REGULATION

TRAP 5



Diego de Leon, 47 - 28006 Madrid Spain Telf. +34 91 286 6871 Fax. +34 91 838 8588 Email: inform@cmfedecat.com

REGULATION OF TRAP - 5

CHAPTER I GENERAL RULES

Article 1 - This Regulation applies to the modality of shooting sports with hunting weapons, in the discipline of "TRAP 5"

These Regulations are mandatory for all official National and International events, approved by the World Council of Hunting and Shooting Sports Federations (FEDECAT) in the TRAP 5 Discipline.

Shooters have the obligation to know and respect these Regulations, without being able to claim ignorance or any reason that excuses their compliance.

CHAPTER II SHOOTING FIELDS

Article 2 - The shooting fields must satisfy at least the following conditions:

- 1. Be flat and level from the shooting positions up to about 20 to 25 meters beyond the trench that holds the trap machines.
- 2 From the distance specified in the preceding paragraph, and up to the point of collapse of the clay, the fields must be cleared of obstacles obstructing the good regularity of the flight of the clay and visibility of the shooter. (The net of the shooting range is not considered impeditive as long as the Trap machines trench is symmetrically framed with it);
- 3 To be northeastern oriented, so that in the normal hours of shooting the sun is most of the time behind the shooter; (in the southern hemisphere, the southeast)
- 4 Being oriented as much as possible in place sheltered from prevailing winds.
- 5 To have an area with a gun stand, chairs and all other requirements for the convenience of shooters.

Article 3.

1 - For installation of Trap machines 5 (five) of launching, the field must have a trench built with the depth necessary so that the top surface of its roof has same height as the level of the shooting stations.

CHAPTER III TRAP MACHINES

Article 4.

- 1. The horizontal distance between each of the 5 trap machines shall be one meter (1.0) to one meter 10 centimeters (1.10) center to center. The center trap will not deviate more than 10 degrees each side and the right and left hand trap machines will throw clays to its opposite side, that means, to the left and right sides, respectively.
- 2. An automatic voice activation system will be used (electric or electronic) to instantly release the clay target from the trap.

CHAPTER IV **DISTANCES; HEIGHTS, ANGLES AND SCHEMES (grids)**

Article 5.

- 1 The flight of the clay under normal conditions should reach a distance of 68 meters (+ or 1 m/s) and at the optimum angle of elevation.
- 2 The heights of the clay are measured from the horizontal plane and at a distance of 10 meters from the center of the machine, a mid height of 1,50 m/. and to 3.00 m/ respectively.
- 3 The height of the clays must be between 1.50m minimum and 3.00m maximum (with an allowable variation of +or-0.15m)
- 4 The heights, distances and angles of the thrown targets, are provided in **Annex 1**.

CHAPTER V CLAY SPECIFICATION

Article 6.

- 1 The clay should have a diameter of 110 mm (+ or 2 mm), a height of 25 to 26 mm and the weight of 105 grams (+ or 5 grams).
- 2 -The color of the clay will be the one that best highlights the background under normal light conditions. The clay will be a recognized brand to ensure perfection and uniformity of flight as well as the ability to break easily when shot.
- 3 During an official competition the color, brand, manufacturer and model of the clay must always be the same.

CHAPTER VI SHOOTING STATIONS AND SHOOTING BOARDS

Article 7º.

- 1. The shooting stations are five in total. They are located at 15 meters from the front edge of the trench. They measure 1m x 1m square and there will be a distance of 3 to 3.30 meters (center to center) between each of them.
- 2. Next to each shooting position there will be a table, seat or other suitable object, on which the shooter can put his cartridges.
- 3. Behind the shooting positions will be a mandatory runway where shooters will pass from the 5th shooting position back to the 1st shooting position.
- 4. Each round is made up of 25 clays which are shot in a rotation of a squad of shooters. The shooter that shoots first in the round starts on position one, the second shooter starts in position 2, and so on.

