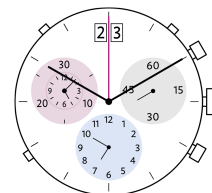


# RONDA startech 5000

Chronographs, Big Date & Date,  
different calendar systems, Alarm

*Caliber 5130.B – 12½'''*



## Product Specifications

Analog quartz movement

Line

startech

Caliber

5130.B

Size

12½'''

Version Swiss Made

13 Jewels / gold plated

Standard battery life

48 months

Hand fitting height

2

## Features

- Very long battery life
- Repairable metal watch movement
- Power saving mechanism with pulled out stem: Reduction of consumption approximately 70%
- Very easy handling by two pushers

## Functions

- Chronograph
- Chrono-Alarm
- Center stop second (1/1 sec)
- 30 minute / 12 hour counter
- ADD and SPLIT functions
- 3 eyes
- Alarm
- Big date
- Small second

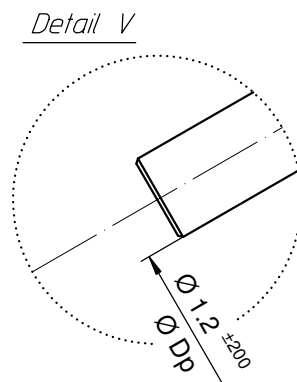
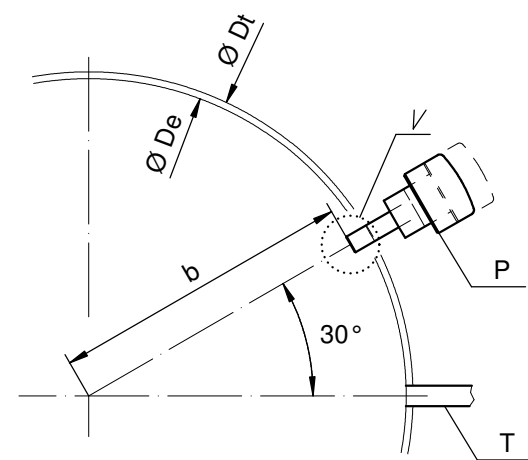
## Technical Specifications

|                                            |                                      |
|--------------------------------------------|--------------------------------------|
| Diameter Total                             | 28.60 mm                             |
| Case fitting                               | 28.00 mm                             |
| Movement height                            | 4.40 mm                              |
| Height over standard battery               | 4.40 mm                              |
| Movement rest                              | 0.60 mm                              |
| Height over stem                           | 1.90 mm                              |
| Length of stem travel                      | 0.90 mm                              |
| Stem thread                                | 0.90 mm                              |
| Standard battery                           | 395                                  |
| Standard battery life                      | 48 months                            |
| Battery voltage                            | 1.5 V                                |
| Current consumption – typical              | 1.48 µA (Date Mechanism not in Gear) |
| Current consumption – maximum              | 1.65 µA (Date Mechanism not in Gear) |
| Useful torque second – typical             | 6 µNm                                |
| Useful torque minute – typical             | 300 µNm                              |
| Useful torque center stop second – typical | 7 µNm                                |
| Operating temperature                      | 0 - 50 °C                            |
| Instantaneous rate                         | -10/ +20 sec/month                   |
| Resistance to magnetic fields              | 18.8 Oe                              |
| Resistance against shock                   | NIHS 91-10                           |

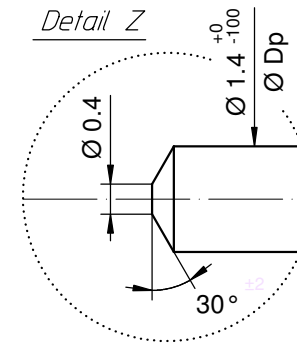
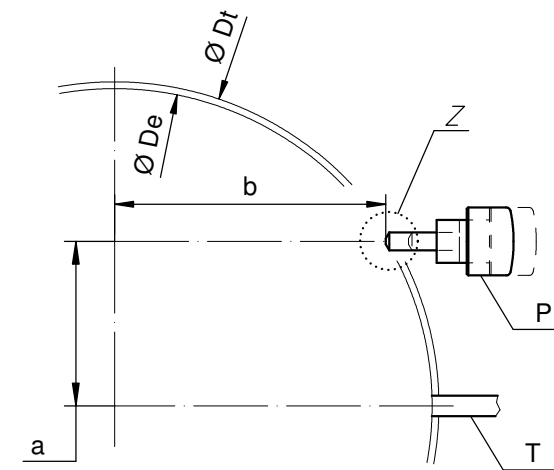




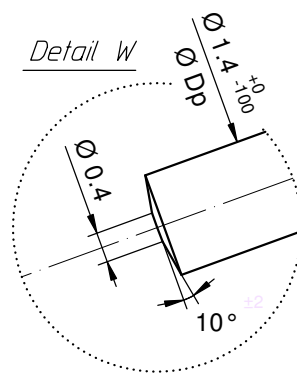
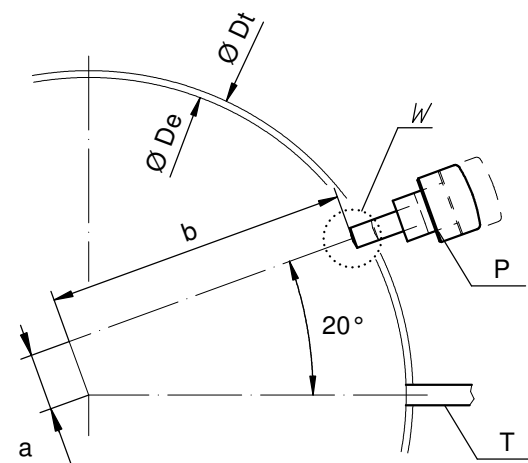
|                          |       |  |
|--------------------------|-------|--|
| Angle<br>Winkel<br>Angle | 30°   |  |
| Ø Dp                     | b     |  |
| 1.00                     | 13.50 |  |
| 1.10                     | 13.50 |  |
| 1.20                     | 13.50 |  |
| 1.30                     | 13.50 |  |
| 1.40                     | 13.50 |  |



|                          |      |       |
|--------------------------|------|-------|
| Angle<br>Winkel<br>Angle | 0°   |       |
| Ø Dp                     | a    | b     |
| 1.30                     | 7.40 | 11.43 |
| 1.40                     | 7.45 | 11.40 |



|                          |      |       |
|--------------------------|------|-------|
| Angle<br>Winkel<br>Angle | 20°  |       |
| Ø Dp                     | a    | b     |
| 1.30                     | 2.57 | 13.22 |
| 1.40                     | 2.59 | 13.21 |



Ø De: diamètre d'encageage  
Durchmesser der Gehäusepassung  
fitting-diameter

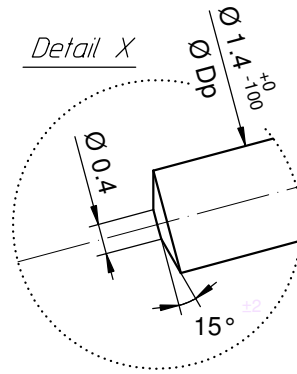
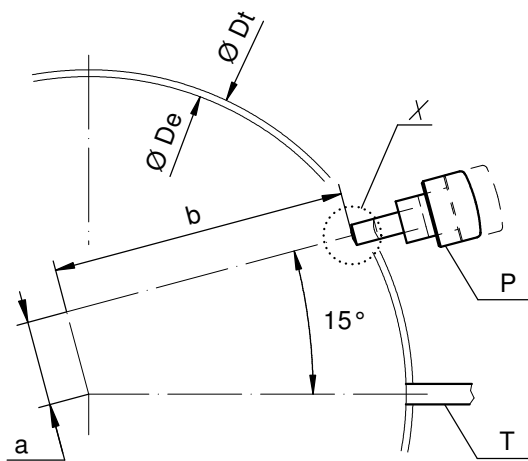
Ø Dp: diamètre du poussoir  
Drückerdurchmesser  
pusher-diameter

