0	198
149 150	41.6 42.2	203 204	41.3 41.9	202 203	41.1 41.6	201 203	40.8 41.3	200 202	40.5 41.1	200 201
151	42.8	205	42.5	205	42.2	204	41.9	203	41.6	202
152	43.3	207	43.0	206	42.7	205	42.5	204	42.2	204
153 154	43.9 44.5	208 209	43.6 44.2	207 209	43.3 43.9	207 208	43.0 43.6	206 207	42.7 43.3	205 206
155	45.0	211	44.7	210	44.4	209	44.1	208	43.8	208
156	45.6	212	45.3	211	45.0	211	44.7	210	44.4	209
157 158	46.2 46.8	214 215	45.9 46.5	213 214	45.6 46.2	212 213	45.3 45.9	211 213	45.0 45.6	210 212
159	47.4	216	47.1	215	46.8	215	46.5	214	46.1	213
160	48.0 48.6	218 219	47.7 48.3	217	47.4 48.0	216 217	47.0	215 217	46.7 47.3	214
161 162	49.2	220	48.9	218 220	48.6	217	47.6 48.2	218	47.3	216 217
163	49.8	222	49.5	221	49.2	220	48.8	219	48.5	218
164 165	50.4 51.0	223 224	50.1 50.7	222 224	49.8 50.4	221 223	49.4 50.0	221 222	49.1 49.7	220 221
166	51.7	226	51.3	225	51.0	224	50.6	223	50.3	222
167	52.3	227	51.9	226	51.6	225	51.2	225	50.9	224
168 169	52.9 53.6	228 230	52.6 53.2	228 229	52.2 52.8	227 228	51.9 52.5	226 227	51.5 52.1	225 226
170	54.2	231	53.8	230	53.5	230	53.1	229	52.7	228
171	54.8	233	54.5	232	54.1	231	53.7	230	53.4	229
172 173	55.5 56.1	234 235	55.1 55.7	233 234	54.7 55.4	232 234	54.4 55.0	231 233	54.0 54.6	230 232
174	56.8	237	56.4	236	56.0	235	55.6	234	55.3	233
175	57.4	238	57.0	237	56.7	236	56.3	235	55.9	235
176 177	58.1 58.7	239 241	57.7 58.4	238 240	57.3 58.0	238 239	56.9 57.6	237 238	56.5 57.2	236 237
178	59.4	242	59.0	241	58.6	240	58.2	239	57.8	239
179 180	60.1 60.8	243 245	59.7 60.3	243 244	59.3 59.9	242 243	58.9 59.5	241 242	58.5 59.1	240 241
181	61.4	246	61.0	245	60.6	244	60.2	243	59.8	243
182	62.1	248	61.7	247	61.3	246	60.9	245	60.5	244
183 184	62.8 63.5	249 250	62.4 63.1	248 249	62.0 62.6	247 248	61.5 62.2	246 247	61.1 61.8	245 247
185	64.2	252	63.7	251	63.3	250	62.9	249	62.5	248
186	64.9	253	64.4	252	64.0	251	63.6	250	63.1	249
187 188	65.6 66.3	254 256	65.1 65.8	253 255	64.7 65.4	252 254	64.3 64.9	252 253	63.8 64.5	251 252
189	67.0	257	66.5	256	66.1	255	65.6	254	65.2	253
190 191	67.7	258	67.2	257	66.8	257	66.3	256	65.9	255
191	68.4 69.1	260 261	67.9 68.7	259 260	67.5 68.2	258 259	67.0 67.7	257 258	66.6 67.3	256 257
193	69.8	262	69.4	262	68.9	261	68.4	260	68.0	259
194 195	70.6 71.3	264 265	70.1 70.8	263 264	69.6 70.3	262 263	69.2 69.9	261 262	68.7 69.4	260 261
196	72.0	267	71.5	266	71.1	265	70.6	264	70.1	263
197	72.8	268	72.3	267	71.8	266	71.3	265	70.8	264
198 199	73.5 74.3	269 271	73.0 73.8	268 270	72.5 73.3	267 269	72.0 72.8	266 268	71.5 72.3	265 267
200	75.0	272	74.5	271	74.0	270	73.5	269	73.0	268

