

# Appendix II

## IPC Biathlon

### Pursuit Competition Format

Version 1.9.09

1.3.1.2 IPC Biathlon Pursuit 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 IPC Biathlon pursuit start.

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 pursuit competition are:  
LW 10-12, LW 2-9, B 1-3 per gender.

1.3.1.2.1 Course: 900m (+/- 300m)

The course must be sufficiently wide (8–10 m) and without sharp corners. Sections of the course must be designed straight, wide and long enough to make overtaking possible. The course used for the qualification round and the course used for the finals must in principle be the same.

Qualification: 3 laps / 2 shooting rounds / time penalty (20s per miss)  
Final: 3 laps / 2 shooting rounds / penalty loop (80m)

1.3.1.2.2 Track: at least 1 track should be set on the outside of the course

1.3.1.2.3 Penalty loop: The penalty loop must be an oval trail which is at least 9m wide and 80m long measured along the inside perimeter of the loop.

1.3.1.2.4 WC-points: WC-points will be awarded according to the final result list. Competitors who didn't reach the finals will be ranked according to their qualification time.

1.3.1.2.4.1 Ranking: In case of equal times in the first race, the competitors will be ranked according to their current WC points.  
Competitors with the same qualification time who did not advance to the finals will have the same ranking on the final results list and will get the same number of WC points.

#### **First race (Qualification):**

1.3.1.2.5 Start: Individual start (interval 30 sec)

1.3.1.2.6 Start order: Draw at the TCM like in individual races.

- 1.3.1.2.7 Penalty in the first race: Time penalty (20 sec per miss)
- 1.3.1.2.8 Shooting lane in the first race:
- The LW Class Athletes are free to choose the shooting lane.
  - The B-Class Athletes entering the range for shooting in competition must use the furthest lane available. In most cases this will be the lane immediately to the left of the previous athlete in the range, except when the previous athlete uses the lane farthest to the left.

**Second race (Final):**

- 1.3.1.2.9 Composition: The best athletes per category (from first race).  
The number of athletes in the final will be determined according to the available shooting lanes per class.  
If the final result of a competitor in the first race is more than 30% behind the winner of the first race, the athlete will not be allowed to start in the second race of the pursuit.
- 1.3.1.2.10 Pursuit Start  
The start in the final should be organized with 2 straight corridors for the first 30 – 50 meters.
- 1.3.1.2.11 Start time:  
The start time is calculated by taking the Basic time from the first race (not including shooting penalties) adding the Delta time and the Shooting Penalties (20 sec per miss) from the first race.  
Explanation Basic time: see appendix I IPC CC Sprint Competition Format 360.8. Explanation Delta time: see IPC Nordic rules 355.1.2
- 1.3.1.2.12 Start position: If athletes start at the same time in the finals the athlete with the lowest bib chooses first.
- 1.3.1.2.13 Start lanes: There shall be 2 lanes (4m wide). At each lane, 3 officials control the start procedure. B-Class athletes will be held back by the official until they can start.
- 1.3.1.2.14 Early start in the second race: The athlete has to return and cross the start line again. By doing this the athlete has to make sure not to interfere with the other athletes. In case of interference while returning to the start line, the competitor has to stop the competition and will be ranked at the last of this second race.
- 1.3.1.2.15 Shooting lane: Assigned lanes for LW Class athletes in the final will be according to their bib numbers.

- 1.3.1.2.16 Bib numbers in the final: New bib numbers will be distributed for the final. The first athlete starting in the final per category has the 1 as the last digit on the bib, the second starter the 2 and so on. (21, 22, 23 ... )  
In case of equal start times, the athlete with a better result in the first race will have the lower bib number.
- 1.3.1.2.17 Assistance in the second race for LW athletes:  
Coaches bring the rifle to the assigned lane and take it back after the shooting. Marshals reset the targets.
- 1.3.1.2.18 Penalty: Penalty loop per missed shot (80m).
- 1.3.1.2.19 Finish: This zone is a minimum of 9 meters wide and is separated by set tracks into 3 corridors that must be clearly marked and highly visible but not interfering with the skis
- 1.3.1.2.20 Ranking: In case of a tie (“dead heat”) in the second race, the competitors are ranked on the same place in the final results.

