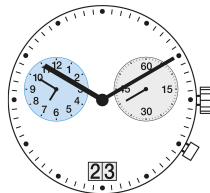
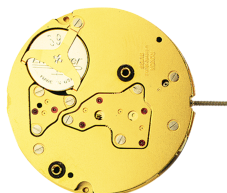


Caliber 4120.B – 12½"



Product Specifications

Analog quartz movement

Line xtratech

Caliber 4120.B

Size 12½"

Version Swiss Made 7 Jewels / gold plated

Version Swiss Parts 3 Jewels / nickel plated

Standard battery life 50 months

Standard hand fitting height 2

Features

- Repairable metal watch movement
- Power saving mechanism with pulled out stem:
Reduction of consumption approximately 70%
- Very easy handling by one pusher
- Big date with quick change

Functions

- Multifunction
- Alarm
- Big date
- Small second
- 2 hands

Quartz Movements

Multifunctions

RONDA xtratech

Caliber 4120.B – 12½"

Technical Specifications

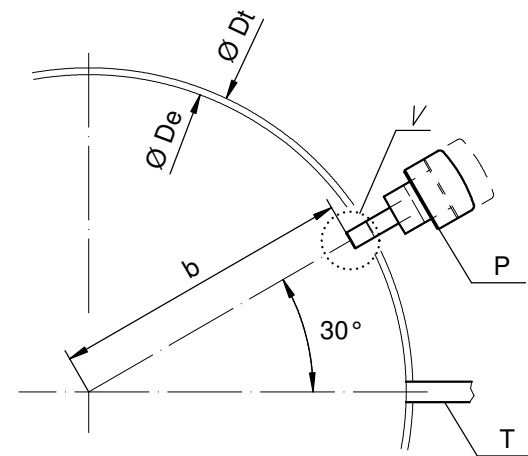
Diameter Total	28.60 mm
Case fitting	28.00 mm
Movement height	4.40 mm
Height over standard battery	4.40 mm
Movement rest	0.60 mm
Height over stem	1.90 mm
Length of stem travel	0.90 mm
Stem thread	0.90 mm
Useful torque second – typical	6 µNm
Useful torque minute – typical	300 µNm
Operating temperature	0 - 50 °C
Instantaneous rate	-10/ +20 sec/month
Resistance to magnetic fields	18.8 Oe
Resistance against shock	NIHS 91-10



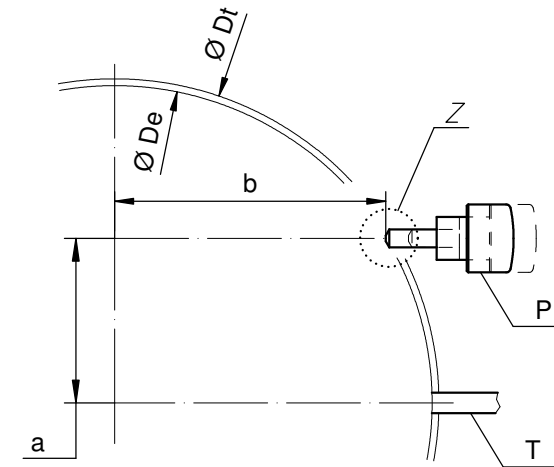
Battery Specifications

Standard battery	No. 395
Standard battery life	50 months
Battery voltage	1.5 V
Current consumption – typical	1.42 µA (Date Mechanism not in Gear)
Current consumption – maximum	1.65 µA (Date Mechanism not in Gear)

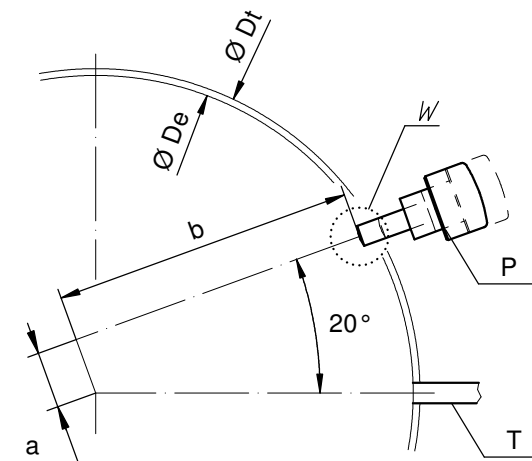
Angle Winkel Angle	30°	
Ø Dp	b	
1.00	13.50	
1.10	13.50	
1.20	13.50	
1.30	13.50	
1.40	13.50	



