



FAI Sporting Code

*Fédération
Aéronautique
Internationale*

World and Continental Helicopter Championships

Section 9, Chapter 8, Chapter 6

Additional events Event 6.3

6.3.1 Slalom Heli - Race

6.3.2 Fender Heli - Race

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6.3

Heli Races

General Event Regulations

The general event regulations apply to the Slalom (6.3.1) and Fender (6.3.2) Heli-Races.

1. Types of helicopters

There is no differentiation in classes. Any helicopter with a valid C of A may compete.

A crew consists of two people.

A maximum of five crews per country are permitted to enter.

At least eight crews must enter the competition for a World Cup stage to be valid.

The following must be adhered to:

- a) Special bubble windows in the cockpit may not be fitted
- b) Outside mirrors and technical aids such as radio altimeters are not permitted. Any use will result in disqualification
- c) The competition is flown with the co-pilots door removed.
- d) Crews must only use manufacturer's standard seating harnesses in accordance with manufacturer's instructions.

2. Qualifying

Slalom and Fender Heli-Race is a play-off event. There should be a minimum of 8 crews and a maximum of 32 crews to compete for the title of "Slalom or Fender Heli-Race Champion". The maximum number of in - competition crews from one country is 5.

The number of flights for each pair of crews may vary from 1 to 3 and will be published by the Event Director on the Registration day. It means that a pair of crews may compete for 1 victory (1 flight winner) or 2 victories (2 or 3 flights). Best of three, winner of two.

3. Documents required

Pilots must hold a valid pilots licence and a valid medical certificate from the issuing authority in their country.

Pilot and co-pilot must hold valid FAI Sporting Licences. Each aircraft must hold a valid certificate of airworthiness; a certificate of registration; a certificate of insurance including any competition/country specific requirements.

All documents must be in English or a language understood by the organiser.

4. Helicopter insurance

The organiser must be co-insured unless there is specific event insurance in place.

5. Judges and Jury

The International Board of Judges consists of a maximum of ten judges/assistant judges from each country, judges/assistant judges must be held on the FAI judges database.

The jury is represented by one person and will be appointed by CIG for each stage.

6. Competition tasks, elimination and scoring.

Competition & elimination

All competing crews will be required to perform the same event at each stage of the competition.

Running orders for the qualifying heats will be decided by a draw. A Rating or Seeding system can be used once established. Seeding or rating - description to follow.

A running order sheet will be compiled (See Annex 3)

After qualifying, the best 16, 8 or 4 crews (depending on the total number of competing crews) will qualify for the final knockout.

Places in the finals are based on positions gained in the qualifying heats. (See Annexes 4 (1-16 crews) and Annex 5 (1-8 crews)).

Scoring

Scoring will be displayed either on a manual score board or electronic score board after each run.

If there is no scoreboard available, a manual system will be used. There will be 2 parallel courses marked by the flags of different colours. After each run/heat the Scoring Judge responsible for the winner's course will raise the flag of corresponding colour to show the crews and the public who is the winner of the run/heat.

Scoring is determined by summarising (0.1 point for 0.1 second) with penalty points as laid down in the fender and slalom infringement lists. The crew with the smallest number of points wins.

False starts

In the event of a false start after both competitors have indicated readiness and both starter flags have been raised, the race will not be stopped. The timing will start from when the flags are dropped and the false start penalty will be applied.

Black flags

A black flag will be shown to indicate disqualification to a competing crew for the following reasons:

1. A flying time of more than 240 seconds
2. Unsafe flying

Competition and course equipment

All equipment as listed in Annexes will be checked/scrutineered by the Chief Judge or his appointed representative.

7. Titles and awards

A. Scoring

The points for scoring and ranking are calculated according to the following chart. Places from 1 to 4 will be determined as a result of a knock-out competition. Places from 5 to the last will be determined as a sum of the best 2 results of each crew during the last phase of their competition (e.g. places from 5 to 8 - in 1/4-finals).

Crews who are not places in the finals will be ranked according to their qualification places.

Points are awarded as follows for each place:

Place	Points	Place	Points	Place	Points
1	60	12	26	23	10
2	54	13	24	24	9
3	48	14	22	25	8
4	43	15	20	26	7
5	40	16	18	27	6
6	38	17	16	28	5
7	36	18	15	29	4
8	34	19	14	30	3
9	32	20	13	31	2
10	30	21	12	32	1
11	28	22	11		

B. Awards - General

All medals, diplomas and prizes shall be awarded at the end of the competition.

C. Titles to be awarded

The titles to be awarded are as follows:

Stage awards

- Event stage winner for Parallel Slalom Heli Race - World Cup Slalom Champions
- Event stage winner for Parallel Fender Heli Race- World Cup Fender Champions

Stage winners per discipline - gold, silver and bronze CIG FAI medals and CIG FAI Diplomas.

Annual awards

Individual outright

- Overall winner Parallel Slalom Heli Race - Overall World Cup Slalom Champions
- Overall winner Parallel Fender Heli Race- Overall World Cup Fender Champions
- Overall winner (Slalom & Fender) - Overall World Cup Champions

Overall winners per discipline; FAI CIG gold, silver and bronze medals, FAI CIG diplomas and FAI CIG small cup for the winners

Overall winners (slalom & fender); FAI CIG gold, silver and bronze medals, FAI CIG diplomas and FAI CIG big cups for winners (1st place)

Nations Cup

- Nations Cup Parallel Slalom Heli Race - Overall World Cup Slalom Champions
- Nations Cup Parallel Fender Heli Race - Overall World Cup Fender Champions
- Nations Cup overall winner (Slalom & Fender) - Overall World Cup Champions

Nations Cup per discipline - FAI CIG gold, silver and bronze medals, FAI CIG diplomas and FAI CIG small cups (1st place)

Nations Cup overall winners - FAI CIG gold, silver and bronze medals, FAI CIG diplomas and FAI CIG big cup (1st place)

Determination of overall individuals and overall nations.

Individual Overall Event scores and places are determined in the end of the season when all HWCup stages are finished.

Individual Overall Event score and corresponding place of each crew is a sum of 3 best scores in Event (Fender or Slalom) in any HWCup stage.

Nations Cup score and corresponding place of each nation is determined as a sum of results (overall points) of 2 best national crews.

D. Tie for a place in the Overall ranking

If there is a tie for a place in Individual Overall in Event ranking (2 crews have equal points in the end of the season) the sum of the scores of each crew in 2 best flights in corresponding heats are compared (6 results of each crew are summarised). The crew/nation with the smallest score wins.

Example in the Event Overall:

<u>1st crew:</u>	HWC Stage 1	Stage 3	Stage 6	TOTAL result
Place/Points	1/60	3/48	2/54	1/162
Scores in 2 flights	49,0; 54,1	72,4; 68,0	52,0; 55,0	350,5
<u>2nd crew:</u>	WCup Stage 2	Stage 3	Stage 7	
Place/Points	3/48	1/60	2/54	2/162
Scores in 2 flights	78,0; 65,1	50,0; 55,0	51,0; 59,0	358,1

The same procedure applies to HWC Overall scoring and to the Nation Cup Scoring.

In HWC Individual Overall ranking the sum of the scores of each crew in 2 best flights in corresponding heats in both events are compared (12 results of each crew are summarised).

In the Nations Cup Overall in Event ranking the sum of the scores of 2 best national crews in 2 best flights in corresponding heats in the Event are compared (6 results of each crew, i.e. 12 results for nation are summarised).

In HWC Nations Overall ranking the sum of the scores of 2 best national crews in 2 best flights in corresponding heats in both Events are compared (12 results of each crew, i.e. 24 results for nation are summarised).

8. Complaints and protests

All complaints and protests can only be immediately after the flight in question and before the next flight takes off.