Ø Dt: diamètre total  
Totaldurchmesser  
total-diameter

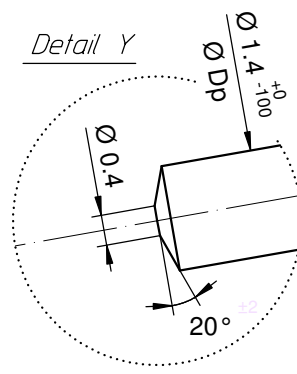
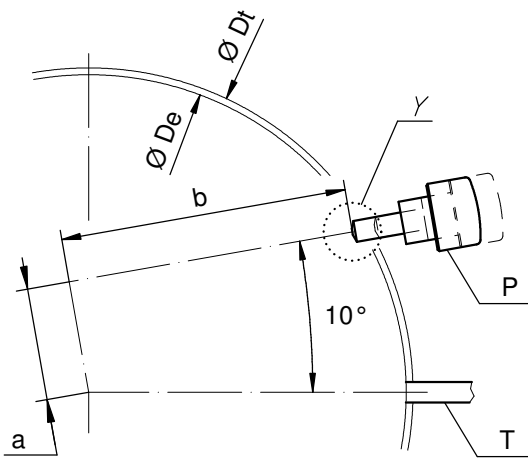
P: poussoir en position poussée  
Drücker in gedrückter Stellung  
pusher in pressed position

T: tige de mise à l'heure  
Stellwelle  
stem

|                          |      |       |
|--------------------------|------|-------|
| Angle<br>Winkel<br>Angle | 15°  |       |
| Ø Dp                     | a    | b     |
| 1.30                     | 3.83 | 12.92 |
| 1.40                     | 3.86 | 12.91 |



|                          |      |       |
|--------------------------|------|-------|
| Angle<br>Winkel<br>Angle | 10°  |       |
| Ø Dp                     | a    | b     |
| 1.30                     | 5.06 | 12.52 |
| 1.40                     | 5.10 | 12.50 |



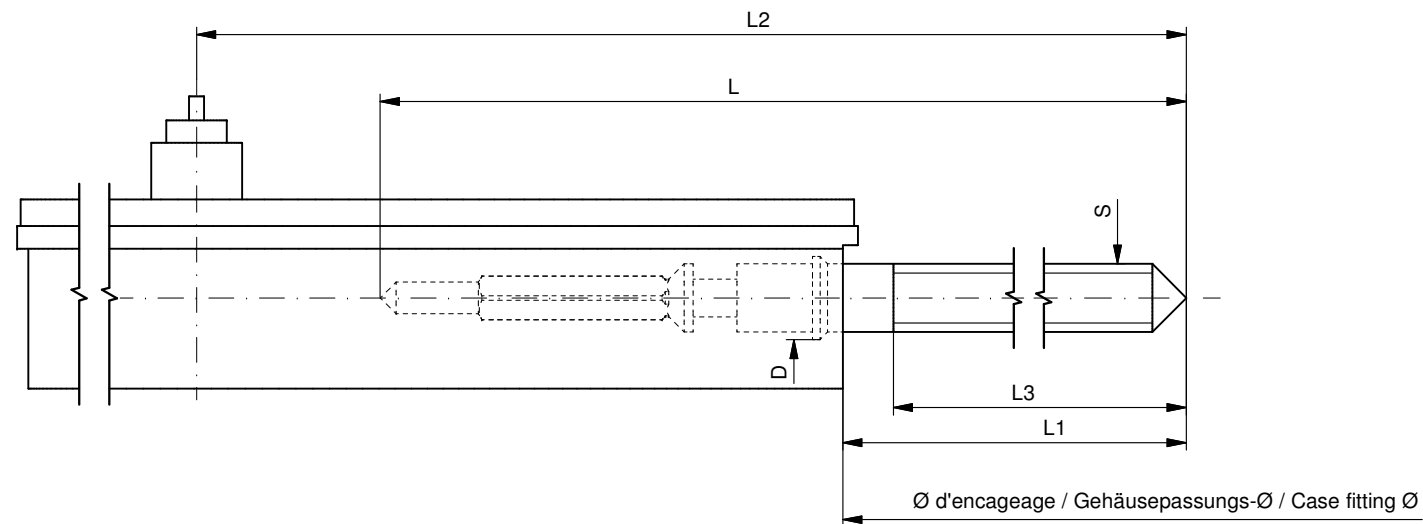
Angle des poussoirs A et B  
Winkel der Drücker A und B  
Angle of pusher A and B

RONDA

4xxx.x, 5xxx.x

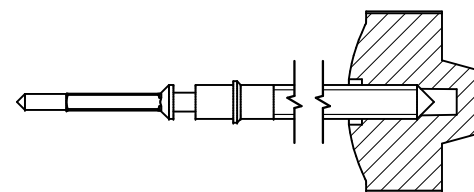
|                                                                                    |                         |    |
|------------------------------------------------------------------------------------|-------------------------|----|
| Issued                                                                             | 06 Sep 2004             | mk |
| Modified                                                                           | 30.März 2005<br>ÄA 1784 | mk |
| Released                                                                           | YES                     |    |
| Tolerance                                                                          | +/- 20 µm               |    |
| Scale                                                                              | 10 : 1 (5 : 1) (A3H)    |    |
| Sous réserve de modifications<br>Äenderungen vorbehalten<br>Modifications reserved |                         |    |
| No.                                                                                | 5000.345                | 01 |





Tige de travail (intégrée dans le mouvement)  
Arbeitsstellwelle (im Werk eingebaut)  
Working stem (implemented in the movement)

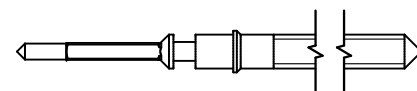
| No. d'article<br>Artikelnummer<br>Part number | L     | L1    | L2    | L3    | S    | D    |
|-----------------------------------------------|-------|-------|-------|-------|------|------|
| 3000.177.CO                                   | 20.00 | 10.23 | 24.23 | 10.15 | 0.90 | 1.10 |



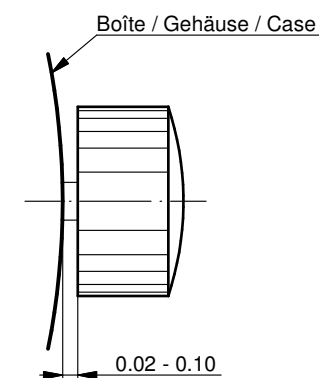
|                                                      |                                       |
|------------------------------------------------------|---------------------------------------|
| Couleur de la couronne<br>Kronenfarbe<br>Crown color | bleu foncé<br>dunkelblau<br>dark blue |
| Code                                                 | UN 5002                               |

Tige (normale) / Stellwelle (normal) / Stem (normal)

| No. d'article<br>Artikelnummer<br>Part number | L     | L1    | L2    | L3    | S    | D    |
|-----------------------------------------------|-------|-------|-------|-------|------|------|
| 3000.177                                      | 20.00 | 10.23 | 24.23 | 10.15 | 0.90 | 1.10 |
| 3000.191                                      | 32.00 | 22.23 | 36.23 | 22.15 | 0.90 | 1.10 |



Couronne normale  
Normale Krone  
Normal crown

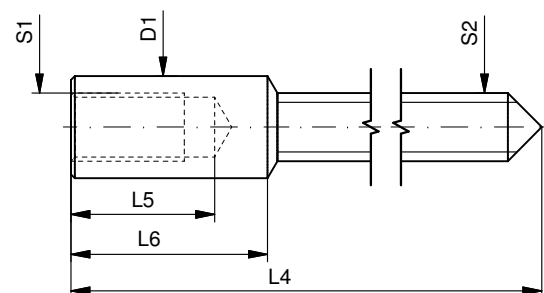


Couronne vissée  
Geschraubte Krone  
Screwed crown

|                                              |      |
|----------------------------------------------|------|
| Force ⇐ min.<br>Kraft ⇐ min.<br>Force ⇐ min. | 10 N |
| Force ⇐ max.<br>Kraft ⇐ max.<br>Force ⇐ max. | 15 N |

Rallonge de tige / Stellwelle Verlängerung / Stem extension

| No. d'article<br>Artikelnummer<br>Part number | L4    | L5<br>(min) | L6   | S1   | S2   | D1   |
|-----------------------------------------------|-------|-------------|------|------|------|------|
| 3000.040                                      | 12.00 | 1.90        | 2.60 | 0.90 | 0.90 | 1.35 |



Tige (dimensions / forces)  
Stellwelle (Dimensionen / Kräfte)  
Stem (dimensions / forces)

RONDA

5010.B, 5020.B, 5021.D, 5030.D,  
5040.B, 5040.D, 5040.E, 5040.F,  
5050.B, 5050.C, 5051.C, 5130.B, 5130.D

|           |                         |        |
|-----------|-------------------------|--------|
| Issued    | 05 Sep 2012             | ds5222 |
| Modified  | 17 Mär 2017<br>ÄA 34582 | mg5224 |
| Released  | YES                     |        |
| Tolerance | ---                     |        |
| Scale     | 10:1 (A3)               |        |

Sous réserve de modifications  
Änderungen vorbehalten  
Modifications reserved

|     |          |    |
|-----|----------|----|
| No. | 5030.019 | 01 |
|-----|----------|----|

You have decided to buy a watch, which was assembled by a watch-maker using a Ronda movement. Please note that no watches are produced or distributed under the Ronda Brand.