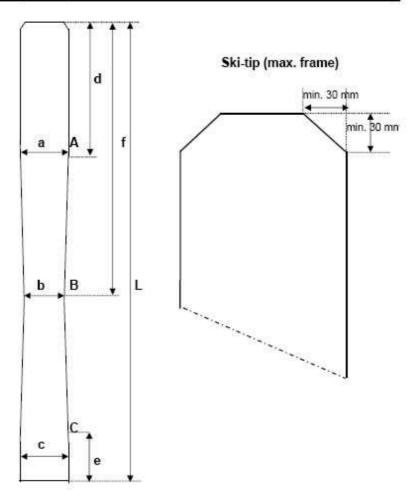
# Measurement table for mounting of Ski Jumping Bindings

Masstabelle für Montage der Skisprungbindung						Masstabelle für Montage der Skisprungbindung								
Me	Measuring table for mounting of jumping bindings						Measuring table for mounting of jumping bindings							
а	ab Saison 2010/2011 - as from Season 2010/2011						а		2010/2011	as fr	om Sea		2011	
Body Height Körpergrösse	Ski length 145% Skilänge 145%	Front ski = 57% Vorderski = 57%		Body Height Körpergrösse	Ski length 145% Skilänge 145%	Front ski = 57% Vorderski = 57%	Body Height Körpergrösse	Ski length 145% Skilänge 145%	Front ski = 57% Vorderski = 57%		Body Height Körpergrösse	Ski length 145% Skilänge 145%	Front ski = 57% Vorderski = 57%	
cm	cm	cm		cm	cm	cm	cm	cm	cm		cm	cm	cm	
140	203	116		155	225	128		246	140		185	268	153	
141	204	116		156	226	129	170	247	141			269	153	
	205	117			227	129	171	248	141		186	270	154	
142	206	117		157	228	130	172	249	142		187	271	154	
143	207	118		158	229	131		250	143			272	155	
	208	119			230	131	173	251	143		188	273	156	
144	209	119		159	231	132	174	252	144		189	274	156	
145	210	120		160	232	132		253	144			275	157	
	211	120		161	233	133	175	254	145		190	276	157	
146	212	121			234	133	176	255	145		191	277	158	
147	213	121		162	235	134		256	146		192	278	158	
	214	122		163	236	135	177	257	146			279	159	
148	215	123			237	135	178	258	147		193	280	160	
149	216	123		164	238	136		259	148		194	281	160	
	217	124		165	239	136	179	260	148			282	161	
150	218	124			240	137	180	261	149		195	283	161	
151	219	125		166	241	137	181	262	149		196	284	162	
152	220	125		167	242	138		263	150			285	162	
	221	126			243	139	182	264	150		197	286	163	
153	222	127		168	244	139	183	265	151		198	287	164	
154	223	127		169	245	140		266	152			288	164	
	224	128					184	267	152		199	289	165	
											200	290	165	

Jugend Cup - Masstabelle für Skilänge und Bindungsmontage										
You	Youth Cup - Measuring table for Ski length and mounting of the bindings									
	-	son 2010/2011 - a								
						., %				
Body Height Körpergrösse	Ski length = 140% Skilänge = 140%	Front ski = 57% Vorderski = 57%		Body Height Körpergrösse	Ski length = 140% Skilänge = 140%	Front ski = 57% Vorderski = 57%				
<u> </u>	= <del> </del> = = = = = = = = = = = = = = = = = = =	. <del>  </del>		<u>lgi</u>	h :اقا					
H	₽œş	ski rsk		¥ 5.	چ پې %	SKi SKi				
후합	ē % 6	nt de		후합	ler 7% 40°	int de				
Body Height Körpergröss	Ski length = 140% Skilär = 140%	Fro		Bo Kö	Ski length = 140% Skilär = 140%	Fro				
cm	cm	cm		cm	cm	cm				
125	175	100		156	218	124				
126	176	100			219	125				
407	177	101		157	220	125				
127	178	101		158	221	126				
128	179	102		150	222	127 127				
129	180 181	103 103		159 160	223 224	127				
130	182	103		161	225	128				
131	183	104		101	226	129				
'''	184	105		162	227	129				
132	185	105		163	228	130				
133	186	106			229	131				
	187	107		164	230	131				
134	188	107		165	231	132				
135	189	108		166	232	132				
136	190	108			233	133				
	191	109		167	234	133				
137	192	109		168	235	134				
138	193	110			236	135				
400	194	111		169	237	135				
139	195	111 112		170	238	136				
140 141	196 197	112		171	239	136 137				
141	197	113		172	240 241	137				
142	199	113		173	241	138				
143	200	114		1/3	243	139				
143	201	115		174	244	139				
144	202	115		175	245	140				
145	203	116		176	246	140				
146	204	116		110	247	141				
1-70	205	117		177	248	141				
147	206	117		178	249	142				
148	207	118			250	143				
	208	119		179	251	143				
149	209	119		180	252	144				
150	210	120		181	253	144				
151	211	120		· · ·	254	145				
	212	121		182	255	145				
152	213	121		183	256	146				
153	214	122			257	146				
	215	123		184	258	147				
154	216	123		185	259	148				
155	217	124		186	260	148				
. 50	-11	147				1.40				