CHAPTER VII

SHOTGUNS AND AMMUNITION

Article 8º. - Weapons and ammunition

- 1. Only shotguns with a length greater than 66cms are allowed to be used.
- 2 The cartridge should not be more than 70 mm in length.
- 3 It is not allowed to use black powder.
- 4 The lead should be spherical, coated or not and have maximum size of 2.5 mm in diameter, with a tolerance of one-tenth of a millimeter.
- 5 The maximum load of lead permitted is 24 grams, with a tolerance of 0.5 grams (half gram);
- 6 Tracer Ammunition are prohibited;
- 7. Semi-automatic shotguns are not allowed; unless you have cartridge collector bag.

Article 9 – Shotgun fault.

- 1. In the case of a shotgun malfunction, any shooter can shoot with another shotgun, if they obtain the shotgun within three minutes. If they are unable to obtain a shotgun, they will leave their position and stop their round. They will complete their round when they receive consent from the Jury to complete their round in a time to be determined.
- 2. In the case of a shotgun fault that can be repaired before the expiry of the period stated above, and with the authorization of the arbitrator, the shooter may continue to shoot.
- 3. In the case of a malfunction of a shotgun, regardless of whether the shooters has used more than one shotgun, the shooter shall be entitled to another clay (up to the maximum of two times in each round).
- 4. If the shotgun fails a third time then a zero is recorded in the final result.
- 5 When, for technical reasons, a misfire due to a percussion cap defect, the clay will be considered as "zero, unless such failure had been verified for more than two times, which would mean the marking of "zero" in accordance with the stipulated in the preceding paragraph.
- 6. If the shotgun has a trigger fault then the rules of the previous paragraph apply.

CHAPTER VIII

REFEREES AND JURY

Article 10°. - Referees, Jury and its qualifications.

1. The shooting is directed by a main referee and assisted by two auxiliary referees who were shooters from the previous round. This is done by the criteria set by the organization.

2. Any shooter that refuses to be a referee or who does not attend the round as a referee or is not replaced by another shooter, will be punished by having 3 points deducted from their final score. If there is any case of recurrence in the same competition then the shooter will be disgualified.

Article 11º. - The referee main responsibility:

- 1 Ensure that the positions of the shooter correspond to the order of call.
- 2 To give authorization for the start of the round.
- 3. Clay by clay the referee must call the result. Silence if the clay is hit. If the clay is missed then zero is called by voice, buzzer or other easily understandable means.
- 4. In any case of doubt, the referee will consult with each auxiliary referee. If they disagree then the main referee has the right to make the final decision.
- 5 Examine the weapons and ammunition in the form stipulated in this Regulation.
- 6. To suspend the shooting for a decision to be made in accordance with the regulations.
- 7. If the shooter does not accept the judgment he will be invited to leave the round.
- 8 To meet with the jury for consultation before any final decision, if this is not a clay "good", "null", or "zero".

Article 12 - After the consultation with the auxiliary referees as to whether the clay was good, zero or null, the decision of the main referee is final. It is not open to further appeal.

Article 13 – The auxiliary referees assist the main referee and in particular:

- 1 Mark visibly and give their opinion in cases of doubt, so that the main referee can decide;
- 2 Check the results recorded in the table, if this exists and is at his side.
- 3 Note the results in the table or on the scorecard of the round.

Article 14 – The main referee and his assistant, under the control of the jury, are obliged to comply with this regulation. They ensure that the shooting layout is safe and according to the specifications for Trap 5. They also ensure that only the shooters who are about to compete are allowed onto the shooting layout.

Article 15^o. - In international events, the jury shall be composed by three or more people.

- 1. They check, before the shooting starts, that all the necessary preparations to the shooting field (or layout) have been completed and are in accordance with the Trap 5 rules. They may examine the clays by opening a box and checking 2 at random.
- 2 It is the responsibility of the Jury to verify that the schemes of training and competition are in accordance with the grid.
- 3 Take the necessary deliberations in cases of technical defects, or other that require resolution, even in cases in which the referee having regulatory competence to do so, it has not taken the appropriate decisions.
- 4 Responding to complaints, as well as decide in cases of omission, or when requested exclusive decision of their competence;
- 5 Decide the penalties to be applied at the time of the offence for any shooter that does not comply with the regulations, or behaves in a manner that is less than correct or unsportsmanlike.
- 6 The Jury resolves the issues when both the referee and the organization cannot decide;
- 7 After a meeting of the jury, their final decision will be considered valid.