Annex 3

Table 1

Heat No	Call Sign	Pilot/Crew	Country	Time
Heat 1				
Heat 1				
Heat 2				
Heat 2				
Heat 3				
Heat 3				
Heat 4				
Heat 4				
Heat 5				
Heat 5				
Heat 6				
Heat 6				
Heat 7				
Heat 7				
Heat 8				
Heat 8				
Heat 9				
Heat 9				
Heat 10				
Heat 10				
Heat 11				
Heat 11				
Heat 12				
Heat 12				
Heat 13				
Heat 13				
Heat 14				
Heat 14				
Heat 15				
Heat 15				
Heat 16				
Heat 16				

Annex 4

FAI Helicopter Races - Finals Running Order From 16

	Numbers Indicate Ranking from Qualifying Heats	Winners of Last 16	Winner of each Quarter Final	Winner of each Semi Final
	LAST 16		LAST 8	
Gate 1	1			
HEAT 1				
Gate 2	9	Gate 1 1		
		QUARTER FINAL 1		
Gate 1	7	Gate 2 1		
HEAT 2				
Gate 2	15		Gate 1 1	
			SEMI FINAL 1	
Gate 1	5		Gate 2 1	
HEAT 3				
Gate 2	13	Gate 1 1		
		QUARTER FINAL 2		
Gate 1	3	Gate 2 1		
HEAT 4				
Gate 2	11			Gate 1 1
				FINAL
Gate 1	4			Gate 2 1
HEAT 5				
Gate 2	12	Gate 1 1		
		QUARTER FINAL 3		
Gate 1	6	Gate 2 1		
HEAT 6				
Gate 2	14		Gate 1 1	
			SEMI FINAL 2	
Gate 1	8		Gate 2 1	
HEAT 7				
Gate 2	16	Gate 1 1		Gate 1 2
		QUARTER FINAL 4		3rd/4th
Gate 1	2	Gate 2 1		Gate 2 2
HEAT 8				
Gate 2	10			

Annex 5

FAI Helicopter Races - Finals Running Order From 8

			Numbers Indicate Ranking from Qualifying Heats		Winner of each Quarter Final		Winner of each Semi Final
QUALIFYING			LAST 8				
		Gate 1	1				
		QUARTER FINAL 1					
		Gate 2	5				
					Gate 1	1	
					SEMI FINAL 1		
					Gate 2	1	
		Gate 1	3				
		QUARTER FINAL 2					
		Gate 2	7				
					Gate 1	1	
					FINAL		
					Gate 2	1	
		Gate 1	4				
		QUARTER FINAL 3					
		Gate 2	8				
				Gate 1	1		
				SEMI FINAL 2			
				Gate 2	1		
	Gate 1	2					
	QUARTER FINAL 4						
	Gate 2	6					
				Gate 1	2		
				3rd/4th			
				Gate 2	2		

6.3.1 Slalom Heli-Race

Event 6.3.1 Parallel Slalom Heli-Race

6.3.1.1 Event Description:

Two helicopters flying a bucket suspended on a rope with two handling lengths - 3m and 5m - on identical parallel courses consisting of a departure gate, a container full of water, six 2m x 1m gates and a target table.

Holding the bucket at the 3m rope length, the bucket is filled from the container with water. When the bucket is full, the rope length is extended to 5m and flown through gates 1 to 6 and back creating a course of 11 gates and then the bucket is placed on a 30cm table.

The competition comprises of qualifying rounds and finals until there are two helicopters left in the final.

6.3.1.2 Flying the course

6.3.1.2.1 Preparation Line

A start time will be given for the competition. It is the responsibility of each crew to observe the running order and be ready to present themselves at the preparation line when it becomes free.

6.3.1.2.2 Departure Line

Crews arrive at the Departure Lines of the Parallel courses. A judge/assistant judge will hand the co-pilots the buckets (See Annex 2).

The rope will be held by the crew member, sitting on the seat on the side opposite to the pilot, in a normal position and wearing the safety harness in line with the manufacturer's instructions. The crew must remain seated*. The rope will be placed on the floor of the cabin, either inside or outside the skids where fitted with the fender resting on the ground

**Note: The Event Director, subject to the consent of all Team Managers and Chief Judge, may permit crew members to stand with one foot on the skid or on the footboard provided the fastening system is safe and checked by the Technical Commission.*

After finishing the each flight both crews return to the Departure Lines and wait for a signal from the Scoring Team that will indicate who is the winner of the heat. (The signals of the scoring team will be demonstrated at the briefing.)

After finishing the second flight, both crews return to the Departure Lines and wait for a signal from the Scoring Team that will indicate who is the winner of the second flight. If the winner is the same as in the first flight, both crews, upon a signal from the judge leave the course to return to the parking positions.

If the winners in first and second flights are different the crews will prepare for the final third flight to determine the winner of the heat.

After finishing the third flight both crews return to the Departure Lines and wait for a signal of the Scoring Team that will indicate who is the winner of the heat and will continue the competition on the next stage. Both crews leave the course to return to the parking positions.

6.3.1.2.3 Start

Upon an indication of readiness from the pilots (or crew members), the judge will signal the start by dropping a flag or use of a suitable indication system (such a system will be demonstrated at the briefing).

6.3.1.2.4 Manoeuvring through the course

The helicopters will take off from the Departure Line, lifting the bucket off the ground, the crew members holding the rope above the 3 metre flag.

The pilot will fly to the container filled with water. The co-pilot must fill the bucket with water and the helicopter will climb as the co-pilot extends the rope to 5m before flying to the first gate. To correctly pass a gate, the top of the bucket must pass below the top of the poles. Multiple opportunities to pass a gate correctly will not be allowed.

The rope will remain held at the handling aid over the red flag by the crew member, who must have both hands visible. Manoeuvring of the rope is allowed provided the rope is not shortened by any part of the body below the first red flag.

The numbered gates will be placed as per Annex 1 and the gates will be flown consecutively from gate 1 to gate 6 and back to gate 1 in reverse order.

After passing gate 1 for the second time, the pilot will fly to the table. The bucket must be put down on the table and the rope dropped. Multiple tries are not penalised.

The gate directions and position of gate 6 will be decided by a draw at the briefing:

The reference of "Up", "Down", "Left" or "Right" refer to the direction of flight through each gate with reference to Annex 1 with "Up" being at the top of the page. All variables are equal for both courses.

Variables:

1. Gate 1 is always flown "Up" first and "Down" second time
2. Gate 2, 3 and 4 are "Left" or "Right" for first and second time
3. Gate 5 is "Up" or "Down" first and second time
4. Gate 6 is "Up" or "Down", only flown once
5. The position of Gate 6 can vary along a 30 metre line in one of five positions marked A - E. Positions A - E are at 7.5 metre centres. (See Annex 1)

The water left in the bucket will be measured after the competitor has completed the course. A water level below 18cms will incur a penalty. The measuring is done on the table and the table wiped dry after it is removed.

6.3.1.3 Timing and Judging

6.3.1.3.1 Timing:

The time starts when the start signal is given at the Departure Line and stops when the rope is released over the table. The time is measured in minutes, seconds and tenth of seconds according to item 13.14 FAI Sporting Code, Section 9, Chapter 8, Rules and Regulations.

6.3.1.3.2 Judging and scoring will be performed immediately by raising of red flags in the case of penalty or by electronic methods of judging. Judging systems will be demonstrated at the briefing.

See guidance information in annexes 6, 7, 8 ,9 and 10 for organisers.

6.3.1.4 Tie breaker

If there is a tie for a place, the winning crew is determined by the shortest flight time.

6.3.1.5 Scoring

Scoring is determined by summarising time points (0.1 points for 0.1 second) with penalty points as laid down in the infringement list. The crew with the smaller number of points wins.

Penalties are cumulative.

Infringement	Penalty
False start (before the starters signal)	10
Bucket touches the ground (per touch)	10
Missing a gate by passing a gate in the wrong order, not attempting the gate or passing in a wrong direction	10
Failing a gate by missing or bucket over poles	10
Water level less than 18cms	10
Rope lengthened or shortened, has knots or handled below the red flag during the flight (per infringement)	10
Bucket exiting the designated area 185 x 50m	10
Placing the bucket outside the target table <i>*if the bucket falls from the table or lands on the ground, any water left will not be measured</i>	100
Losing the bucket during the course	100
Crews not staying seated or correctly harnessed (both hands and legs not visible) <i>**if the crew members are not permitted to stand with one foot on the footboard according to 6.3.1.2.2</i>	100

