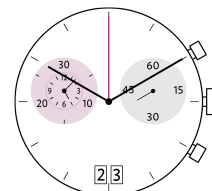


RONDA startech 5000

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

Caliber 5020.B – 12½'''



Product Specifications

Analog quartz movement

Line

startech

Caliber

5020.B

Size

12½'''

Version Swiss Made
Swiss Parts

10 Jewels / gold plated
5 Jewels / nickel plated

Standard battery life

54 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

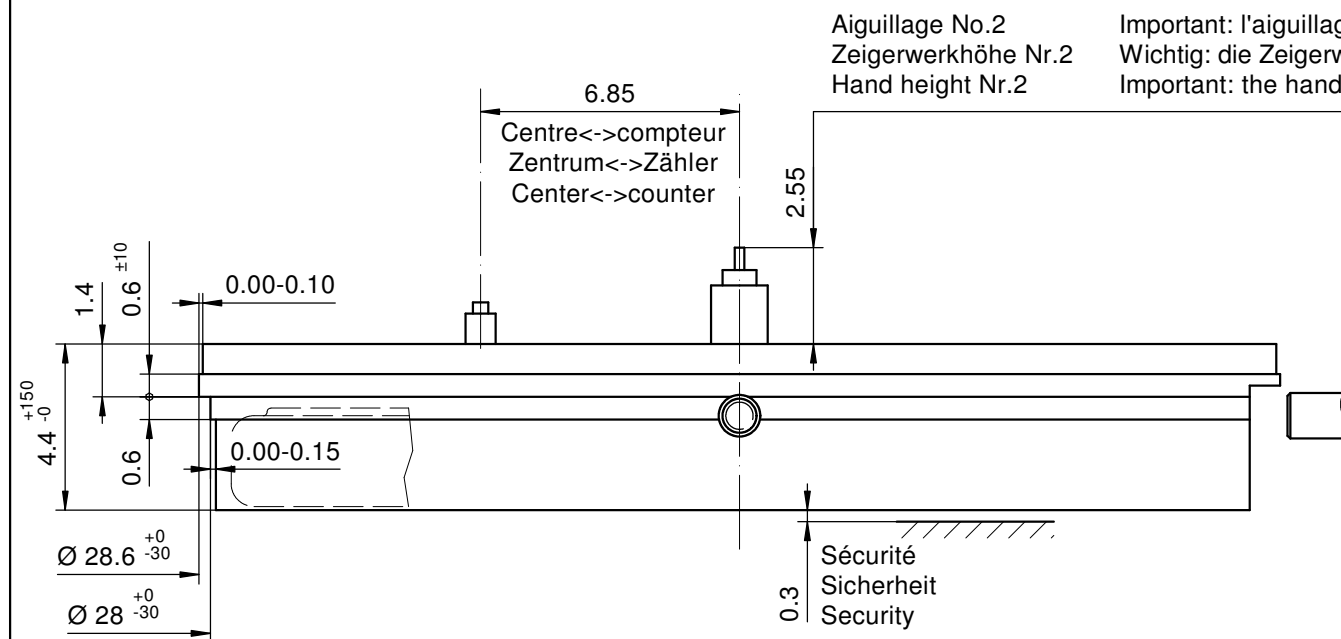
Functions

- Chronograph
- Center stop second (1/1 sec)
- 30 minute / 12 hour counter
- ADD and SPLIT functions
- 2 eyes
- 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	54 months
Battery voltage	1.5 V
Current consumption – typical	1.32 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





Important: l'aiguillage peut varier selon le modèle
Wichtig: die Zeigerwerkhöhe kann bei verschiedenen Modellen unterschiedlich sein
Important: the hand height can vary between different models