**In case of repairs, guarantee claims and questions concerning the functioning of a watch, purchasers and consumers should contact their retailer or the watch manufacturer, for which the relevant information can be found in the sales or guarantee documentation provided with the watch.**

**Description of the display and control buttons**

**Display elements**  
 Minute hand  
 Date 5130.B  
 Hour hand  
 Minute counter  
 Hour counter  
 Second counter  
 Alarm and reference time (hour and minute)  
 Second hand  
 Date 5130.D

**Control buttons**  
 Push-button A  
 Crown  
 Push-button B

01

**Multifunction movement**

The **alarm** and **chronograph** are combined in Cal. 5130.D and 5130.B. All functions can be operated with the 2 push-buttons and crown.

**Initial status** (chronograph hands at zero position)  
 – start the **chronograph** with **push-button A**  
 – switch the **alarm** on and off with **push-button B**

**Chronograph active**  
 Push-button B is also operative for the chronograph as soon as timing is started with push-button A. At the end of timing and when the chronograph hands are reset to the zero positions the push-button functions once again assume their «initial status».

The alarm cannot be adjusted when the chronograph is active.

02

**Setting the time**

- 1\* Pull out the crown to position III (the watch stops).
- 2 Turn the crown until you reach the correct time 8:45.
- 3\* Push the crown back into position I.

**Please note:**

\* In order to set the time to the exact second, 1 must be pulled out when the second hand is in position «60». Once the hour and minute hands have been set, 3 must be pushed back into position I at the exact second.

03

**Setting the date (quick mode)**

- 1 Pull out the crown to position II (the watch continues to run).
- 2 Turn the crown until the correct date [01] appears.
- 3 Push the crown back into position I.

**Please note:**

The date of the following day must be set in the calendar changing phase between approx. 9 PM and midnight.

5130.B: Setting the date too quickly in quick mode can result in the incorrect date being displayed. Switching the date between 01 and 31 (position II) restores the synchronisation.

04

**Setting the time and date**

Example:  
 – Date / time on the watch: [17] / 1:25 AM  
 – Present date / time: [04] / 10:39 PM

- 1 Pull out the crown to position II (watch continues to run).
- 2 Turn the crown until yesterday's date appears [03].
- 3 Pull out the crown to position III (the second hand stops. The display changes from alarm time to reference time.)
- 4 Turn the crown until the correct date [04] appears.
- 5 Continue to turn the crown until the current time 10:39 PM appears.
- 6 Push the crown back into position I (the display changes from reference to alarm time).

**Please note:**

Resetting the time also requires the identical correction of the reference time. Please refer to «setting the reference time».

\* Please observe the AM/PM clock rhythm.

05

**Setting the alarm time**

- 1 **Activate the setting mode**  
Press the push-button B for at least 2 seconds. As soon as the small minute hand jumps forward 1 minute, this mode is active.
- 2 **Setting**  
Short pressing (less than 1 second): the alarm time is moved forward by the minute.  
Long pressing (longer than 2 seconds): the alarm time is moved forward until the push-button is released.

**Please note:**

If the push-button B is not activated for 10 seconds, the setting mode of the alarm time deactivates itself. At the same time, 2 beeps are emitted to indicate that the alarm is switched on.

06

**Switching the alarm on/off**

- 1 The alarm is switched on/off by briefly pressing the push-button B:
- 2 beeps → alarm switched on
- 1 beep → alarm switched off

**Please note:**

The alarm can be set maximum 12 hours before the desired alarm time.

Once the set alarm time has been reached, a signal is emitted for 20 seconds. This signal is repeated after two minutes. Following brief pressing of the push-button B, the signal is immediately switched off.

07

**Setting the reference time**

- 1 Pull out the crown to position III (second hand stops. The display changes from alarm time to reference time.)
- 2 **Activating the setting mode**  
Press the push-button B for at least 2 seconds. As soon as the small minute hand jumps forwards one minute, this mode is active.
- 3 **Short pressing** (less than 1 second): the reference time is moved forwards by the minute.  
**Medium pressing:** (1–2 seconds): the reference time is moved forwards by the hour.  
**Long pressing** (longer than 2 seconds): the reference time is moved forwards until the push-button is released.
- 4 Push the crown back into position I (the display changes from reference time to alarm time). A 1 beep signal indicates that the alarm is switched off.

**Please note:**

The reference time must display the same time as the current time. This means that resetting the current time also requires the identical correction of the reference time. Afterwards, the alarm time has to be reset.

08

**Chronograph: Basic function**  
 (Start / Stop / Reset)

Example:  
 1 **Start:** Press push-button A.

- 2 **Stop:** to stop the timing, press pushbutton A once more and read the chronograph counters:  
4h / 20 min / 38 sec
- 3 **Zero positioning:**  
Press push-button B. (The chronograph hands will be reset to their zero positions.)

**Please note:**

The alarm cannot be used as long as the chronograph is in operation.

09

**Chronograph: Accumulated timing**

Example:  
 1 **Start:** (start timing)  
 2 **Stop:** (e.g. 15 min 5 sec following 1)  
 3 **Restart:** (timing is resumed)  
 4 **\*Stop:** (e.g. 5 min 12 sec following 3) = 20 min 17 sec (The accumulated measured time is shown)  
 5 **Reset:**  
The chronograph hands are returned to their zero positions.

- 1 **Start:** (start timing)
- 2 **Stop:** (e.g. 15 min 5 sec following 1)
- 3 **Restart:** (timing is resumed)
- 4 **\*Stop:** (e.g. 5 min 12 sec following 3) = 20 min 17 sec (The accumulated measured time is shown)
- 5 **Reset:**  
The chronograph hands are returned to their zero positions.

**Please note:**

\* Following 4, the accumulation of the timing can be continued by pressing push-button A (Restart / Stop, Restart / Stop, ...).

10

**Chronograph: Intermediate or interval timing**

Example:  
 1 **Start:** (start timing)  
 2 **Display interval:**  
e.g. 20 minutes 17 seconds (timing continues in the background)  
 3 **Making up the measured time:** (the chronograph hands are quickly advanced to the ongoing measured time).  
 4 **Stop:** (Final time is displayed)  
 5 **Reset:**  
The chronograph hands are returned to their zero position

- 1 **Start:** (start timing)
- 2 **Display interval:**  
e.g. 20 minutes 17 seconds (timing continues in the background)
- 3 **Making up the measured time:** (the chronograph hands are quickly advanced to the ongoing measured time).
- 4 **Stop:** (Final time is displayed)
- 5 **Reset:**  
The chronograph hands are returned to their zero position

**Please note:**

\* Following 3, further intervals or intermediates can be displayed by pressing push-button B (display interval / make up measured time, ...).

11

**Adjusting the chronograph hands to zero position**

Example:  
 One or several chronograph hands are not in their correct zero positions and have to be adjusted (e.g. following a battery change).

- 1 Pull out the crown to position III (all chronograph hands are in their correct or incorrect zero position. The display changes from alarm time to reference time.)
- 2 Keep push-buttons A and B depressed simultaneously for at least 2 seconds (the second counter hand rotates by 360° → corrective mode is activated.)
- 3 Returning the crown to position I  
Termination of the chronograph hands adjustment (can be carried out at any time. The display changes from reference to alarm time.)