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

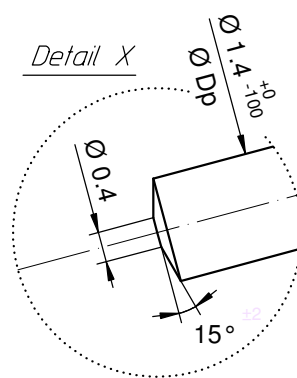
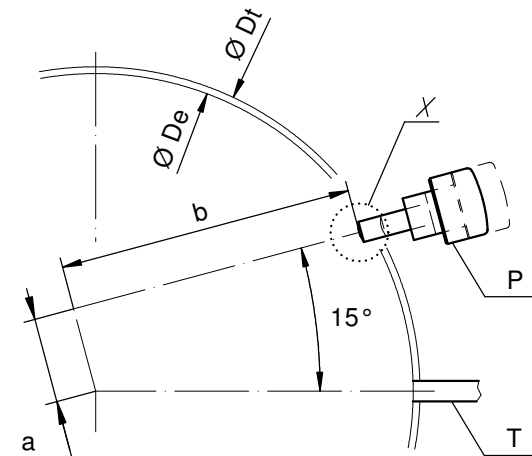
Ø Dp: diamètre du poussoir
Drückerdurchmesser
pusher-diameter

Ø Dt: diamètre total
Totaldurchmesser
total-diameter

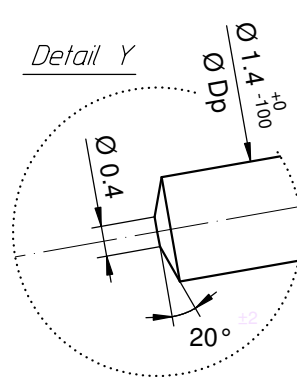
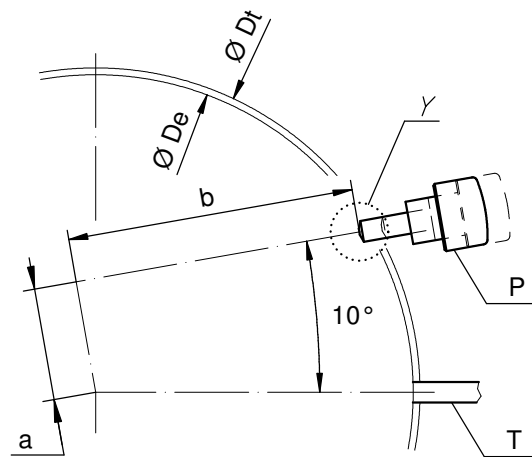
P: poussoir en position poussée
Drücker in gedrückter Stellung
pusher in pressed position