CHAPTER IX RULES OF SHOOTING

Article 16 – The shooting positions for each shooter are drawn by lottery. The shooter must stand in their designated shooting position and their feet must not exceed the limits of the board when they take their shot.

Article 17º. - When the shooter is ready to shoot, they must call for the clay ("ask the clay"), so that the clay can be released immediately.

Article 18°. - from the moment that the shooter on the left side, opens the shotgun after taking the shot, the next shooter will have 10 seconds to take their shot.

CHAPTER X CLAY "REGULAR" AND "IRREGULAR"

Article 19º. - The clay are considered to be "REGULAR" or "IRREGULAR"

- 1 Consider the clay "REGULAR", when it is called for by the shooter and released in accordance with the rules.
- 2 Consider the clay "IRREGULAR" when it flies with different path from the one specified in the Regulation, (either by wrong angle, elevation or distance).
- 3 If the shooter (by reaction) shoots at an "IRREGULAR" clay, the result will be counted, unless the referee has considered it to be "NULL" before, or at the precise moment that the shooter takes the shot.

CHAPTER XI CLAY "GOOD", "ZERO", OR "NULL"

Article 20°. - The results are reflected in clay "GOOD", "ZERO", OR "NULL".

- 1 The clay is considered "GOOD", when the shooter shoots the clay in accordance with the rules and the referees are able to see at least a visible broken piece of clay or total fragmentation;
- 2 The clay is considered "ZERO", in the following cases:
- a) If the shooter fails to hit the clay during its flight.
- b) If only dust is seen, or if it is only shaken;
- c) If the shooter could not shoot on the clay after calling due to the safety catch being on.
- d) If the shooter could not shoot on the clay because he forgot to put the cartridges into the shotgun.
- e) If the shooter has fired the first shot and could not shoot the second, because he forgot to put cartridges in both barrels..
- f) If the shooter having fired the first shot, could not trigger the second, because the cartridge had emptied as a result of the recoil or vibration of the first shot.

- g) If the shooter, after calling for the clay, did not shoot a clay deemed "REGULAR".
- h) If the shooter, in the case of a malfunction or failure of the shotgun, proceeds to open it or touches the 'safety catch', before the referee had chance to look at the shotgun.
- i) if the same shooter has a shotgun or cartridge malfunctions for a third time in the same round
- j) The shooter cannot shoot the second shot, from a malfunction of ammunition, then broke the clay with the first shot.
- 3 The clay is considered 'Null' and another clay is launched, whether the shooter has shot it or not, in the following cases:
- a) If the clay has launch broken, or if it breaks after the launch and before it is shot.
- b) If two or more clay are released simultaneously.
- c) If the clay color is clearly different from what has been used.
- d) If the clay is launched before the shooters is ready and has not called for the clay.
- e) If the clay does not launch immediately on the shooters call.
- f) If the clay is 'irregular' and the shooter does not shoot it.

NOTE: In these last two cases, if the shooter shoots the clay, this means that he "accepted" and the result will be scored, unless the referee has given as "NULL" before, or at the time the shot was taken.

Article 21 – If it exits before the shooters call and is not shot. Or, if the shooter only shoots one shot. If the shooter shoots the second shot then the result is scored.

Article 22°. - If the shotgun shoots simultaneously both barrels (double discharge), the clay is considered "NULL".

Article 23°. - By breach or defect in the mechanism of the rifle or ammunition, without that this fact can be blamed for the shooter, this will have the right to REPEAT THE CLAY in the following case:

The shooter will not be blamed for a defect in the shotgun or cartridge and will have the right to REPEAT THE CLAY in the following case:

- a) If the first shot missed the clay and the second shot could not be taken due to a fault in either the shotgun or the cartridge.
- b) In these cases, for the clay to be considered "GOOD" it will have to be broken by the second shot, after first shot has been shot into the air.
- c) The shooters that use a shotgun with two shots with a single trigger and shoot in the first place with the second pipe, must declare it before the competition start so that they can benefit from a new clay, when was case of that.