**Adjusting the second counter hand**

Single step ➡ A 1 x short  
Continuous ➡ A long

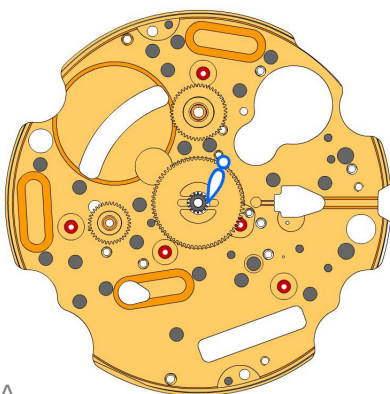
**Adjusting the next hand B**

Single step ➡ A 1 x short  
Continuous ➡ A long

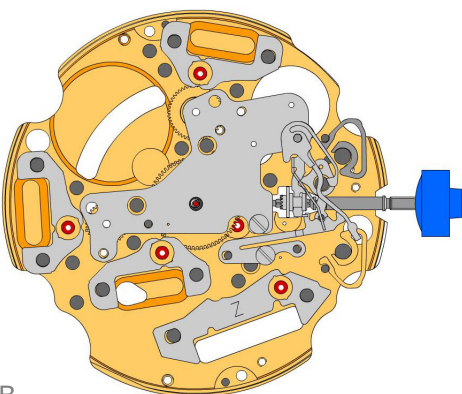
**Adjusting the minute counter hand and the hour counter hand (mechanical coupled)**

Single step ➡ A 1 x short  
Continuous ➡ A long

12



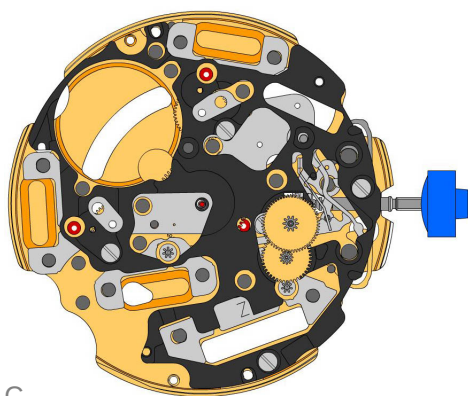
A



B

|                   |                                                                                   |                                      |
|-------------------|-----------------------------------------------------------------------------------|--------------------------------------|
| 2000.574.G<br>1.  |  | Main plate                           |
| 3305.282.CO<br>2. |  | Cannon pinion with driver (Aig.2)    |
| 3301.244.CO<br>3. |  | Hour wheel (counter 24h)<br>(Chrono) |
| 3301.243.CO<br>4. |  | Hour wheel (counter 12h)<br>(Alarm)  |

|                   |                                                                                     |                                                                                                                               |
|-------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 2030.017.CO<br>5. |    | Centre bridge<br>Centre bridge held by 1 screw 4000.250. Parts 2030.017.CO, 3004.223 and 3500.059 must be exchanged together. |
| 4000.250<br>6.    |    | Screw                                                                                                                         |
| 3001.055.FI<br>7. |    | Sliding pinion                                                                                                                |
| 3000.177.CO<br>8. |   | Setting stem                                                                                                                  |
| 3017.049<br>9.    |  | Setting lever                                                                                                                 |
| 3905.049<br>10.   |  | Setting lever jumper (3 positions)<br>Setting lever jumper held by 1 screw 4000.250.                                          |
| 4000.250<br>11.   |  | Screw                                                                                                                         |
| 3015.081<br>12.   |  | Yoke (3 positions)<br>Parts 3015.081 and 3905.067 must be exchanged together.                                                 |
| 3905.067<br>13.   |  | Yoke spring<br>Tensioning the spring arm. Parts 3015.081 and 3905.067 must be exchanged together.                             |
| 3406.030<br>14.   |  | Pusher jumper B<br>Put the grey jumper between the two posts on the further side.                                             |
| 3406.038<br>15.   |  | Pusher jumper A<br>Put the yellow jumper between the two posts on the closer side.                                            |
| 3622.040<br>16.   |  | Stator<br>Mark [Z] on stator.                                                                                                 |
| 3622.039<br>17.   |  | Stator (counter 6h, 9h, chrono)                                                                                               |
| 3622.039<br>18.   |  | Stator (counter 6h, 9h, chrono)                                                                                               |
| 3622.039<br>19.   |  | Stator (counter 6h, 9h, chrono)                                                                                               |



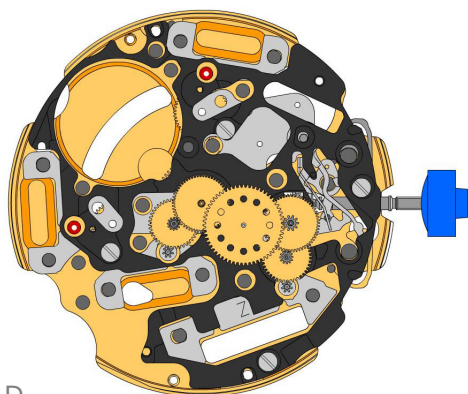
C

3603.079  
20.  Plastic bracket  
Plastic bracket held by 4 screws 4000.250.

4000.250  
21.  Screw

3715.094.RK  
22.  Rotor

3715.094.RK  
23.  Rotor



D

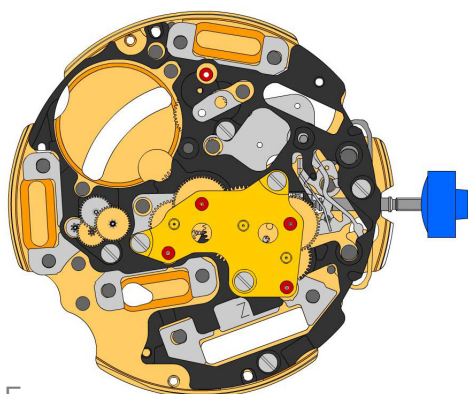
3147.046.CO  
24.  Intermediate wheel

3136.142.CO  
25.  Second wheel (long)

3147.047.CO  
26.  Intermediate wheel (chrono)

3136.144.CO  
27.  Chronograph wheel (Aig.2)

3122.056.CO  
28.  Third wheel



E

2020.148.G  
29.  Train wheel bridge  
Train wheel bridge held by 3 screws 4000.250.

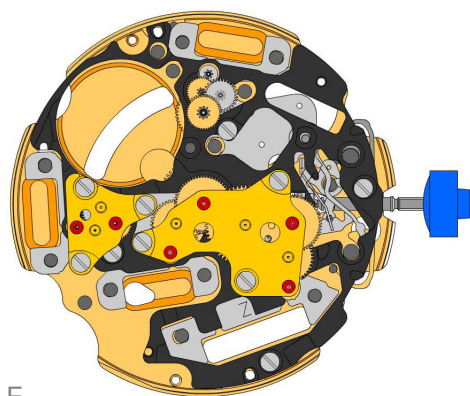
4000.250  
30.  Screw

3715.095.RK  
31.  Rotor

3147.048.CO  
32.  Intermediate wheel (counter)

3007.056.CO  
33.  Minute wheel (counter 24h)

3402.008.CO  
34.  Minute counting wheel



F

2020.149.G  
35.  Counter train wheel bridge  
Train wheel bridge held by 3 screws 4000.250.

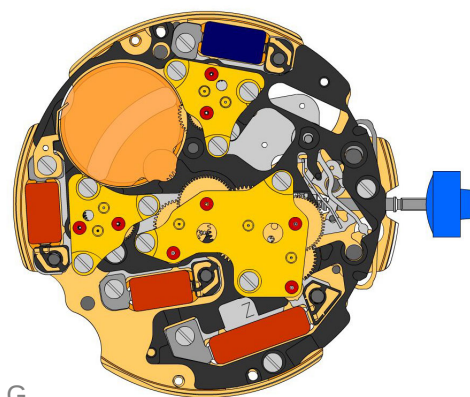
4000.250  
36.  Screw

3715.095.RK  
37.  Rotor

3147.048.CO  
38.  Intermediate wheel (counter)

3007.055.CO  
39.  Minute wheel (counter 12h)

3402.007.CO  
40.  Minute counting wheel



G

2020.149.G  
41.  Counter train wheel bridge  
Train wheel bridge held by 3 screws 4000.250.