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

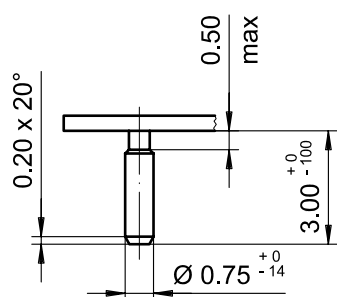
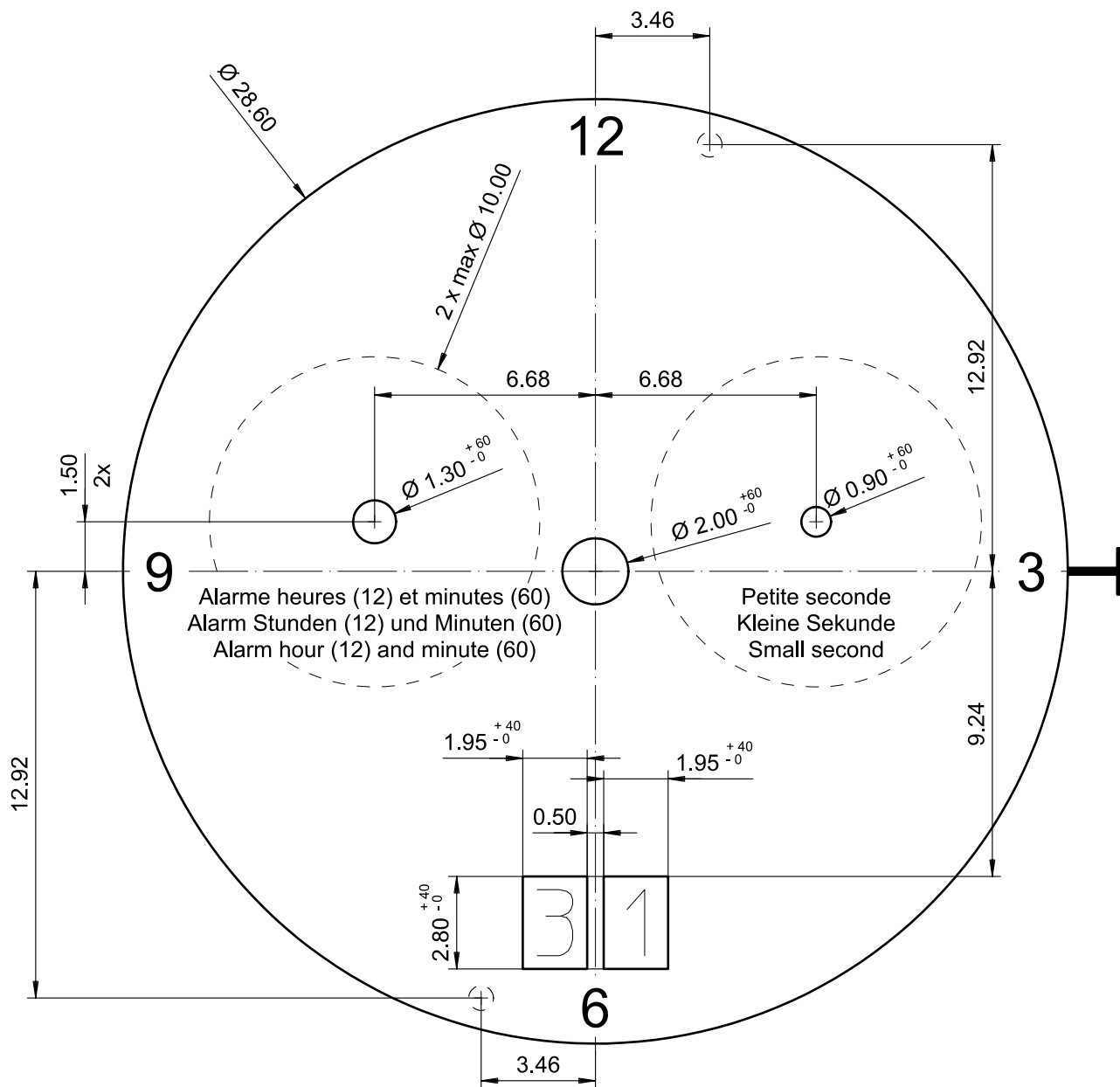


Angle des poussoirs A et B
Winkel der Drücker A und B
Angle of pusher A and B

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



Epaisseur du cadran selon hauteur de l'aiguillage
Zifferblattdicke gemäss Zeigerwerkhöhen
Dial thickness according to hand fitting heights

Tige	Date
Stellw.	Datum
Stem	Date
3H	6H

Cadran
Zifferblatt
Dial

12 1/2"

Issued	13 Dez 2006	cw
Modified	15.Dez.2006 ÄA ----	cm
Released	YES	
Tolerance	+/- 20 µm	
Scale	5 : 1 (A4V)	

