



PRECISIONS, INFORMATION AND INSTRUCTIONS

PARA NORDIC

NORTHERN HEMISPHERE

EDITION 2023/24

Oberhofen, October 2023

PRECISIONS, INFORMATION AND INSTRUCTIONS SOUTHERN HEMISPHERE 2023/2024

FIS Council Meeting: 25th October 2023.

1) INTRODUCTION

This document presents the rule changes within the Para Nordic International Competition Rules (ICR), Rules of the Points, Classification Rules and Regulations and Equipment Specifications following the approval of the proposals by the FIS Council on 25th October 2023.

All updated documents are now available on the FIS Website.

2) FLUOR WAX TESTING UPDATE

As previously communicated on 22nd March, a fluor wax ban will be fully implemented at the start of the upcoming 2023-2024 winter season. FIS is committed to banning flour products used in ski preparation given the health risks and environmental concerns connected to fluorine waxes and stands fully behind the testing procedure in place for the upcoming season.

In order to have a testing process that runs smoothly at the beginning of the season and to eliminate any speculation of a possible contamination of skis/snowboards, the FIS Council decided to increase the threshold that could lead to a disqualification of an athlete due to the use of banned fluorine waxes for a limited transition period.

The threshold for tests conducted at the finish of a race will be raised from 1.0 (defining clean skis/snowboards without any fluorine content) to 1.8 for the limited period of time until 31st December 2023. All results of the tests during this transition period will be documented.

More information can be found [here](#).

3) RUSSIA-BELARUS PARTICIPATION

The current FIS policy, which does not allow the participation of Russian and Belarusian athletes and officials at FIS events, will remain in effect until further notice.

4) CLASSIFICATION RULES AND REGULATIONS

The goal of the Para Nordic Classification Rules and Regulations review was not to change any rules but to clear up inconsistencies, include more detail about the process of classification, and further define the criteria to increase consistency among classifiers. The following amendments were made:

- Added detail about the assessment methods for each of the eligible impairment types, which for some impairments was previously missing. Removed assessment methods not used in practice.
- Separated out and added information about what to expect during a technical assessment and observation assessment, together with its purpose.
- Separated out the eligible impairment types under each of the Sport Class profiles, adding further detail to select criteria to increase consistency among classifiers.

Part One: General Provisions

14.6 When Observation in Competition Assessment reveals:

14.6.1 inconsistencies with the Physical Assessment and/or the Technical Assessment; and/or

14.6.2 that the Athlete, in the sole discretion of the Classification Panel, may have not performed to his best ability,

14.6.3 re-assessment may take place before a Sport Class is allocated. Such re-assessment must take place as soon as possible at that same Competition by the same Classification Panel.

14.7 An Athlete who is required to complete a re-assessment will remain designated with Tracking Code: Observation Assessment (OA) for the duration of the re-assessment.

14.8 If a Classification Panel requires an Athlete to complete a re-assessment, the Athlete must complete another Observation in Competition Assessment. The Athlete will be entered in the Competition with the Sport Class allocated by the Classification Panel after the completion of the Physical and/or Technical Assessment(s) of the reassessment. The Observation in Competition Assessment must take place the next time the Athlete competes in an Event during the Competition in a particular Sport Class. Such appearance within a Sport Class applies to participation in all Events within the same Sport Class.

Appendix One Athletes with Physical Impairment

2 Assessment Methodology

2.3 Athletes must attend an Evaluation Session with their competition ski equipment and accessories (for example, sit-ski, strapping and padding, orthoses, prostheses, poles and boots).

2.4 All athletes will undergo an assessment relevant to the Underlying Health Condition/diagnosis and presentation. This includes, but is not limited to, an assessment of:

- Muscle power
- Muscle tone
- Reflexes
- Passive range of movement
- Coordination
- Motor control/Movement control
- Anthropometric measurements

Final Sport Class allocation is the resultant outcome of a comprehensive battery of tests and measures.

3 Physical Assessment

3.1 Impaired Muscle Power

3.1.1 Manual muscle testing is conducted in accordance with Daniels and Worthingham (2014Hislop et al. 2013)¹ and scoring is based on the Oxford Scale. Muscle power will be tested through the full available passive range of movement (PROM) modified by testing isometrically at the midpoint of available range of motion. (In: Hislop, H. J., & Montgomery, J. (2002): Daniels and Worthingham's Muscle Testing: Techniques of Manual Examination (9th ed.). Philadelphia: W.B. Saunders Company). Classifiers will also describe the range of motion and any limitations at the time of classification. In case of differences in or changes/limitations or lack of anatomic insertion of a muscle, the manual muscle testing score is based on functional strength across the joint through the available range of movement at the time of examination.

Oxford Scale

<u>5</u>	<u>Muscle group is able to complete FULL available range of movement against gravity and maximal resistance</u>
<u>4</u>	<u>Muscle group is able to complete FULL available range of movement against gravity and resistance but not against maximal resistance</u>
<u>3</u>	<u>Muscle group is able to complete FULL available range of movement against only the resistance of gravity</u>
<u>2</u>	<u>Muscle group is able to complete FULL available range of movement in a position that minimizes the force of gravity (Gravity Minimized)</u>
<u>1</u>	<u>Muscle contraction activity detected visually or by palpation in the muscle however no movement of limb noted</u>
<u>0</u>	<u>Absence of muscle contraction noted visually nor by palpation</u>

For the assessment of Athletes with spinal cord injury must provide an International Standards for Neurological Classification of SCI (ISNCSCI) Worksheet, recently completed by a qualified health care professional. The worksheet is available from: International Standards for Neurological Classification of SCI (ISNCSCI) Worksheet - American Spinal Injury Association (asia-spinalinjury.org)

, the ASIA classification must be used (accessible at http://asia-spinalinjury.org/wp-content/uploads/2016/02/International_Stds_Diagram_Worksheet.pdf, accessed 08/2017)

Buttock sensibility is measured in accordance with the ASIA Classification (accessible at http://asia-spinalinjury.org/wp-content/uploads/2016/02/International_Stds_Diagram_Worksheet.pdf accessed 08/2017):-

0 = absent

¹ Hislop, H. J. , Avers, D. and Brown, A (2013). Daniels & Worthingham's muscle testing : Techniques of Manual Examination and Performance Testing (9th Edition). Philadelphia: W.B. Saunders Company

1 = altered
2 = normal
NT = Not Testable

3.2 Impaired Passive Range of Movement

3.2.1 Impaired Passive Range of Movement testing is conducted in reference to the anatomical ranges of movement described in Daniels and Worthingham (Hislop et al. 2013).

3.2.2 General Considerations:

- Athlete appropriately positioned for assessment
- Active range of movement is determined and when limitation is noted the passive range of movement is further assessed

3.2.3 Equipment used:

- Long arm goniometer

3.3 Limb Deficiency

3.3.1 Limb deficiency must be demonstrated as having partial absence of bones or joints as a consequence of trauma, illness or congenital limb deficiency.

3.3.2 General Considerations:

- Determination of whether limb deficiency is acquired or congenital
- Athlete appropriately positioned for assessment
- Residual limb is measured using consistent and precise anatomical landmarks
- Measurements must be recorded accurately for left and right sides

3.3.3 Equipment used:

- Medical tape measure (in centimeters)

3.4 Leg Length Difference

3.4.1 Leg length difference must be demonstrated as anatomic leg length discrepancy as opposed to functional leg length discrepancy.

3.4.2 General Considerations:

- Determination of leg length discrepancy
- Athlete appropriately positioned for assessment
- Leg length is measured in supine position, taking the average of two measurements of the distance from the inferior aspect of the anterior superior iliac spine to the distal tip of the medial malleolus
- Measurements must be recorded accurately for left and right sides

3.4.3 Equipment used:

- Medical tape measure (in centimeters)

3.5 Hypertonia

3.5.1 In conducting the assessment, the Classification Panel must be satisfied that the velocity dependent resistance to passive lengthening of the muscle is related to an Underlying Health Condition. The following signs may be useful indicators in this regard:

- Increased resistance to velocity dependent passive lengthening of the muscle
- presence of non-dampening clonus on the side which the tone is increased;
- abnormal brisk reflexes in the limb in which the tone is increased;
- mild atrophy in the limb in which the tone is increased;
- positive Babinski response on the side in which the tone is increased.
- Increase in muscle tone (including clonus or reflex activity) as demonstrated during sport specific activity assessment incorporating functional velocity dependent passive lengthening of the muscle

3.5.2 The Modified Ashworth Scale is used to measure the increase of muscle tone. Muscle groups are assessed through full available passive range of movement in both slow and velocity dependent manners.

Modified Ashworth Scale (MAS)

<u>0</u>	<u>No increase in muscle tone</u>
<u>1</u>	<u>Slight increase in muscle tone, manifested by a catch and release or minimal resistance at the end of range of movement when an affected part(s) is moved in flexion or extension</u>
<u>1+</u>	<u>Slight increase in muscle tone, manifested by a catch, followed by minimal resistance throughout the remainder (less than half) of range of movement</u>
<u>2</u>	<u>More marked increase in muscle tone through most of range of movement, but affected part(s) easily moved</u>
<u>3</u>	<u>Considerable increase in muscle tone, passive movement difficult</u>
<u>4</u>	<u>Affected part(s) rigid in flexion or extension</u>

For the assessment of hypertonia, the Ashworth Scale must be used (Ashworth, B. (1964). Preliminary trial of carisoprodal in multiple sclerosis. Practitioner 192: 540-542).

3.6 Ataxia

3.6.1 In conducting the assessment, the Classification Panel must be satisfied that ataxic movements or coordination deficits are demonstrable, clearly evident and related to an Underlying Health Condition. Tests that may be useful for determining this include, but are not limited to:

- Finger-to-nose test (Athlete touching own nose from the crucifix position)
- Finger-to-finger test (Classifier presents their index finger and asks

the Athlete to touch it with their own index finger)

- Toe-to-finger test (Classifier presents their index finger and asks the Athlete to touch it with their toe)
- Heel draw test (i.e., draw the heel of one leg along the length of the contralateral shin, from ankle to knee and then in the reverse direction)
- Straight line heel-to-toe walking
- One leg stance
- Walking

3.6.2 Sport Specific tests will be included in the evaluation as needed. Tests that may be useful for determining this include, but are not limited to:

- Pole control placement tests;
- Nordic specific movement tests;

3.7 Athetosis

Athetosis refers to unwanted movement and posturing resulting from damage to motor control centres of the brain, most frequently the basal ganglia. When evaluating an Athlete, the Classification Panel must be satisfied that athetosis is clearly evident and that it is neurological in origin. Clearly evident athetosis is unwanted movement and posturing that is characteristically athetoid and observable as at least one of the following:

- Involuntary movement of the fingers or upper extremities despite the Athlete trying to remain still;
- Involuntary movement of the toes or lower extremities despite the Athlete trying to remain still;
- Inability to hold the body still – swaying of the body.
- Characteristic athetoid posturing of the limbs and/or trunk

Functional Assessment of Sitting Athletes

General Considerations

3.7.1 All athletes competing in the Sitting Classes (LW10-LW12) with potential trunk and/or hip neurologic weakness/dysfunction will undergo Trunk/Hip Testing. The purpose of these tests are to assess trunk/hip muscle power, postural control, and function to determine the extent to which the Athlete's Eligible Impairment impacts their ability to execute the specific tasks and activities fundamental to sit skiing.

Test Table Test The Board Test

~~Test-table testing~~ The Board Test is conducted in accordance with the protocol described in Pernet et al., (2011)², Validity of the test-table-test for Nordic Skiing for classification of Paralympic sit-ski sport participants. Spinal Cord, 49, 935-941).

3.7.2 Equipment used:

- Test Board, which may include the use of strapping, foam, cushions etc. Classifiers will adjust or modify the equipment or set up as needed to meet the individual needs of the athlete and/or to comprehensively or more specifically assess the athlete's physical ability.