4000.250  
42.  Screw

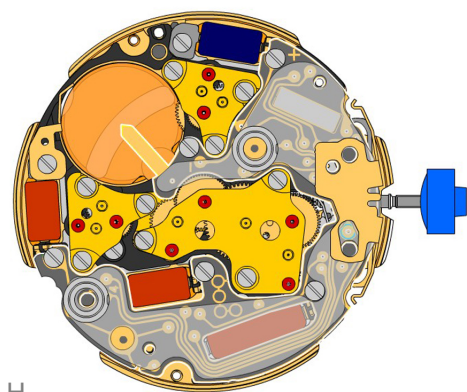
3621.053.RK  
43.  Coil  
Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

3621.054.RK  
44.  Coil (counter 9h, chrono)  
Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

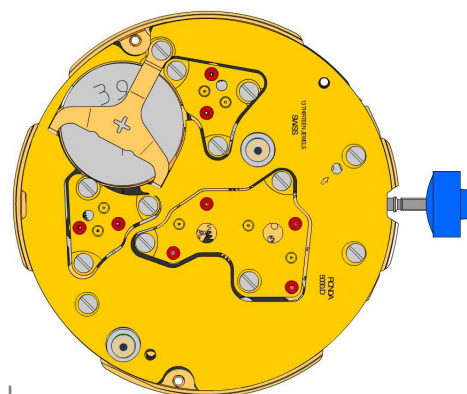
3621.054.RK  
45.  Coil (counter 9h, chrono)  
Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

3621.055.RK  
46.  Coil (counter 6h)  
Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

4000.250  
47.  Screw

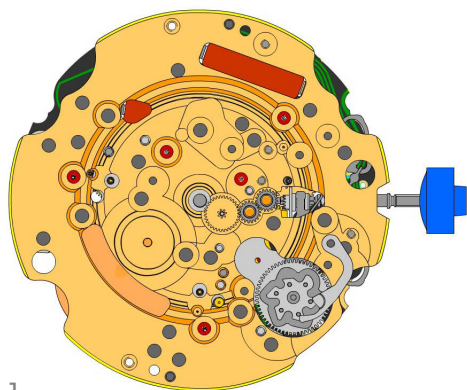


H

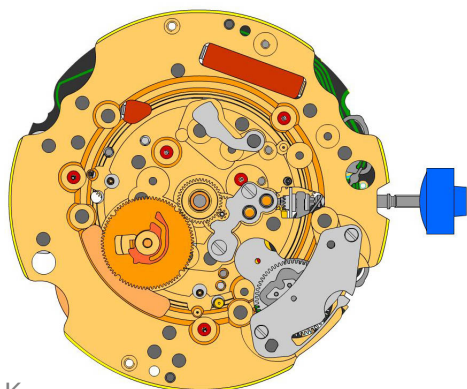


I

|                             |                                                                                     |                                                                                                                       |
|-----------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 3601.118<br>48.             |    | <b>Contact strip</b><br>Contact strip held by 1 screw 4000.250.                                                       |
| 4000.250<br>49.             |    | <b>Screw</b>                                                                                                          |
| 3603.034<br>50.             |    | <b>Battery insulator</b>                                                                                              |
| 3612.176.5130<br>51.        |    | <b>Electronic module</b><br>Electronic module held by 5 screws 4000.248. Electronic measurements may be realised now. |
| 4000.248<br>52.             |    | <b>Screw</b>                                                                                                          |
| 3603.069<br>53.             |    | <b>Circuit insulator</b>                                                                                              |
| 3603.070<br>54.             |    | <b>Contact insulator</b>                                                                                              |
| 3603.070<br>55.             |    | <b>Contact insulator</b>                                                                                              |
| 3601.107.G<br>56.           |   | <b>Pusher contact spring</b>                                                                                          |
| 2130.159.G.M01.5130B<br>57. |  | <b>Electronic module cover</b><br>Electronic module cover held by 1 screw 4000.250.                                   |
| 3600.010.HGF<br>58.         |  | <b>Battery 395</b>                                                                                                    |
| 3601.109.G<br>59.           |  | <b>Bridle +</b><br>Bridle held by 1 screw 4000.250.                                                                   |
| 4000.250<br>60.             |  | <b>Screw</b>                                                                                                          |

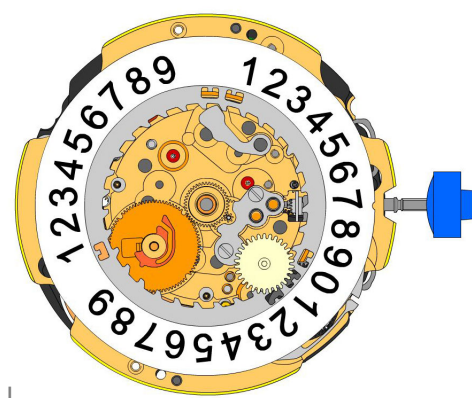


J



K

|                    |                                                                                     |                                                                                                                                                                                                    |
|--------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2000.574.G<br>61.  |    | Main plate                                                                                                                                                                                         |
| 3004.164<br>62.    |    | Setting wheel                                                                                                                                                                                      |
| 3004.164<br>63.    |    | Setting wheel                                                                                                                                                                                      |
| 3007.054.CO<br>64. |    | Minute wheel                                                                                                                                                                                       |
| 2130.143<br>65.    |    | Minute train bridge<br>Minute train bridge held by 3 screws 4000.305.                                                                                                                              |
| 4000.305<br>66.    |    | Screw                                                                                                                                                                                              |
| 3004.223<br>67.    |    | Tens indicator driving wheel<br>Parts 2030.017.CO, 3004.223 and 3500.059 must be exchanged together. The short tooth of the tens indicator driving wheel must point to the center of the movement. |
| 3500.059<br>68.    |    | Tens jumper<br>Parts 2030.017.CO, 3004.223 and 3500.059 must be exchanged together.                                                                                                                |
| 2130.142<br>69.    |  | Tens jumper maintaining plate<br>Tens jumper maintaining plate held by 2 screws 4000.306. Tensioning the spring arm.                                                                               |
| 4010.306<br>70.    |  | Screw                                                                                                                                                                                              |
| 3301.242<br>71.    |  | Hour wheel (Aig.1)                                                                                                                                                                                 |
| 3315.016<br>72.    |  | Friction spring                                                                                                                                                                                    |
| 3004.224.CO<br>73. |  | Date indicator driving wheel                                                                                                                                                                       |
| 3500.049<br>74.    |  | Date jumper                                                                                                                                                                                        |



L

3504.214.AF.1.A  
75.



Units indicator (standard)  
Nick of the indicator at 3 o'clock.

3147.054  
76.



Tens intermediate wheel

2130.141  
77.



Date indicator maintaining plate  
Date indicator maintaining plate held by 1 screw 4000.250.

4000.250  
78.

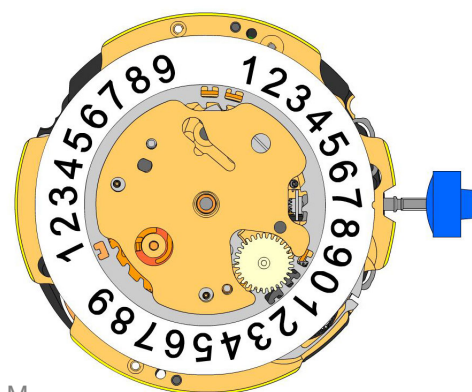


Screw

3905.070  
79.



Date jumper spring  
Insert the date jumper spring in the provided opening.



M

3504.216.AF.1.A  
80.



Tens indicator (standard)  
Insert the date jumper spring in the previous opening.

2130.140.G  
81.



Date mechanism maintaining plate  
Date mechanism maintaining plate held by 2 screws 4000.250.

4000.250  
82.

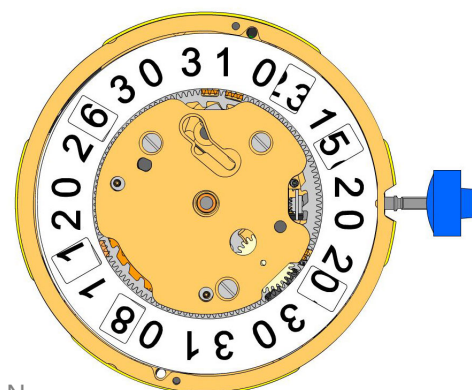


Screw

3506.072.G  
83.



Dial support



N

8200  
84.



Moebius 8200

9014  
85.