RONDA

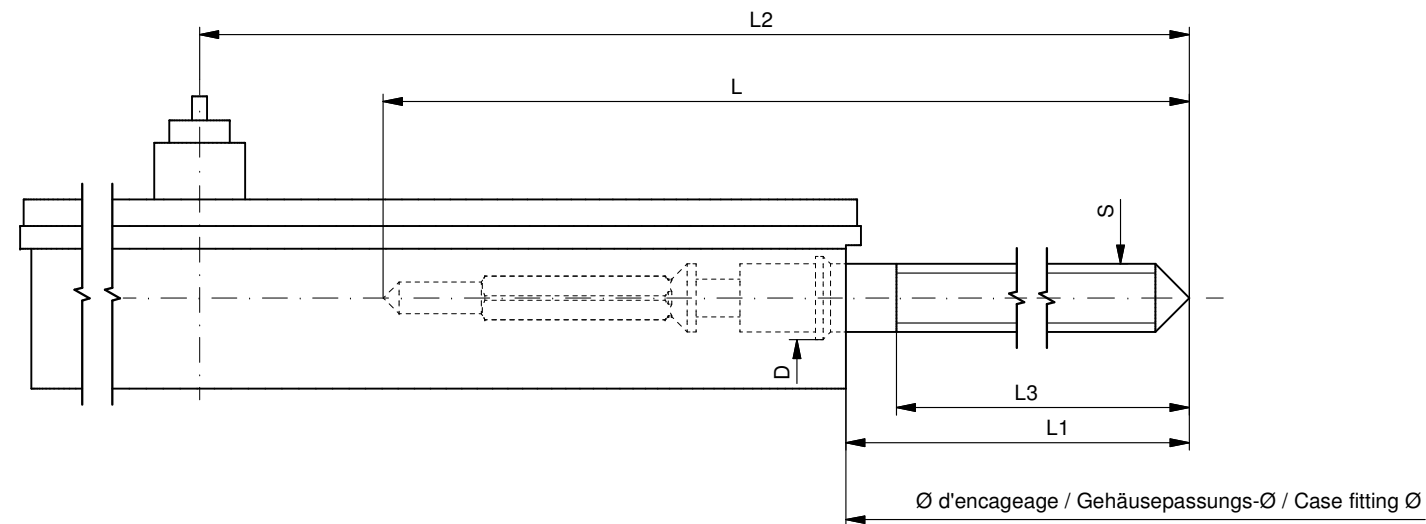
4120.B

Sous réserve de modifications
Änderungen vorbehalten
Modifications reserved

No. 5010.695 02

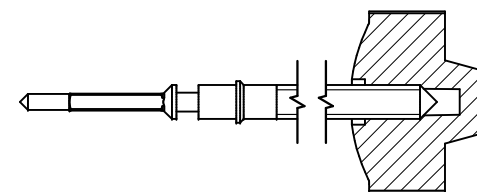


Aiguillages Zeigerwerkhöhe 12½" Hand fitting heights		Issued	14 Nov 2003	mk
		Modified	15 Okt 2014 ÄA 13275	dh
		Released	Yes	
		Tolerance	µm	
		Scale	20 : 1 (A3H)	
RONDA	4120.B, 4220.B	Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
		No.	3316.083	04



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

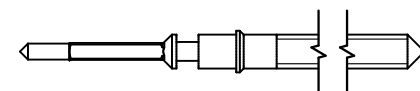
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.177.CO	20.00	10.23	24.23	10.15	0.90	1.10



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

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

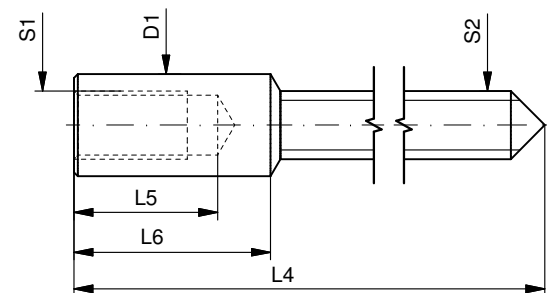
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.177	20.00	10.23	24.23	10.15	0.90	1.10
3000.191	32.00	22.23	36.23	22.15	0.90	1.10



Couronne vissée Geschraubte Krone Screwed 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

4002.B, 4003.B, 4120.B,
4210.B, 4220.B

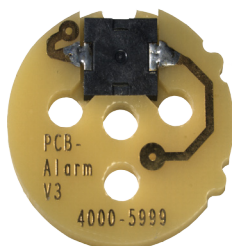
Issued	05 Sep 2012	ds5222
Modified	17 Mär 2017 ÄA 34582	mg5224
Released	YES	
Tolerance	---	
Scale	10:1 (A3)	
Sous réserve de modifications Äenderungen vorbehalten Modifications reserved		
No.	5030.018	02



Movement holder
Removing setting stem
H5XXX.1T



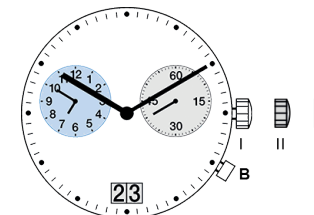
Movement holder
Setting hands
H5XXX.1A4



PCB-Alarm
Installing Piezo function for
H5XXX.1A4
H5XXX.1P

Fitting dial and hands

- Crown in position II
- Wind crown, until date 02 appears
- Crown in position III
- Wind hour hand forwards, until date changes to 03
- Remove working hand
- Fit dial
- Point all hands towards 12 o'clock
- Set time
- Set alarm reference time**
- Crown in position II
- Set date
- Crown in position I