The tests that will be carried out include:

- Test 1: Test of Extensors
- Test 2: Test of Flexors
- Test 3: Test of Free Rotation
- Test 4: Test of Lateral / Sidebending

Tests are scored on a scale of 0-3, as follows:

- Score 0: no function
- Score 1: weak function
- Score 2: fair function
- Score 3: normal function

~~The test-table-test board (Figure 1) consists of a medium-density fibreboard padded with specially designed standardised cushions also supporting the legs. The position of these cushions can be adapted to the Athlete's anthropometrics. Velcro straps over the hip joints, knees and ankles are used to secure legs during testing.~~

Figure 1: Test-Table-Test Board



² Pernet et al (2011) Validity of the test-table-test for Nordic Skiing for classification of Paralympic sit-ski sport participants. Spinal Cord, 49, 935-941

2.4 Table 1. describes the tests to be conducted with the test table and the scoring system:

Table 1: Test-Table-Test	
Test	Scoring and Abilities
<p>Test 1 The Athlete sits with the hands behind the neck and is asked to forward flex the trunk at the waist as much as possible, then extend the trunk and move to a position of 45° forward flexion indicated by a landmark. The position has to be maintained for 5sec while keeping the hands behind the neck.</p>	<p>Score 0: No function The Athlete can lean forward but loses balance before 45°</p>
	<p>Score 1: Weak function The Athlete can lean forward but not go up against gravity</p>
	<p>Score 2: Fair function The Athlete can lean forward and come up with using the head and upper part of the trunk from 45° and above</p>
	<p>Score 3: Normal function The Athlete straightens up normal</p>
<p>Test 2 The Athlete is asked to fold the arms over the chest, lean back and maintain a 45° backward inclination of the trunk relative to the horizontal for 5sec. Subsequently, the Athlete is asked to return to the starting, complete upright, sitting position.</p>	<p>Score 0: No function The Athlete cannot lean backwards, loses balance</p>
	<p>Score 1: Weak function The Athlete can lean some degrees out of centre of gravity. He/she compensates with the head and increases his/her kyphotic position of the upper spine</p>
	<p>Score 2: Fair function The Athlete can lean backwards to 45°, but cannot maintain this position</p>
	<p>Score 3: Normal function The Athlete straightens up normal</p>
<p>Test 3 The Athlete is asked to perform a maximum rotation of the trunk in the long-sitting position in both directions while keeping the arms fully abducted.</p>	<p>Score 0: No function The Athlete cannot sit with the arms abducted</p>
	<p>Score 1: Weak function The Athlete only uses the arms when trying to rotate</p>
	<p>Score 2: Fair function The Athlete rotates the upper body, but one side is better than the other, or lumbar spine is not following in the rotation</p>
	<p>Score 3: Normal function Normal trunk rotation</p>
<p>Test 4 The Athlete is asked to bimanually lift a 1-kg medicine ball over the head from-</p>	<p>Score 0: No function The Athlete cannot lift the medicine ball</p>

the left to the right and back. Leaning on the ball has to be avoided.	Score 1: Weak function The Athlete can lift the medicine ball, but cannot hold it with both hands, nor lift it over the head. The Athlete uses one hand for stability
	Score 2: Fair function The Athlete leans on the medicine ball when putting it down
	Score 3: Normal function Normal function

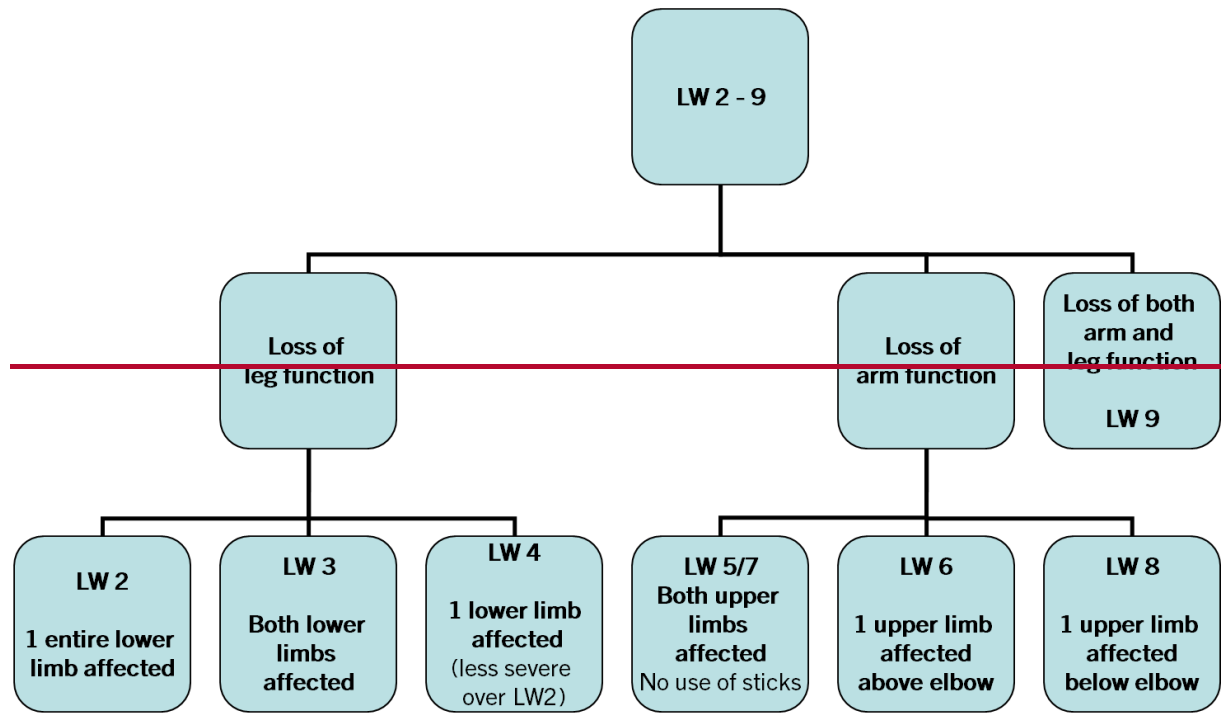
Technical Assessment

A Technical Assessment is a supplementary component of the overall Athlete Evaluation process. It complements the process of determining the impact of the athletes' eligible impairment and the extent to which the athlete is able to execute the specific tasks and activities fundamental to nordic skiing. Technical Assessment may provide further clarification and assist in the allocation of a Sport Class.

A Technical Assessment takes place in a controlled non-competitive environment that allows for the repeated observation of key tasks and activities. This also allows the Classification Panel to evaluate the Athlete when they are using the Adaptive Equipment that they will use in competition (if any), taking into account the (optimal) use of such equipment (such as strapping, gloves etc.). The Classification Panel may observe the following but are not limited to:

- Basic ski propulsion
- Poling use and dynamics
- Changing tracks
- Uphill skiing
- Downhill skiing
- Cornering
- Use of Equipment

The below overview describes the Sport Class allocation criteria for the Sport Classes LW 2 to LW 9, thus for Athletes who compete in a standing position.



~~Length of prostheses used by athletes with lower limb amputation~~

~~The length of prosthesis used by Athletes with lower limb amputation in FIS Para-Nordic Competitions is defined in accordance with the criteria for prosthetic leg length in the sport of World Para Athletics (detail available in the World Para Athletics Classification Rules and Regulations).—~~

4 Observation in Competition Assessment

- 4.1 Observation in Competition Assessment, otherwise known as Observation Assessment, refers to the observation of an Athlete in a Competition by a Classification Panel. The process is further defined under Article **Error! Reference source not found.** The Observation in Competition Assessment is only required if a Classification Panel considers it is necessary in order to complete an Evaluation Session.
- 4.2 Observation Assessment is used to confirm that the Athlete has been allocated the correct Sport Class by observing and evaluating the Athlete in a competitive environment.
- 4.3 During the Observation Assessment, the Athlete is observed by the Classification Panel in a comprehensive assessment of all aspects of the athletes' physical abilities. Observation Assessment is used to confirm findings from the Physical and/or Technical Assessments to support the allocation of the Sport Class.
- 4.4 Following an Observation Assessment, the Classification Panel may either: allocate the Athlete a final Sport Class (in which case the Athlete will also be allocated a Sport Class Status); or require the Athlete to redo any or all of the components of the Evaluation Session (including Observation Assessment) that the Classification Panel deems necessary.

~~For observation in training and/or Competition, the Classification Panel may observe:~~

- ~~▪ Changing tracks with trunk and hip assistance~~
- ~~▪ Climbing – trunk assistance~~
- ~~▪ Downhill – trunk stability and control~~
- ~~▪ Trunk control in curves~~
- ~~▪ Leg position*~~
- ~~▪ Strapping*~~

~~————— (*) for Athletes in Sport Classes LW10-12 only~~

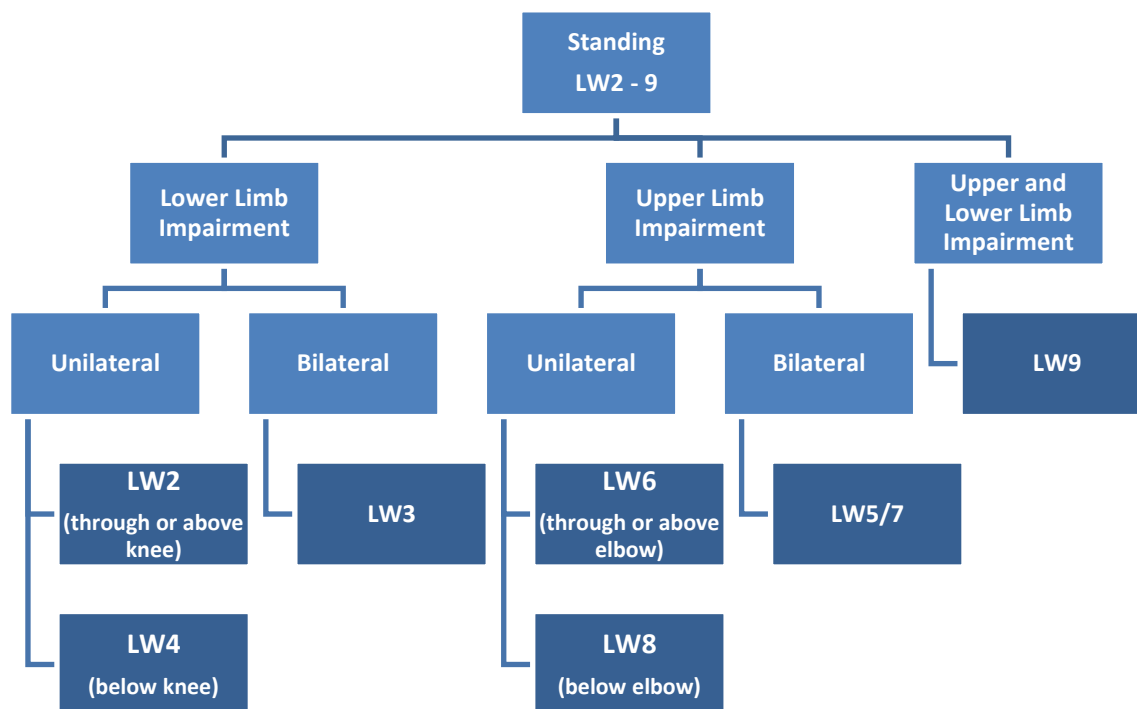
Sport Class Profiles

4.5 General Considerations

2.4.14.5.1 The Sport Classes in Para Nordic for athletes with a Physical Impairment are as follows:

- ~~Sport Classes for~~ Standing Skiers: LW 2, LW 3, LW 4, LW 5/7, LW 6, LW 8, LW 9
- ~~Sport Classes for~~ Sit-Skiers: LW 10, LW10.5, LW 11, LW 11.5, LW 12

2.54.6 Sport Class Profiles - Standing Classes (LW2-9)



<u>Sport Class LW2</u>	<u>Unilateral lower limb impairment (through or above the knee)</u>
<u>Impaired Muscle Power</u>	<u>Loss of muscle power resulting in a total score of 64 or less for all muscle groups of the lower limb, at minimum a loss of 16 points in one lower limb, and a knee flexion/extension score of 2 or less.</u>
<u>Limb Deficiency</u>	<u>Loss of limb through or above the knee; or A congenital deficit where the length of the affected limb is no longer than the length of the femur of the unaffected limb.</u>
<u>Impaired Passive Range of Movement</u>	<u>No range of motion in knee and/or hip, resulting from arthrodesis or ankylosis.</u>
<u>Ataxia Athetosis Hypertonia</u>	<u>Affecting one leg at or above the knee.</u>
<u>Technical Considerations</u>	<u>The Athlete must ski using two skis and two ski poles.</u>