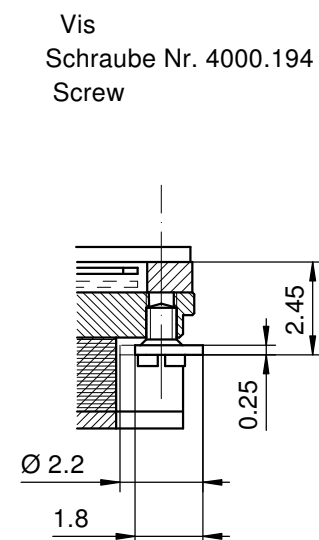
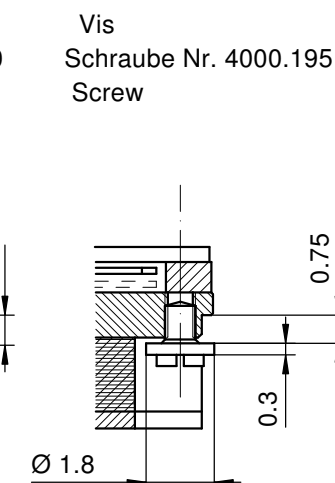
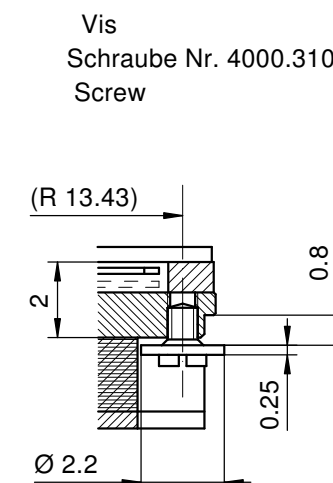
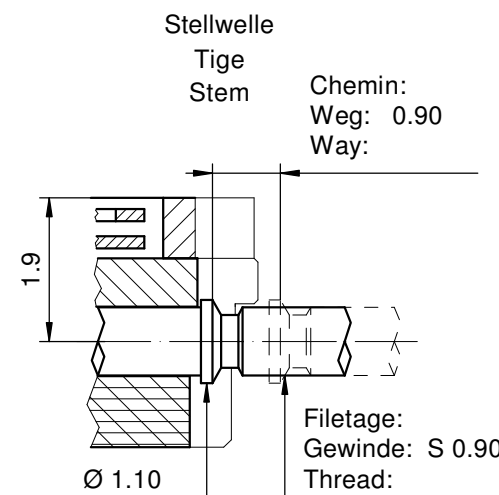
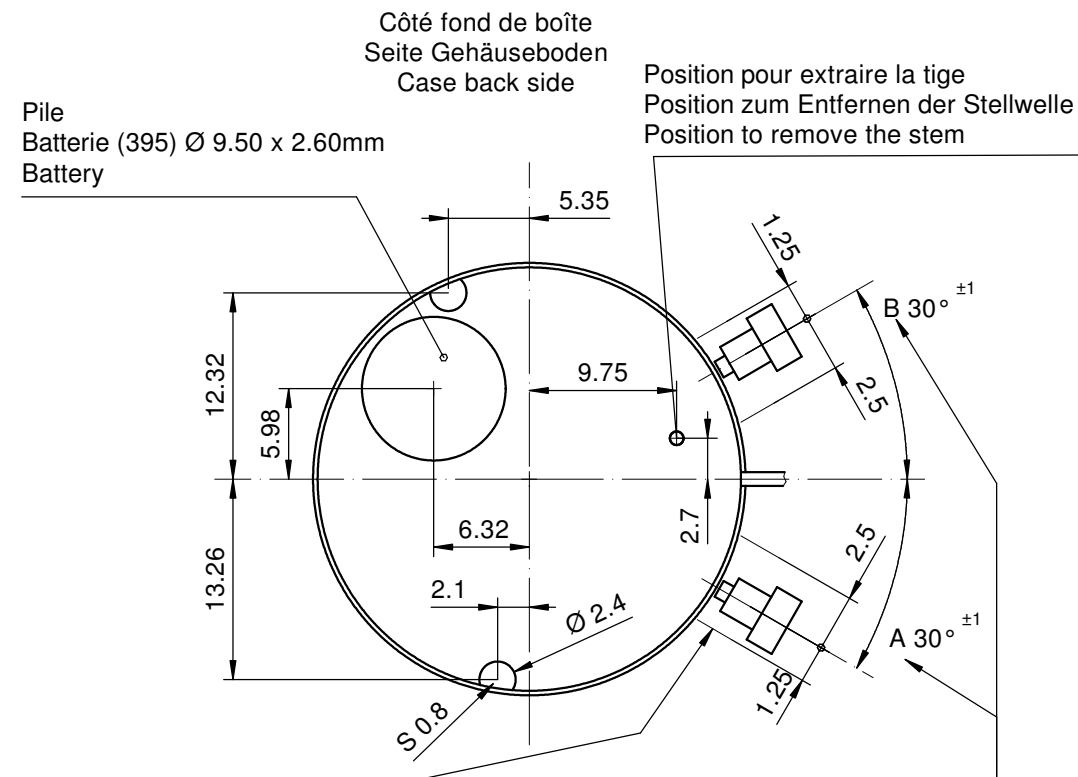
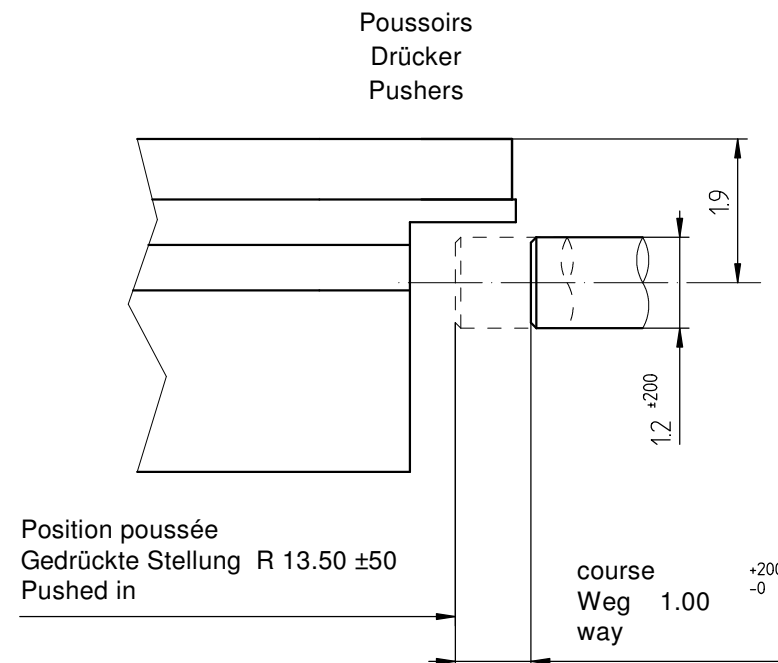
Sécurité entre l'aiguille des secondes et le verre:
Sicherheit zwischen Sekundenzeiger und Glas: 0.30mm
Security between second hand and glass:

Le cadran doit être tenu par la boîte
Das Zifferblatt muss durch die Schale gehalten werden
The dial must be hold by the case

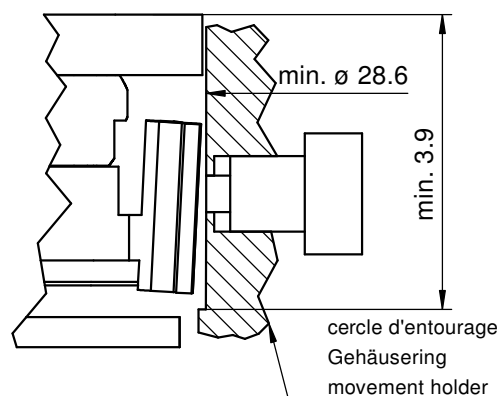
La course du poussoir doit être limitée dans le poussoir lui-même. Sa position poussée doit être contrôlée.

Die Weglänge des Drückers ist im Drücker selbst zu begrenzen. In der gedrückten Stellung ist seine Position zu kontrollieren

The way of the pusher has to be limited in the pusher itself. Its position must be checked while pushed in.



Dégagement cercle d'entourage pour poussoir
Freistellung Gehäuse ring für Drücker
Opening movement holder for pusher



L'angle indiqué pour la direction du poussoir et la position doivent être respectés.
Pour un angle de 0° des poussoirs A et B, voir plan 5000.345

Der angegebene Winkel für die Drückerrichtung und die Position müssen eingehalten werden.
Für einen Drückerwinkel von 0° bei A und B, siehe Zeichnung 5000.345

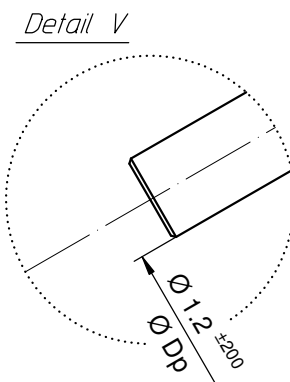
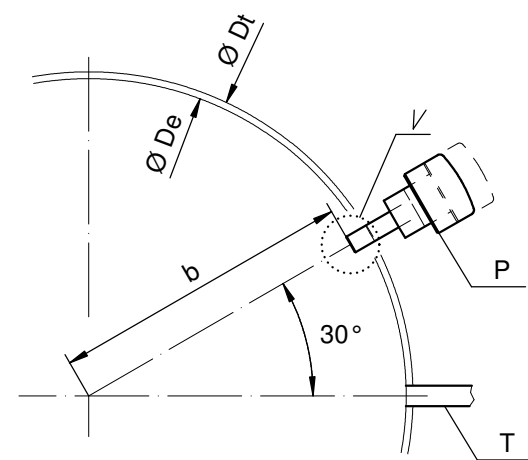
The indicated angle of the pusher direction and the position must be fulfilled. For pusher angles of 0° (pusher A and B), see drawing 5000.345.