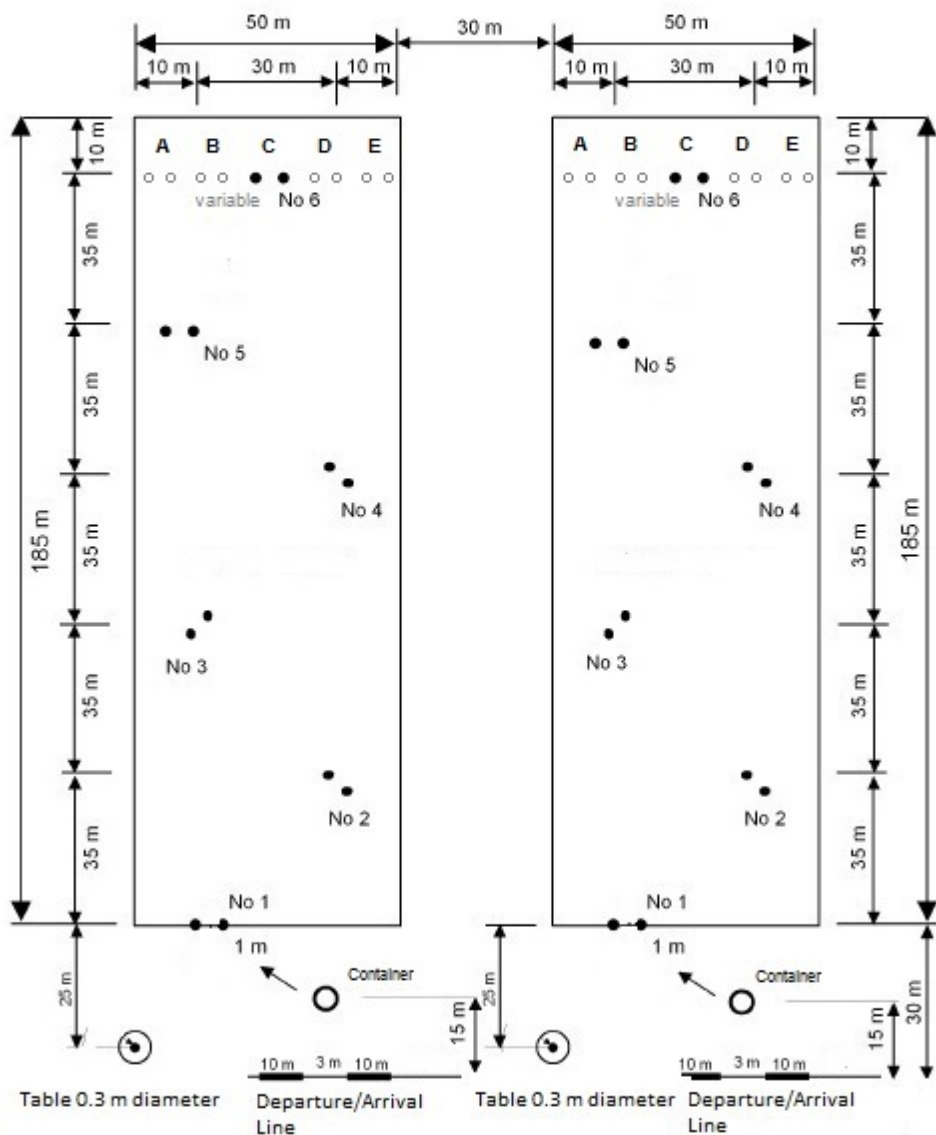
Measurements of competition area and equipment (see Annex 1).

6.3.1.6. Measurements of competition area and equipment (see attached Annexes):

Item	Specification
Competition area	185 x 130 m, including 2 courses (see Annex 1)
Twelve gates	Internal width 1metre, each composed of two 2 metre high poles (see Annex 1A)
Two round tables	30cm diameter and 1 metre high (see Annex 1A)
Two buckets (with the ropes)	Stainless steel bucket, of cylindrical form containing 6.5 litres of water +/- 2% with a maximum weight of 8.5kg (see Annex 2) with nine holes.
Rope	Equipped with 2 red flags; the first at a height of 3 metres, the second at a height of 5 metres. 20cms over 5m flag - a grip at the end of the rope (see Annex 2).
Preparation & Departure Lines	May be marked with the flags only, with 5 metre and 3 metre space between them respectively.