Date switching duration:

First and tenth digit discs

~2hrs

**Setting alarm reference time

- Activate pusher B min. 2 secs (activating reference time mode)
- Synchronise reference time with actual time by pressing pusher B:
 - Short press (< 1 sec.) → +1 minute
 - Medium press (1-2 secs) → +1 hour
 - Long press (> 2 secs) → continuously

Details: See Instructions Manual

General Instructions

Removing the setting stem can only be effected in Pos. I.

The use of supporting screws is essential when mounting the hands.

Permitted hand setting strengths:

Hr / min. hands: <40N

Other hands: <30N

During quick date correction (setting stem in position II), a date switching speed of 5 d/s must not be exceeded.

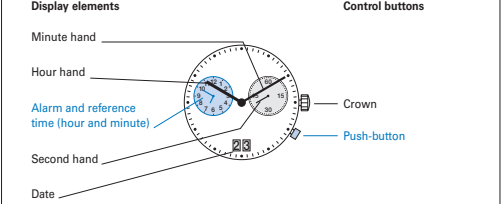
You have decided to buy a watch, which was assembled by a watch-maker using a Ronda movement. Please note that no watches are produced or distributed under the Ronda brand.

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

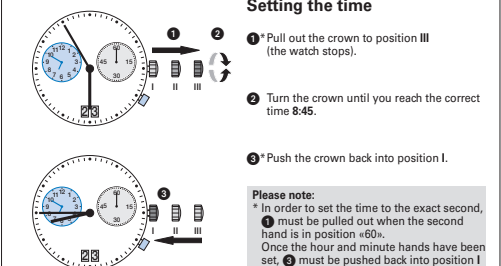
Display elements

Control buttons



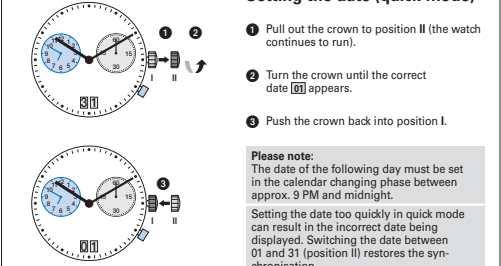
01

Setting the time



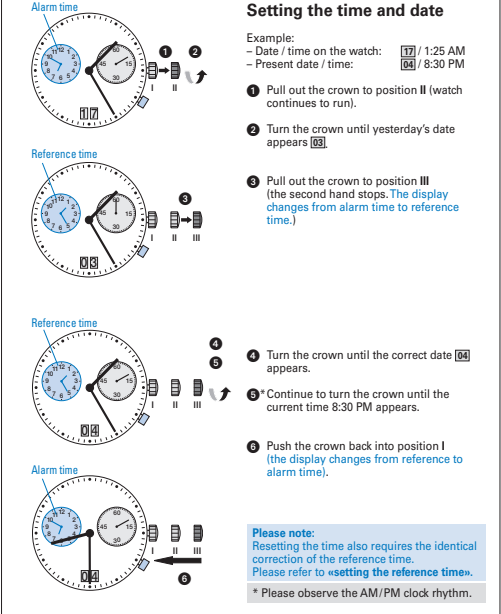
02

Setting the date (quick mode)



