



concours international
de chronométrie Le Locle
2015 *Excellence et Précision*

2015
regulations

www.concourschronometrie.org

2015 regulations

Foreword

This Competition is the successor to the observatory competitions which first appeared in the 19th Century, and came to an end in the second half of the 20th Century. It is derived from a scientific, technical and cultural approach aimed at promoting the know-how of watchmakers, craftsmen and manufacturers with a shared passion for perfection. Its objective is to promote the concepts of excellence and accuracy in the field of modern mechanical watchmaking. What sets it apart from the old competitions is its comparison of the performance and reliability of market-ready cased watches.

The Honorary Committee of the 2015 International Chronometry Competition is chaired by Mr. Claude Nicollier, NASA and ESA astronaut, and Professor at EPFL.

The Jury comprises independent individuals upholding the scientific and legal validity of the Competition results. It is chaired by Mr. Jean-Marc Triscone, Dean of the Science Faculty of the University of Geneva. The Technical Judge, and Jury member, is Mr. Laurent-Guy Bernier, of the Federal Institute for Metrology (METAS).

The 2015 International Chronometry Competition comes under the ultimate supervision of the Le Locle Watch Museum, Château des Monts.

The testing is conducted in collaboration with the Official Swiss Chronometer Testing Institute (COSC), Besançon Observatory and the Haute Ecole Arc Engineering Department.

Participation

The Competition is open to:

WATCHMAKING COMPANIES

Brands, movement makers, development firms and independent watchmakers. The pieces submitted must have been assembled, adjusted and set by the participant company. The constituent parts of the movement must have been made in a country on the European continent.

YOUNG WATCHMAKERS

Persons in training or who have recently completed their training. Participation is on an individual basis, and the piece submitted must have been assembled, adjusted and set by the individual participant as part of their training no more than 15 months prior to submission. In addition, the calibre submitted must be that which is usually used by the training centre for teaching purposes. There shall be only one ranking for "young watchmakers".

ANONYMOUS

Anonymous participation in the Competition is also possible. In this case, the participant's name shall not be mentioned publicly. Their piece shall not be exhibited, and their result shall not be part of the ranking. For their part, the participant undertakes not to divulge the results of which they are notified.

A participant cannot submit more than two watches per calibre.

Watch categories

Pieces permitted in the Competition shall be cased **mechanical** wristwatches, without bracelets, which are market-ready and compliant with the specifications of the entry form.

The display must provide an unambiguous time, minute and seconds reading.

The movement height shall be limited to 15 mm, and its area to 1'164 mm².

Three watch categories shall have separate rankings:

- 1. Classic**
with a non position-compensated regulator.
- 2. Tourbillon**
with a position-compensated regulator.
- 3. Chronograph**
with short time measurement mechanism, with start, stop and reset.

Entries

The entry form is available on the website **www.concourschronometrie.org**. It must be completed in full, and sent to the stated address by **31 January 2015**, with proof provided by the date of the postmark or e-mail. By signing the entry form, the participants agree to adhere to the conditions of the present regulations and charter for use (available on the website) of the Competition name, logo and results.

The number of pieces permitted in the Competition is **limited to 50**. If applicable, the jury shall decide on the entries to be rejected without appeal, based in particular on the arrival of the entry, the number of pieces submitted by the same company and keeping a proportion between corporate entries and young watchmakers.

Entry fees

Per piece

- YOUNG WATCHMAKERS CHF 50.–
- WATCHMAKING COMPANIES CHF 2'500.–
- ANONYMOUS CHF 3'500.–

The entry may only be taken into consideration if the payment has reached the account of the International Chronometry Competition Association by 15 February 2015.

If a piece is not accepted by the Jury, the entry fee shall be reimbursed.

If a participant withdraws their entry up to one month before submission of the pieces, i.e. up to 29 April 2015, their entry fee shall be 50% reimbursed. After this time, no reimbursements shall be payable.

Submission of pieces

The deadline for submitting pieces to the Le Locle Watch Museum, Château des Monts, is set for **Thursday 28 May 2015, at 17:00.**

List of participants

For watchmaking companies, passing the first test in the Competition entitles them to be on the list of "nominees", which shall be published at a ceremony, on **26 June 2015.**

The list of pieces that have failed shall not be published. These unranked pieces shall not be exhibited, but shall undergo the subsequent tests. The participant concerned shall be notified of the detailed results confidentially, and may not divulge them.

Measurements and tests

TESTING PROCEDURE

1. **First measurement cycle as per standard ISO3159** at the Official Swiss Chronometer Testing Institute, Le Locle.
2. **Magnetic field exposure** at HE-Arc, Le Locle.
3. **Second measurement cycle as per standard ISO3159** at the Official Swiss Chronometer Testing Institute, Le Locle.
4. **Impact exposure** at HE-Arc, Le Locle.
5. **Third measurement cycle as per standard ISO3159** at Besançon Observatory.