ANNEX 1 - SLALOM HELI-RACE

NOT TO SCALE



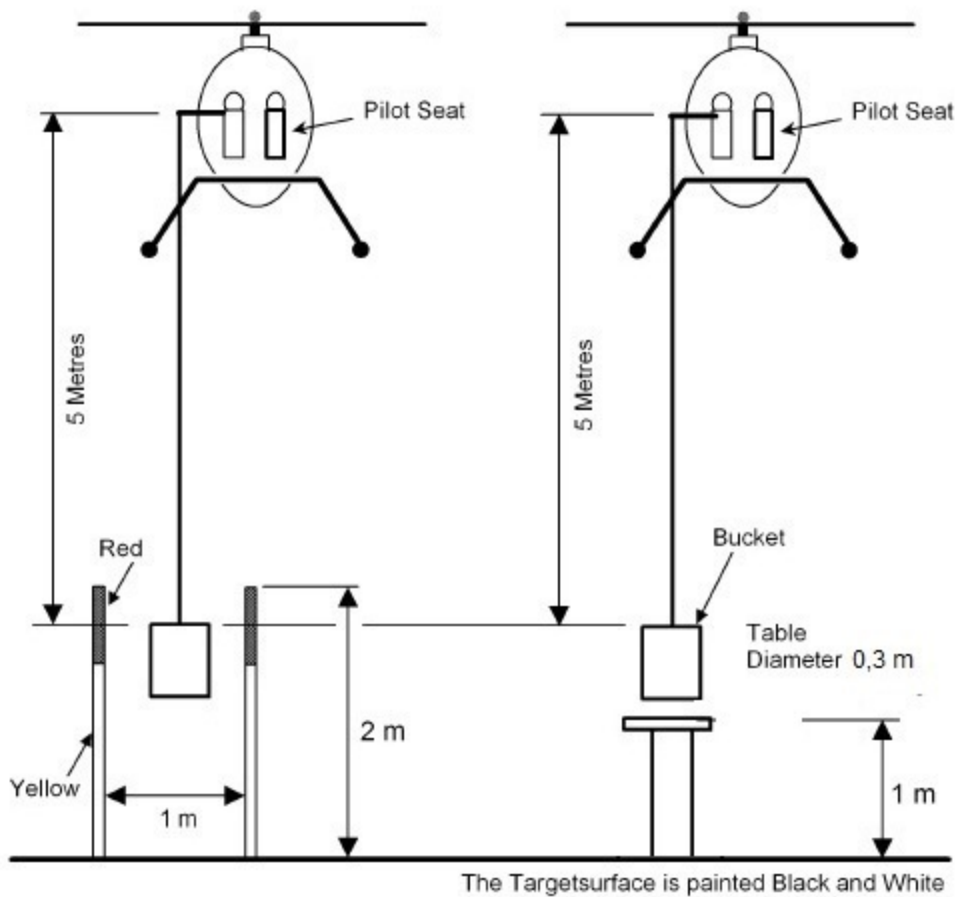
Container

SLALOM HELI-RACE

Annex 1A Poles and Table

NOT TO SCALE

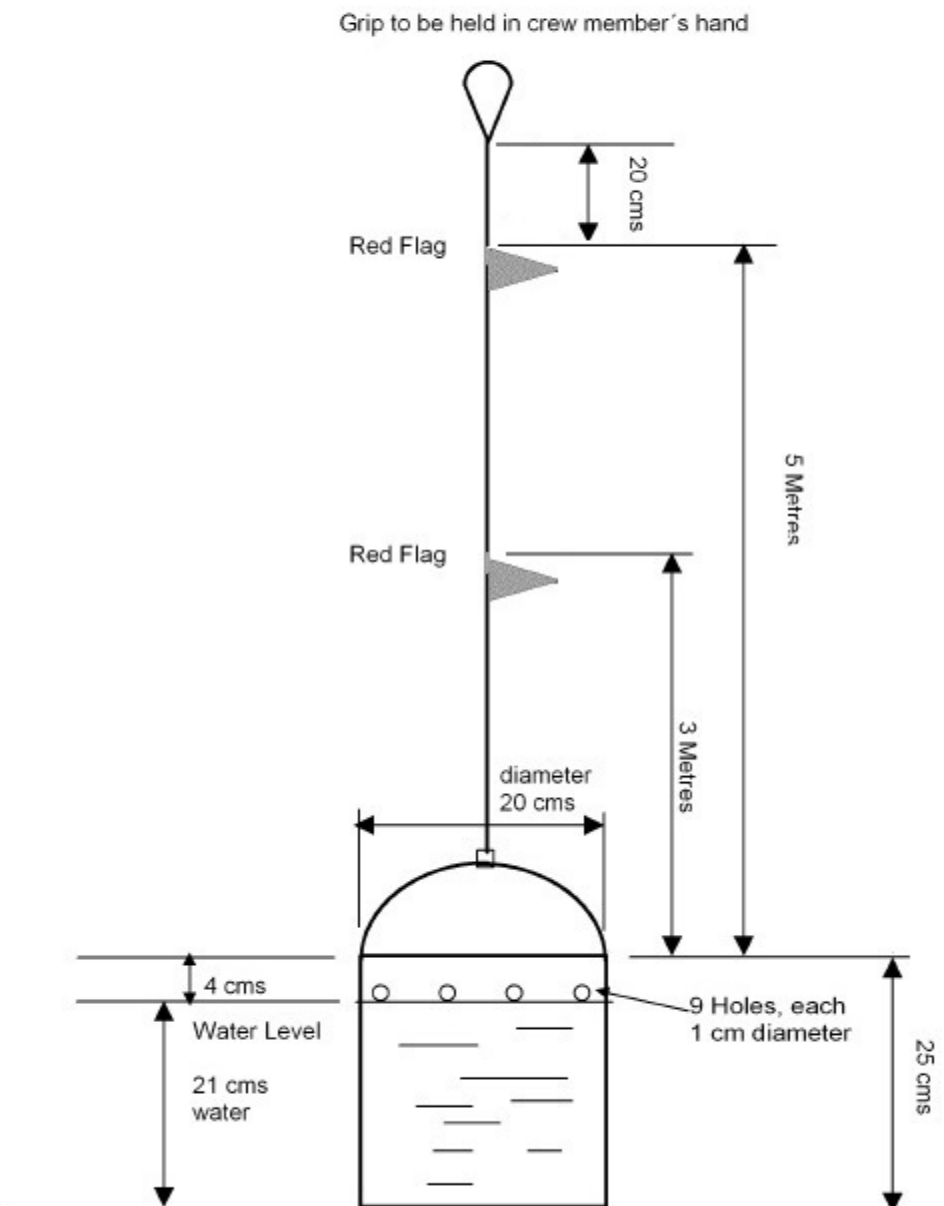
Front View of Helicopter



SLALOM HELI-RACE

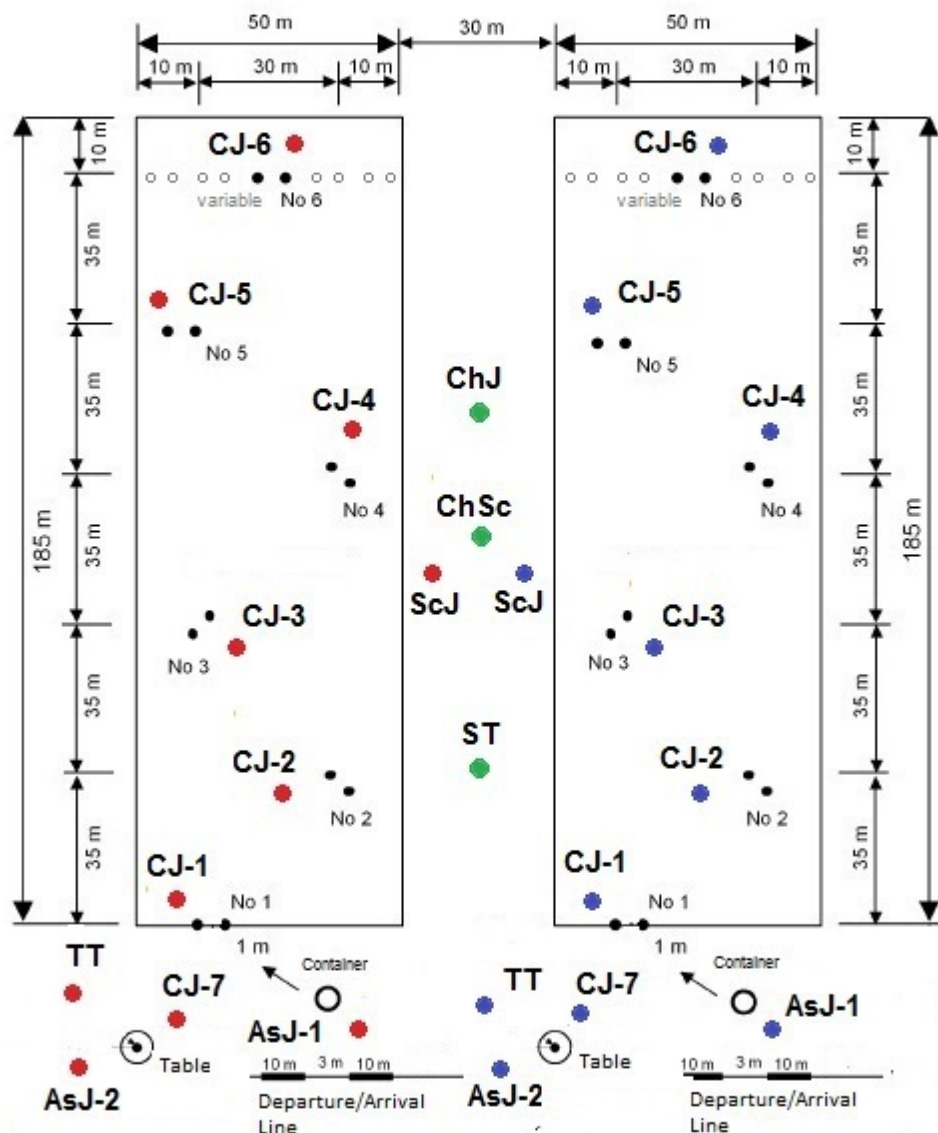
Annex 2 - Rope Equipment and Bucket

NOT TO SCALE



ANNEX 6- SLALOM HELI-RACE DISTRIBUTION OF THE JUDGES

NOT TO SCALE



ANNEX 7

SLALOM HELI-RACE

RESPONSIBILITIES OF JUDGES

(The places of the judges on the courses see Annex No 6 - Distribution of the judges on the courses)

1. CJ-1 – COURSE JUDGE 1 (Departure Gate, Start, Gate 1 and Gate 11)

There will be 1 Judge in this team.

Area of responsibility: Flight between the Departure Line and Gate 1

Flight between Gate 10 and Gate 11 on the way back

Left border of the designated competition area looking from Gate 1 in the direction of Gate 6

Responsibilities: To judge infringements and indicating by raising a red flag for each:

- False start (before the starter's signal)
- Failing the Gates 1 & 11 by missing or bucket over poles
- Passing Gates 1 & 11 in different direction
- Bucket touches the ground (each touch)
- Rope lengthened or shortened, has knots or handled below the red flag (each infringement)
- Crews not staying seated or harnessed (both hands and legs not visible) – special sign with the flag
- Bucket exiting the left border of the designated areas (per infringement)

2. CJ-2 – COURSE JUDGE 2 (Gate 2 and Gate 10 Gate)

There will be 1 Judge in this team.

Area of responsibility: Flight between the Gate 1 and Gate 2

Flight between Gate 9 and Gate 10 on the way back

Responsibilities: To judge infringements and indicating by raising a red flag for each:

- Failing the Gates 2 & 10 by missing or bucket over poles
- Passing Gates 2 & 10 in different direction
- Bucket touches the ground (each touch)
- Rope lengthened or shortened, has knots or handled below the red flag (each infringement)
- Crews not staying seated or harnessed (both hands and legs not visible) – special sign with the flag

3. CJ-3 – COURSE JUDGE 3 (Gate 3 and Gate 9)

There will be 1 Judge in this team.

Area of responsibility: Flight between the Gate 2 and Gate 3

Flight between Gate 8 and Gate 9 on the way back

Responsibilities: To judge infringements and indicating by raising a red flag for each:

- Failing the Gates 3 & 9 by missing or bucket over poles
- Passing Gates 3 & 9 in different direction
- Bucket touches the ground (each touch)
- Rope lengthened or shortened, has knots or handled below the red flag (each infringement)
- Crews not staying seated or harnessed (both hands and legs not visible) – special sign with the flag

4. CJ-4 – COURSE JUDGE 4 (Gate 4 and Gate 8)

There will be 1 Judge in this team.

Area of responsibility: Flight between the Gate 3 and Gate 4

Flight between Gate 7 and Gate 8 on the way back

Responsibilities: To judge infringements and indicating by raising a red flag for each:

- Failing the Gate 4 & Gate 8 by missing or bucket over poles
- Passing a Gate 4 & Gate 8 in different direction
- Bucket touches the ground (each touch)
- Rope lengthened or shortened, has knots or handled below the red flag (each infringement)
- Crews not staying seated or harnessed (both hands and legs not visible) – special sign with the flag

5. CJ-5 – COURSE JUDGE 5 (Gate 5 and Gate 7)

There will be 1 Judge in this team.

Area of responsibility: Flight between the Gate 4 and Gate 5

Flight between Gate 6 and Gate 7 on the way back

Responsibilities: To judge infringements and indicating by raising a red flag for each:

- Failing the Gate 5 & Gate 6 by missing or bucket over poles
- Passing Gate 5 & Gate 7 in different direction
- Bucket touches the ground (each touch)

- Rope lengthened or shortened, has knots or handled below the red flag (each infringement)
- Crews not staying seated or harnessed (both hands and legs not visible) – special sign with the flag

6. CJ-6 – COURSE JUDGE 6 (Gate 6)

There will be 1 Judge in this team.

- Area of responsibility: Flight between the Gate 5 and Gate 6
- Right hand border of the designated area looking from Gate 1 in the direction of Gate 6
- Responsibilities: To judge infringements and indicating by raising a red flag for each:
- Failing Gate 6 by missing or bucket over poles
 - Passing Gate 6 in different direction
 - Bucket touches the ground (each touch)
 - Rope lengthened or shortened, has knots or handled below the red flag (each infringement)
 - Crews not staying seated or harnessed (both hands and legs not visible) – special sign with the flag
 - Bucket exiting the right border of the designated areas (per infringement)

7. CJ-7 – COURSE JUDGE 7 (Table)

There may be 1 or 2 judges in this team.

- Area of responsibility: Flight between the Gate 11 and the Table
- Responsibilities: To judge infringements and indicating by raising a red flag for each:
- Water level less than 18 cm (after measuring the water level with the ruler)
 - Bucket touches the ground (each touch)
 - Rope lengthened or shortened, has knots or handled below the red flag (each infringement)
 - Crews not staying seated or harnessed (both hands and legs not visible) – special sign with the flag

8. TT– TIME TEAM (Time)

There may be 2 or 3 judges in this team (2 at least)

- Responsibilities: To record the time with the stopwatches
- To display the time on the scoreboard (manual or electronic)

To be in visual contact with the Starter (to confirm their readiness for the next heat to the Starter) and the Scoring Team (to ensure the time has been recorded by the Scoring Team)

9. ST – STARTER

There will be 1 starter for both courses.