Cage
Uhrwerkgestell 12½"
Frame

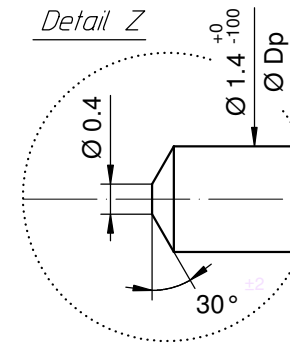
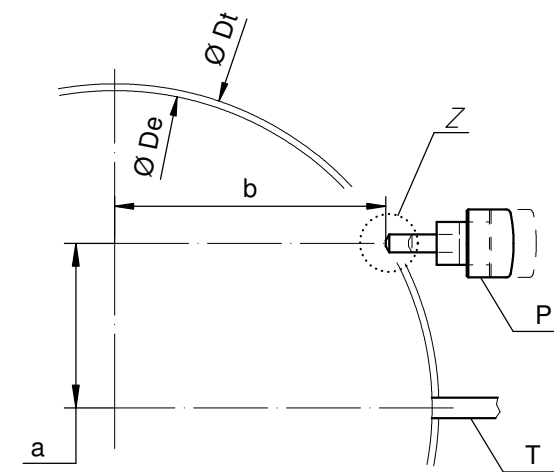
RONDA 5020.B

Issued	14 Nov 2003	mk
Modified	05 Sep 2016 ÄA 34777	dh
Released	YES	
Tolerance	+/- 20 µm	
Scale	10 : 1 (5 : 1) (A3H)	
Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
No.	5000.321	03

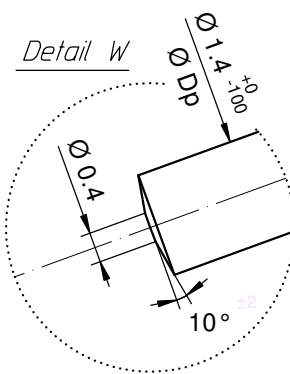
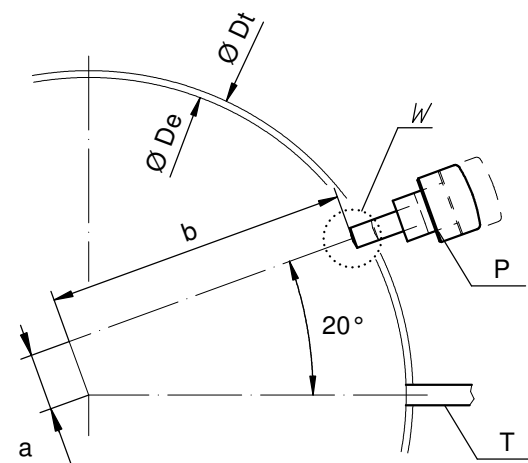
Angle Winkel Angle	30°	
Ø Dp	b	
1.00	13.50	
1.10	13.50	
1.20	13.50	
1.30	13.50	
1.40	13.50	



Angle Winkel Angle	0°	
Ø Dp	a	b
1.30	7.40	11.43
1.40	7.45	11.40



Angle Winkel 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

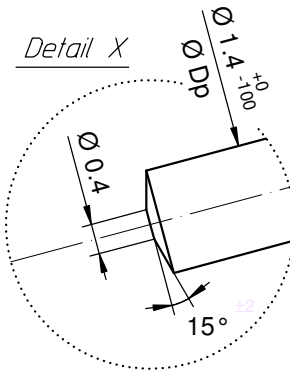
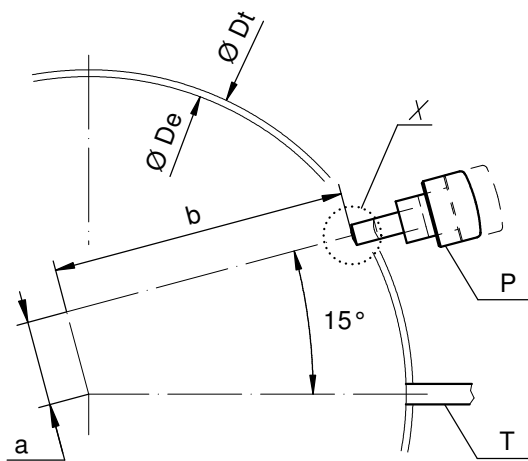
Ø Dp: diamètre du poussoir
Drückerdurchmesser
pusher-diameter

Ø Dt: diamètre total
Totaldurchmesser
total-diameter

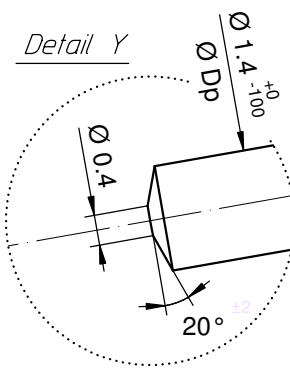
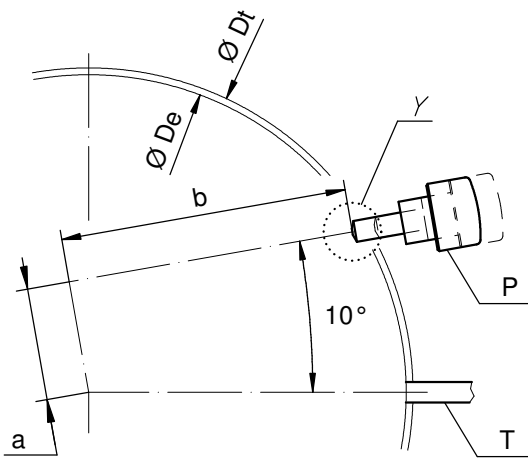
P: poussoir en position poussée
Drücker in gedrückter Stellung
pusher in pressed position