Article 1.2.1.2: Precision of the Profile Width

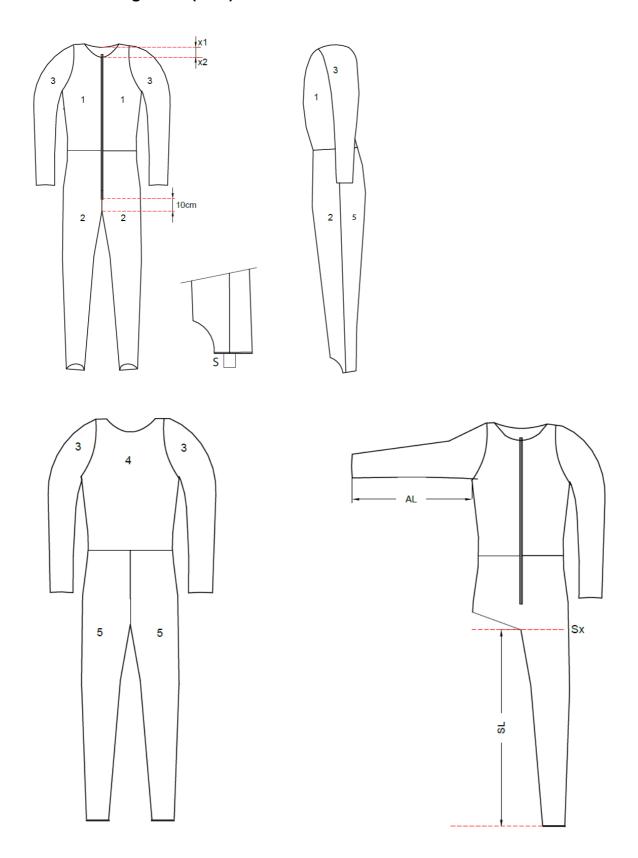
L	Ski length
a	max. width at front portion = 115 mm
b	max. width at 57% of front portion (f) = 105 mm
С	
d	max. length between tip and begin of sidecut = 300 mm
е	max. length between tail and begin of sidecut = 150 mm
f	control point of b



## Ski Jumping Suits for Men

Standardized measuring control points and number of parts of material of which the suits consist

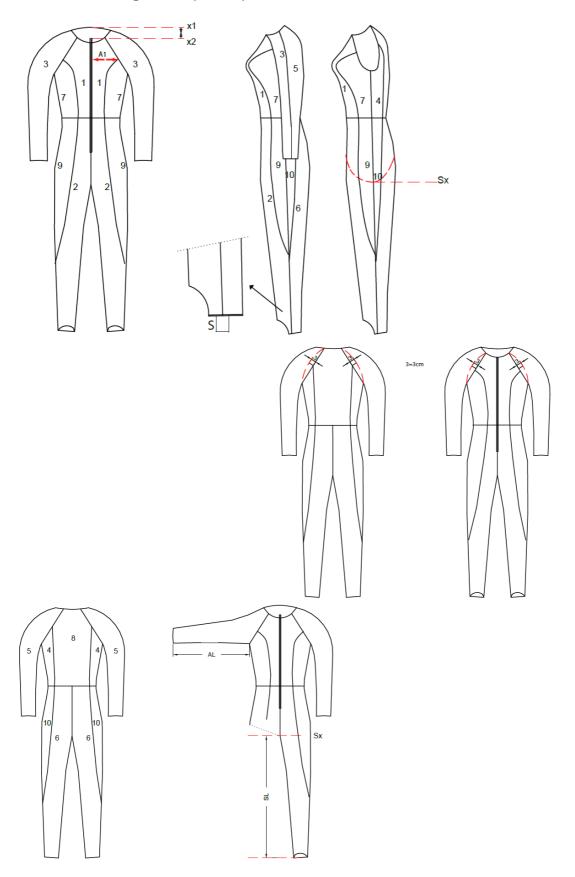
### Valid is the image 1.1b (men) dated 11.06.2012



### **Ski Jumping Suits for Ladies**

Standardized measuring control points and number of parts of material of which the suits consist

### Valid is the image 1.3b (ladies) dated 11.06.2012



### **Commercial Markings on Equipment**

#### 1. General Principles

Athletes may display on their Competition Equipment a commercial marking (wording or logo) specifically permitted by para. 2.1 to 2.6 per product.