Responsibilities: To be in visual contact with the Chief Scorer and both Time Teams to get an indication of readiness from them for the next heat

To be in visual contact with the crews to get an indication of readiness from them for the next heat

To signal the start by dropping two flags after getting indication of readiness from the Chief Scorer, from both Time Teams and both competing crews

(The signals of the Starter will be demonstrated at the briefing)

10. ScT (ScJ and ChSc)–SCORING TEAM (Scoring Judges and Chief Scorer) (Scoring)

Scoring Team consists of 3 persons - Chief Scorer and 2 Scoring Judges.

Scoring Judges

Responsibilities of the Scoring Judges (ScJ): Flight between the Departure Line and the Table

1) To judge infringements and to inform the Chief Scorer immediately:

- Passing a gate in the wrong order (each infringement)
- Placing the bucket outside the target table
- Losing the bucket during the course

2) To fulfill the following duties:

- To record the raised red flags that indicate penalties from the Course Judges and to inform the Chief Scorer immediately
- To record the actual time recorded by the Time Team and to inform the Chief Scorer immediately
- To show the flag of corresponding colour to the winning crew at the signal of the Chief Scorer
- To be in visual contact with the Time Team to ensure actual time has been recorded by the Scoring Team for each heat

Chief Scorer

Responsibilities of the Chief Scorer:

- To record penalties and time from the Scoring Judges and enter on the judging sheets
- To confirm the results of both competing crews as quickly as possible
- To inform the Scoring Judges who is the winner and confirm the crews are informed (use radio contact with the crews if necessary)
- To be in visual contact with the Starter to show that the Scoring Team is ready for the next heat

11. ChJ – Chief Judge (Control)

Chief Judge is responsible for the smooth running of judging and scoring. Chief Judge should have a radio to be able to contact the Chief Scorer, the crews and the tower, if necessary.

12. AsJ-1 – Assistant Judge-1

Responsibilities: To hand the bucket to the co-pilot
To maintain the water level in the container.

13. AsJ-2 – Assistant Judge-2

There may be 1 or 2 assistant judges in this team

Responsibilities: To transfer the bucket from the table to the Departure Line
To wipe the table with a cloth.

Event No 1: PARALLEL SLALOM HELI RACE

Judging Team No 2: GATE 2 AND GATE 10 (GATE 2 TWICE)

NN	Team №	Passing a Gate in different direction	Failing a gate by missing or bucket over poles	Rope lengthened or shortened or has knots or handled below the flag	Crew not staying seated or harnessed	Bucket touches ground (per infringement)
	Penalty	10	10	10	100	10

Judges: _____

Event No 1:

PARALLEL SLALOM HELI RACE

Judging Team No 3:

GATE 3 AND GATE 9 (GATE 3 TWICE)

NN	Team №	Passing a Gate in different direction	Failing a gate by missing or bucket over poles	Rope lengthened or shortened or has knots or handled below the flag	Crew not staying seated or harnessed	Bucket touches ground (per infringement)
	Penalty	10	10	10	100	10

Judges:

Event No 1:

PARALLEL SLALOM HELI RACE

Judging Team No 4:

GATES 4 AND GATE 8 (GATE 4 TWICE)

NN	Team №	Passing a Gate in different direction	Failing a gate by missing or bucket over poles	Rope lengthened or shortened or has knots or handled below the flag	Crew not staying seated or harnessed	Bucket touches ground (per infringement)
	Penalty	10	10	10	100	10

Judges:

Event No 1:

PARALLEL SLALOM HELI RACE

Judging Team No 5:

GATE 5 AND GATE 7 (GATE 5 TWICE)

NN	Team №	Passing a Gate in different direction	Failing a gate by missing or bucket over poles	Rope lengthened or shortened or has knots or handled below the flag	Crew not staying seated or harnessed	Bucket touches ground (per infringement)
	Penalty	10	10	10	100	10

Judges:

Event No 1:

PARALLEL SLALOM HELI RACE

Judging Team No 6:

GATE 6 (ONCE)

NN	Team №	Passing a Gate in different direction	Failing a gate by missing or bucket over poles	Rope lengthened or shortened or has knots or handled below the flag	Crew not staying seated or harnessed	Bucket touches ground (per infringement)	Bucket exiting left border (per infringement)
	Penalty	10	10	10	100	10	10

Judges: _____

Event No 1:

PARALLEL SLALOM HELI RACE

Judging Team No 7:

FLIGHT FROM GATE 11 & TABLE

NN	Team №	Bucket touches ground (per infringement)	Crew not staying seated or harnessed	Rope lengthened or shortened or has knots or handled below the flag	Water level less than 18cm
	Penalty	10	100	10	10

Judges:

Event No 1:

PARALLEL SLALOM HELI RACE

Judging Team No 8:

TIME (SITED NEAR TABLE)

NN	Team №	Flying time
	Penalty	0.1 per 10th second

Judges:

Event No 1:

PARALLEL SLALOM HELI RACE

Judging Team ScJ:

D LINE AND TABLE

NN	Team №	Passing a Gate in wrong order	Placing bucket outside target table	Losing bucket en route
	Penalty	10	100	10

Judges:

Name of the competition - **World Cup-2017, Stage 3**
 Name of the event and stage of the competition - **Slalom - 1/2-FINAL**
 Country and place - **Russia, Konakovo airfield**
 Date «16» July 2017

NN	Call-sign	Pilot / crew	Country	№ of the flight	Time	Time points	Penalty points	Result	Victories	Score
1	06	Ivanov Ivan Petrova Natalia	RUS	1-st FLIGHT	0'51",2	51.2	10.0	61.2		0:2
	08	Bloggs Joe Brown Fred	UK		0'47",5	47.5		47.5	1	
	06	Ivanov Ivan Petrova Natalia	RUS	2-nd FLIGHT	1'09",3	69.3	20.0	89.3		
	08	Bloggs Joe Brown Fred	UK		0'40",5	40.5		40.5	1	
	06	Ivanov Ivan Petrova Natalia	RUS	3-rd FLIGHT						
	08	Bloggs Joe Brown Fred	UK							
2	02	Longo Federico Grasso Marco	IT	1-st FLIGHT	0'42",0	42.0		42.0	1	2:1
	04	Muller Otto Schulz Karl	GER		0'55",6	55.6	110.0	165.6		
	02	Longo Federico Grasso Marco	IT	2-nd FLIGHT	1'22",1	82.1		82.1		
	04	Muller Otto Schulz Karl	GER		0'47",0	47.0	20.0	67.0	1	
	02	Longo Federico Grasso Marco	IT	3-rd FLIGHT	0'40",8	40.8	10.0	50.8	1	
	04	Muller Otto Schulz Karl	GER		0'52",4	52.4	20.0	72.4		

6.3.2 Fender Heli-Race

Event 6.3.2 Parallel Fender Heli-Race

6.3.2.1 Event Description

Two helicopters flying a load suspended on a rope on identical parallel courses consisting of one entrance gate and three containers. The load (fender) has to be placed in each container in a predetermined order with a different rope length of 4, 6 or 8 metres.

The competition comprises of qualifying rounds and finals until there are two helicopters left in the final.

6.3.2.2 Flying the course

6.3.2.2.1 Preparation Line

A start time will be given for the competition. It is the responsibility of each crew to observe the running order and be ready to present themselves at the preparation line when it becomes free.

6.3.2.2.2 Departure Line

Crews arrive at the Departure Lines of the Parallel courses. A judge/assistant judge will hand the co-pilots the fenders (See Annex 2).

The rope will be held by the crew member, sitting on the seat on the side opposite to the pilot, in a normal position and wearing the safety harness in accordance with the manufacturer's instructions. The crew must remain seated*. The rope will be placed on the floor of the cabin, either inside or outside the skids where fitted with the fender resting on the ground.

**Note: The Event Director, subject to the consent of all Team Managers and Chief Judge, may permit crew members to stand with one foot on the skid or on the footboard provided the fastening system is safe and checked by the Technical commission.*

After finishing the each flight both crews return to the Departure Lines and wait for a signal from the Scoring Team that will indicate who is the winner of the heat. (The signals of the scoring team will be demonstrated at the briefing.)

After finishing the second flight, both crews return to the Departure Lines and wait for a signal from the Scoring Team that will indicate who is the winner of the second flight. If the winner is the same as in the first flight, both crews, upon a signal from the judge leave the course to return to the parking positions.

If the winners in first and second flights are different the crews will prepare for the final third flight to determine the winner of the heat.

After finishing the third flight both crews return to the Departure Lines and wait for a signal of the Scoring Team that will indicate who is the winner of the heat and will continue the competition on the

next stage. Both crews leave the course to return to the parking positions.