T: tige de mise à l'heure
Stellwelle
stem

Angle Winkel Angle	15°	
Ø Dp	a	b
1.30	3.83	12.92
1.40	3.86	12.91



Angle Winkel Angle	10°	
Ø Dp	a	b
1.30	5.06	12.52
1.40	5.10	12.50

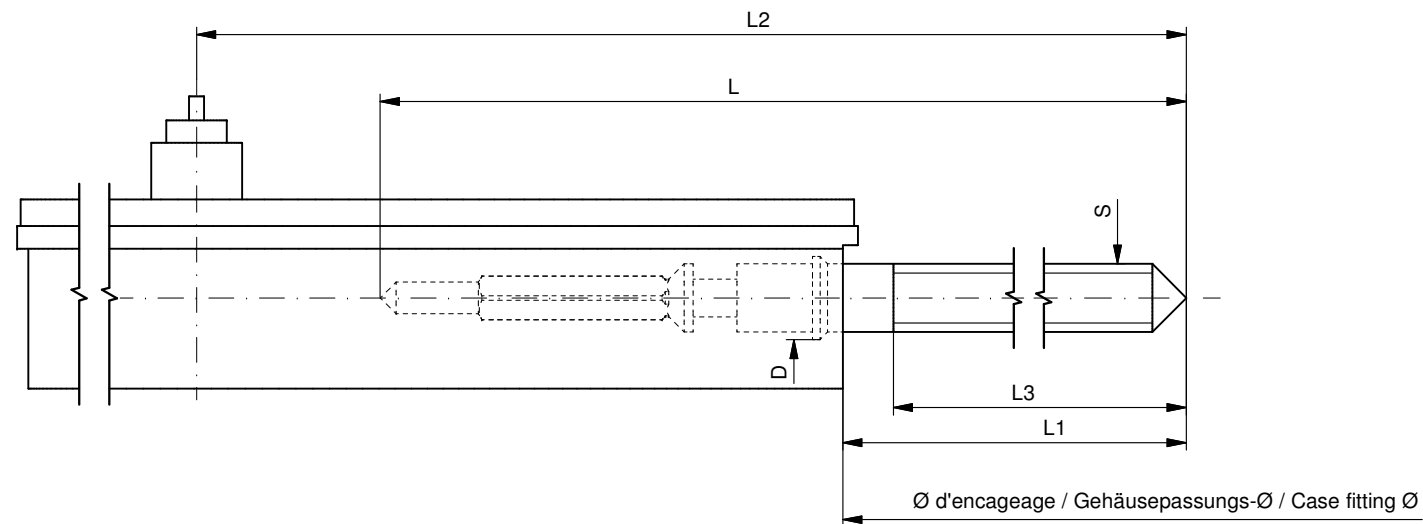


Angle des poussoirs A et B
Winkel der Drücker A und B
Angle of pusher A and B

RONDA

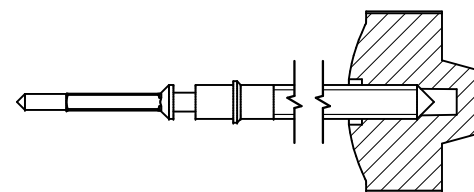
4xxx.x, 5xxx.x

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



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

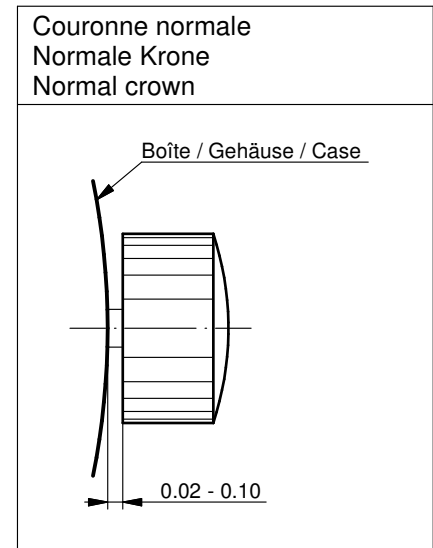
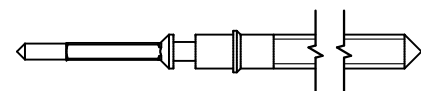
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.177.CO	20.00	10.23	24.23	10.15	0.90	1.10



Couleur de la couronne Kronenfarbe Crown color	bleu foncé dunkelblau dark blue
Code	UN 5002

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

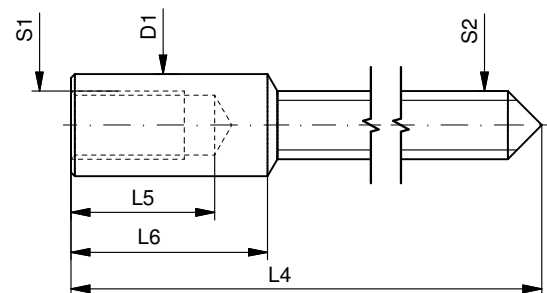
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.177	20.00	10.23	24.23	10.15	0.90	1.10
3000.191	32.00	22.23	36.23	22.15	0.90	1.10



Couronne normale Normale Krone Normal crown	
Force ⇐ min. Kraft ⇐ min. Force ⇐ min.	10 N
Force ⇐ max. Kraft ⇐ max. Force ⇐ max.	15 N

Rallonge de tige / Stellwelle Verlängerung / Stem extension

No. d'article Artikelnummer Part number	L4	L5 (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 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

Hour hand

Minute counter

Hour counter

Second counter

Second hand

Date

Control buttons

Push-button A

Crown

Push-button B

01

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.

02

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 1 appears.

3 Push the crown back into position I.

Please note:

During the date changing phase between approx. 9 PM and 12 PM, the date must be set to the date of the following day.

An extreme acceleration in setting the date with quick mode can induce a false date indication. The synchronization is re-established by setting the date from 01 till 31 (crown in position II).

03

Setting the date/time

Example:

– Date / time on the watch: 17 / 1:25 AM

– Present date / time: 4 / 8:30 PM

1 Pull out the crown to position II (the watch continues to run).

2 Turn the crown until yesterday's date appears 3.

3 Pull out the crown to position III (the watch stops).

4 Turn the crown until the correct date 4 appears.

5 Continue to turn the crown until the correct time 8:30 PM appears.

6 Push the crown back into position I.

Please note:

* To set your watch to the exact second, please refer to the chapter entitled «setting the time».

** Please observe the AM/PM clock rhythm.

04

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.)

05

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.

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

06

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

Please note: Following 2, further intervals or inter-mediate dates can be displayed by pressing push-button B (display interval / make up measured time, ...).

07

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).

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).

08

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)

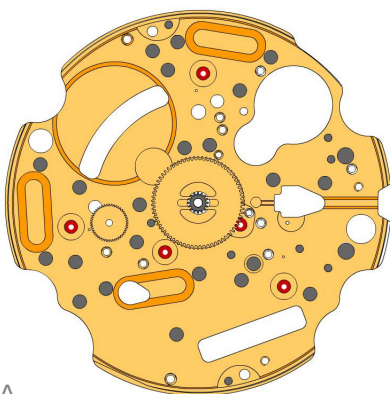
Single step A 1 x short

Continuous A long

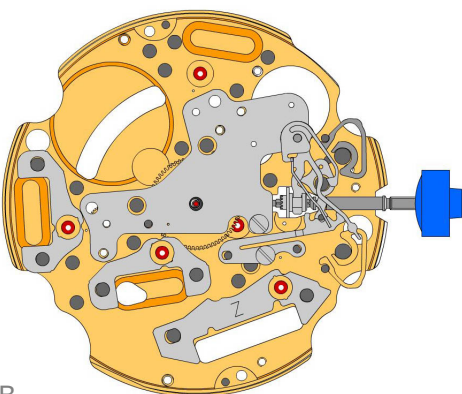
3 Returning the crown to position I

Termination of the chronograph hands adjustment (can be carried out at any time).