Day	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
Pos.																		
	6H			3H			9H			FH			CH			6H		
T °C	23	23	23	23	23	23	23	23	23	23	23	8	23	38	23	23		
M [s/d]	M ₁	M ₂	M ₃	M ₄	M ₅	M ₆	M ₇	M ₈	M ₉	M ₁₀	M ₁₁	M ₁₂	M ₁₃	M ₁₄	M ₁₅			

Mechanisms in operation

Measurement cycle as per standard ISO3159

The standards used are:

- **for rate measurements:**
standard ISO 3159, category 1.
- **for magnetic fields:**
standard ISO 764.
There is no rate test.

- **for impacts:**
a Competition-specific protocol.
Application of half-sinusoidal impacts, with intensity 150g (1g = 9.81m/s²) and duration 5 ms.
In total, 150 impacts are applied:
50 in the 3-9 o'clock axis (25 in each direction),
50 in the 6-12 o'clock axis (25 in each direction),
50 perpendicular to the dial (25 in each direction).
There is no rate test.

24 hours before the measurements, the pieces are wound and set up in position as per ISO 3159. The pieces are wound every day throughout the measurement periods.

Piece rating

Criteria		Tolerances [s/d]
R _{ave}	average daily rate	-4 / +6
V _{ave}	average rate variation in the same position	2
V _{max}	greatest rate variation	5
D	difference between rates in horizontal and vertical positions	-6 / +8
P	greatest rate difference	10
C	rate variation with temperature	±0.6
R	rate resumption	±5
V _{moyc}	average rate variation between positions	Non-elimatory criterion

The calculation method for these criteria is as defined by standard ISO 3159. In addition V_{avec}, a Competition-specific criterion, takes into account the rate differences between positions. Hence its calculation, similar to that of V_{ave}, is defined as follows:

$$V_{avec} = \frac{1}{4} \times \sum |M_{i+1} - M_i| \quad \text{where } i = 2, 4, 6, 8$$

All the criteria are taken as absolute values.

The measurement series give rise to the allocation of scores, calculated using the formula below:

$$N = 1000 - (12,5 \times |M_{ave}| + 55 \times V_{ave} + 45 \times V_{avec} + 20 \times V_{max} + 100/3 \times |D| + 10 \times P + 500 \times |C| + 10 \times |R|)$$

The maximum score is 1'000 points. The final score is the average obtained using the formula:

$$Nf = \frac{1}{3} \times N1 + \frac{1}{3} \times N2 + \frac{1}{3} \times N3 \quad \text{where } N1: \text{COSC 1}; N2: \text{COSC 2}; N3: \text{Besançon Observatory}$$

The ranking is drawn up in decreasing order of points obtained.

Results

The results shall be published on **22 October 2015**. Only pieces that have not exceeded any of the tolerances in the 3 tests may appear in the final ranking. For each category, only the names and results of the top 3 (prizewinners) shall be published.

Gold, silver or bronze medals, and a diploma stating the number of points obtained, shall be awarded to the prizewinners.

A participation certificate shall be awarded to each "nominee" participant.

Prizes of 500, 300 and 200 francs shall be awarded to YOUNG WATCHMAKER participants with the best results, provided that they have obtained more than 500 points.

Confidentiality

Each participant shall receive details of the results for their piece. Use of results, medals, diplomas and certificates by the participants must comply with the Competition Charter.

The Organising Committee agrees for its part to make every effort to ensure that all unpublished information remains confidential.

Insurance

The watches shall be insured by the International Chronometry Competition Association to a value of 5'000 francs per piece, against fire, natural occurrences, theft and water damage. If the participants wish to insure their piece to a higher value, they shall do so at their expense.

Though certain tests are potentially destructive, competitors must accept these tests and the risk incurred.

There shall be no questions of liability regarding handling, examination and transport procedures.

Final provisions

The Jury is authorised to decide without appeal on any matter relating to the Competition, without the obligation to explain its decisions.

The reference documents shall be the original French documents.

The official language of the Competition shall be French.

www.concourschronometrie.org

Gauging talent and performance

Information

The entry form and further information can be found on the International Chronometry Competition website:

www.concourschronometrie.org



Key dates

Entry deadline	31 January 2015
Submission of pieces to the Le Locle Watch Museum	28 May 2015
Nominees ceremony	26 June 2015
Results announced	22 October 2015

SPONSORS GOLD



SPONSORS SILVER



SPONSORS BRONZE



AVEC LE SOUTIEN DE



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