<u>Sport Class LW3</u>	<u>Bilateral lower limb impairment</u>
<u>Impaired Muscle Power</u>	<u>Loss of muscle power in both legs, resulting in:</u> <ul style="list-style-type: none"> ▪ <u>A maximum of 65 points for both limbs; AND</u> ▪ <u>A minimum of 5 points missing in one leg; AND</u> ▪ <u>At least one muscle group in one leg must have a maximum score of 2</u>
<u>Limb Deficiency</u>	<u>Loss of both limbs at minimum proximal to metatarsals; or</u>

	<u>A congenital deficit resulting in the absence of forefoot structure.</u>
<u>Impaired Passive Range of Movement</u>	<u>No range of movement in both knee joints.</u>
<u>Ataxia</u> <u>Athetosis</u> <u>Hypertonia</u>	<u>Ataxia in both lower limbs observed during at least one of the coordination tests for lower extremities, as presented under 3.6.1.</u> <u>Clearly evident athetosis, observable in both lower limbs, as presented under 0.</u> <u>Hypertonia in both legs, resulting in grade 2 or more on the Modified Ashworth Scale in any direction of movement.</u>
<u>Technical Considerations</u>	<u>The Athlete must ski using two skis and two ski poles.</u>

<u>Sport Class LW4</u>	<u>Unilateral lower limb impairment (below the knee)</u>
<u>Impaired Muscle Power</u>	<u>Loss of muscle power in one lower limb, resulting in:</u> <ul style="list-style-type: none"> ▪ <u>A maximum of 70 points; AND</u> ▪ <u>At least loss of 10 points in the affected leg; AND</u> ▪ <u>At least one muscle group in the affected leg (below the knee) must have a maximum score of 2</u>
<u>Limb Deficiency</u>	<u>Loss of limb through or above the ankle joint; or</u> <u>A congenital defect with the length of the affected limb shorter than the length of the unaffected limb at the level of the ankle.</u>
<u>Impaired Passive Range of Movement</u>	<u>Equivalent activity limitation to the loss of limb through or above the ankle joint.</u>
<u>Ataxia</u> <u>Athetosis</u> <u>Hypertonia</u>	<u>Ataxia in one lower limb observed during at least one of the coordination tests for lower extremities, as presented under 3.6.1.</u> <u>Clearly evident athetosis observable in one lower limb (below the knee) as presented under 0.</u> <u>Hypertonia affecting one leg (below the knee).</u>
<u>Leg Length Difference</u>	<u>Leg length difference between both legs of at least 7cm.</u>
<u>Technical Considerations</u>	<u>The Athlete must ski using two skis and two ski poles.</u>

<u>Sport Class LW5/7</u>	<u>Bilateral upper limb impairment</u>
<u>Impaired Muscle Power</u>	<u>Loss of muscle power in both upper limbs with max score of 2 in finger flexion, finger extension and thumb opposition</u>
<u>Limb Deficiency</u>	<u>Loss of limb in both upper limbs, at or proximal to all metacarpophalangeal joints; or</u>

	<u>Congenital deficit of both hands, resulting in inability to grip and use poles</u>
<u>Impaired Passive Range of Movement</u>	<u>Equivalent activity limitation to that of an athlete with loss of limb in both upper limbs, at or proximal to all metacarpophalangeal joints</u>
<u>Ataxia</u> <u>Athetosis</u> <u>Hypertonia</u>	<u>Affecting both upper limbs</u>
<u>Technical Considerations</u>	<u>The Athlete must ski using two skis but no ski poles.</u> <u>The use of upper limb prostheses is not allowed.</u> <u>The above Eligible Impairment criteria are defined by the lack of functional grip in both upper limbs. If the inability to grip and use poles in both hands cannot be overcome by strapping technology (e.g. strap above and below thumb-finger interspace with circumferential wrist strap), the Athlete will be allocated LW5/7.</u>

<u>Sport Class LW6</u>	<u>Unilateral upper limb impairment (through or above elbow)</u>
<u>Impaired Muscle Power</u>	<u>Loss of muscle power, resulting in max scores of 2 for muscle groups in wrist and elbow region.</u>
<u>Limb Deficiency</u>	<u>Loss of limb through or above the elbow; or</u> <u>Congenital deficit with the length of the affected limb equal to or shorter than the length of the humerus of the unaffected limb</u>
<u>Impaired Passive Range of Movement</u>	<u>Equivalent activity limitation to that of an athlete with loss of limb through or above the elbow</u>
<u>Ataxia</u> <u>Athetosis</u> <u>Hypertonia</u>	<u>Affecting one entire upper limb at or above the elbow</u>
<u>Technical Considerations</u>	<u>The Athlete must ski using two skis and one ski pole without the use of a prosthesis. The entire limb must be fixed (non-flexible) to the body for the entire duration of the race (with the exception of limb deficiency).</u>

<u>Sport Class LW8</u>	<u>Unilateral upper limb impairment (below elbow)</u>
<u>Impaired Muscle Power</u>	<u>Lack of functional grip, being defined as loss of muscle power in one upper limb with max score of 2 in finger flexion, finger extension and thumb opposition.</u>
<u>Limb Deficiency</u>	<u>Loss of upper limb below the elbow, at or proximal to all metacarpophalangeal joints.</u> <u>Congenital deficit with the length of the affected limb longer than the length of the humerus of the unaffected limb.</u> <u>Dysmelia of one hand, resulting in lack of functional grip for Nordic Skiing.</u>

<u>Impaired Passive Range of Movement</u>	<u>Maximum of 5 degrees of flexion or extension in the elbow, with no ability to exert force when poling on the affected side.</u>
<u>Ataxia</u> <u>Athetosis</u> <u>Hypertonia</u>	<u>Affecting one upper limb below the elbow.</u>
<u>Technical Considerations</u>	<u>The Athlete must ski using two skis and one ski pole without the use of a prosthesis. The Impairment shall be such that the Athlete can only use one ski pole. Athletes in this Sport Class will be strictly forbidden to use their affected arm to assist poling or paddling.</u> <u>The above Eligible Impairment criteria are defined by the lack of functional grip in one upper limb. If the inability to grip and use a pole in one hand cannot be overcome by strapping technology (e.g. strap above and below thumb-finger interspace with circumferential wrist strap), the Athlete will be allocated LW8.</u>

<u>Sport Class LW9</u>	<u>Impairment of at least one upper limb and one lower limb</u>
<u>Impaired Muscle Power</u> <u>Limb Deficiency</u> <u>Impaired Passive Range of Movement</u>	<u>Impairment in one lower limb AND one upper limb, each meeting the inclusion criteria for LW4 or LW8 respectively.</u>
<u>Hypertonia</u> <u>Ataxia</u> <u>Athetosis</u>	<u>Hypertonia in at least one lower limb AND in one upper limb, resulting in grade 2 or more on the Modified Ashworth Scale in any direction of movement.</u> <u>Ataxia in at least one lower limb AND in one upper limb observed during at least one of the coordination tests for upper and lower extremities, as presented under 3.6.1.</u> <u>Clearly evident athetosis, observable in at least one lower limb AND in one upper limb as presented under 0</u>
<u>Technical Considerations</u>	<u>The Athlete must ski using two skis and either one ski pole or two ski poles.</u>

Sport Class LW2

Athletes eligible for Sport Class LW2 are those with an Eligible Impairment affecting one entire lower limb (including pelvis), meeting one of the following Minimum Impairment Criteria:

- Loss of limb through or above the knee
- No range of motion in knee and/or hip, resulting from arthrodesis or ankylosis
- Loss of muscle power resulting in a total score of 64 or less for all muscle groups of the lower limbs and hips, at minimum a loss of 16 points in one lower limb, and a knee flexion/extension score of 2 or less

- Limb deficiency or dysmelia with the length of the affected limb no longer than the length of the femur of the unaffected limb (measured from great trochanter to medical condylis); recent X-ray (<12 months before classification) must be provided)

The Athlete must ski using two skis and two ski poles.

Sport Class LW3

Athletes eligible for Sport Class LW3 are those with Impairment in both lower limbs, affecting the limb in whole or partially, meeting any of the following Minimum Impairment Criteria:

- Loss of both limbs at minimum proximal to metatarsals
- Loss of muscle power in both legs, resulting in:
 - A maximum of 65 points for both limbs; AND
 - A minimum of 5 points missing in one leg; AND
 - At least one muscle group in one leg must have a maximum score of 2
- Hypertonia in both legs, resulting in grade 2 or more on the Ashworth Scale in any direction of movement
- Ataxia in both lower limbs observed during at least one of the following tests of voluntary movement:
 - Heel draw test (i.e., draw the heel of one leg along the length of the contralateral shin, from ankle to knee and then in the reverse direction);
 - Straight line heel-to-toe walking
 - Walking
- Clearly evident athetosis in both lower limbs is unwanted movement and posturing that is characteristically athetoid and is observable as at least one of the following:
 - Involuntary movement of the toes or lower extremities despite the person trying to remain still.
 - Inability to hold the body still — swaying of the body. Swaying must not be due to other neurological deficits such as vestibular or proprioceptive impairments and therefore must not be exacerbated by closing of the eyes.
 - Characteristic athetoid posturing.
- Limb deficiency or dysmelia resulting in the absence of forefoot structure (recent X-ray (<12 months before classification) must be provided)
- No range of movement in both knee joints

The Athlete must ski using two skis and two ski poles.

Sport Class LW4

Athletes eligible for Sport class LW4 are those with an Eligible Impairment affecting one lower limb below the knee, meeting any of the following Minimum Impairment Criteria:

- Loss of limb through or above the ankle joint
- Loss of muscle power in the lower limbs, resulting in:
 - A maximum of 70 points; AND
 - At least loss of 10 points in one leg; AND
 - At least one muscle group in one leg must have a maximum score of 2

- ~~Ataxia in one lower limb observed during at least one of the following tests of voluntary movement:

 - Heel draw test (i.e., draw the heel of one leg along the length of the contralateral shin, from ankle to knee and then in the reverse direction);
 - Straight line heel-to-toe walking
 - Walking~~
- ~~Clearly evident athetosis in one lower limb is unwanted movement and posturing that is characteristically athetoid and is observable as at least one of the following:

 - Involuntary movement of the toes or lower extremities despite the person trying to remain still.
 - Inability to hold the body still — swaying of the body. Swaying must not be due to other neurological deficits such as vestibular or proprioceptive impairments and therefore must not be exacerbated by closing of the eyes.
 - Characteristic athetoid posturing.~~
- ~~Leg length difference between both legs of at least 7cm, measured in supine position, taking the average of two measurements of the distance from anterior superior iliac spine to the tip of the medial malleolus~~

~~The Athlete must ski using two skis and two ski poles.~~

Sport Class LW5/7

~~Athletes eligible for Sport Class LW5/7 are those with an Impairment in both upper limbs without the use of prosthesis, meeting any of the following Minimum Impairment Criteria:~~

- ~~Loss of limb in both upper limbs, at or proximal to all metacarpophalangeal joints (recent X-ray (<12 months before classification) must be provided)~~
- ~~Lack of functional grip in both upper limbs, being defined as loss of muscle power in both upper limbs with max score of 2 in finger flexion, finger extension and thumb opposition~~
- ~~Dysmelia of both hands, resulting in inability to grip and use poles. If the inability to grip and use poles in both hands cannot be overcome by strapping technology (e.g. strap above and below thumb-finger interspace with circumferential wrist strap), the Athlete will be allocated LW5/7.~~

~~The Athlete must ski using two skis but no ski poles. If the Athlete is able to use a pole he must compete in LW6 or LW8. The use of prosthesis of the upper limbs is not allowed.~~

Sport Class LW6

~~Athletes eligible in Sport Class LW6 have an Impairment in one entire upper limb, meeting any of the following Minimum Impairment Criteria:~~