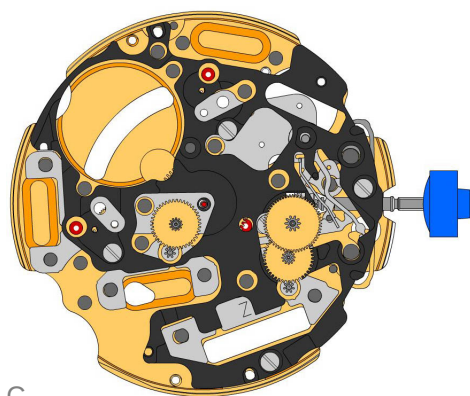


A

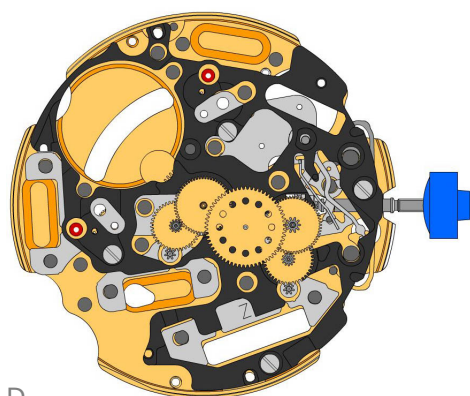


B

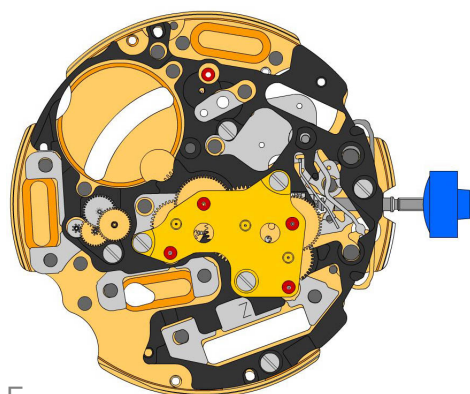
2000.574.G 1.		Main plate
3305.282.CO 2.		Cannon pinion with driver (Aig.2)
3301.244 3.		Hour wheel (counter 24h)
2030.017.CO 4.		Centre bridge Centre bridge held by 1 screw 4000.250. Parts 2030.017.CO, 3004.223 and 3500.059 must be exchanged together.
4000.250 5.		Screw
3001.055.FI 6.		Sliding pinion
3000.177.CO 7.		Setting stem
3017.049 8.		Setting lever
3905.049 9.		Setting lever jumper (3 positions) Setting lever jumper held by 1 screw 4000.250.
4000.250 10.		Screw
3015.081 11.		Yoke (3 positions) Parts 3015.081 and 3905.067 must be exchanged together.
3905.067 12.		Yoke spring Tensioning the spring arm. Parts 3015.081 and 3905.067 must be exchanged together.
3406.030 13.		Pusher jumper B Put the grey jumper between the two posts on the further side.
3406.038 14.		Pusher jumper A Put the yellow jumper between the two posts on the closer side.
3622.040 15.		Stator Mark [Z] on stator.
3622.039 16.		Stator (counter 6h, 9h, chrono)
3622.039 17.		Stator (counter 6h, 9h, chrono)



C



D



E

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

4000.250
19.  Screw

3715.094.RK
20.  Rotor

3715.094.RK
21.  Rotor

3147.046.CO
22.  Intermediate wheel

3136.142.CO
23.  Second wheel (long)

3147.047.CO
24.  Intermediate wheel (chrono)

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

3122.056.CO
26.  Third wheel

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

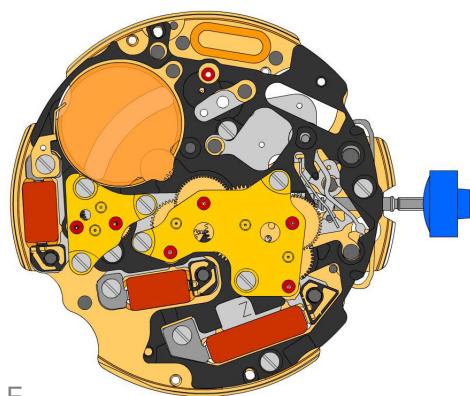
4000.250
28.  Screw

3715.095.RK
29.  Rotor

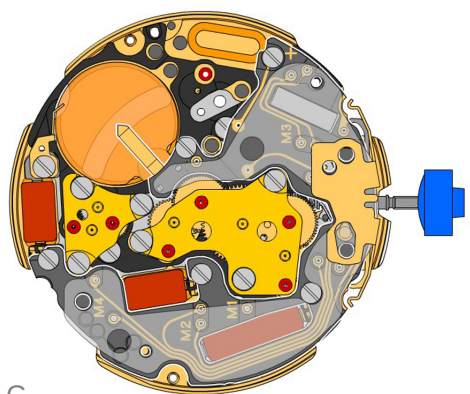
3147.048.CO
30.  Intermediate wheel (counter)

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

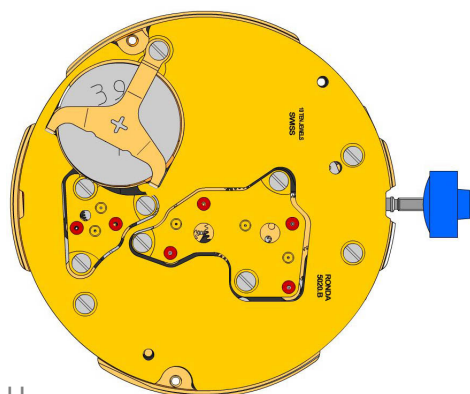
3402.008.CO
32.  Minute counting wheel (24h)



F



G



H

2020.149.G
33.



Counter train wheel bridge
Counter train wheel bridge held by 3 screws 4000.250.

4000.250
34.



Screw

3621.053.RK
35.



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

3621.054.RK
36.



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
37.



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

3601.118
38.



Contact strip
Contact strip held by 1 screw 4000.250.

4000.250
39.



Screw

3603.034
40.



Battery insulator

3503.054
41.



Tube

3612.144.5020
42.



Electronic module
Electronic module tenue par 5 vis 4000.248. Electronic measurements may be realised now.

4000.248
43.



Screw

3603.069
44.



Circuit insulator

3601.107.G
45.



Pusher contact spring

2130.138.G.M01.5020B
46.



Electronic module cover
Electronic module cover held by 3 screws 4000.250.

3600.010.HGF
47.



Battery 395

3601.109.G
48.

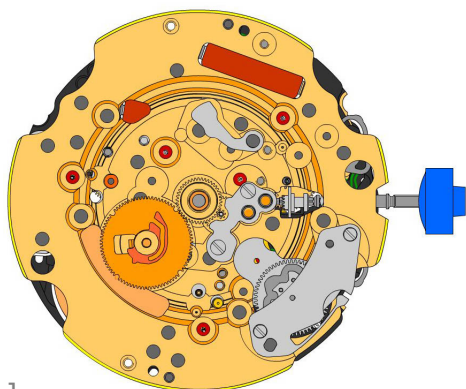
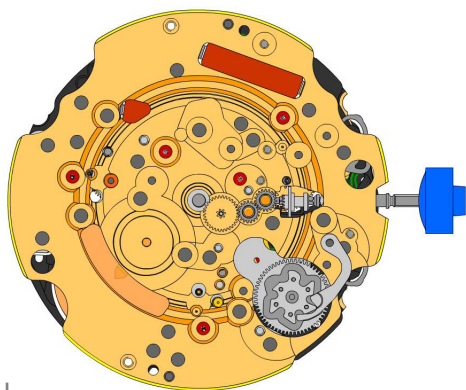


Bridle +
Bridle held by 1 screw 4000.250.