Moebius 9014

124  
86.

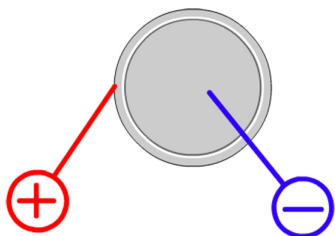


Jismaa 124

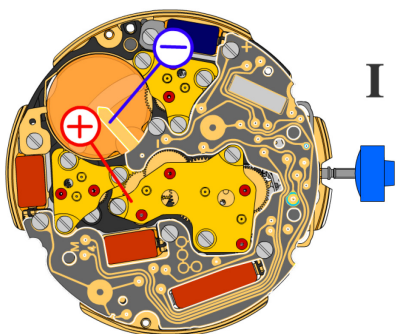
9020  
87.



Moebius 9020

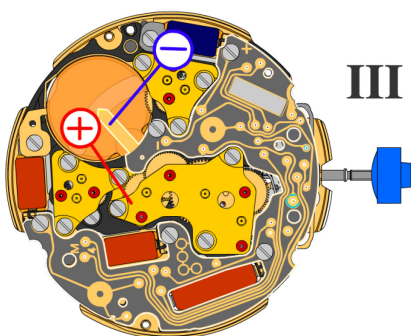


|         |               |
|---------|---------------|
| Battery | <b>395</b>    |
| Voltage | <b>1.55 V</b> |



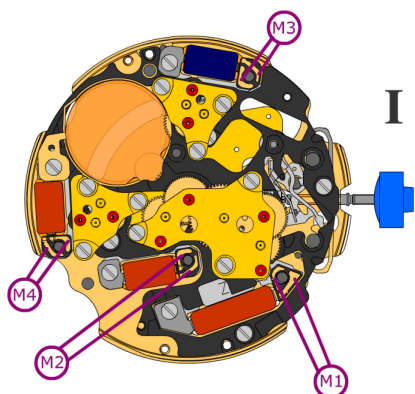
*Setting stem in position I, calendar not in gear,  
60 s measuring interval for rate and consumption:*

|                             |                               |
|-----------------------------|-------------------------------|
| Typical consumption         | <b>1.48 <math>\mu</math>A</b> |
| Maximal consumption         | <b>1.65 <math>\mu</math>A</b> |
| Rate                        | <b>-10s/M. .. +20s/M.</b>     |
| Lower working voltage limit | <b>1.20 V</b>                 |



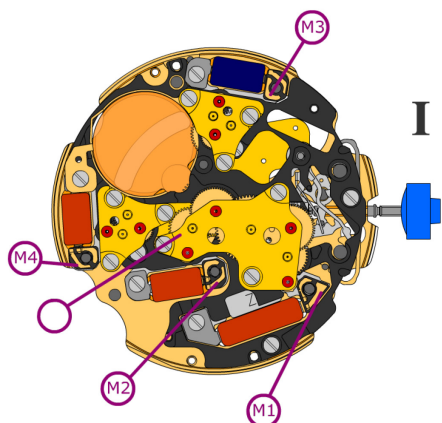
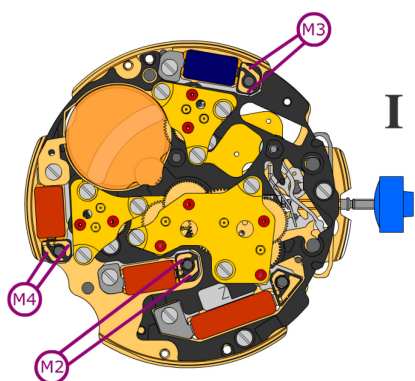
*Setting stem in position III, 60 s measuring interval:*

|                     |                               |
|---------------------|-------------------------------|
| Typical consumption | <b>0.10 <math>\mu</math>A</b> |
| Maximal consumption | <b>0.30 <math>\mu</math>A</b> |

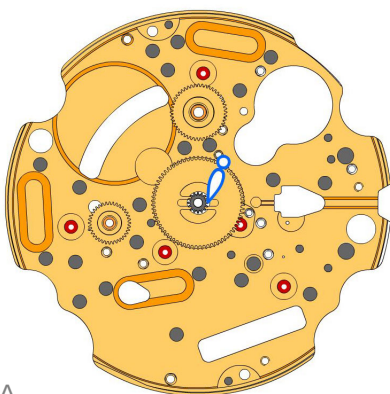

Coil resistance M1 **1.90 k $\Omega$  .. 2.10 k $\Omega$** 

Coil resistance M2 **1.68 k $\Omega$  .. 1.88 k $\Omega$** 

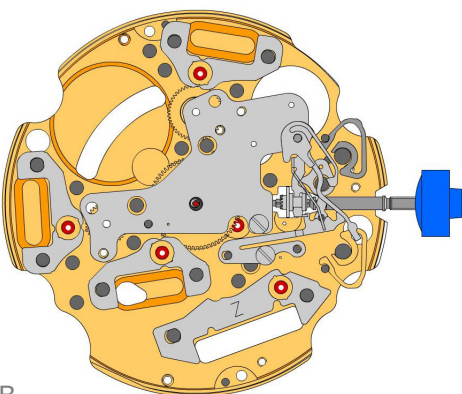
Coil resistance M3 **1.68 k $\Omega$  .. 1.88 k $\Omega$** 

Coil resistance M4 **1.68 k $\Omega$  .. 1.88 k $\Omega$** 

Coil isolation M1/M2/M3/M4  **$\infty$  k $\Omega$** 

*Signal generator (4.9 ms, 8 Hz):*

Lower working voltage limit  
M2/M3/M4 **1.20 V**



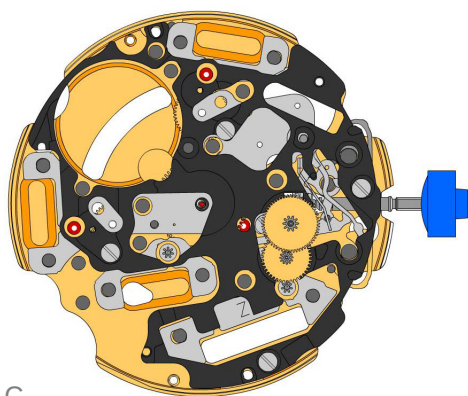
A



B

|                   |                                                                                   |                                      |
|-------------------|-----------------------------------------------------------------------------------|--------------------------------------|
| 2000.574.G<br>1.  |  | Main plate                           |
| 3305.282.CO<br>2. |  | Cannon pinion with driver (Aig.2)    |
| 3301.244.CO<br>3. |  | Hour wheel (counter 24h)<br>(Chrono) |
| 3301.243.CO<br>4. |  | Hour wheel (counter 12h)<br>(Alarm)  |

|                   |                                                                                     |                                                                                      |
|-------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 2030.024.CO<br>5. |    | Centre bridge<br>Centre bridge held by 1 screw 4000.250.                             |
| 4000.250<br>6.    |    | Screw                                                                                |
| 3001.055.FI<br>7. |    | Sliding pinion                                                                       |
| 3000.177.CO<br>8. |   | Setting stem                                                                         |
| 3017.049<br>9.    |  | Setting lever                                                                        |
| 3905.049<br>10.   |  | Setting lever jumper (3 positions)<br>Setting lever jumper held by 1 screw 4000.250. |
| 4000.250<br>11.   |  | Screw                                                                                |
| 3015.081<br>12.   |  | Yoke (3 positions)<br>Parts 3015.081 and 3905.067 must be exchanged together.        |
| 3905.067<br>13.   |  | Yoke spring<br>Tensioning the spring arm.                                            |
| 3406.030<br>14.   |  | Pusher jumper B<br>Put the grey jumper between the two posts on the further side.    |
| 3406.038<br>15.   |  | Pusher jumper A<br>Put the yellow jumper between the two posts on the closer side.   |
| 3622.040<br>16.   |  | Stator<br>Mark [Z] on stator.                                                        |
| 3622.039<br>17.   |  | Stator (counter 6h, 9h, chrono)                                                      |
| 3622.039<br>18.   |  | Stator (counter 6h, 9h, chrono)                                                      |
| 3622.039<br>19.   |  | Stator (counter 6h, 9h, chrono)                                                      |



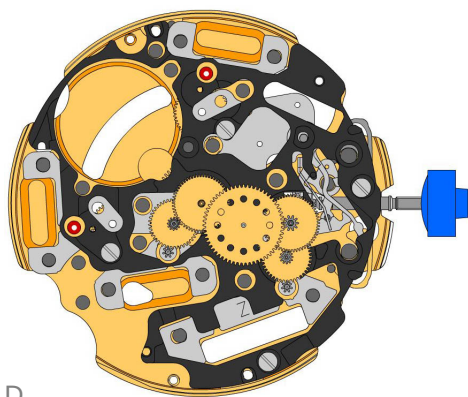
C

3603.079  
20.  Plastic bracket  
Plastic bracket held by 4 screws 4000.250.