- ~~Loss of limb through or above the elbow~~
- ~~Loss of muscle power, resulting in max scores of 2 for muscle groups in wrist and elbow region.~~
- ~~Limb deficiency or dysmelia with the length of the affected limb shorter than the length of the humerus of the unaffected limb (recent X-ray (<12 months~~

~~before classification) is required).~~

~~The Athlete must ski using two skis and one ski pole without the use of a prosthesis. The entire limb must be fixed (non-flexible) to the body for the entire duration of the race.~~

~~Sport Class LW8~~

~~Athletes eligible for Sport Class LW8 have an Impairment in one upper limb, meeting any of the following Minimum Impairment Criteria:~~

- ~~▪ Loss of upper limb below the elbow, at or proximal to all metacarpophalangeal joints~~
- ~~▪ Lack of functional grip, being defined as loss of muscle power in one upper limb with max score of 2 in finger flexion, finger extension and thumb opposition~~
- ~~▪ Limb deficiency with the length of the affected limb longer than the length of the humerus of the unaffected limb (recent X-ray (<12 months before classification) is required).~~
- ~~▪ Maximum of 5 degrees of flexion or extension in the elbow, with no ability to exert force when poling on the affected side~~
- ~~▪ Dymelia of one hand, resulting in inability to grip and use poles other than by means of strapping the wrist to the pole. If the inability to grip and use poles in that hand cannot be overcome by commercially available pole straps, the Athlete will be allocated Sport Class LW8.~~

~~The Athlete must ski using two skis and one ski pole without the use of a prosthesis. The Impairment shall be such that the Athlete can only use one ski pole. Athletes in this Sport Class will be strictly forbidden to use their affected arm to assist poling or paddling.~~

~~Sport Class LW9~~

~~Athletes eligible for Sport Class LW9 have a combination of Impairments in both the upper and lower extremities, meeting any of the following Minimum Impairment Criteria:~~

- ~~▪ the Athlete has an impairment in one lower limb AND one upper limb, each meeting the inclusion criteria for LW4 or LW8 respectively~~
- ~~▪ Hypertonia in both upper and lower limbs, resulting in grade 2 or more on the Ashworth Scale in any direction of movement~~
- ~~▪ Ataxia in both upper and lower limbs observed during at least one of the following tests of voluntary movement:~~
 - ~~— Finger-to-nose test (Athlete touching own nose from the crucifix position)~~
 - ~~— Finger-to-finger test (Classifier presents their index finger and asks the Athlete to touch it with their own index finger)~~
 - ~~— Toe-to-finger test (Classifier presents their index finger and asks the Athlete to touch it with their toe)~~
 - ~~— Heel draw test (i.e., draw the heel of one leg along the length of the contralateral shin, from ankle to knee and then in the reverse direction)~~
 - ~~— Straight line heel-to-toe walking~~

~~—Walking~~

- ~~▪ Clearly evident athetosis in both upper and lower limbs is unwanted movement and posturing that is characteristically athetoid and is observable as at least one of the following:~~

~~—Involuntary movement of the fingers or upper extremities despite the Athlete trying to remain still~~

~~—Involuntary movement of the toes or lower extremities despite the Athlete trying to remain still~~

~~—Inability to hold the body still — swaying of the body. Swaying must not be due to other neurological deficits such as vestibular or proprioceptive impairments and therefore must not be exacerbated by closing of the eyes~~

~~—Characteristic athetoid posturing~~

~~The Athlete must ski using two skis and either one ski pole or two ski poles.~~

~~Criteria for the Sitting Sport Classes LW10-12~~

~~2.64.7 General Considerations for the sitting Sport Classes~~

~~2.6.14.7.1 Athletes competing in sitting Sport Classes LW-10 -12 will need to must meet at least the criteria of LW4.~~

~~2.6.24.7.2 Athletes meeting the criteria of a standing or a sitting Sport Class must ~~The Athlete~~ chooses between sitting or standing at the time of their first classification by the Classification Panel at an event officially approved by FIS.-~~

~~2.6.34.7.3 ~~An The~~ Athlete may request one to review of the choice to compete sitting or standing in accordance with Article **Error! Reference source not found.**16 of these Rules.~~

~~4.7.4 An Athlete may also request review of the choice if there is a clear medical justification for changing, in which case a Medical Review Request must be completed.~~

~~2.6.44.7.5 Athletes who demonstrate neurologic weakness of the trunk and/or the lower extremities will be evaluated to determine which sitting Sport Class they most appropriately fit within.~~

~~2.6.54.7.6 The Athlete will not be permitted to have his lower limbs outside of the sit-ski at any time during the Competition.~~

~~During Classification, no single criteria in isolation determines the Sport Class. The Classification Panel will consider the criteria and Impairment in aggregate to determine the Sport Class for each Athlete.~~

~~2.74.8 Sport Class Profiles – Sitting Classes (LW10-12)~~

LW10	Impairments in the lower limbs and trunk
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<u>Impaired Muscle Power</u>	<u>Trunk Muscle Power:</u> <u>Upper abdominals and trunk extensors: ≤ 2</u> <u>AND</u> <u>Lower abdominals and trunk extensors ≤ 2</u> <u>Hip Muscle Power:</u> <u>Hip Flexor score: ≤ 2 (bilateral)</u> <u>AND</u> <u>Hip Extensor score: ≤ 2 (bilateral)</u>
<u>Limb Deficiency</u>	
<u>Impaired Passive Range of Movement</u>	
<u>Hypertonia</u> <u>Ataxia</u> <u>Athetosis</u>	
<u>Functional Trunk/Hip Testing</u>	<u>Score of 0-2 on the Board Test</u>

<u>LW10.5</u>	<u>Impairments in the lower limbs and the trunk</u>
<u>Impaired Muscle Power</u>	<u>Trunk Muscle Power:</u> <u>Upper abdominals and trunk extensors ≥ 3</u> <u>AND</u> <u>Lower abdominals and trunk extensors ≤ 2</u> <u>Hip Muscle Power:</u> <u>Hip Flexor score: ≤ 2 (bilateral)</u> <u>AND</u> <u>Hip Extensor score: ≤ 2 (bilateral)</u>
<u>Limb Deficiency</u>	
<u>Impaired Passive Range of Movement</u>	
<u>Hypertonia</u> <u>Ataxia</u> <u>Athetosis</u>	
<u>Functional Trunk/Hip Testing</u>	<u>Score of 3-6 on the Board Test</u>

<u>LW11</u>	<u>Impairments in the lower limbs and trunk</u>
<u>Impaired Muscle Power</u>	<u>Trunk Muscle Power:</u> <u>Upper abdominals and trunk extensors ≥ 3</u> <u>AND</u> <u>Lower abdominals and trunk extensors ≥ 3</u> <u>Hip Muscle Power:</u> <u>Hip Flexor score: ≤ 2 (bilateral)</u> <u>AND</u> <u>Hip Extensor score: ≤ 2 (bilateral)</u>
<u>Limb Deficiency</u>	
<u>Impaired Passive Range of Movement</u>	

<u>Hypertonia</u> <u>Ataxia</u> <u>Athetosis</u>	
<u>Functional</u> <u>Trunk/Hip Testing</u>	<u>Score of 7-10 on the Board Test</u>

<u>LW11.5</u>	<u>Impairments in the lower limbs and the trunk</u>
<u>Impaired Muscle</u> <u>Power</u>	<u>Trunk Muscle Power:</u> <u>Upper abdominals and trunk extensors ≥ 3</u> <u>AND</u> <u>Lower abdominals and trunk extensors ≥ 3</u> <u>Hip Muscle Power:</u> <u>Hip Flexor score: ≥ 3 (at least unilateral)</u> <u>AND</u> <u>Hip Extensor score: ≤ 2 (bilateral)</u>
<u>Limb Deficiency</u>	
<u>Impaired Passive</u> <u>Range of Movement</u>	
<u>Hypertonia</u> <u>Ataxia</u> <u>Athetosis</u>	
<u>Functional</u> <u>Trunk/Hip Testing</u>	<u>Score of 11 on the Board Test</u>

<u>LW12</u>	<u>Impairments in the lower limb(s) (at least meeting the criteria of the LW4 class)</u>
<u>Impaired Muscle</u> <u>Power</u>	<u>Trunk Muscle Power:</u> <u>Upper abdominals and trunk extensors ≥ 4</u> <u>AND</u> <u>Lower abdominals and trunk extensors ≥ 4</u> <u>Hip Muscle Power:</u> <u>Hip Flexor score: ≥ 3 (at least unilateral)</u> <u>AND</u> <u>Hip Extensor score: ≥ 3 (at least unilateral)</u>
<u>Limb Deficiency</u>	
<u>Impaired Passive</u> <u>Range of Movement</u>	
<u>Hypertonia</u> <u>Ataxia</u> <u>Athetosis</u>	
<u>Functional</u> <u>Trunk/Hip Testing</u>	<u>Score of 12 on the Board Test</u>

Sport Class LW 10

Athletes eligible for Sport Class LW10 are those with Impairments in the lower limbs and the trunk who will have:

- A max score of 2 for each of the upper and lower abdominal muscles in any direction, and for (distal) trunk extensors, so that the athlete is unable to maintain a sitting position against gravity while properly strapped over the legs to the test table and without arm support
- A test table test score of 0-2
- A buttock sensibility score of 0 in S3-S5

Sport Class LW 10.5

Athletes eligible for Sport Class LW10.5 are those with Impairments in the lower limbs and the trunk who will have:

- Upper abdominal and trunk extensor muscle activity score 3; and score 2 or less for abdominal muscles connecting to the pelvic structure. The Athlete will sit statically without arm support when sitting with proper strapping over the legs to the test table and will not be able to move beyond base of support
- A test table test score of 3-6
- A buttock sensibility score of 0 in S3-S5

Sport Class LW 11

Athletes eligible for Sport Class LW11 are those with Impairments in the lower limbs and the trunk who will have:

- Retained the use of abdominal muscles and trunk extensor muscles, especially those muscle attaching to the pelvis (scores 3 or more)
- Hip flexion score of 2 or less in both hips
- A test table test score of 7-10
- A buttock sensibility score of 0-2 in S3-S5
- The Athlete will be unable to stand and/or walk even with orthosis
- The Athlete will be able to sit unsupported (with or without strapping) on the test table and move trunk out of base of support and return unaided while maintaining sitting position

Sport Class LW 11.5

Athletes eligible for Sport Class LW11.5 are those with Impairments in the lower limb(s) and the trunk who have:

- Near to normal trunk muscles activation (score 3-4 on abdominal muscles and trunk extensors)
- Hip flexion score of 3 or more in one hip and hip extension grade 1 or more in one or both hips (the Athlete may be able to stand or walk with or without aid of orthosis)
- A test table test score of 11
- A buttock sensibility score of 0-2 in S3-S5

Sport Class LW 12

Athletes eligible for Sport Class LW12 are those with Impairments in the lower limb(s):

- With normal trunk function (score 4-5 on abdominal muscles and trunk extensors);
- Score 3-5 for hip flexion and extension (unilateral or bilateral);
- A test table test score of 12
- A buttock sensibility score of 0-2 in S3-S5

5) APPROVED RULE CHANGES

The International Competition Rules (ICR)

201.6.1 *Nordic and Para Nordic Events*

Cross-Country, Roller Skiing, Ski-Jumping, Ski-Flying, Nordic Combined, Team Competitions in Nordic Combined, Nordic Combined with Roller Skiing or In-line, Team Ski-Jumping, Ski-Jumping on plastic jumping hills, Popular Cross-Country races, Para Cross-Country, Para Roller Skiing and Para Biathlon.

207.1.2 Winners presentation / Equipment on the podium

At FIS World Ski Championships and all events ~~of~~on the FIS Calendar, a competitor is allowed to take the following equipment on the podium:

- Skis / Snowboards
- Footwear: The athletes may wear their boots on their feet, but are not allowed to wear them anywhere else (such as around their neck). Other shoes cannot be taken on the podium during presentation except if they are worn on the feet.
- Poles: not on/around skis, normally in the other hand. Para athletes are exempt from this rule and may bring poles on/around the skis.
- Goggles: either worn or around the neck
- Helmet: if worn only on the head and not on another piece of equipment, e.g. skis or poles
- Ski straps: maximum of two with name of the producer of skis; eventually one can be used for a wax company
- Nordic Combined and Cross-Country Ski Poles Clips. A clip can be used to hold the two poles together. The clip can be the width of the two poles, though not wider than 4 cm. The length (height) can be 10 cm. The long side of the clip is to be parallel to the poles. The commercial marking of the pole manufacturer can cover the entire surface of the clip.
- All other accessories are prohibited: waist bags with belt, phones on neck-bands, bottles, rucksack/backpack, etc.