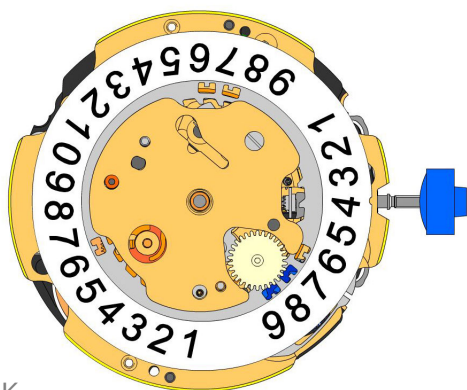
4000.250
49.



Screw



2000.574.G 50.		Main plate
3004.164 51.		Setting wheel
3004.164 52.		Setting wheel
3007.054.CO 53.		Minute wheel
2130.143 54.		Minute train bridge Minute train bridge held by 1 screw 4000.305.
4000.305 55.		Screw
3004.223 56.		Tens indicator driving wheel 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 57.		Tens jumper Parts 2030.017.CO, 3004.223 and 3500.059 must be exchanged together.
2130.142 58.		Tens jumper maintaining plate
4010.306 59.		Screw
3301.242 60.		Hour wheel (Aig.2)
3315.016 61.		Friction spring
3004.224.CO 62.		Date indicator driving wheel
3500.049 63.		Date jumper



K

3504.214.AD.1.A
64. Units indicator (standard)
Nick of the indicator at 3 o'clock.



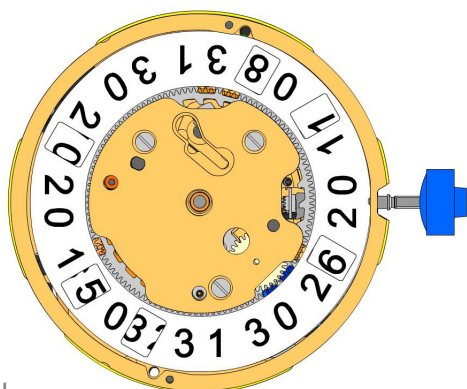
3147.054
65. Tens intermediate wheel



2130.141
66. Date indicator maintaining plate
Nick of the indicator at 3 o'clock.



3905.070
67. Date jumper spring
Insert the date jumper spring in the provided opening.



L

3504.215.AD.1.A
68. Tens indicator (standard)
Nick of the indicator at 3 o'clock.



2130.140.G
69. Date mechanism maintaining plate
Date mechanism maintaining plate held by 2 screws 4000.250.



4000.250
70. Screw



3506.072.G
71. Dial support



9014
72. Moebius 9014

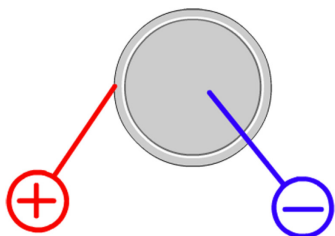


124
73. Jismaa 124

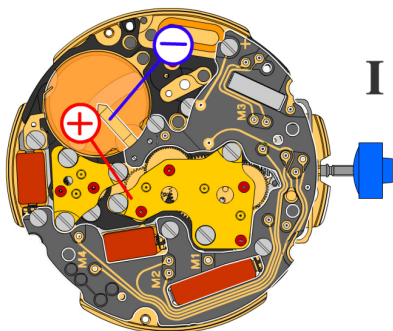


9020
74. Moebius 9020



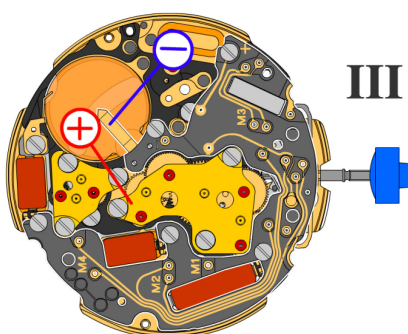


Battery	395
Voltage	1.55 V



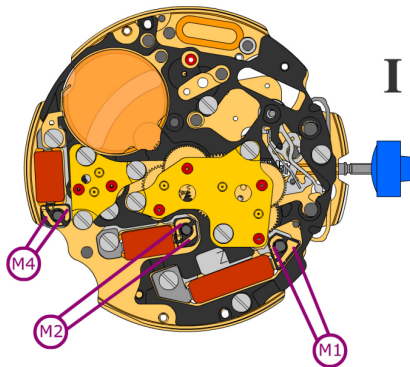
*Setting stem in position I, calendar not in gear,
60 s measuring interval for rate and consumption:*

Typical consumption	1.32 μA
Maximal consumption	1.65 μA
Rate	-10s/M. .. +20s/M.
Lower working voltage limit	1.20 V



Setting stem in position III, 60 s measuring interval:

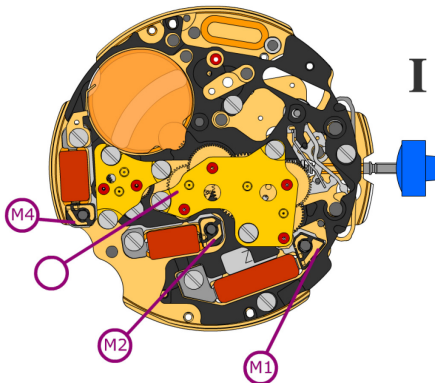
Typical consumption	0.10 μA
Maximal consumption	0.30 μA



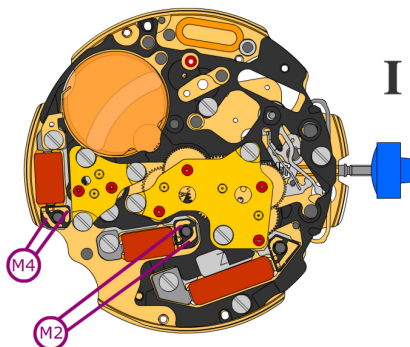
Coil resistance M1 **1.90 k Ω .. 2.10 k Ω**

Coil resistance M2 **1.68 k Ω .. 1.88 k Ω**

Coil resistance M4 **1.68 k Ω .. 1.88 k Ω**

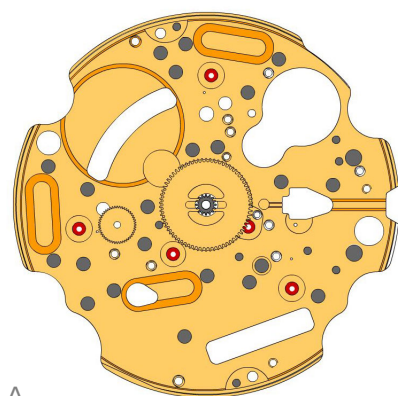


Coil isolation M1/M2/M4 **∞ k Ω**

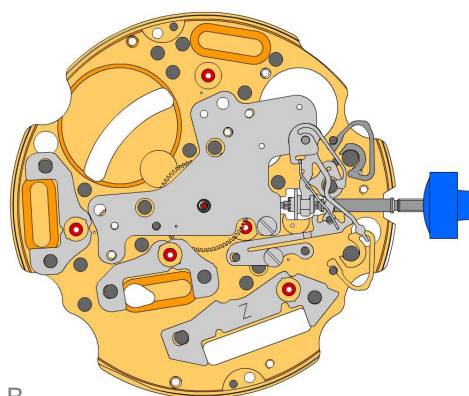


Signal generator (4.9 ms, 8 Hz):