Article 24 – The clay will be considered 'ZERO' if the same shooter, for a third time, has a malfunction of the shotgun or cartridge whilst on the same round (or layout).

Article 25°. - The referee may order the release of another clay, where:

- a) The shooter has been visibly disturbed.
- b) Another shooter shoots the clay 'out of turn'.
- c) The referee, for any reason, finds that it is impossible to decide if the clay was "GOOD" or "ZERO".

Unique: In this last case, the referee should consult the auxiliary referees before the order to launch a new clay.

CHAPTER XII

RULES OF CONDUCT AND SAFETY IN THE SHOOTING FIELD

Article 26 - All shooters must comply with this regulation and all its safety aspects.

- 1 All shotguns, even when they are empty, should be handled safely;
- 2 Within the area of the shooting field, and when not in use, the shotgun should always be open and unloaded.
- 3. The shotgun can only be loaded on the shooting position and after the referee authorize the start of the shoot.
- 4 All shotguns must be opened between positions 1 and 5
- 5 Open and unloaded when moving from position 5 to position 1.
- 6 When not in use the shotgun, should be put it in the gun cabinet. (gun cabinet)
- 7. All shooters are expected to behave in a sportsmanlike manner. They should be in control and composed. They must avoid disrupting other shooters with their behavior
- 8. If a shooter refuses to be a referee or leaves the layout, will be 3 clays deducted from their score.
- 9 All shooters are expressly prohibited from using any electronic or mechanical device that can indicate the trajectories of the clay.
- 10 The use of mobile phones in the shooting area is prohibited during competition or practice.

Article 27 – At the beginning of the competition (and only on the first layout of the day) the shooter can test fire up to two shots, from his official shooting position and only with the permission of the referee. It is expressly forbidden to:

- a) To aim or shoot at another shooter's clay target.
- b) Aim or shoot at any animals.
- c) Aim at anything outside the allowed 'safe area' of the layout.
- d) During the competition any shooter who loads a shotgun must be pointing 'down range' and towards the trench.

Article 28°. - The shooter, when called, must be ready to shoot immediately and have the ammunition and equipment necessary and must be wearing the mandatory hearing protection.

Article 29°. - The shooter at the beginning of his series, must not load the shotgun without being on their own shooting position, they must do so with the shotgun directed toward the "trench" and only after the referee give the signal to begin.

- 1 The shooter has to shoot in turn and only when the clay has been launched.
- 2 The shooter must not turn around with his loaded shotgun, whilst on the shooting position.
- 3 In the case of having to launch another clay, or interruption of the shooting, the shooter should open his shotgun, and only close the shotgun again when the shooting restarts at the order of the referee.
- 4 After taking the shot, the shooter must stay at the same shooting position until the shooter on the right side has shot.

5 – All shooters must stay in their shooting position when they shoot their last clay of the round, until the referee of that round declares 'the end of the round'.

Article 30 – In the case of any malfunction of shotgun or cartridge, the shooter must remain on the shooting position and the shotgun must remain facing down the range. The shooter must not open the shotgun or touch the 'safety catch' before the referee is able to examine the shotgun.

Article 31 – The shooters when in the shooting position are only allowed to call for the target using recognized 'command words', or to call a protest or to answer any question from a referee.

CHAPTER XIII

RANKING/TEAMS

Article 32º. - Age Groups and National Teams

Rank

- 1 SENIOR (up to 60 years)
- 2 VETERAN (over 60 years)
- 3 S-VETERAN (over 70 years)
- 4 JUNIOR (up to 20 years)
- 5 LADY

Teams:

- SENIOR
- VETERAN
- S-VETERAN
- JUNIOR
- LADY

The National, Regional, Clubs and Commercial Firms Teams will be made up of three members, who may be from different categories.