12206.4.1 A World Cup Trophy for the winner and medals for the top three (3) (medals only for CC) ranked athletes/guides will be awarded in each category / discipline. A Nations Cup Trophy for the top ranked World Cup nation in a season.

12206.4.2 For VI Categories, if the athlete skied with a guide only one guide per VI athlete will be awarded per discipline and overall trophies. In the event an athlete has skied with more than one guide during the season, the team manager must communicate the name to FIS and LOC representatives at the last Team Captains Meeting before the award ceremony.

12206.4.3 FIS and IBU will provide the Trophies and Medals.

12302.1.3.2 The Chair of the OC or his/her Assistant represents the OC to the public and chairs the meetings of the OC. He/she cooperates before and after the competition closely together with the FIS. See art. 210.

12302.3.6 The chief of control and competition is responsible to organise together with the Jury the suitable placing of ~~manual and video~~ controllers, to collect and all pertinent information and to report any incidents to the Jury as soon as possible.

12303.2.2.4 For PWG, WSC and WC competitions the TDs are appointed by the FIS Para Snowsports Committee based on the nominations prepared by the FIS Para Nordic Race Director in consultation with the Sub-Committee Para Nordic and the Cross-Country Sub-Committee for Rules & Control. For other international competitions the TDs are appointed by the regional TD coordinators. For PWG and WSC the appointments must be confirmed by the FIS Council. For WC, COC and FIS Competitions the NSA must appoint a National Assistant TD who is supervised and instructed by the TD. The Sub-Committee Para Nordic, will select the Technical Delegate and Race Director for PWG and make a formal nomination to the FIS Council.

~~12303.2.2.5 For PWG, WSC and WC competitions the TD and the Race Director will be appointed by the Sub-Committee Para Nordic. For WC competitions, the NSA should appoint a National TD who will serve on the jury and support the TD.~~

~~12303.2.2.6~~ 12303.2.2.5 Persons holding a position of responsibility for a Nations Team are not permitted to be nominated for the position of a TD or Jury member for PWG or WSC.

12303.4.4 Jury duties during competition are related but not limited to:

- All Jury members should be present on competition site in good time (normally 2 hours before first start)
- Can competitions start as scheduled (stadium and course preparation, weather conditions, teams on site?)
- Substitutions and late entries
- Changes to warm-up and ski test procedures on course
- Decide on re-grooming, rescheduling of forerunners and use of snow patrols if necessary
- Decide on salting the course if necessary
- Inform teams on Jury decisions
- Monitor the execution of competitions
- Decide on all reported infractions including ICR 207 and late starts (if force majeure was the reason for late start)
- Decide on valid protests

- Document Jury decisions along with used evidence to be used in case of appeal
- Check timing and results, calculate race penalty, declare official results
- Check that official results are published on FIS website
- In case of injuries during training/competition, the TD must complete FIS Injury Reports (see also FIS Medical Guide)
- TD must prepare his/her TD report within 3 days after the competition and send it to all Jury members.

12304.2.1 Reimbursement applies as follows:

- For PWG special regulations apply.
- At WSC for the TD, Assistant TD CC, Assistant TD BT, ~~Race Director, fixed~~ Jury member, IR Timing & Results, IR Biathlon, IR Classification, further officials as required
- ~~At WC for the TD, and the National TD assistant, IR Biathlon, FIS Classifiers as required, Race Director (free accommodation and meals),~~
-
- at other international competitions for the TD and National Assistant TD,
- includes official site inspection and homologation visits.

12304.2.4 The reimbursement will be done by the organizer by bank transfer or cash (the OC has the right to choose) latest 1 week after the expenses sheet was received by the OC.

12310.1.1 Cross-Country Skiing

CC Sprint	LW 10-12	men	800 - 1000m- (+/-300m)	sit ski	4800 - 1000m (+/-200m)	1 <u>or</u> 2	
	Qualification (all)	LW 10-12	women	800 - 1000m- (+/-300m)	sit ski	4800 - 1000m (+/-200m)	1 <u>or</u> 2
	Semifinal B1-3 (best 8)	LW 2-9	men	1200 - 1400m- (+/-400m)	standing	600 - 14200m (+/-400m)	1 <u>or</u> 2
	Semifinal LW (best 12)	B1-3	men	1200 - 1400m 1200m- (+/-400m)	standing	600 - 12400m (+/-400m)	1 <u>or</u> 2
	Final B1-3 (best 4)	LW 2-9	women	1200 - 1400m 1200m- (+/-400m)	standing	600 - 12400m (+/-400m)	1 <u>or</u> 2
	Final LW (best 6)	B 1-3	women	1200 - 1400m 1200m- (+/-400m)	standing	600 - 14200m (+/-400m)	1 <u>or</u> 2

12310.1.2 Biathlon

Competition	Class	Gender	Total Distance		Course	Loops
BT 7.5 km Sprint Penalty loop sit ski: 100m standing: 150m 2 shootings	LW 10-12	men	7.5 km	sit ski	2.5 km	3
	LW 10-12	women	7.5 km	sit ski	2.5 km	3
	LW 2-9	men	7.5 km	standing	2.5 km	3
	B1-3	men	7.5 km	standing	2.5 km	3
	LW 2-9	women	7.5 km	standing	2.5 km	3
	B 1-3	women	7.5 km	standing	2.5 km	3
BT 40 km - Middle Penalty loop sit ski: 100m standing: 150m 4 shootings	LW 10-12	men	10 km	sit ski	2.0 km	5
	LW 10-12	women	10 km	sit ski	2.0 km	5
	LW 2-9	men	10 km	standing	2.0 km	5
	B1-3	men	10 km	standing	2.0 km	5
	LW 2-9	women	10 km	standing	2.0 km	5
	B 1-3	women	10 km	standing	2.0 km	5
BT Individual 12.5 km Penalty 1 minute 4 shootings	LW 10-12	men	12.5 km	sit ski	2.5 km	5
	LW 10-12	women	12.5 km	sit ski	2.5 km	5
	LW 2-9	men	12.5 km	standing	2.5 km	5
	B1-3	men	12.5 km	standing	2.5 km	5
	LW 2-9	women	12.5 km	standing	2.5 km	5
	B 1-3	women	12.5 km	standing	2.5 km	5
BT 10 km Pursuit 2 day Pursuit Penalty loop sit ski: 100m standing: 150m 4 shootings	LW 10-12	men	10 km	sit ski	2.0 km	5
	LW 10-12	women	10 km	sit ski	2.0 km	5
	LW 2-9	men	10 km	standing	2.0 km	5
	B1-3	men	10 km	standing	2.0 km	5
	LW 2-9	women	10 km	standing	2.0 km	5
	B 1-3	women	10 km	standing	2.0 km	5
BT Sprint Pursuit Qualification + Final Penalty loop: sit-ski: 80m <u>75m</u> standing: 80m 2 shootings	LW 10-12	men	2.4 - 3.0 km	sit ski	800 - 1000m <u>200m</u> (+/-)	3
	LW 10-12	women	2.4 - 3.0 km	sit ski	800 - 1000m <u>200m</u> (+/-)	3
	LW 2-9	men	3.6 - 4. 8 <u>2</u> km	standing	1200 - 1400m <u>400m</u> (+/-)	3
	B1-3	men	3.6 - 4. 8 <u>2</u> km	standing	1200 - 1400m <u>400m</u> (+/-)	3
	LW 2-9	women	3.6 - 4. 8 <u>2</u> km	standing	1200 - 1400m <u>400m</u> (+/-)	3
	B 1-3	women	3.6 - 4. 8 <u>2</u> km	standing	1200 - 1400m <u>400m</u> (+/-)	3
BT Team Sprint Qualification + Final	LW10-12	Mixed	800 - 1000m <u>300m</u> (+/-)	sit ski	800 - 1000m <u>200m</u> (+/-)	4

Penalty loop:
~~80m~~
75m
4 shootings

LW 2-9
B1-3

Mixed

~~1200 -~~
~~1400m + 200m (+/-~~
~~400m)~~

standing

~~1200 - 1400m~~
~~(+/- 400m)~~

4

12310.2.2.2 Diagonal ~~stride~~ Stride technique is comprised of alternating diagonal movements of the arms and legs and includes diagonal stride ~~technique~~ and herringbone technique without a gliding phase. In diagonal technique only one or no pole is in the ground at any time.

12310.2.3 Where there ~~is~~ are one or more set track, repeatedly changing or stepping in and out of the tracks is not allowed.

12310.2.4 Single or double ~~;~~ skating is not allowed.

12310.3.2.1 For the PWG and the WSC, the programme is:

Cross country skiing:

Standing & VI men: Sprint, ~~1200m~~ 5 km, 10 km and 20 km

sit-ski men: Sprint, ~~800m~~ 5 km, 10 km and 20 km

standing & VI women: Sprint, ~~1200m~~ 5 km, 10 km and 20 km

sit-ski women: Sprint, ~~800m~~ 5 km, 10 km, and 20 km

all mixed & open relays (4 x 2.5 km)

Biathlon:

Standing & VI men: 7.5 km, Sprint Pursuit~~40 km~~ and 12.5 km

sit-ski men: 7.5 km, Sprint Pursuit ~~40 km~~ and 12.5 km

standing & VI women: 7.5 km, Sprint Pursuit ~~40 km~~ and 12.5 km

sit-ski women: 7.5 km, Sprint Pursuit ~~40 km~~ and 12.5 km

At Para Biathlon World Championships: Biathlon Team Sprint

12311.1 Fundamental Characteristics

12311.1.1 Cross-Country and Biathlon courses must be laid out so that they provide a technical, tactical and physical test of the competitors' qualifications. The degree of difficulty should be in accordance with the level of the competition. The course should be laid out as naturally as possible to avoid any monotony, with rolling undulating sections, climbs, and downhill sections.

Rhythm should not be broken by too many sharp changes in direction or steep climbs. The downhill sections must be laid out so that they create a challenge to the competitors. At the same time, it should be possible to ski the course even under fast conditions.

See the FIS Cross-Country Course and Venue Design Guidelines~~FIS Cross-Country Homologation Manual~~.

12312.5.1 When ski exchange is allowed, the pit box area must be designed so that each nation has a designated box marked by their national flag / national code and an exit is provided that minimizes any chance for interference. The minimum width of each exchange box shall be 2.5

metres. A bypass corridor must be provided so that any competitors who do not enter their pit boxes will have the shortest skiing distance past this ski exchange area.

The jury decides about the layout of the ski exchange zone and the number of boxes per nation, taking in consideration the total number of competitors and the available space in the stadium.

The course along the access to the boxes should be minimum 4 m wide. The width of the course on the exit side on the boxes should be minimum 6 m.

12313.1.2 As a minimum, the required data fields shown in the Official FIS Entry Form must be included. ~~See art. 215.~~

12314.6.1 Design

Bibs must be readable from the back and the front. They must not hinder the competitor in any way. The size, the shape and the method of attachment cannot be changed. The Organiser is responsible for obtaining practical bibs. Bibs used in sprints and in competitions with Pursuit start ~~and-or~~ Mass starts procedures should also have numbers on both sides under the arms; this is also possible for other competitions.

12315.5.1 The start area is prepared with a start line and a pre-start area that are 1 - 2.5 meter apart. This shall ensure adequate space for VI athletes.