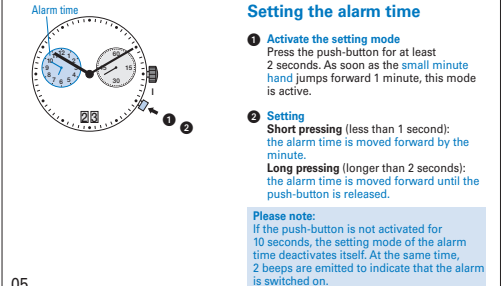
03

Setting the time and date



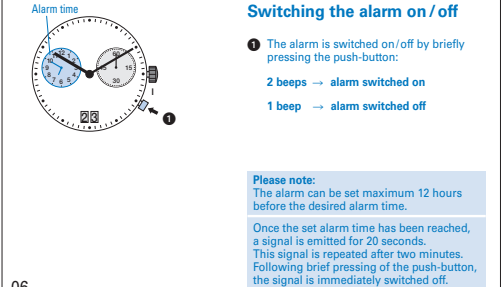
04

Setting the alarm time



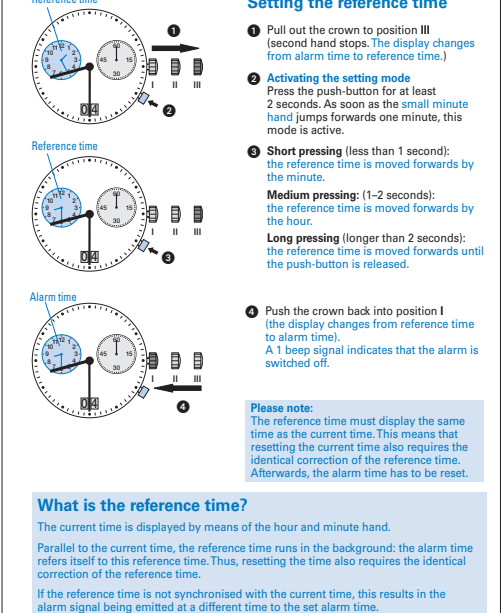
05

Switching the alarm on/off



06

Setting the reference time



07

What is the reference time?

The current time is displayed by means of the hour and minute hand.

Parallel to the current time, the reference time runs in the background: the alarm time refers itself to this reference time. Thus, resetting the time also requires the identical correction of the reference time.

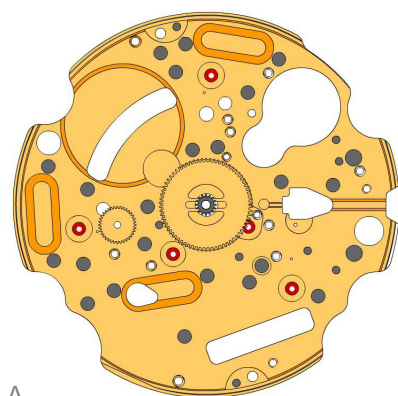
If the reference time is not synchronised with the current time, this results in the alarm signal being emitted at a different time to the set alarm time.

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

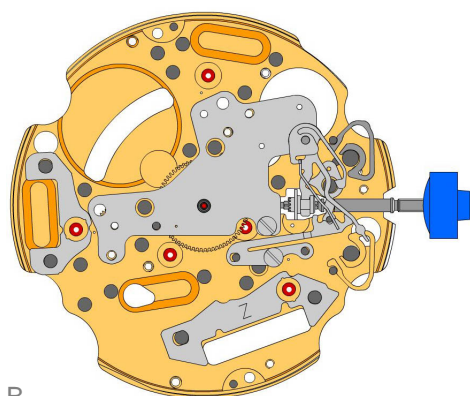
* Please observe the AM/PM clock rhythm.

Battery type: 395 / SR927SW
 Accuracy: +20 / -10 seconds per month

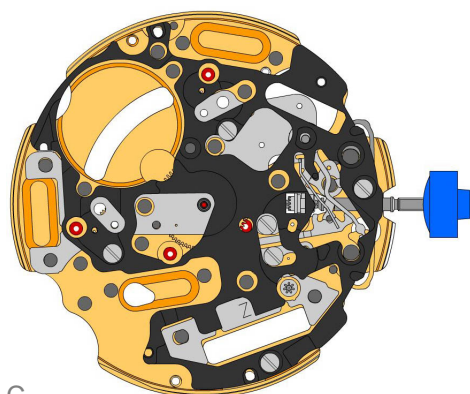
08/2023






A



















B

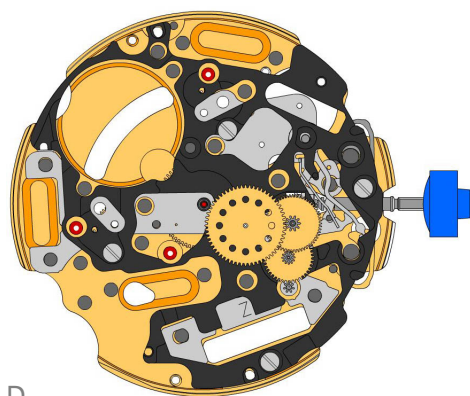


C

2000.574.G 1.		Main plate
3305.290.CO 2.		Cannon pinion with driver (Aig.2, closed)
3301.243 3.		Hour wheel (counter 24h)