4000.250  
21.  Screw

3715.094.RK  
22.  Rotor

3715.094.RK  
23.  Rotor



D

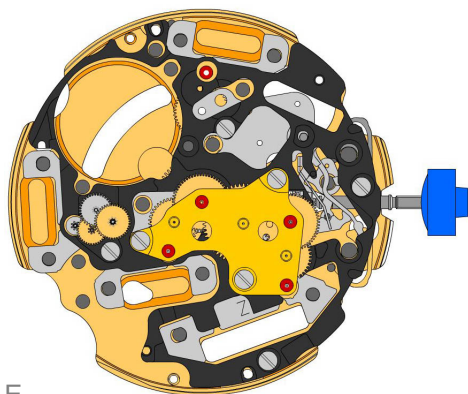
3147.046.CO  
24.  Intermediate wheel

3136.142.CO  
25.  Second wheel (long)

3147.047.CO  
26.  Intermediate wheel (chrono)

3136.144.CO  
27.  Chronograph wheel (Aig.2)

3122.056.CO  
28.  Third wheel



E

2020.148.G  
29.  Train wheel bridge  
Train wheel bridge held by 3 screws 4000.250.

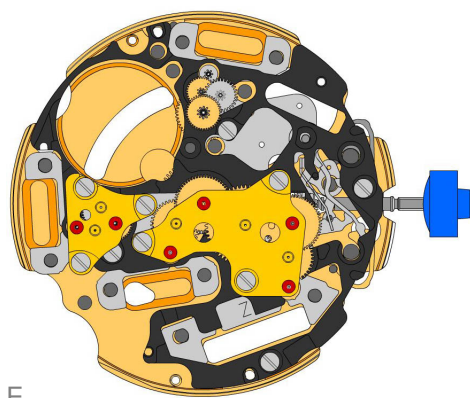
4000.250  
30.  Screw

3715.095.RK  
31.  Rotor

3147.048.CO  
32.  Intermediate wheel (counter)

3007.056.CO  
33.  Minute wheel (counter 24h)

3402.008.CO  
34.  Minute counting wheel



F

2020.149.G  
35.  Counter train wheel bridge  
Train wheel bridge held by 3 screws 4000.250.

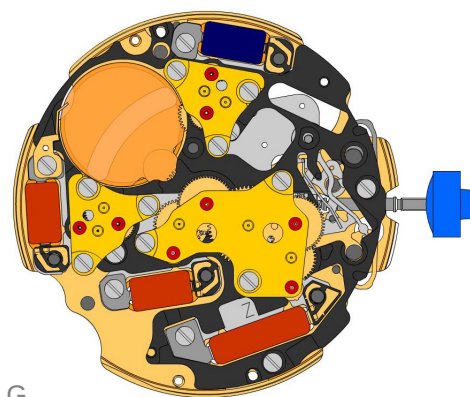
4000.250  
36.  Screw

3715.095.RK  
37.  Rotor

3147.048.CO  
38.  Intermediate wheel (counter)

3007.055.CO  
39.  Minute wheel (counter 12h)

3402.007.CO  
40.  Minute counting wheel



G

2020.149.G  
41.  Counter train wheel bridge  
Train wheel bridge held by 3 screws 4000.250.

4000.250  
42.  Screw

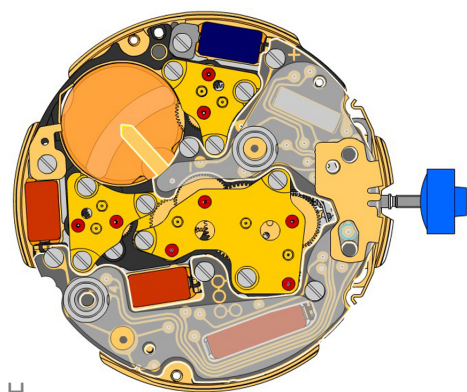
3621.053.RK  
43.  Coil  
Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

3621.054.RK  
44.  Coil (counter 9h, chrono)  
Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

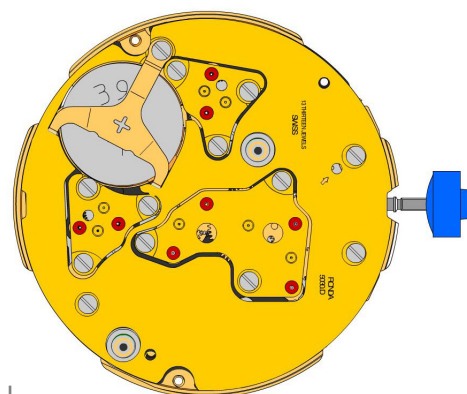
3621.054.RK  
45.  Coil (counter 9h, chrono)  
Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

3621.055.RK  
46.  Coil (counter 6h)  
Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

4000.250  
47.  Screw

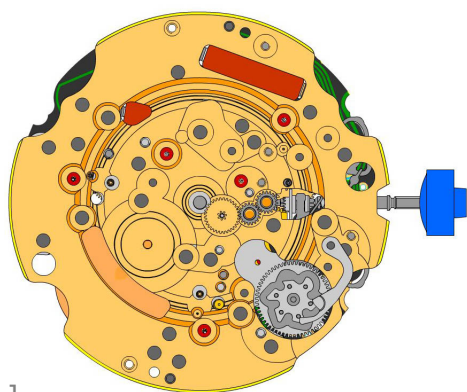


H

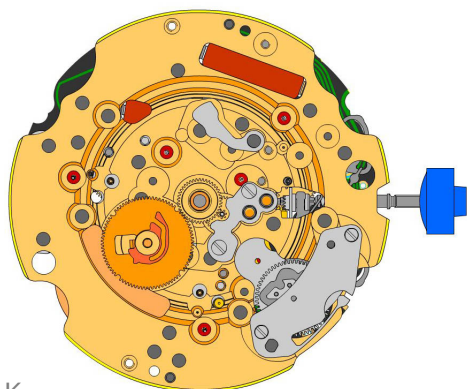


I

|                             |                                                                                     |                                                                                                                       |
|-----------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 3601.118<br>48.             |    | <b>Contact strip</b><br>Contact strip held by 1 screw 4000.250.                                                       |
| 4000.250<br>49.             |    | <b>Screw</b>                                                                                                          |
| 3603.034<br>50.             |    | <b>Battery insulator</b>                                                                                              |
| 3612.176.5130<br>51.        |    | <b>Electronic module</b><br>Electronic module held by 5 screws 4000.248. Electronic measurements may be realised now. |
| 4000.248<br>52.             |    | <b>Screw</b>                                                                                                          |
| 3603.069<br>53.             |    | <b>Circuit insulator</b>                                                                                              |
| 3603.070<br>54.             |    | <b>Contact insulator</b>                                                                                              |
| 3603.070<br>55.             |    | <b>Contact insulator</b>                                                                                              |
| 3601.107.G<br>56.           |   | <b>Pusher contact spring</b>                                                                                          |
| 2130.159.G.M01.5130B<br>57. |  | <b>Electronic module cover</b><br>Electronic module cover held by 1 screw 4000.250.                                   |
| 3600.010.HGF<br>58.         |  | <b>Battery 395</b>                                                                                                    |
| 3601.109.G<br>59.           |  | <b>Bridle +</b><br>Bridle held by 1 screw 4000.250.                                                                   |
| 4000.250<br>60.             |  | <b>Screw</b>                                                                                                          |