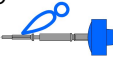
Lower working voltage limit M2/M4 **1.20 V**

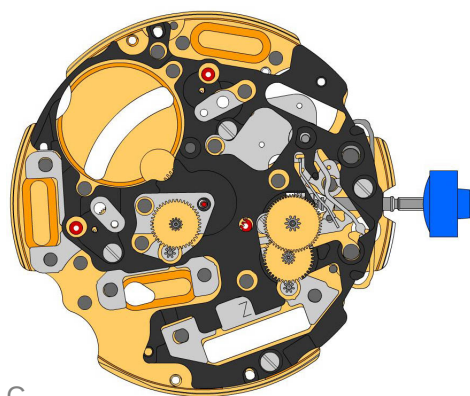


A

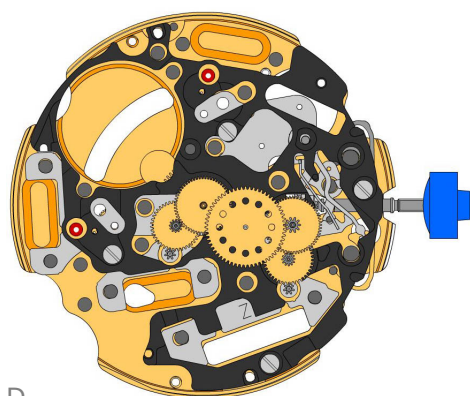


B

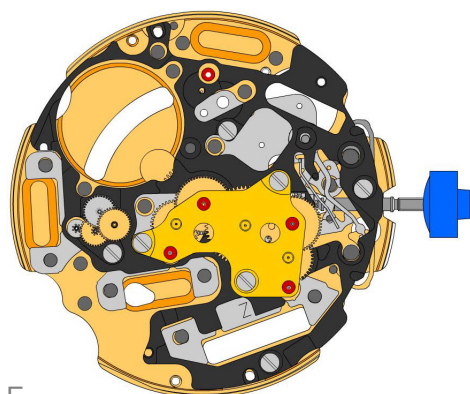
2000.574.G 1.		Main plate
3305.282.CO 2.		Cannon pinion with driver (Aig.2)
3301.244 3.		Hour wheel (counter 24h)
2030.024.CO 4.		Centre bridge Centre bridge held by 1 screw 4000.250.
4000.250 5.		Screw
3001.055.FI 6.		Sliding pinion
3000.177.CO 7.		Setting stem
3017.049 8.		Setting lever
3905.049 9.		Setting lever jumper (3 positions) Setting lever jumper held by 1 screw 4000.250.
4000.250 10.		Screw
3015.081 11.		Yoke (3 positions)
3905.067 12.		Yoke spring Tensioning the spring arm.
3406.030 13.		Pusher jumper B Put the grey jumper between the two posts on the further side.
3406.038 14.		Pusher jumper A Put the yellow jumper between the two posts on the closer side.
3622.040 15.		Stator Mark [Z] on stator.
3622.039 16.		Stator (counter 6h, 9h, chrono)
3622.039 17.		Stator (counter 6h, 9h, chrono)



C



D



E

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

4000.250
19.  Screw

3715.094.RK
20.  Rotor

3715.094.RK
21.  Rotor

3147.046.CO
22.  Intermediate wheel

3136.142.CO
23.  Second wheel (long)

3147.047.CO
24.  Intermediate wheel (chrono)

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

3122.056.CO
26.  Third wheel

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

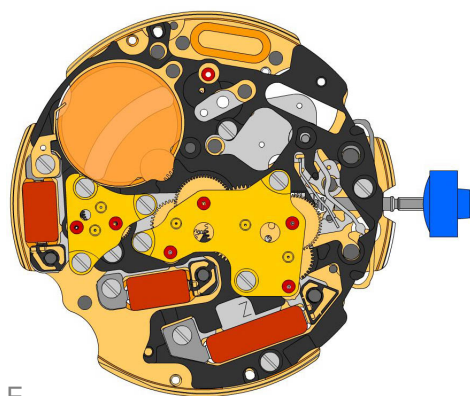
4000.250
28.  Screw

3715.095.RK
29.  Rotor

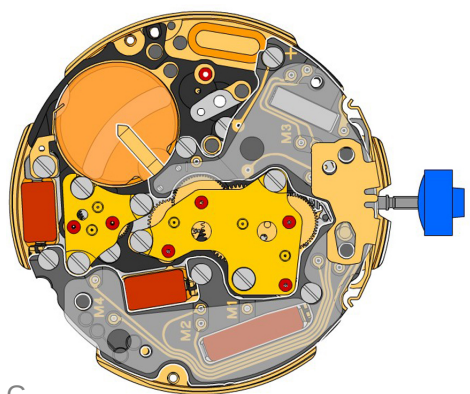
3147.048.CO
30.  Intermediate wheel (counter)

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

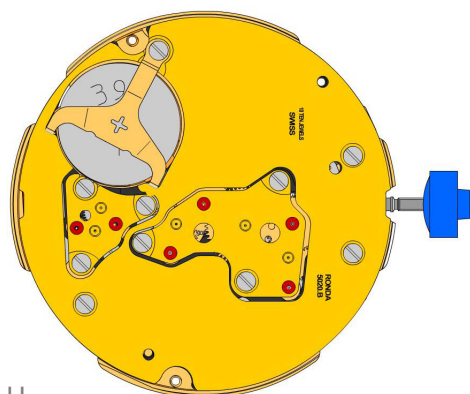
3402.008.CO
32.  Minute counting wheel (24h)



F



G



H

2020.149.G
33.



Counter train wheel bridge
Counter train wheel bridge held by 3 screws 4000.250.

4000.250
34.



Screw

3621.053.RK
35.



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

3621.054.RK
36.



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
37.



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

3601.118
38.



Contact strip
Contact strip held by 1 screw 4000.250.

4000.250
39.



Screw

3603.034
40.



Battery insulator

3503.054
41.



Tube

3612.144.5020
42.



Electronic module
Electronic module tenue par 5 vis 4000.248. Electronic measurements may be realised now.

4000.248
43.



Screw

3603.069
44.



Circuit insulator

3601.107.G
45.



Pusher contact spring

2130.138.G.M01.5020B
46.



Electronic module cover
Electronic module cover held by 3 screws 4000.250.

3600.010.HGF
47.



Battery 395

3601.109.G
48.