2030.017.CO 4.		Centre bridge Center 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)

3603.079 17.		Plastic bracket Plastic bracket held by 4 screws 4000.250.
4000.250 18.		Screw
3715.094.RK 19.		Rotor

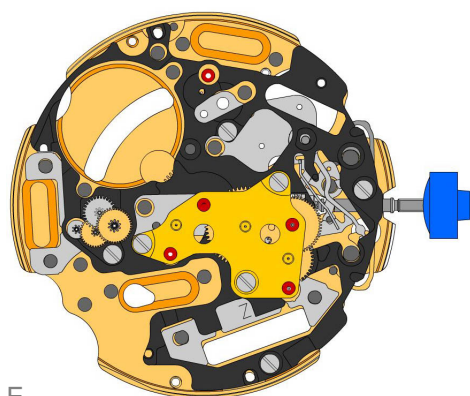


D


3147.046.CO
20.  Intermediate wheel

3136.142.CO
21.  Second wheel (long)

3122.056.CO
22.  Third wheel




E

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

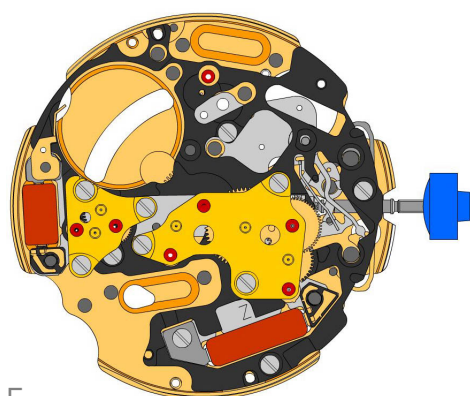
4000.250
24.  Screw

3715.095.RK
25.  Rotor


3147.048.CO
26.  Intermediate wheel (counter)

3007.055.CO
27.  Minute wheel (counter 24h)


3402.007.CO
28.  Minute counting wheel (24h)




F

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

4000.250
30.  Screw

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

3621.054.RK
32.  Coil (counter 9h, chrono)
Attention: Please hold the coil only on the grey coil core.

4000.250
33.  Screw

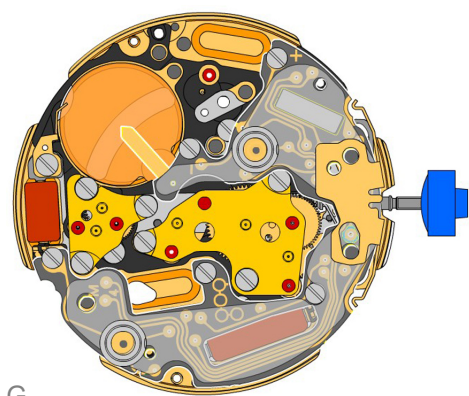
3601.118
34.  Contact strip
Contact strip held by 1 screw 4000.250.

4000.250
35.  Screw







3603.034
36.  Battery insulator

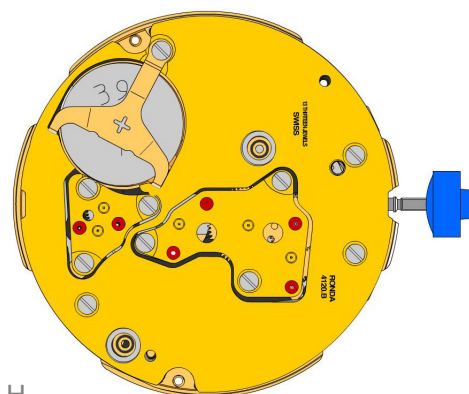
3503.054
37.  Tube

3503.054
38.  Tube







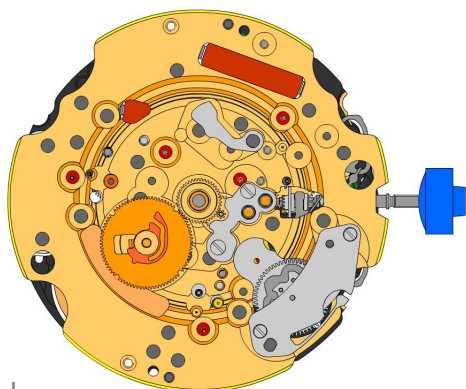
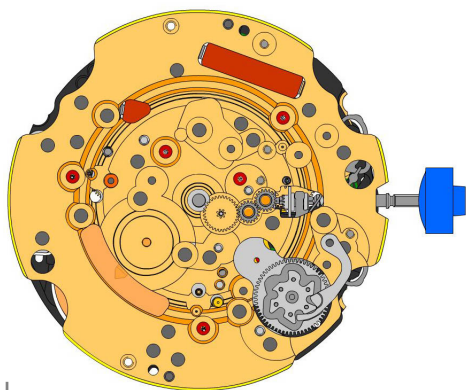
G