All other forms of commercial markings or advertising are not permitted if they are not explicitly mentioned.

The privilege of attaching Manufacturer's Identifications to Competition Equipment shall be exceptional and strictly limited to Effective Manufacturers. FIS recognises as an Effective Manufacturer only those enterprises which meet, in the FIS own discretion, the Definition in Chapter A, para. 1.1 of these specifications.

Companies which are typically not engaged in the equipment manufacturing but produce certain equipment items mainly for the purpose of advertising shall not be allowed to benefit from the Manufacturer's Identification privilege.

Specifications concerning the size, the form and the number of commercial markings must be decided by the FIS (Council).

No commercial markings which appear on any Competition Equipment may be displayed on bibs or on clothing unless such commercial marking is a Manufacturer's Identification of that particular Competition Equipment.

### 2. Actual specifications

- 2.1 Skis, boots, bindings, ski poles, arm and leg protection, etc.
- 2.1.1 Skis, ski boots, bindings, ski poles, separate arm and leg protection and other hardware are permitted to be used at FIS competitions with their commercially available designs and may only bear the Manufacturer's Identification as defined in Chapter A, para. 1.2 of these specifications.
- 2.1.2 The size of the commercial markings on the arm and leg protection is limited to one marking of 12 cm<sup>2</sup> on each item of equipment.

Other sponsor markings on arm and leg protection are permitted, if those protections are part of the clothing and within the specifications of art. 2.4 (3 - 4 parts).

There is an exception for jumping skis: Please see art. 2.6.3.

A commercial marking of the actual producer on the hand protector of ski poles is permitted. The marking may be divided into two parts per individual hand protector. The total surface area of the commercial markings per hand protector is limited to 15 cm<sup>2</sup>.

#### 2.1.3 Ski straps

Only hardware (skis, ski boots, bindings, ski poles) and wax suppliers are permitted to have advertising on ski straps.

No commercial advertising is permitted. Maximum 2 ski straps per pair of skis, for example one hardware and one wax supplier.

#### 2.2 Gloves

A commercial marking of the actual producer of the glove is permitted. The marking may be divided into two parts per individual glove. The total surface area of the commercial markings per glove is limited to 15 cm<sup>2</sup>.

#### 2.3 Goggles

Goggle-straps may carry two commercial markings of the actual producer, no larger than 15 cm<sup>2</sup> each in an unstretched position.

Straps shall not measure more than 4 cm in width. In case of double straps only one strap may carry the commercial markings. Lenses must be free of advertising.

Straps (without goggles) with commercial markings of goggle suppliers may not be worn.

#### 2.4 Clothing

- 2.4.1 Articles of clothing may carry commercial markings belonging to the manufacturer and/or to other sponsors (as defined in art. 2.6)
- 2.4.2 The total surface area of all commercial markings on the clothing of one person shall not exceed 400 cm<sup>2</sup>.

The maximum surface area for a single marking is 100 cm<sup>2</sup>.

Commercial markings of the same sponsor may not appear one above the other or one beside the other.

The National Association may decide on the placing of commercial markings.

- 2.4.3 Roll necks may in addition to the 400 cm<sup>2</sup> also display the manufacturer's trademark and/or sponsor, which may also be divided into two parts, with a maximum total surface area of 20cm<sup>2</sup>.
- 2.4.4 A military symbol (emblem), indicating the national military organisation and similar organisations may be displayed on warm-up suits (not on headgear or race suits), with a maximum size of 20 cm<sup>2</sup>. This symbol is including within the 400 cm<sup>2</sup> total surface area of the commercial markings. This applies also to markings of charitable organisations.
- 2.5 Helmets and Headgear
- 2.5.1 Helmets and headwear may carry two commercial markings of the manufacturer with a maximum size of 15 cm², one on each side, placed over the ears. The front of helmets and headwear may only be used for the emblems of national teams, and sponsors, subject to art. 2.5.2.
- 2.5.2 The front (middle) of helmets and all headwear worn in competition and within the competition area, to include flower and prize-giving ceremonies, interviews etc., must carry the identification of the national ski association with a minimum size of 6 cm<sup>2</sup>.