12317.1.6 Percentage System

The percentages are determined by the Factors Expert Group and are approved by the Sub Committee Para Nordic and subject to change. The valid percentages can be downloaded from the FIS Para Nordic website <https://www.fis-ski.com/en/para-snowsports/para-nordic/documents>

12323 Sprint Competitions

12323.1 Definition

Cross Country skiing sprint competitions begin with a qualification round, organised as an interval start competition (ranking by calculated time). After the qualification, qualified athletes compete in the sprint finals using heats of different formats with pursuit start (ICR art. **Error! Reference source not found.**) and finish ranking by order of finish / real time. (ICR art. **Error! Reference source not found.**)

Distance:	LW 10-12	women	800 <u>- 1000</u> m
	LW 10-12	men	800 <u>- 1000</u> m

LW 2-9	women	1.2 – <u>1.4</u> km
LW 2-9	men	1.2 – <u>1.4</u> km
B1-3	women	1.2 – <u>1.4</u> km
B1-3	men	1.2 – <u>1.4</u> km

Course	Sit Ski	Standing
Men + women	800 – <u>1000</u> m	1.2 – <u>1.4</u> km
loops	<u>1 - 2</u>	<u>1 - 2</u>

12323.2.4 During the sprint finals (from semi-final to final), no waxing of skis is allowed. For exceptions see 12335.13.

12323.3.6.2 The allocation of athletes in the heats is determined from the finish ranking in the qualification round. Positions in subsequent heats are assigned based on rankings in the previous rounds of heats.

Category	Number of finishing athletes	Athletes per semi-final	Heats	Athletes in final
LW	<u>123</u> or more	6	heat 1) 1,4,5,8,9,12 heat 2) 2,3,6,7,10,11	6
	<u>11</u>	<u>5 and 6</u>	<u>heat 1) 1,4,5,8,9</u> <u>heat 2) 2,3,6,7,10,11</u>	<u>6</u>
	<u>10</u>	<u>5</u>	<u>heat 1) 1,4,5,8,9</u> <u>heat 2) 2,3,6,7,10</u>	<u>6</u>
	<u>9–12</u>	4 <u>and 5</u>	heat 1) 1,4,5,8, <u>9</u> heat 2) 2,3,6,7	6
	7 to 8	no semi-final		6
	<u>3*5</u> to 6	no semi-final		<u>All athletes in final4</u>
	<u>4* or 3*</u>	no semi-finals		<u># finishers - 1</u>

B	<u>89</u> or more	4	heat 1) 1,4,5,8 heat 2) 2,3,6,7	4
	<u>7 or 8</u>	3 <u>and 4</u>	heat 1) 1,4, <u>56</u> heat 2) 2,3, <u>6,75</u>	4
	<u>3*5</u> to 6	no semi-finals		4
	<u>4* or 3*</u>	no semi-finals		<u># finishers - 1</u>

* applies to WC or below only as per **Error! Reference source not found.**

12323.3.6.7 The Ccompetitors are not allowed to change corridors/tracks within marked corridors s area. the first 15-30m after the start line.

12323.3.6.9 If athletes start at the same time in the sprint finals (same percentage) the starting positions (lane choice) are determined according to the following:

Semi-finals – qualification times (rankings) are used.

Finals - rankings from the semi-finals and ~~then~~ qualification times are used.

12327 **Biathlon ~~10 km~~ Middle Competition**

12327.1 Definition

The Biathlon Middle~~10 km~~ competition uses interval start with 4 shooting stages and 5 ski loops. For each missed shot the athlete must ski one penalty loop.

12327.2 Courses and stadium

12327.2.1 Norms for WSC and PWG. For WC the Jury is allowed to modify if needed.

Biathlon 10 km <u>Middle</u>	Sit ski only	Sit Ski + Standing	Standing only
	Classical Technique	Classical + Free	Free Technique

12329 **Biathlon Sprint Pursuit Competition**

12329.1 Definition

In the Para Biathlon Sprint Pursuit the competition begins with a first race (qualification), organized as an interval start. After the first race, selected athletes compete in the second race (final) using the format of Para Biathlon Pursuit Start. Both races take part on the same day.

Under difficult weather conditions or in case of technical problems the jury may decide to postpone the start or to cancel the second race. If it is cancelled, the result from the first part of the competition will count as the final result and WC points will be awarded according to the result of the first race.

The categories in the BT Sprint Pursuit competition are: LW 10-12, LW 2-9, B 1-3 per gender.

Distance:	LW 10-12	women	2.4 <u>- 3.0</u> km
	LW 10-12	men	2.4 <u>- 3.0</u> km

LW 2-9	women	3.6 – <u>4.2</u> km
LW 2-9	men	3.6 – <u>4.2</u> km
B1-3	women	3.6 – <u>4.2</u> km
B1-3	men	3.6 – <u>4.2</u> km

Course	Sit Ski	Standing
Men + women	800 – <u>1000</u> m	1.2 – <u>1.4</u> km
Loops	3	3

12329.2 Courses and Stadium

BT Sprint Pursuit	Sit ski only	Sit Ski + Standing	Standing only
	Classical Technique	Classical + Free	Free Technique
COURSE			
Width (minimum)	6 m	12 m	9 m
Classic tracks	2-3 tracks	2 tracks on the side	1 track on the side
Distance between tracks	Minimum 1.2 m		
Shooting range			
Shooting lanes	PWG 12 B / 18 LW (WC/WSC 10-12 B / 14 LW)		
Penalty loop			
Length of Penalty loop	<u>80-75</u> m (oval)		
Width of Penalty loop	6 m		
START			
Width (minimum)	9 m	9 m	9 m
Organization/preparation	2 corridors	2 corridors	2 corridors
Classical tracks	2	2	0

Final: 3 laps / 2 shooting rounds / penalty loop (7580m)

12329.3.4 Course and Stadium: see ICR art.12323 CC Sprint

LW 10-12: 800 – <u>1000</u> m (<u>+/- 200</u> m)	3 laps	2 shooting rounds
LW 2-9 / B1-3: 1200 – <u>1400</u> m (<u>+/- 400</u> m)	3 laps	2 shooting rounds

12329.4.3 Course

LW 10-12: 800 - 1000m (~~+/- 200m~~) 3 laps 2 shooting rounds

LW 2-9 / B1-3: 1200 - 1400m (~~+/- 400m~~) 3 laps 2 shooting rounds

12329.4.10 Penalty per missed shot: Penalty loop ~~80m~~75m

12330 Biathlon 12.5 km Individual Competition

12330.1 Definition
The Biathlon 12.5 km Individual competition uses interval start with 4 shootings, 5 ski loops and 1-minute time penalty per missed shot.

12330.2 Courses and stadium

Biathlon <u>12.5 km Individual</u>	Sit ski only	Sit Ski + Standing	Standing only
	Classical Technique	Classical + Free	Free Technique

12331.2.1 Norms for WSC and PWG. For WC the Jury is allowed to modify if needed.

BT Team Sprint	Sit ski only	Sit Ski + Standing	Standing only
	Classical Technique	Classical + Free	Free Technique
COURSE			
Width (minimum)	6 m	12 m	9 m
Classic tracks	2-3 tracks	2 tracks on the side	1 track on the side
Distance between tracks	Minimum 1.2 m		
Shooting range			
Shooting lanes	PWG 12 B / 18 LW (WC/WSC 10-12 B / 14 LW)		

Penalty loop			
Length of Penalty loop	80 <u>75</u> -m (oval)		
Width of Penalty loop	6 m		
START			
Width (minimum)	9 m	9 m	9 m
Organization/preparation	2 corridors	2 corridors	2 corridors
Classical tracks	2	2	0
FINISH			
Width (minimum)	12 m	12 m	12 m
Number of corridors	4	3	3
Number of tracks	4 (2 on both sides of the finish corridor, 2 between corridors)		

- 12331.4.2 Course and Stadium: see ICR art.12323 CC Sprint
 LW 10-12: 800 ~~- 1000m~~ (+/- 200m) 4 laps 4 shooting rounds
 LW 2-9 / B1-3: 1200 ~~- 1400m~~ (+/- 400m) 4 laps 4 shooting rounds

12331.4.5 Penalty per missed shot: Penalty loop ~~80m~~75m

12331.5.9 Penalty per missed shot: Penalty loop ~~75~~80m

12332.1.1 Shooting range

The shooting range is where all shooting takes place during a Biathlon competition.

(Layout details can be found in the Para [Biathlon Range and Equipment Certification Manual](#) ~~Nordic Technical Documents~~)

12332.1.2 General

The biathlon shooting range must be located in the central area of the stadium and both the targets and the shooting ramp must be visible to the majority of spectators. The range must be flat and level and must be surrounded by adequate safety protection on the sides and behind the targets. The placement and configuration of the range must be set

up with strict regard for safety in relation to the trails, stadium and the surrounding area and must comply with local laws. The shooting direction should generally be north to enhance light conditions during competitions.

The shooting range for PWG must have 12 shooting lanes for vision impaired classes (electronic) and 18 shooting lanes for LW classes (air rifle). For World Cup and World Championships the range must have 10-12 shooting lanes for vision impaired classes and 14 shooting lanes for LW classes. In case of small number of athletes participating in World Cup competitions the Jury may reduce the number of shooting lanes, if doing so does not affect the quality and fairness of the competition.

12332.1.6 The Shooting Ramp

The shooting ramp is the area to the rear of the firing line where the competitors arrive and depart and shoot from. The ramp must be totally covered with snow, solidly packed, even, smoothly groomed and not icy, and the entire area used by competitors during the competition must be level. The shooting ramp must be a minimum of 10 m wide measured back from the front edge of the firing line.

There must be a solid piece of wood, 20-30cm wide, fixed along the entire front edge of the shooting ramp to allow for the installation of a base for LW and rifle supports, and for the installation of the B system control boxes.

12332.2 Penalty loop

In competitions where a penalty loop is used, the penalty loop must be set up immediately after the shooting range and no further than 60m skiing distance from the right edge of the range to the entrance of the penalty loop. The loop must be at least 6m wide. The length of the loop shall be 80m-75m long for the Sprint Pursuit and Team Sprint. For all other events (sprint, 10 km & pursuit) the loop shall be 150m long for standing and B classes and 100m long for sitting classes (if configuration permits). Length is measured along the inside perimeter of the loop. The opening must be at least 15m long. The penalty loop must be marked off with v-boards, set up so close enough together that competitors have no chance of mistaking the entrance/exit.

12332.3.2 Specifications for 10m air rifle

The biathlon air rifle shall be any type of compressed air or gas-powered rifle of conventional appearance with a five or one-shot clip and according to the following specifications:

- a) The total length of the air rifle system measured from the back end of the mechanism to the apparent muzzle must not exceed 850mm.
- b) The front sight may not extend beyond the apparent muzzle.
- c) The trigger weight should be set at a minimum of 0.5kg (500 grams).
- d) Caliber: .177 caliber. 4,5 mm
- e) Power: Not to exceed 560 ft/sec, 8.0 Joule (0.75grain pellet measured with a full air-cylinder).
- f) Air cylinder: No more than 10 years old
- g) Minimum height of the stock: 70 mm
- h) Maximum weight of the ~~weapon~~rifle: 5,5 kg
- i) There must be a trigger-guard for safety
- j) Maximum width of stock: 70 mm

12332.3.3.2 Audio (acoustic) levels of the headsets shall range from a minimum of 85db to a maximum of 95db.

12332.5.5 All amplification systems and radios used by the B classes are not allowed to be used inside the guide waiting area.

12332.6.2 Rifle support for LW classes 5/7, 6, 8 and 9~~and 6/8~~

Athletes of the classes LW 5/7, LW 6, LW 8 and LW 9~~and 6/8~~ are allowed to use a rifle support. The supports to be used during the competition will be provided by FIS. Athletes are not allowed to use their own support. Exceptions are only allowed in the LW 5/7 class. In case a LW 5/7 athlete has to use a private support due to physical limitation, this support has to be submitted to the FIS Adaptive Equipment Inventory and be approved. Using a support that has not been approved in this way prior to the competition may lead to disqualification.

12332.6.2.2 LW 5/7, LW 6, ~~and~~ LW 8 and LW 9 athletes using the rifle support are only allowed to touch the rifle with a second hand / arm for the purpose of reloading or activating the trigger mechanism and are not allowed to touch or stabilize the rifle with the second arm / hand while shooting.

12333.2.4 During FIS Para Nordic sanctioned competitions all competitors in class B1 must wear their own opaque shades or glasses approved through the FIS Adaptive Equipment Inventory by the Sub-Committee Para Nordic. The glasses must be worn so that no light can be seen by the competitor (inside must be black).