## **Explanation**

### **1.3.1.2.21 Start times based on first race**

#### **Principle**

The principle is that in the final, the competitors with equal calculated skiing time and equal penalties in the first race shall have the same chance to reach an equal result. This is done by using the winner’s calculated time of the first race per category as a basic time B.

Times in the first race are measured in (truncated like FIS) hundreds of a second. Where percentage is involved in calculations, the resulting value is rounded to hundreds.

#### **Symbols used**

B basic time is the winner’s calculated time. (First race).  
wR the winner’s real time  
iP individual competitor percentage

#### **Calculation**

Start times for the final race are calculated by adding three elements from the first race results:

- Difference in start time due to difference in percentage (% Diff.).  $iT = wR - B \cdot 100 / iP$
- DELTA - time from first race.
- Shooting penalty from first race: 20 sec per missed shot.

The result is rounded to seconds.

To make sure that the first athlete starts at 0:00, the smallest of these times (after rounding) is subtracted from all start times. This gives the final “Start Time”.

### Example

Results first race:

Rank	Bib	Name	NPC	Class	%	iR	DELTA	iC	Miss	Result	
1	38	YANCHUK Konstantin	RUS	LW5/7	87	10:10.60	0.00	8:51.22	0+1	9:11.22	Q
2	40	VOVCHYNSKYI Grygorii	UKR	LW8	97	9:15.03	7.38	8:58.38	0+1	9:18.38	Q
3	32	ULSET Nils-Erik	NOR	LW3	89	9:47.16	-9.72	8:42.57	2+0	9:22.57	Q
4	44	MAKHMUTOV Ilgram	RUS	LW6	96	9:34.58	21.23	9:11.60	1+0	9:31.60	Q
5	42	MIKHAYLOV Kirill	RUS	LW4	96	9:18.44	5.09	8:56.10	1+1	9:36.10	Q
6	37	ARENDZ Mark	CAN	LW6	96	9:40.41	27.06	9:17.19	1+0	9:37.19	Q
7	35	DAROVSKIKH Valeriy	RUS	LW8	97	9:40.77	33.12	9:23.35	1+0	9:43.35	Q
8	31	OELSNER THOMAS	GER	LW6	96	9:32.49	19.14	9:09.59	1+1	9:49.59	Q
9	39	KURZ Michael	AUT	LW9	92	10:14.88	37.47	9:25.69	0+2	10:05.69	Q
10	33	BOURSEAUX YANNICK	FRA	LW6	96	9:38.65	25.30	9:15.50	2+1	10:15.50	Q
11	43	MAKAMEDINOV Alfis	RUS	LW2	91	10:38.34	54.58	9:40.89	1+1	10:20.89	
12	36	KOŁODZIEJ Jan	POL	LW3	80	11:39.17	35.14	9:19.34	2+2	10:39.34	

Calculation of Final Start Times:

Start Rank	Bib	Name	NPC	Class	%	% Diff.	DELTA times	Missed penalty	Added times	Relative start	Start times
1	38	YANCHUK K.	RUS	LW5/7	87	0:00.00	0.00	20.00	0:20.00	20	0
2	32	ULSET Nils-Erik	NOR	LW3	89	0:13.72	-9.72	40.00	0:44.00	44	24
3	40	VOVCHYNSKYI G.	UKR	LW8	97	1:02.95	7.38	20.00	1:30.33	01:30	01:10
4	44	MAKHMUTOV I.	RUS	LW6	96	0:57.25	21.23	20.00	1:38.48	01:38	01:18
5	42	MIKHAYLOV K.	RUS	LW4	96	0:57.25	5.09	40.00	1:42.34	01:42	01:22
6	37	ARENDZ Mark	CAN	LW6	96	0:57.25	27.06	20.00	1:44.31	01:44	01:24
7	39	KURZ Michael	AUT	LW9	92	0:33.19	37.47	40.00	1:50.66	01:51	01:31
8	35	DAROVSKIKH V.	RUS	LW8	97	1:02.95	33.12	20.00	1:56.07	01:56	01:36
9	31	OELSNER T.	GER	LW6	96	0:57.25	19.14	40.00	1:56.39	01:56	01:36
10	33	BOURSEAUX Y.	FRA	LW6	96	0:57.25	25.30	1:00.00	2:22.55	02:23	02:03

### Further explanations:

Why time penalty in the first race:

To be able to calculate the exact basic time we need the running time without penalty loops.