A National Association may sign sponsorship contracts for helmet/headwear advertising rights of up to a maximum of 50 cm<sup>2</sup> (which may be divided between 2 identical - same size - logos) with firms who are not suppliers of ski equipment (hardware or software), subject to the regulations of each National Association. In such a case, the front of

helmets and headwear must carry the identification of the national ski association with a minimum size of 6 cm<sup>2</sup>.

The relevant advertising must be placed either to the side of or above the identification of the national ski association. The free space between the national ski association's identification (middle front of headgear) and the sponsor's advertising (50 cm<sup>2</sup>) must be at least 1 cm.

For headbands the relevant advertising may be placed at the front of the headband, with the identification of the national ski association to the side. No advertising is allowed on the movable or integrated chin straps of helmets.

Additionally it is not permitted to depict a website address which refers directly to the athlete, on headgear or other clothing.

### 2.6 Other sponsors

- 2.6.1 A National Association may sign sponsorship contracts with firms which are not suppliers of ski equipment (hardware and software) See also ICR art. 206.
- 2.6.2 The dimensions of commercial markings of such sponsors must conform to the specifications in art. 2.1., art. 2.4. or art. 2.5.
- 2.6.3 Jumping skis: The dimensions of commercial markings of such a sponsor on jumping skis are limited to a total surface area of 160 cm<sup>2</sup> per ski. Only one commercial marking per ski is permitted, and the marking must be identical on both skis.
- 2.6.4 Aerial skis: The dimensions of commercial markings of such a sponsor on aerial skis are limited to a total surface of 120 cm<sup>2</sup> per ski. Only one commercial marking per ski is permitted and the marking must be identical on both skis.
- 2.6.5 Snowboards: the base bottom of snowboards may only carry the recognized commercial markings of the effective producer. The top of snowboards may carry the commercial markings of the effective producer and up to five (5) other sponsors within a total size of 250 cm<sup>2</sup>, according to the regulations of the relevant National Association.

#### 2.7 Accessories

#### 2.7.1 Fanny packs

The commercial markings belong to the NSA.

The size of commercial markings is limited to a maximum of 50 cm2. The space can be used by the actual producer of the product or a commercial sponsor of the National Ski Association.

Waist bags with commercial markings may not be worn on the podium during the winners' presentation and/or the award ceremony.

2.7.2 Mobile phones with large neckband / use of drinking bottles

To avoid obstructing the view of the bib sponsor during the winners' presentation and/or award ceremony, large neckbands with mobile phones and drinking bottles are prohibited on the podium.

2.8 All specifications also apply for officials, coaches, technicians, support personnel and forerunners.

### II. By-laws for commercial markings and for advertising

#### A. Commercial markings

- A.1 Trade names, brand names and logos of other products cannot be used as model names or be shown on ski equipment, except jumping skis and freestyle aerial skis.
- A.2 Clothing or helmets shall not represent or simulate the logo or product of a manufacturer or sponsor.
- A.3 Measuring
- A.3.1 The size of the commercial marking is the surface area within the actual outline of the marking. The measuring is done in an un-stretched state.
- A.3.2 If the marking is contained within an area of different colour, the total surface area of the different colour is to be measured.
- A.3.3 The accuracy of measurement of all markings is the responsibility of the respective National Association.
- A.3.4 For approval of commercial markings, it is strongly recommended to send a copy of all commercial markings in their original size, form and colour to the FIS before use. This should be done before October 1st or before the corresponding season begins in the Southern Hemisphere.

#### B. Advertising with athletes

- B.1 Advertising with athletes is allowed subject to the permission of the National Association.
- B.2 Names, titles and illustrations of particular athletes can only be used in advertising with the permission of the National Association.
- B.3 Not allowed in advertising with athletes:
- B.3.1 Any kind of advertising with alcohol, tobacco, and drugs.
- B.3.2 The use of names, illustrations and titles of skiers for product names or product designs.
- B.3.3 Any direct statement or active product presentation.
- B.3.4 Any religious or racial discrimination
- C. The above rules also apply in connection with press information or PR activities.