International Competitions will admit National Teams, Mixed Teams and Commercial Firm Teams

National Competitions will admit Regional Teams, Mixed Teams, Club Teams and Commercial Signature Teams.

The Regional Competitions will admit Mixed Teams, Club Teams and Commercial Firm Teams.

The levels of each shooter will be awarded in a document for this purpose, according to the results obtained in previous editions. This will be regulated by regulations.

MIXED TEAMS

A mixed team comprises one lady and one man (any age is allowed).

The mixed team event is a combined score so ALL mixed team competitors MUST shoot in the main championship during that weekend (European or World Championship). Their individual score is also their team score.

Names of each team must be submitted by each country's representative before the championship starts or their team scores will not be counted. (No exceptions).

CHAPTER XIV

PROTESTS AND COMPLAINTS

Article 33 – If the shooter does not agree with the referee's call, they must protest immediately the incident occurs (and before the next shooter takes their shot) by raising their **arm** and saying 'protest' or 'Stop'.

- 1 The referee then stops the shooting and consults with the "auxiliary referees". He then gives the decision.
- 2 If the shooter that has protested does not find the decision of the referee satisfactory, then he can 'appeal' in writing, to the jury.
- Article 34 Any Appeal of the decision of a referee, or any organizational irregularities, should be made 'in writing' to the Jury and accompanied by a fee to be determined by the Competition Jury.
- Unique The "JURY" is charged to resolve or deal with the "APPEAL".
- Article 35°. At the end of each round, the shooter must be given his result and the shooter must sign the scorecard.
- Article 36°. If the shooter does not comply with the conditions laid down in the preceding article, then the shooter forfeits the right to make any 'later' Appeal of the result..
- Article 37°. If a shooter, or other competitor, sees an instance occur that is not within the Regulation, they should immediately inform the referee or a member of the jury, so that appropriate action can be taken.

CHAPTER XV PENALTIES AND MISCELLANEOUS PROVISIONS

Article 38 – All shooters are obliged to know and accept the current Regulation before they enter any competition. They are also obliged to accept the 'PENALTIES' that will result from their non-compliance or breach of the regulations, or their refusal to accept any orders / instructions / guidance from the referee (or other official representative)

- Article 39°. If the shooter use "weapons or ammunition" other than those set out in Articles 8°, of this Regulation, will be disqualified.
- Article 40 If any shooter uses shotguns or cartridges other than those set out in Article 8 of this Regulation, they will be disqualified.
- Article 41 Involuntary breach of the Rules of Conduct presented in Chapter X1 of this Regulation will result in a warning being given by the referee or even the jury.
- Article 42 When the round is ready to start, and if a shooter is still missing, the referee will take one minute to call the shooters name three times.
- Unique If the 'missing' shooter presents themselves to the referee 'after' the round has started, he 'not' be allowed to join that round. The jury will allow the shooter to shoot this round at a later time in the day. The jury will decide when, BUT, the shooter will be penalized with 5 points from the score of that round.
- Article 43 If the jury becomes aware that a shooter is deliberately delaying the shoot, or deliberately adopts any unsporting behavior opposed to the spirit of the sport, then this shooter will be punished as follows:
- a) Any breach of the provisions of Article 37º will result in the shooter being sanctioned.
- b) Any breach of the provisions of paragraph 9 and 10 of Article 26° and Article 38° the shooter is warned

c) After three warnings, the shooter will be sanctioned.

CHAPTER XVI RESULTS AND SCORES

Art. 44°. - The scores will be prepared in the following way:

- 1 The shooter breaks the clay and is assigned a "GOOD" on the scorecard .
- 2 The shooter who misses the clay is assigned 0 (zero) points.

CHAPTER XVII SQUADS, ROUNDS AND FINAL

Article 45º. - Squads, series and final:

- 1 Squads are composed of a maximum of (6) shooters.
- 2 The round comprises 25 clays for each shooter.
- 3 The first 6 (six) shooters of the general classification (open) compete in a Final, consisting of 25 (twenty-five) clays each.
- 4 In case of a tie, there will be a 'single barrel' Shoot-Off, to determine the finalists.