6.3.2.2.3 Start

Upon an indication of readiness from the pilots (or crew members), the judge will signal the start by dropping a flag or use of a suitable indication system (such a system will be demonstrated at the briefing).

6.3.2.2.4 Manoeuvring through the course

The helicopters will take off from the Departure Line, lifting the fender off the ground, the crew members holding the red ball immediately above the 4 metre flag.

The pilot will fly to the Entrance Gate. The co-pilot must manoeuvre the fender through the Entrance Gate and into the containers. To correctly pass the gate, the top of the fender must pass below the top of the poles. Only one attempt to pass through the entrance gate will be permitted.

On the course and during the flight, the crew member, must have both hands visible. Manoeuvring of the rope is allowed provided the rope is not shortened by any part of the body below the red flags. The rope must be fully extended to the required length (4,6 or 8 metres) and free of knots prior to crossing the departure line (D-Line) and during the whole event.

The pilot will fly to the first container and the crew member will place the fender into it, after placing the fender into the first container, the crew member will deploy the rope to 6 metres and lift the fender from the container. The pilot must proceed to second container for placing the fender into it. The crew member has to manoeuvre the fender into the second container, deploy the rope to 8 metres, lift the fender and then repeat the procedure for the third container. Upon placing the fender in the third container, the crew will release the rope and timing stops.

The order of the containers to be flown will be decided by a draw at the briefing:

A-C-B C-B-A B-A-C C-A-B B-C-A A-B-C.

6.3.2.3 **Timing and Judging**

6.3.2.3.1 Timing:

The time starts when the start signal is given at the Departure Line and stops when the rope is released over the third container. The time is measured in minutes, seconds and tenth of seconds according to item 13.14 of the FAI Sporting Code, Section 9, Chapter 8, Rules and Regulations

6.3.2.3.2 Judging and scoring will be performed immediately by raising of red flags in the case of penalty or by electronic methods of judging. Judging systems will be demonstrated at the briefing.

See guidance information in annexes 6, 7, 8, 9 and 10 for organisers.

6.3.3.4 Tie breaker.

If there is a tie for a place, the winning crew is determined by the shortest flight time.

6.3.3.5 Scoring

Scoring is determined by summarising time points (0.1 points for 0.1 second) with penalty points as laid down in the infringement list. The crew with the smaller number of points wins.

Penalties are cumulative.

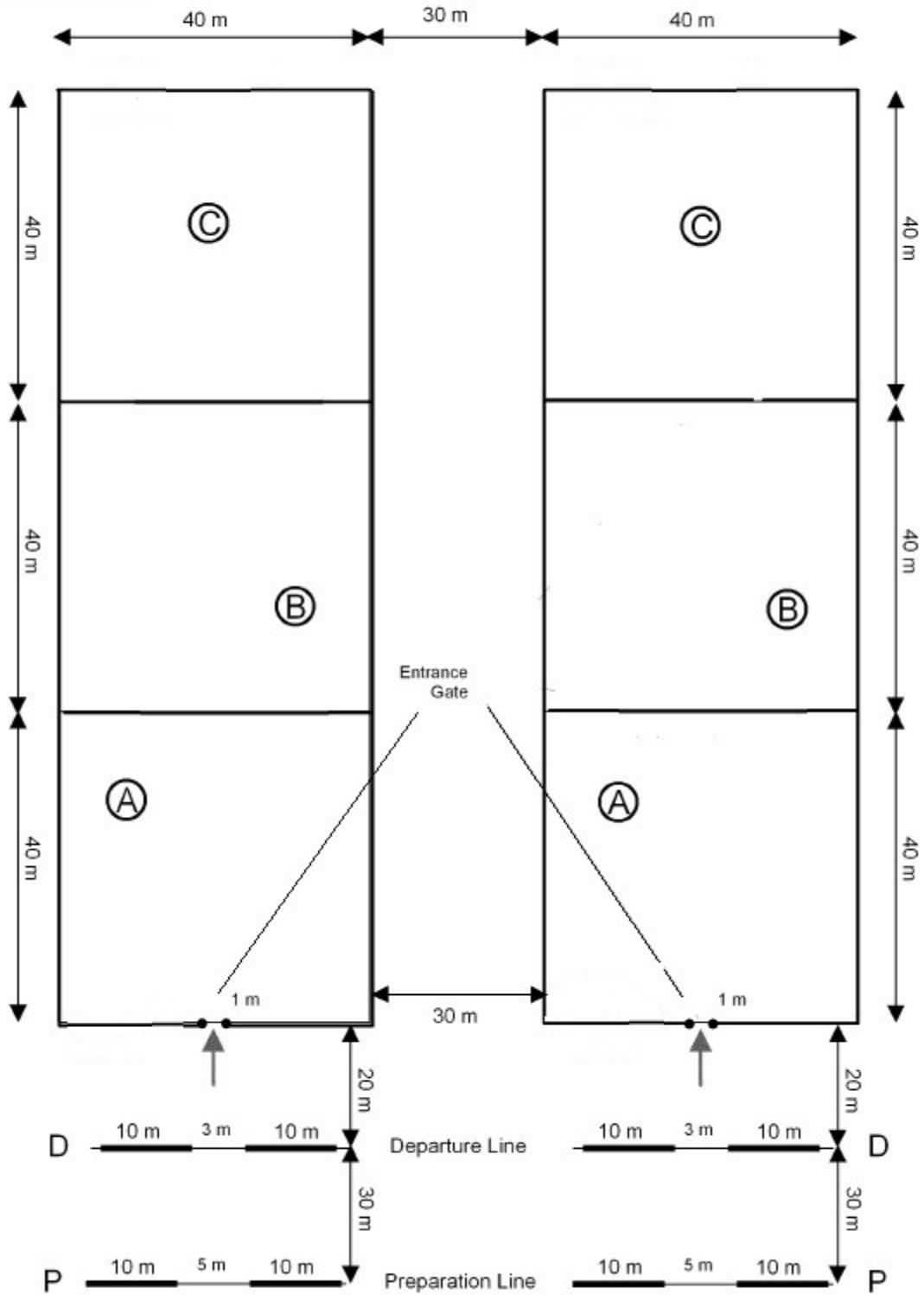
Infringement	Penalty
False start (before the starters signal)	10
Fender touches the ground (per touch)	10
Failing the entrance gate by missing or fender over poles	10
Touching the external sides of the container with the fender (per touch)	10
Rope lengthened or shortened, has knots or handled below the red flag during the flight (per infringement)	10
Rope not deployed to the correct length when lifting off from containers (per infringement)	10
Fender exiting the designated area 120 x 40m	10
Fender being placed into container in wrong order	50
Fender not placed into the container (per infringement)	50
Losing the fender during the course	100
Crews not staying seated or harnessed (both hands and legs not visible) <i>*if the crew members are not permitted to stand with one foot on the footboard according to 6.3.2.2.2</i>	100

Measurements of competition area and equipment (see Annex 1)

6.3.3.6. Measurements of competition area and equipment (see attached Annexes):

Item	Specification
Competition area	120 x 110 m, including 2 courses (see Annex 1).
Entrance Gate	Internal width 1 m, composed of two 2 m high poles
Six containers	Each to be positioned in a container square and filled with water or other heavy material to prevent moving. Can be made of any material or colour, but must be uniform.
Container height	1.00 m - 1.20 m
Diameter of container opening	48 cm +/- 2 cms
Two fenders (with the ropes)	"Majoni" Star size 5. Diameter: 30 cm. Height: 0.8 – 1 m. Weight: 7 – 8 kg (achieved by filling with water) (see Annex 2). Can be made of any material or colour but must be uniform.
Fender ropes	Length - 8.2m from the top of the fender to the grip, red flags at distances of 4, 6 and 8 metres from the top of the fender, wooden balls - 20 cm above the red flags at 4 and 6 metres (see Annex 2). Polypropylene rope.
Preparation & Departure Lines:	May be marked with the flags only, with 5 metre and 3 metre space between them respectively.