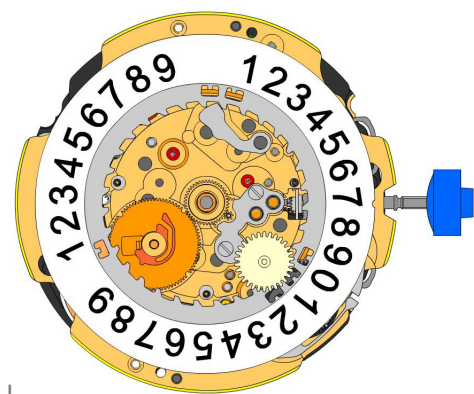


J



K

|                    |                                                                                     |                                                                                                                                                       |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2000.574.G<br>61.  |    | Main plate                                                                                                                                            |
| 3004.164<br>62.    |    | Setting wheel                                                                                                                                         |
| 3004.164<br>63.    |    | Setting wheel                                                                                                                                         |
| 3007.054.CO<br>64. |    | Minute wheel                                                                                                                                          |
| 2130.143<br>65.    |    | Minute train bridge<br>Minute train bridge held by 3 screws 4000.305.                                                                                 |
| 4000.305<br>66.    |    | Screw                                                                                                                                                 |
| 3004.227<br>67.    |    | Tens indicator driving wheel<br>The short tooth of the tens indicator driving wheel must point to the center of the movement.                         |
| 3500.075<br>68.    |    | Tens jumper                                                                                                                                           |
| 2130.142<br>69.    |  | Tens jumper maintaining plate<br>Tens jumper maintaining plate held by 2 screws 4000.306. Place the spring loaded bracket outside of the tens jumper. |
| 4010.306<br>70.    |  | Screw                                                                                                                                                 |
| 3301.242<br>71.    |  | Hour wheel (Aig.1)                                                                                                                                    |
| 3315.016<br>72.    |  | Friction spring                                                                                                                                       |
| 3004.224.CO<br>73. |  | Date indicator driving wheel                                                                                                                          |
| 3500.049<br>74.    |  | Date jumper                                                                                                                                           |



L

3504.214.AF.1.A  
75.



Units indicator (standard)  
Nick of the indicator at 3 o'clock.

3147.054  
76.



Tens intermediate wheel

2130.141  
77.



Date indicator maintaining plate  
Date indicator maintaining plate held by 1 screw 4000.250.

4000.250  
78.

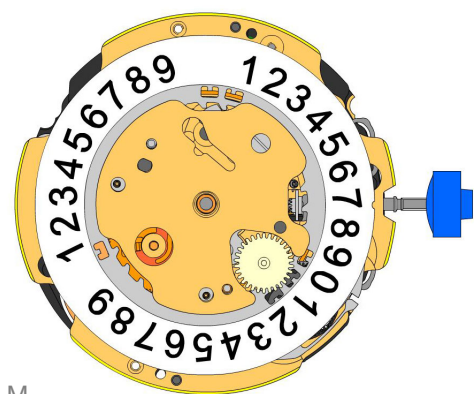


Screw

3905.070  
79.



Date jumper spring  
Insert the date jumper spring in the provided opening.



M

3504.216.AF.1.A  
80.



Tens indicator (standard)  
Insert the date jumper spring in the previous opening.

2130.140.G  
81.



Date mechanism maintaining plate  
Date mechanism maintaining plate held by 2 screws 4000.250.

4000.250  
82.

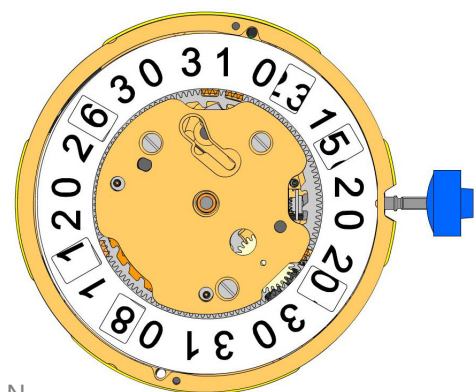


Screw

3506.072.G  
83.



Dial support



N

8200  
84.



Moebius 8200

9014  
85.



Moebius 9014

124  
86.

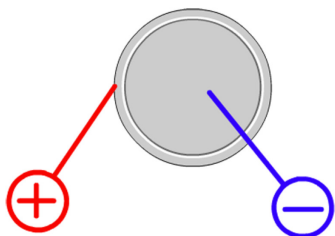


Jismaa 124

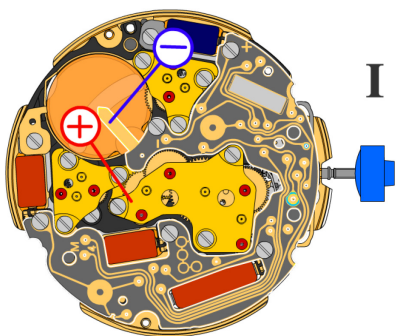
9020  
87.



Moebius 9020

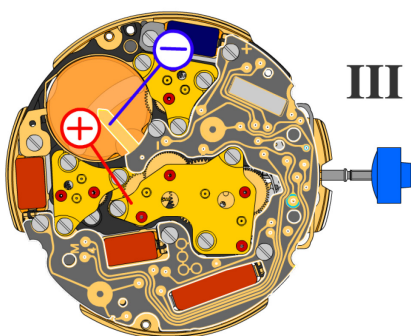


|         |               |
|---------|---------------|
| Battery | <b>395</b>    |
| Voltage | <b>1.55 V</b> |



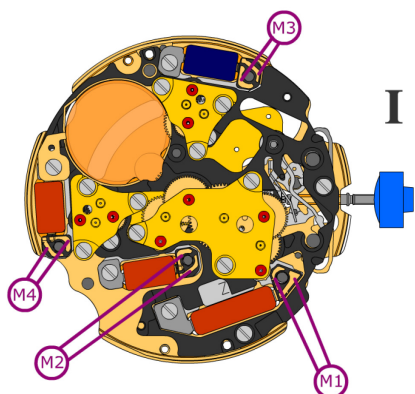
*Setting stem in position I, calendar not in gear,  
60 s measuring interval for rate and consumption:*

|                             |                               |
|-----------------------------|-------------------------------|
| Typical consumption         | <b>1.48 <math>\mu</math>A</b> |
| Maximal consumption         | <b>1.65 <math>\mu</math>A</b> |
| Rate                        | <b>-10s/M. .. +20s/M.</b>     |
| Lower working voltage limit | <b>1.20 V</b>                 |



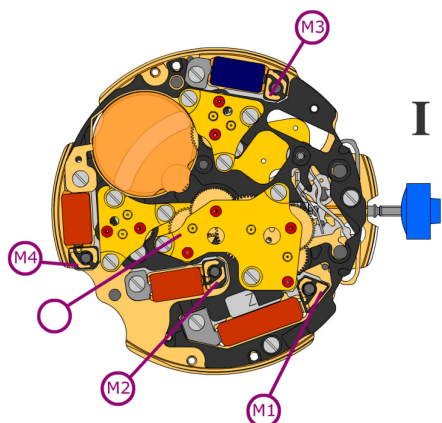
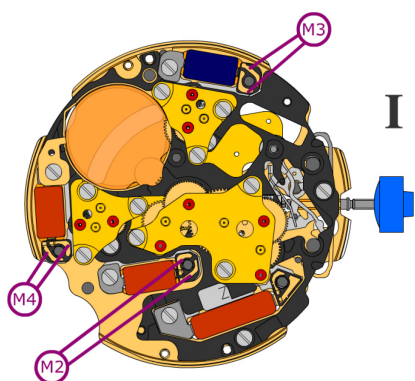
*Setting stem in position III, 60 s measuring interval:*

|                     |                               |
|---------------------|-------------------------------|
| Typical consumption | <b>0.10 <math>\mu</math>A</b> |
| Maximal consumption | <b>0.30 <math>\mu</math>A</b> |


Coil resistance M1 **1.90 k $\Omega$  .. 2.10 k $\Omega$** 

Coil resistance M2 **1.68 k $\Omega$  .. 1.88 k $\Omega$** 

Coil resistance M3 **1.68 k $\Omega$  .. 1.88 k $\Omega$** 

Coil resistance M4 **1.68 k $\Omega$  .. 1.88 k $\Omega$** 

Coil isolation M1/M2/M3/M4  **$\infty$  k $\Omega$** 

*Signal generator (4.9 ms, 8 Hz):*

Lower working voltage limit  
M2/M3/M4 **1.20 V**