CHAPTER XVIII CLASSIFICATION

Article 46º. - Individual classifications, levels and teams;

The general classification (OPEN) obtained for each of the shooter is added to the result of the final.

- 1 Ties for medals, in all categories, must be resolved in a Shoot-Off to a shot and seen clay. If there is enough light and the Organization considers it, the tie can be broken with a series of 25 targets.
- 2 In the rest of the situations, in case of a tie in the individual classification, they will be arranged in the reverse order of the series (last, penultimate, etc.).
- 3 If the National Teams are tied, these results will also be sorted out by using 'Count Back'. The result of the team member's rounds in reverse order of their achievement will be counted as described in 1 above.

CHAPTER XIX
TIES

Article 47º. - Ties and elimination

- 1 The ties are twenty five (25) clays with full use of the shotgun (two shots).
- 2 If the tie remains, there will be a single barrel Shoot Off. The shooter will be eliminated at their first (0) Zero.

For the rest of the categories, ladies, veterans, super veterans and juniors, the best score of the last series will count. If the tie persists, the penultimate and so on.

Awards

Article 48°. - Awards. Classification General-Open; Levels and Teams

- 1 General Classification (Open) Compensation for expenses
- 2 Levels Compensation for expenses

UNIQUE: Compensation for expenses, in accordance with the programme.

3 - TEAMS.

1st, 2nd and 3rd place for each level - Medals

CHAPTER XX

GRAND PRIX FEDECAT, THE EUROPEAN CHAMPIONSHIPS AND THE WORLD CHAMPIONSHIP

Article 49°. - International Championships and National Teams

- 1 The Grand Prix FEDECAT, European Championship and the World Championship will be played in 125 + FINAL.
- 2 The Provincial Championships must be developed with at least 50 targets.
- 3 The Regional Championships must be developed with at least 100 targets.
- 4 The National Championships must be developed over 125 targets + Final
- 5 The clay to be used in the official practice, shall be of the same type (brand) in the course of the competition.
- 6 The official practice **grid**, will be identical to the competition grid.
- 7 The Organization of the competition must provide the necessary conditions for the implementation of official practice, up to two (2) days before the beginning of the competition.
- 8 The name of the shooters in the National Teams must be submitted to the organizers before the championship starts.
- 9 The Jury of competition consists by one (1) representative of each country, It must be composed of at least five (5) members.
- 10 If any National team is absent then the previous point is not applicable.

CHAPTER XXI

DRESS CODE, BACK NUMBER AND BEHAVIOR

Article 50°. - Clothing and other:

- 1 All participants in an official competition should dress appropriately at the event, bringing credibility and the national colors.
- 2 Only trousers or Bermuda type shorts (maximum 5cm above the knee) are allowed. Short shorts are expressly prohibited.
- 3 The shirts must be at least short sleeve, and may or may not have collar that are near in the neck.
- 4 For safety reasons, the use of sandals is prohibited.
- 5 'Back numbers' should be fixed on the back, and should be visible in its entirety
- 6 For breaches referred to in the previous paragraphs, shooter is sanctioned with "warning".

If their behavior is not changed, they can be punished with the exclusion from the competition.

CHAPTER XXII

Other provisions are laid down in the specifications of the competitions.

ANNEX 1

TRAP 5 FEDECAT - SCHEMES - GRIDS

| Schematic | Machine | Angle L R | | Height | Distance |
|-----------|---------|-------------------|-----|--------|----------|
| | 1 | | 35º | 1,5 m | 68 m |
| | 2 | | 20⁰ | 2,0 m | 68 m |
| 1 | 3 | 10⁰ | | 1,5 m | 68 m |
| | 4 | 30º | | 3,0 m | 68 m |
| | 5 | 45⁰ | | 1,5 m | 68 m |

| Schematic | Machine | Angle L R | | Height | Distance |
|-----------|---------|-------------------|-----|--------|----------|
| | 1 | | 40º | 1,5 m | 68 m |
| | 2 | | 15º | 1,5 m | 68 m |
| 6 | 3 | | 5º | 2,5 m | 68 m |
| | 4 | 30⁰ | | 2,5 m | 68 m |
| | 5 | 45º | | 3,0 m | 68 m |