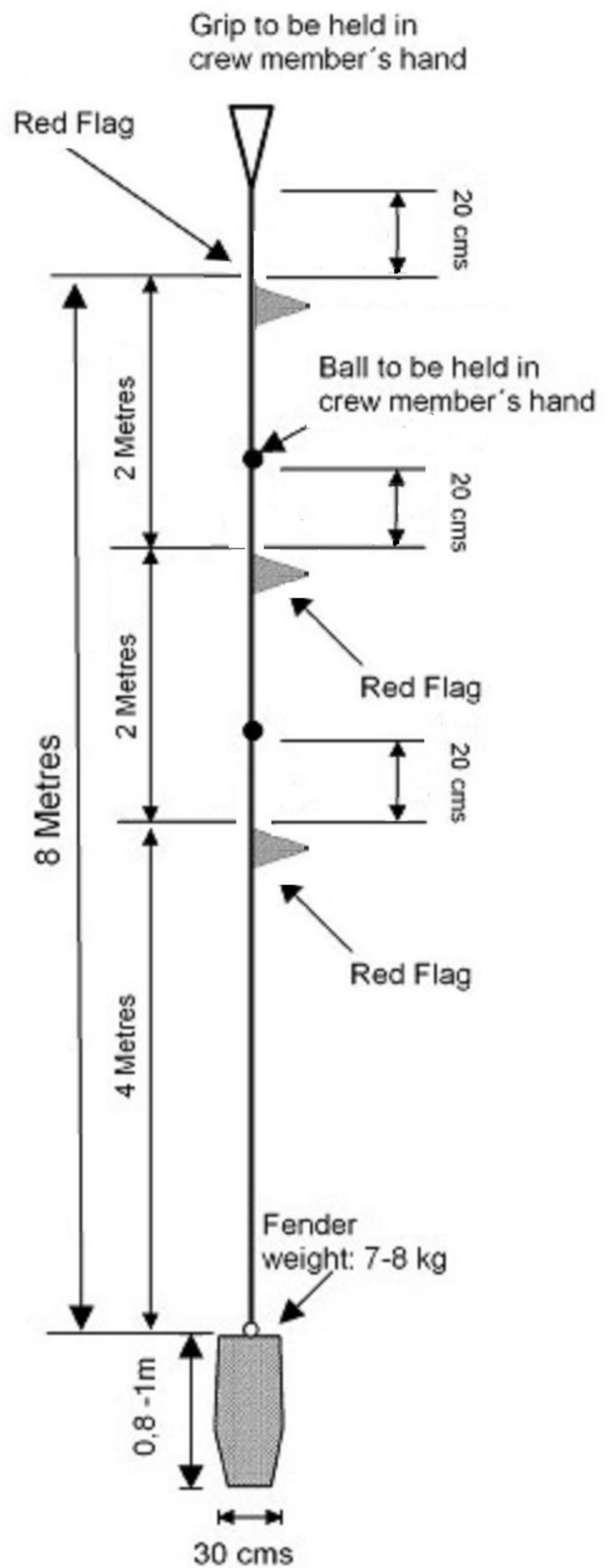
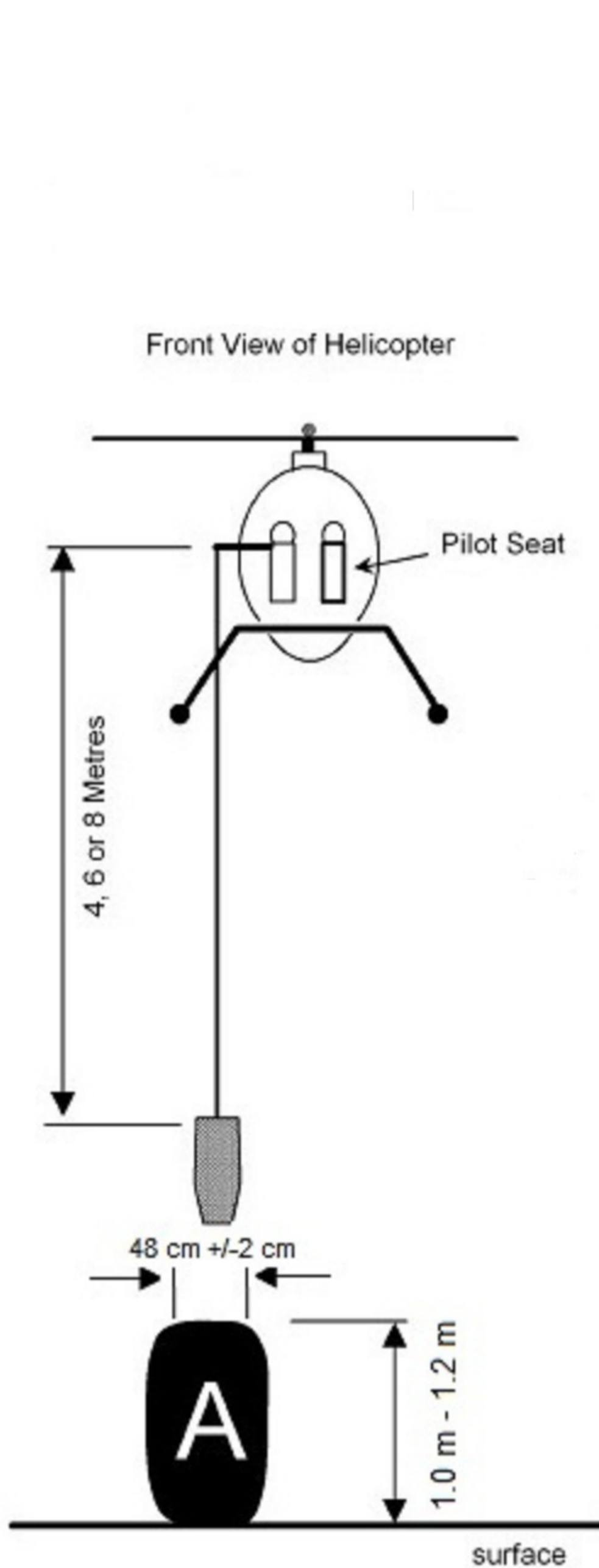
ANNEX 1 - FENDER HELI-RACE
NOT TO SCALE



Annex 2 FENDER HELI-RACE

Container and Length of Ropes

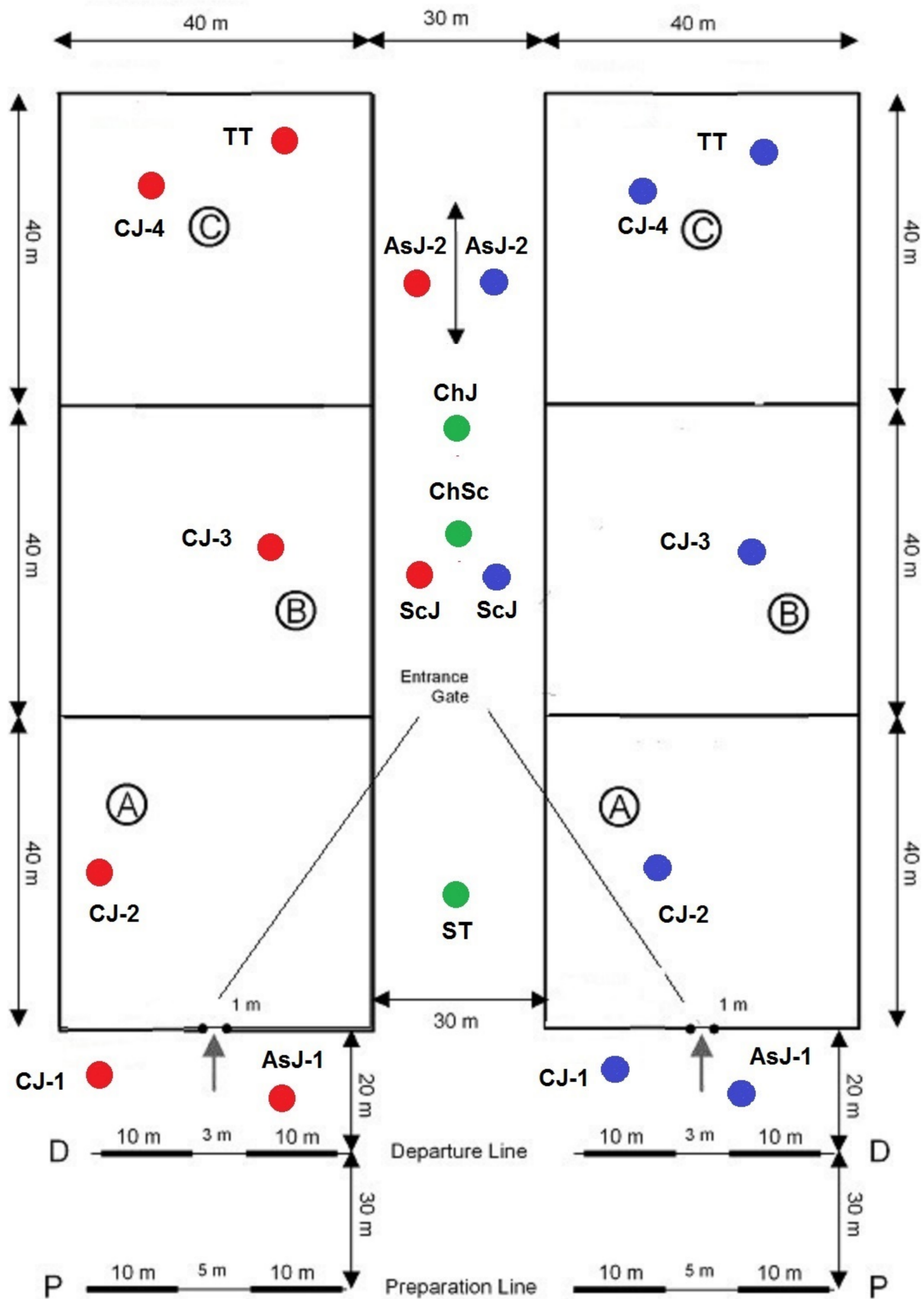
NOT TO SCALE



Weight of fender to be achieved by adding water 7-8 KG' +/- 5%

ANNEX 6 FENDER HELI-RACE DISTRIBUTION OF THE JUDGES

NOT TO SCALE



Note: The distribution of the CJ-2, CJ-3 and CJ-4 is shown for the A-B-C containers' order

ANNEX 7.