12335.12.2 Skis may be changed only if:

- The skis or bindings are broken or damaged. The equipment failure must be proven to the Jury after the competition.
- Equipment exchange boxes (pit boxes) are in place at the competition.
- During classical individual sprint competition finals, when more than one pair of skis is allowed to go through the controls of fluorinated wax. Jury may add instructions or deadlines for changing pair of skis (among the controlled ones).

12335.12.3 Only skis that passed the controls of fluorinated wax (when present) can be left in the exchange (pit) boxes.

~~12335.12.3~~12335.12.4 In the case of any ski exchange, the competitor must do it outside of the track or range to avoid obstruction. The athlete can be supported by a team official.

~~12335.12.4~~12335.12.5 When ski exchange boxes (pit boxes) are provided for long distance competitions, the competitor is permitted to change skis inside the pit box. 2 officials are allowed in the exchange box to assist the athletes per nation. The jury may allow big teams to have additional officials in the exchange box if needed.

~~12335.12.5~~12335.12.6 When ski exchange boxes (pit boxes) are provided, overtaking along the access corridors to the boxes is only allowed on the side that is farthest from the boxes.

12335.13 Waxing, scraping-structuring or cleaning of the competitor's skis bases during the competition is forbidden, with the following ~~Exception:~~ In classical ~~technique-distance~~ competitions, competitors, may scrape their skis to remove snow and ice, and add kick wax ~~if necessary~~. ~~Competitors may only be handed tools or materials and must do this outside of the track. They must make these adjustments~~ without help assistance from ~~any~~ other persons and without interfering with other competitors. (LW 5/7 and B1-3 athletes can be supported by a team official). During classic individual sprint competitions, adjustments of the kick zone may be made between the rounds by the competitor or authorized personnel within the designed Control Area. Any adjustment of the glide zones is not allowed. It is not allowed to place branches, tools or materials on or adjacent to the groomed course.

12335.15 Communication devices that support wireless communication between coaches and athletes or between athletes are not allowed during competition. Radio communication between guide and competitor is accepted, except in the guide waiting area.

12336.3 In order ~~To~~ to obtain clean TV coverage and for safety reasons parts of the competition course may be closed for all but the competitors taking part in the competition. The Jury can allow ski testing and warming up by competitors on parts of the competition course before and during the competition. Athletes and service personnel, wearing special bibs may be allowed to ski on these parts of the competition course.

12337 **Not Permitted to Start**

Competitors will not be permitted to start in any FIS international ski competition who:

12337.1 wears obscene names and/or symbols on clothing and equipment (art. 207) or behaves in an unsportsmanlike manner in the start area (art. 205.5);

12337.2 violates the FIS rules in regard~~regarding to~~ equipment (art. 222) and/~~or on advertising and~~ commercial markings ~~prior to competing in a competition or race~~ (art. 207); ~~or~~

12337.3 refuses to undertake a FIS required medical examination (rule 221.2)

12337.4 competitors

- whose skis have been positive at the controls of fluorinated wax before the start.
- present skis to the control of fluorinated wax later than 5 minutes after the deadline.

13337.54 If a competitor has actually started in a competition and is later determined by the Jury to have been in violation of these rules the Jury must sanction the competitor.³

12338.1 Procedure

When an infraction to the rules occurs, the Jury must meet and decide the appropriate sanction by taking into consideration:

- the specific circumstances,
- the gain or advantage for the offender (see ICR art. 223.3.3),

³ Explanatory note: when skis for the ski exchange are positive for fluorinated wax before the skis are skied on, the athlete will be sanctioned with a DSQ.

- the negative impact on other competitors,
- the impact on the final result or intermediate results (sprint heats ~~or bonus sprints~~),

12338.9 Monetary Fine

12338.9.1 Monetary fines can be given to any accredited person.

12338.9.2 Monetary fine should be used for

- infractions of advertising and commercial markings rules;
- ~~for~~ minor course and range discipline infractions;
- for infractions to ICR **Error! Reference source not found.** ~~and for~~
- violation of restrictions on ski testing and warming up
- delayed skis delivery for equipment control up to 5 minutes (minimum 250 CHF);

12339.2.1 Protests according to the art. **Error! Reference source not found.** – **Error! Reference source not found.** at the location or the email address designated in the official program on the official notice board or ~~at a place announced~~ at the a-team captains' meeting.

~~12364339~~.2.2 Protests concerning clerical errors or violations of the FIS rules after the competition must be sent by registered mail through the competitor's National Ski Association to the FIS Office within one month of the competition.

12339.2.3 Protests against Jury decisions that cannot be appealed (art. 224.11) will not be accepted.

12339.3.5 Against Jury decisions that are not sanctioned

- within 15 minutes after the posting of the unofficial result list or the official communication.

12339.4.1 Protests are to be submitted in writing and in English language.

12340.1.3 ~~Appeal procedure can also be started by the respective competition Jury or FIS Office.~~ FIS Office or respective competition Jury can start

Appeal procedure also for other cases that could not be addressed before the publication of official result list.

12340.1.4 Deadlines

12340.1.4.1 Appeals against the decisions of the Jury are to be submitted within 48 hours of the publication of the official results list.

12340.1.4.2 ~~A~~The appeals against the official results are to be submitted within 30 days, including the day of the competition.

12340.1.4.3 Appeals filed according ICR 12340.1.3 are to be submitted within 48 hours after the publication of the official results list.

Rules of the Points

1.1 Para Nordic Points regulation

The Para Nordic Point Rules are an integral part of the FIS Para Nordic Competition Rules (“ICR”).

In the following “Points” refer to Para Cross-Country FIS Points and Para Biathlon Qualification Points.

2.1 Conditions

For the points evaluation, only those competitions can be considered who meet the following standards:

2.1.1 Announcement of the competition in the FIS Calendar

2.1.2 Strict observance of the International Competition Rules (ICR)

~~2.1.3 Competition is carried out according to the FIS Para Nordic Rules~~

~~2.1.4~~2.1.3 The result list contains at least five ranked competitors for each class and gender, refer to section 9.3 for further details on situations with less than five ranked competitors for each class and gender

~~2.1.5~~2.1.4 All FIS competitions should be carried out on homologated courses

9.4 Minimum Penalties

9.4.1 Minimum penalties will be applied for the following competition categories:

- Paralympic Winter Games (PWG) 0
- FIS World Championships (WSC) 0
- World Cups 0
- Continental Cups 20
- International FIS Para Nordic Competitions Sanctioned Races
2520
- Open National Championships 20

12.4 A minimum number of five ranked athletes on the result list per category and gender is required to award World Cup points. In cases that the minimum cannot be achieved no World Cup Points will be awarded.

In circumstances where there are fewer than five ranked athletes, points can be awarded according to the following table:

<u># Competitors</u>	<u>5 or more</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
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<u>Rank</u>					
<u>1</u>	<u>100</u>	<u>90</u>	<u>80</u>	<u>60</u>	<u>50</u>
<u>2</u>	<u>95</u>	<u>75</u>	<u>50</u>	<u>40</u>	
<u>3</u>	<u>90</u>	<u>50</u>	<u>30</u>		
<u>4</u>	<u>85</u>	<u>20</u>			
<u>5</u>	<u>80</u>				
<u>6</u>	<u>75</u>				
<u>7</u>	<u>72</u>				
<u>8</u>	<u>69</u>				
<u>9</u>	<u>66</u>				
<u>10</u>	<u>63</u>				
<u>11</u>	<u>60</u>				
<u>12</u>	<u>58</u>				
<u>13</u>	<u>56</u>				
<u>14</u>	<u>54</u>				
<u>15</u>	<u>52</u>				
<u>16</u>	<u>50</u>				
<u>17</u>	<u>48</u>				
<u>18</u>	<u>46</u>				
<u>19</u>	<u>44</u>				
<u>20</u>	<u>42</u>				
<u>21</u>	<u>40</u>				
<u>22</u>	<u>38</u>				
<u>23</u>	<u>36</u>				
<u>24</u>	<u>34</u>				
<u>25</u>	<u>32</u>				
<u>26</u>	<u>30</u>				
<u>27</u>	<u>28</u>				
<u>28</u>	<u>26</u>				
<u>29</u>	<u>24</u>				
<u>30</u>	<u>22</u>				

14.1 Overall World Cup awards will be given to the winning-top 3 male and top 3 female athletes in each category according to the overall ranking at the end of the season (Globes for the winners and medals for the top 3 (medals only for CC)) and to

the ~~top-winning~~three nations (Nations Trophy). (~~Globes for the winners and medals-~~
~~for the top 3)~~

Equipment Specifications for Para Snowsports

6 SPECIFICATIONS FOR PARA ALPINE SKIING ADAPTIVE EQUIPMENT

6.6 BLUETOOTH HEADSETS

VI athletes may choose to use Bluetooth Headsets for clear communication with their Guide. These must not impact the safety performance of the crash helmet in any way.

7 SPECIFICATIONS FOR PARA NORDIC ADAPTIVE EQUIPMENT

7.1 EQUIPMENT CONTROLS

7.1.1 ~~FIS, through its appointed officials, The Sub-Committee Para Nordic, Technical Delegate, or designate,~~ will monitor the use of technology and equipment prior to or at FIS Para Nordic Sanctioned Competitions to ensure that it conforms to the principles outlined in the IPC Policy on Sport Equipment. This may include, but will not be limited to, the assessment of:

7.1.1.1 whether equipment and/or prosthetic components are commercially available to all athletes (prototypes that are purpose built by manufactures exclusively for the use of a specific athlete shall not be permitted);

7.1.1.2 whether equipment contains materials or devices that store, generate or deliver energy and/or are designed to provide function to enhance performance beyond the natural physical capacity of an athlete; and/or

7.1.1.3 whether equipment conforms with the terms of Specifications for Para Nordic Adaptive Equipment art. 7.2 and 7.3.

7.1.2 ~~An athlete will not be allowed to compete unless their adaptive equipment has been registered.~~ For all licensed athletes, all adaptive equipment, including but not limited to sit skis, prostheses, orthoses, ~~B1~~ goggles (for B1 athletes), corrective lenses, air rifles and adaptive support must be registered by 15 November ~~15~~ prior to each in the competition season, or prior to the first event the athlete is competing in, in that season (e.g. COC, International FIS Para Nordic Competitions, NC) using the FPDMS Adaptive Equipment online registration.

For new athletes who ~~become licensed~~ are licensed after 15 November ~~15~~, their adaptive equipment must be submitted as soon as practicably possible (see art 7.1.2.2).

7.1.2.1 All air rifles must ~~also~~ be submitted whether they have adaptations related to impairments or not.

7.1.2.2 Changes, adjustments or modifications to equipment made during the season must be registered as soon as practicably possible prior to the athlete's next competition and a notification must be sent to ParaNordic@fis-ski.com. be reported to the TD prior to a team captain's meeting and will be evaluated against the equipment rules by the jury and/or members of the Para Nordic Committee.

7.1.2.3 Before and during the competition season, or on submission of protests to the Technical Delegate at the competition concerned, controls may be carried out by the appointed official. by members of the Para Nordic Committee and / or the Technical Delegate. The FIS Para Nordic Race Director will coordinate this process.

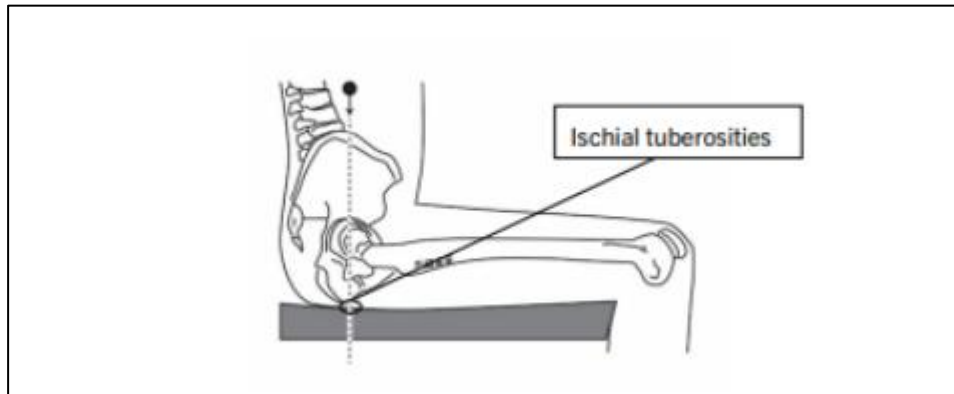
7.1.3 The final decision as to any applicable sanction(s) in respect of any breach by a competitor of competition equipment and technology rules pursuant to these Specifications for Para Nordic Adaptive Equipment shall lie with the jury.