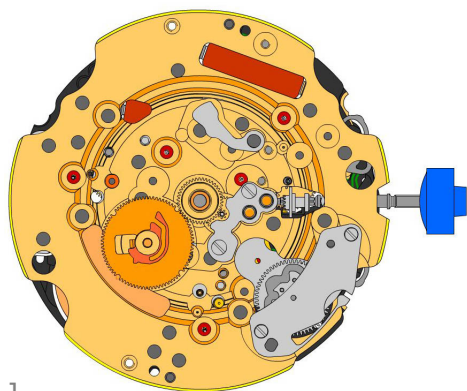
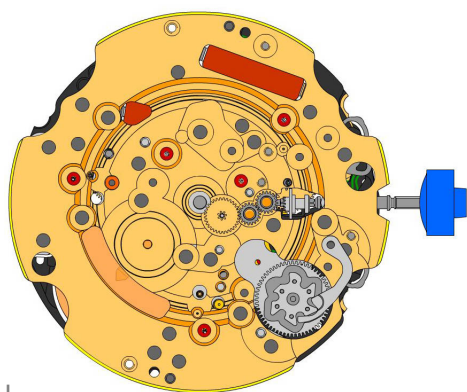


Bridle +
Bridle held by 1 screw 4000.250.

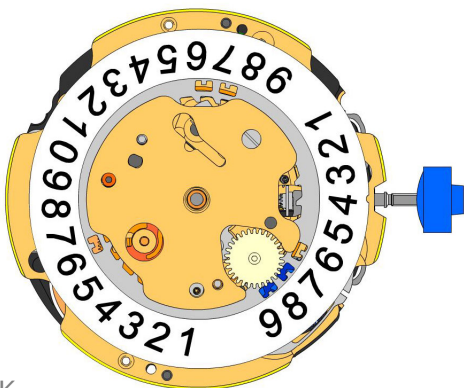
4000.250
49.



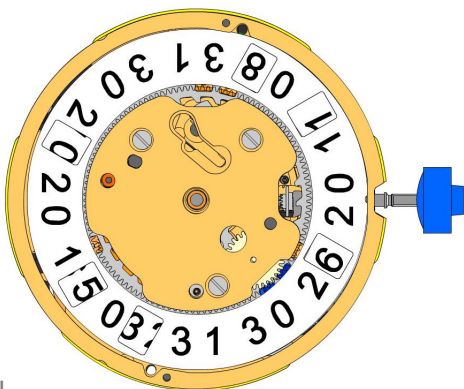
Screw



2000.574.G 50.		Main plate
3004.164 51.		Setting wheel
3004.164 52.		Setting wheel
3007.054.CO 53.		Minute wheel
2130.143 54.		Minute train bridge Minute train bridge held by 1 screw 4000.305.
4000.305 55.		Screw
3004.227 56.		Tens indicator driving wheel The short tooth of the tens indicator driving wheel must point to the center of the movement.
3500.075 57.		Tens jumper
2130.142 58.		Tens jumper maintaining plate
4010.306 59.		Screw
3301.242 60.		Hour wheel (Aig.2)
3315.016 61.		Friction spring
3004.224.CO 62.		Date indicator driving wheel
3500.049 63.		Date jumper



K



L

3504.214.AD.1.A
64.



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

3147.054
65.



Tens intermediate wheel

2130.141
66.



Date indicator maintaining plate
Nick of the indicator at 3 o'clock.

3905.070
67.



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

3504.215.AD.1.A
68.



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

2130.140.G
69.



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

4000.250
70.



Screw

3506.072.G
71.



Dial support

8200
72.



Moebius 8200

9014
73.



Moebius 9014

124
74.

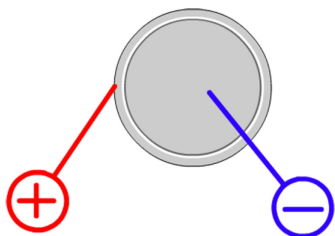


Jismaa 124

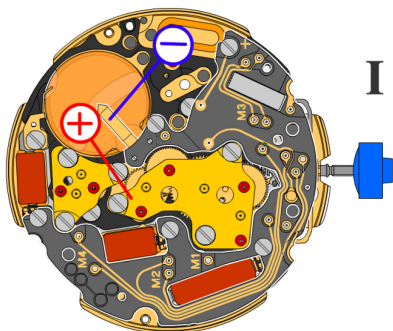
9020
75.



Moebius 9020

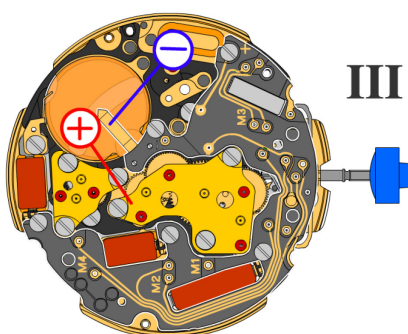


Battery	395
Voltage	1.55 V



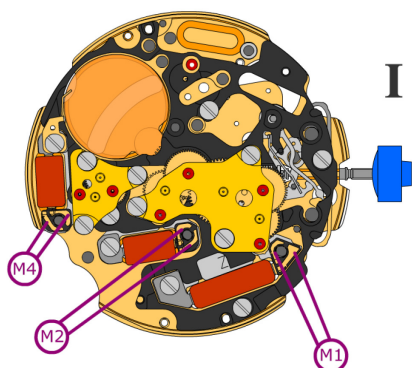
*Setting stem in position I, calendar not in gear,
60 s measuring interval for rate and consumption:*

Typical consumption	1.32 μA
Maximal consumption	1.65 μA
Rate	-10s/M. .. +20s/M.
Lower working voltage limit	1.20 V



Setting stem in position III, 60 s measuring interval:

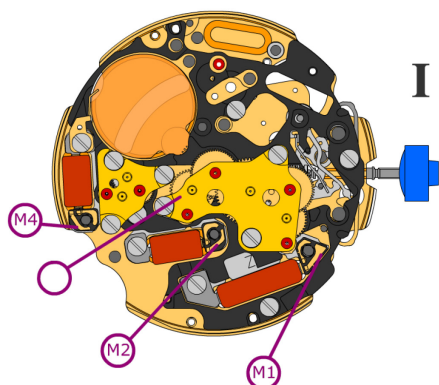
Typical consumption	0.10 μA
Maximal consumption	0.30 μA



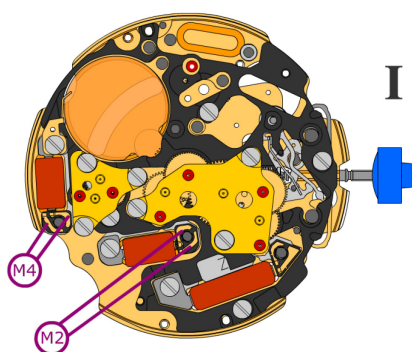
Coil resistance M1 **1.90 k Ω .. 2.10 k Ω**

Coil resistance M2 **1.68 k Ω .. 1.88 k Ω**

Coil resistance M4 **1.68 k Ω .. 1.88 k Ω**



Coil isolation M1/M2/M4 **∞ k Ω**



Signal generator (4.9 ms, 8 Hz):

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