FENDER HELI-RACE

RESPONSIBILITIES OF JUDGES

(The places of the judges on the courses see Annex No 6 - Distribution of the judges on the courses.)

1. CJ-1 – COURSE JUDGE 1 (Start and Entrance Gate)

2 Judges in this team.

Area of responsibilities: Flight between the Departure Line and Entrance Gate

Flight between Departure Line and last container

Responsibilities: To judge infringements and indicating by raising a red flag for each of the below:

- False start (before the starter's signal)
- Failing the entrance gate by missing or fender over poles
- Fender touches the ground (each touch)
- Rope lengthened or shortened, has knots or handled below the red flag (each infringement)
- Crews not staying seated or harnessed (both hands and legs not visible) – special sign with the flag
- Fender exiting the left border of the designated area (per infringement)

2. CJ-2 – COURSE JUDGE 2 (Container No 1 - 4 meters rope)

2 Judges in this team.

Area of responsibilities: Flight between the Entrance Gate and Container 'No 1'.

Responsibilities: To judge infringements and indicating by raising a red flag for each of the below:

- Fender touches the ground (each touch)
- Rope lengthened or shortened, has knots or handled below the red flag (each infringement)
- Crews not staying seated or harnessed (both hands and legs not visible) – special sign with the flag
- Touching the external sides of the container No 1 with the fender (each touch)
- Fender not placed into the container (per infringement)
- Rope not deployed to the correct length when lifting off from container No 1

3. CJ-3 – COURSE JUDGE 3 (Container No 2 – 6 meters rope)

2 Judges in this team.

Area of responsibilities: Flight between the Container No 1 and Container No 2

Responsibilities: To judge infringements and indicating by raising a red flag for each of the below:

- Fender touches the ground (each touch)
- Fender not placed into the container (per infringement)
- Rope lengthened or shortened, has knots or handled below the red flag (each infringement)
- Crews not staying seated or harnessed (both hands and legs visible) – special sign with the flag
- Touching the external sides of the container No 2 with the fender (each touch)
- Rope not deployed to the correct length when lifting off from container No 2

4. CJ-4 – COURSE JUDGE 4 (Container No 3 – 8 meters rope)

2 Judges in this team.

Area of responsibilities: Flight between the Container No 2 and Container No 3

Responsibilities: To judge infringements and indicating by raising a red flag for each of the below:

- Fender touches the ground (each touch)
- Fender not placed into the container (per infringement)
- Rope lengthened or shortened, has knots or handled below the red flag (each infringement)
- Crews not staying seated or harnessed (both hands and legs not visible) – special sign with the flag
- Touching the external sides of the container No 3 with the fender (each touch).

5. TT – TIME TEAM (Time)

Minimum of 2 or 3 judges in this team (2 at least)

Responsibilities: To record the time with the stopwatches

To display the time on the scoreboard (manual or electronic)

To be in visual contact with the Starter (to confirm their readiness for the next heat to the Starter) and with the Scoring Team (to be sure that the time result has been fixed by the Scoring Team).

6. ST – STARTER

There will be 1 starter for both courses.

Responsibilities: To be in visual contact with the Chief Scorer and both Time Teams to get an indication of readiness from them for the next heat.
To be in visual contact with the crews to get an indication of readiness from them for the next heat.
To signal the start by dropping two flags after getting indication of readiness from the Chief Scorer, from both Time Teams and both competing crews
(The signals of the Starter will be demonstrated at the briefing)

7. ScT (ScJ and ChSc)– SCORING TEAM (Scoring Judges and Chief Scorer) (Scoring)

Scoring Team consists of 3 persons - Chief Scorer and 2 Scoring Judges.

Scoring Judges

Responsibilities of the Scoring Judges (ScJ): Flight between the Departure Line and final Container.

1) To judge infringements and to inform the Chief Scorer immediately:

- Losing the fender during the course
- Violation of order of the containers

2) To fulfill the following duties:

- To record the raised red flags that indicate penalties from the Course Judges and to inform the Chief Scorer immediately
- To record the actual time recorded by the Time Team and to inform the Chief Scorer immediately
- To show the flag of corresponding colour to the winning crew at the signal of the Chief Scorer
- To be in visual contact with the Time Team to ensure actual time has been recorded by the Scoring Team for each heat

Chief Scorer

Responsibilities of Chief Scorer

- To record penalties and time from the Scoring Judges and enter on the judging sheets
- To confirm the results of both competing crews as quickly as possible
- To inform the Scoring Judges who is the winner and confirm the crews are informed (to use radio contact with the crews if necessary)
- To be in visual contact with the Starter to show that the Scoring Team is ready for the next heat

8. ChJ – Chief Judge (Control)

Chief Judge is responsible for the smooth running of judging and scoring. Chief Judge should have a radio to be able to contact the Chief Scorer, the crews and the tower, if necessary.

9. AsJ-1 – Assistant Judge -1

Responsibilities: To hand the fender to the co-pilot
 Flight between the Departure line and the final container
 Fender exiting the right border of the designated area (per infringement)

10. AsJ-2 – Assistant Judge -2

There may be 2 or 3 judges in this team (2 at least)
 Responsibilities: To transfer the fenders from the 3rd container to the Departure Line.

NN	Team No	False start	Ground touch (per infringement)	Failing entrance gate by missing or fender over poles	Rope lengthened or shortened, has knots or handled below red flag (per infringement)	Crew not staying seated or harnessed	Bucket exiting left border (per infringement)
	Penalty	10	10	10	10	100	10

Judges:

Event No 2:

PARALLEL FENDER HELI RACE

Judging Team No 2:

CONTAINER 'A'

NN	Team №	Touching the external sides of the container with the fender (per infringement)	Rope lengthened or shortened, has knots or handled below red flag (per infringement)	Rope not deployed to full metres or has knots when lifting off from the container	Ground touch (per infringement)	Crew not staying seated or harnessed	Fender not placed in to container (per infringement)
	Penalty	10	10	10	10	100	50

Judges:

Event No 2:

PARALLEL FENDER HELI RACE

Judging Team No 3:

CONTAINER 'B'

NN	Team №	Touching the external sides of the container with the fender (per infringement)	Rope lengthened or shortened, has knots or handled below red flag (per infringement)	Rope not deployed to full metres or has knots when lifting off from the container	Ground touch(per infringement)	Crew not staying seated or harnessed	Fender not placed in to container (per infringement)
	Penalty	10	10	10	10	100	50

Judges:

Event No 2:

PARALLEL FENDER HELI RACE

Judging Team No 4:

CONTAINER 'C'

NN	Team №	Touching the external sides of the container with the fender (per infringement)	Rope lengthened or shortened, has knots or handled below red flag (per infringement)	Rope not deployed to full metres or has knots when lifting off from the container	Ground touch(per infringement)	Crew not staying seated or harnessed	Fender not placed in to container (per infringement)
	Penalty	10	10	10	10	100	50

Judges:

Event No 2:

PARALLEL FENDER HELI RACE

Judging Team No 5: TIME

NN	Team №	Flying time
	Penalty	0.1 per 10th second

Judges: _____

Event No 2:

PARALLEL FENDER HELI RACE

Judging Team ScJ:

D LINE AND FINAL CONTAINER

NN	Team №	Fender placed in container in wrong order	Fender lost en route
	Penalty	50	100

Judges:

Event No 2:

PARALLEL FENDER HELI RACE

Judging Team As J 1:

FENDER EXITING THE COURSE

NN	Team №	Fender exiting the course (per infringement)
	Penalty	50

Judges:

Name of the competition - **World Cup-2017, Stage 3**
Name of the event and stage of the competition - **FENDER - 1/2-FINAL**
Country and place - **Russia, Konakovo airfield**
Date «16» July 2017

NN	Call-sign	Pilot / crew	Country	№ of the flight	Time	Time points	Penalty points	Result	Victories	Score
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	06	Ivanov Ivan Petrova Natalia	RUS	3-rd FLIGHT						
	08	Bloggs Joe Brown Fred	UK							
2	02	Longo Federico Grasso Marco	IT	1-st FLIGHT	0'42",0	42.0		42.0	1	2:1
	04	Muller Otto Schulz Karl	GER		0'55",6	55.6	110.0	165.6		
	02	Longo Federico Grasso Marco	IT	2-nd FLIGHT	1'22",1	82.1		82.1		
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	04	Muller Otto Schulz Karl	GER		0'52",4	52.4	20.0	72.4		