| Schematic | Machine | Angle L R | | Height (a 10 m) | Distance |
|-----------|---------|-------------------|-----|--------------------|----------|
| | 1 | | 40⁰ | 2,0 m | 68 m |
| | 2 | | 25º | 3,0 m | 68 m |
| 2 | 3 | | 5º | 2,5 m | 68 m |
| | 4 | 15⁰ | | 1,5 m | 68 m |
| | 5 | 35º | | 2,0 m | 68 m |

| Schematic | Machine | Angle L R | | Height (a 10 m) | Distance |
|-----------|---------|-------------------|-----|--------------------|----------|
| | 1 | | 40⁰ | 2,0 m | 68 m |
| | 2 | | 15⁰ | 1,5 m | 68 m |
| 7 | 3 | 0º | 0º | 2,0 m | 68 m |
| | 4 | 20⁰ | | 2,5 m | 68 m |
| | 5 | 40⁰ | | 2,0 m | 68 m |

| Schematic | Machine | Angle L R | | Height (a 10 m) | Distance |
|-----------|---------|-------------------|-----|--------------------|----------|
| | 1 | | 45º | 2,0 m | 68 m |
| | 2 | | 25º | 2,0 m | 68 m |
| 3 | 3 | 5º | | 3,0 m | 68 m |
| | 4 | 30⁰ | | 2,5 m | 68 m |
| | 5 | 45⁰ | | 1,5 m | 68 m |

| Schematic | Machine | Angle L R | | Height (a 10 m) | Distance |
|-----------|---------|-------------------|-----|--------------------|----------|
| | 1 | | 35º | 2,0 m | 68 m |
| | 2 | | 15º | 1,5 m | 68 m |
| 8 | 3 | 0º | 0º | 2,5 m | 68 m |
| | 4 | 20⁰ | | 3,0 m | 68 m |
| | 5 | 45⁰ | | 2,5 m | 68 m |

| Schematic | Machine | Angle L R | | Height (a 10 m) | Distance |
|-----------|---------|-------------------|-----|--------------------|----------|
| | 1 | | 40⁰ | 2,0 m | 68 m |
| | 2 | | 15⁰ | 3,0 m | 68 m |
| 4 | 3 | 5º | | 1,5 m | 68 m |
| | 4 | 30⁰ | | 3,0 m | 68 m |
| | 5 | 35º | | 2,5 m | 68 m |

| Schematic | Machine | Angle L R | | Height (a 10 m) | Distance |
|-----------|---------|-------------------|-----|--------------------|----------|
| | 1 | | 40⁰ | 2,5 m | 68 m |
| | 2 | | 25⁰ | 2,0 m | 68 m |
| 9 | 3 | 0º | 0º | 1,5 m | 68 m |
| | 4 | 15⁰ | | 3,0 m | 68 m |
| | 5 | 35⁰ | | 3,0 m | 68 m |

| Schematic | Machine | Angle L R | | Height (a 10 m) | Distance |
|-----------|---------|-------------------|-----|--------------------|----------|
| | 1 | | 45º | 2,5 m | 68 m |
| | 2 | | 30º | 3,0 m | 68 m |
| 5 | 3 | | 5º | 2,0 m | 68 m |
| | 4 | 30º | | 3,0 m | 68 m |
| | 5 | 40⁰ | | 2,0 m | 68 m |

| Schematic | Machine | Angle L R | | Height (a 10 m) | Distance |
|-----------|---------|-------------------|-----|--------------------|----------|
| | 1 | | 35º | 2,0 m | 68 m |
| | 2 | | 25º | 2,0 m | 68 m |
| 10 | 3 | | 10⁰ | 3,0 m | 68 m |
| | 4 | 30º | | 2,5 m | 68 m |
| | 5 | 45º | | 2,5 m | 68 m |

^{*} The distance 68m (+- 1 meter.)

^{*} The height +- 0,10 meter.