7.2 EQUIPMENT RULES

7.2.1 SIT SKI

7.2.1.1 The Nordic sit-ski shall consist of a sitting device with a fixed seat, which is not adjustable during the race except for the purpose of shooting in a biathlon competition. In this case, the adjustment must be made on the shooting point and be returned before leaving the shooting point. The sit-ski is, mounted on a pair of cross-country skis or rolling devices (summer competition). No springs or flexible articulations are allowed in any segment of the sit ski, including the connection with the skis. The connection with the skis must be rigid.

7.2.1.12 The maximum allowable height difference is 40cm between the top of the unloaded seat cushion (at the point where the athlete's -of contact of the buttock-ischial tuberosity (buttock) (see graphic below) contacts with the seat surface) and the top of the ski is 40cm (including the cushion segment without load).



7.2.1.23 The sit-ski athlete shall be seated on the sit-ski at all times during the race, meaning that the athlete's buttocks-ischial tuberosity (buttocks) shall remain in contact with the seat in accordance with the FIS Para Nordic Classification Rules & Regulations.

7.2.1.34 To prevent movement of the buttocks-ischial tuberosity (buttocks) off the seat, the upper thigh (proximal femur) or hip must be strapped to the seat using a non-flexible material.

7.2.2 AIR RIFLES

7.2.2.1 Biathlon air rifles must conform to art. 12332.3 and 12332.6.2 of the Para Nordic International Competition Rules.

7.2.2.23 Adaptations to rifles related to an athlete's impairment (such as loading and triggering mechanisms) must be identified in the inventory and approved through the FIS Adaptive Equipment Inventory by the Para Nordic Committee.

7.2.3 GOGGLES, OPAQUE SHADES OR GLASSES

7.2.3.14 Goggles, opaque shades or glasses worn by B1 athletes must conform to art. 12333.2.4 of the Para Nordic International Competition Rules.

7.2.4 PROSTHESIS

7.2.4.1 A prosthesis or prosthetic device is an externally applied device used to replace wholly, or in part, an absent or deficient limb segment. Prosthetic devices used in FIS Para Nordic Competitions must conform with these Equipment Rules.

7.2.4.2 For standing athletes competing with Protheses (i.e., bilateral above knee amputations, bilateral below knee amputations, bilateral lower limb dysmelia, or combined above knee and below knee amputations,), the following formulas apply for measuring the maximum allowable standing height (all measures are taken in centimetres (cm) rounded at 1 digit behind the comma):

For Athletes with below knee deficiencies:

<u>Males</u>	<u>Max. height = 5.272 + (0.998 x sitting height) + (0.855 x thigh) + (0.882 x upper arm) + (0.820 x forearm) + 1.91</u>
<u>Females</u>	<u>Max. height = 0.126 + (1.022 x sitting height) + (0.698 x thigh) + (0.899 x upper arm) + (0.779 x forearm) + 1.73</u>

For Athletes with above knee deficiencies:

<u>Males</u>	<u>Max. height = 5.857 + (1.116 x sitting height) + (1.435 x upper arm) + (1.189 x forearm) + 2.62</u>
<u>Females</u>	<u>Max. height = 4.102 + (0.509 x arm span) + 0.966 x sitting height) + 2.14</u>

In cases of multiple dysmelia, the formula with the highest R2 for which all parameters can be measured will be taken from the Canda 2009 publication (Canda, A. (2009) Stature estimation from body segment lengths in young adults: Application to people with physical disabilities. Journal of Anthropology, 28(2):71-82). The PE score will be added to the formula in table 4 (males) or table 5 (females) of this study (See tables below).

In cases with complex dysmelia, where no measures for the upper limb can be calculated, standing height will be based on the following formula:

<u>Males</u>	<u>Max. height = sitting height / 0.52</u>
<u>Females</u>	<u>Max. height = sitting height / 0.533</u>

In cases of Athletes with combined above and below knee amputation (or comparable dysmelia), the formula for below knee deficiency (see above) will be taken with the measurement of the thigh on the non-affected side.

All measures are taken in conformity with the ISAK standardized measures (International Society for the Advancement of Kinanthropometry).

Table 4 Regression equations on male sample

Code	R ²	RMSE	PE	Stature (cm)=
M 1 _m	0.978	1.41	1.54	1.346+1.023 * lower leg+0.957 * sitting height+0.530 * thigh+0.493 * upper arm+0.228 * forearm
M 2 _m	0.978	1.43	1.54	1.575+1.087 * lower leg+0.969 * sitting height+0.532 * thigh+0.551 * upper arm
M 3 _m	0.978	1.44	1.47	0.947+0.135 * arm span+0.914 * sitting height+0.545 * thigh+1.067 * lower leg
M 4 _m	0.975	1.53	1.50	2.630+0.992 * sitting height+1.245 * lower leg+0.609 * thigh+0.216 * foot
M 5 _m	0.974	1.54	1.49	2.590+1.027 * sitting height+1.302 * lower leg+0.613 * thigh
M 6 _m	0.969	1.69	1.77	2.354+0.179 * arm span+0.948 * sitting height+1.376 * lower leg
M 7 _m	0.963	1.84	1.85	4.866+1.753 * lower leg+1.109 * sitting height
M 8 _m	0.961	1.89	1.91	-5.272+0.998 * sitting height+0.855 * thigh+0.882 * upper arm+0.820 * forearm
M 9 _m	0.955	2.03	2.03	-6.059+1.059 * sitting height+0.953 * thigh+1.233 * upper arm
M 10 _m	0.936	2.43	2.62	-5.857+1.116 * sitting height+1.435 * upper arm+1.189 * forearm
M 11 _m	0.931	2.52	2	-7.517+1.283 * sitting height+1.439 * thigh
M 12 _m	0.928	2.57	2.82	29.795+0.333 * arm span+0.935 * lower leg+0.673 * thigh+0.771 * foot
M 13 _m	0.927	2.60	2.49	-9.049+ 0.527* arm span+0.973 * sitting height
M 14 _m	0.923	2.65	2.88	31.768+0.411 * arm span+1.043 * lower leg+0.673 * thigh
M 15 _m	0.922	2.67	2.97	-7.217+1.231 * sitting height+2.075 * upper arm
M 16 _m	0.920	2.72	2.91	36.224+0.979 * lower leg+0.856 * upper arm+1.183 * foot+0.723 * thigh+0.402 * forearm
M 17 _m	0.918	2.73	2.85	37.010+1.075 * lower leg+0.954 * upper arm+1.270 * foot+0.729 * thigh
M 18 _m	0.910	2.87	2.97	34.937+0.479 * arm span+1.426* lower leg
M 19 _m	0.908	2.91	2.98	41.771+1.421 * lower leg+1.518 * foot+0.887 * thigh
M 20 _m	0.903	2.98	2.98	41.642+1.493 * lower leg+1.238 * upper arm+1.360 * foot
M 21 _m	0.890	3.19	3.38	31.176+1.382 * upper arm+1.123 * thigh+1.068 * forearm+1.123 * hand
M 22 _m	0.884	3.25	3.18	50.870+1.899 * lower leg+1.559 * upper arm
M 23 _m	0.883	3.23	3.61	37.026+1.507 * upper arm+1.164 * thigh+1.451 * forearm
M 24 _m	0.883	3.27	3.16	49.629+2.099 * lower leg+1.732 * foot
M 25 _m	0.862	3.55	3.66	40.422+ 2.232 * upper arm+1.382 * thigh
M 26 _m	0.844	3.79	3.88	35.854+2.203 * upper arm+1.577 * forearm+1.400 * hand
M 27 _m	0.834	3.91	4.15	43.424+ 2.398 * upper arm+2.083 * forearm

Code M n_m: M, multiple regression equation; n^o, serial number; m: male. RMSE: root mean square error. PE: pure error

Table 5 Regression equations on female sample

Code	R ²	RMSE	PE	Stature (cm)=
M 1 _f	0.959	1.57	1.25	1.772+0.159 * arm span+0.957 * sitting height+0.424 * thigh+0.966 * lower leg
M 2 _f	0.959	1.57	1.34	2.305+1.013 * lower leg+0.970 * sitting height+0.451 * thigh+0.513 * upper arm +0.253 * foot
M 3 _f	0.958	1.59	1.34	2.907+1.062 * lower leg+1.005 * sitting height+0.453 * thigh+0.529 * upper arm
M 4 _f	0.955	1.65	1.33	3.326+1.007 * sitting height+1.219 * lower leg+0.523 * thigh+0.299 * foot
M 5 _f	0.954	1.67	1.31	4.082+1.285 * lower leg+1.049 * sitting height+0.528 * thigh
M 6 _f	0.951	1.71	1.45	1.815+0.212 * arm span+0.975 * sitting height+1.173 * lower leg
M 7 _f	0.940	1.89	1.55	5.192+1.711 * lower leg+1.116 * sitting height
M 8 _f	0.936	1.96	1.73	-0.126 +1.022 * sitting height+0.698 * thigh+0.899 * upper arm+0.779 * forearm
M 9 _f	0.929	2.06	1.92	-0.686+1.061 * sitting height+0.814 * thigh+1.237 * upper arm
M 10 _f	0.918	2.22	2.14	-4.102+0.509 * arm span+0.966 * sitting height
M 11 _f	0.911	2.3	2.04	-0.559+1.094 * sitting height+1.325 * upper arm+1.229 * forearm
M 12 _f	0.892	2.54	2.34	-1.663+1.184 * sitting height+2.039 * upper arm
M 13 _f	0.894	2.51	2.23	0.685+1.246 * sitting height+1.306 * thigh
M 14 _f	0.875	2.74	2.68	35.709+0.328 * arm span+0.803 * lower leg+0.535 * thigh+0.973 * foot
M 15 _f	0.866	2.84	2.96	40.436+1.009 * lower leg+1.359 * foot+0.627 * thigh+0.939 * upper arm
M 16 _f	0.864	2.86	2.66	41.582+0.417* arm span+0.888 * lower leg+0.522 * thigh
M 17 _f	0.852	2.98	2.77	42.556+0.489 * arm span+1.142 * lower leg
M 18 _f	0.851	2.99	3.13	45.104+1.399 * lower leg+1.526 * foot+0.776 * thigh
M 19 _f	0.825	3.24	3.10	42.361+1.240 * upper arm+0.934 * thigh+1.239 * hand+0.973 * forearm
M 20 _f	0.822	3.26	3.36	50.489+2.047 * lower leg+1.693 * foot
M 21 _f	0.815	3.33	3.20	41.502+1.578 * upper arm+1.075 * thigh+1.645 * hand.
M 22 _f	0.795	3.50	3.49	52.044+2.077 * upper arm+1.154 * thigh
M 23 _f	0.780	3.63	3.36	46.344+1.870 * upper arm+1.630 * forearm+1.278 * hand
M 24 _f	0.769	3.71	3.57	53.970+2.105 * upper arm+1.966 * forearm

Code M n_f: M, multiple regression equation; n^o, serial number; f, female. RMSE: root mean square error. PE: pure error

Figure 1: (Canda, A. (2009). Stature estimation from body segment lengths in young adults: Application to people with physical disabilities. Journal of Anthropology, 28(2):71-82)

7.2.5 ORTHOSIS; ORTHOTIC DEVICE

7.2.5.1 An orthosis or an orthotic device is an externally applied device used to modify the structural and functional characteristics of the neuro-muscular and skeletal systems (For stabilizing, support, compensation, protection, prevention).

Orthosis/orthotic devices worn by athletes during competition must conform to these Equipment Rules. Athletes wearing orthotic devices during competition must declare this during Athlete Evaluation. If an athlete changes or starts wearing an orthotic device after Athlete Evaluation, the athlete must declare the change to FIS.