3612.176.4120 39.		Electronic module Electronic module held by 5 screws 4000.248. Electronic measurements may be realised now.
4000.248 40.		Screw
3603.069 41.		Circuit insulator
3603.070 42.		Contact insulator
3603.070 43.		Contact insulator
3601.107.G 44.		Pusher contact spring

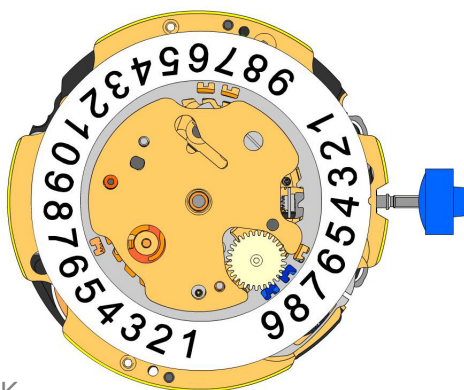


H

2130.160.G.M01.4120B 45.		Electronic module cover Electronic module held by 5 screws 4000.250.
3600.010.HGF 46.		Battery 395
3601.109.G 47.		Bridle + Bridle held by 1 screw 4000. 250.
4000.250 48.		Screw



2000.574.G 49.		Main plate
3004.164 50.		Setting wheel
3004.164 51.		Setting wheel
3007.054.CO 52.		Minute wheel
2130.143 53.		Minute train bridge Minute train bridge held by 2 screws 4000.305.
4000.305 54.		Screw
3004.223 55.		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 56.		Tens jumper Parts 2030.017.CO, 3004.223 and 3500.059 must be exchanged together.
2130.142 57.		Tens jumper maintaining plate Tens jumper maintaining plate held by 2 screws 4000.306. Tensioning the spring arm.
4010.306 58.		Screw
3301.242 59.		Hour wheel (Fig.2)
3315.016 60.		Friction spring
3004.224.CO 61.		Date indicator driving wheel
3500.049 62.		Date jumper



K

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



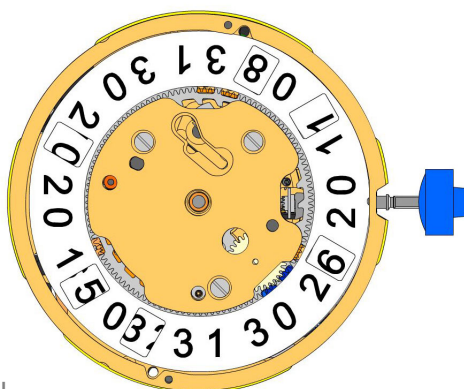
3147.054
64. Tens intermediate wheel



2130.141
65. Date indicator maintaining plate
Date indicator maintaining plate held by 1 screw 4000.250.



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



L

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



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



4000.250
69. Screw



3506.072.G
70. Dial support



8200
71. Moebius 8200



9014
72. Moebius 9014



124
73. Jismaa 124

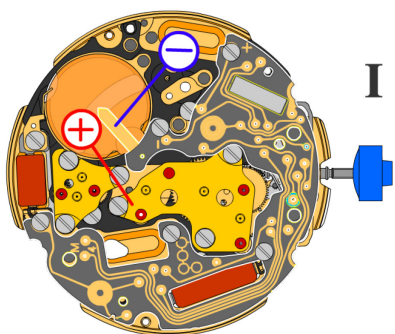


9020
74. Moebius 9020



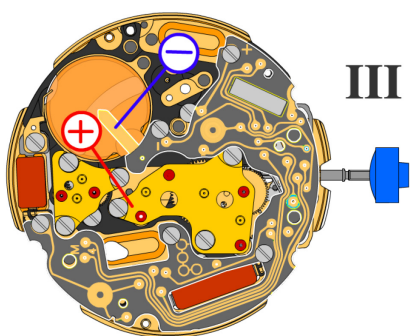


Battery	395
Voltage	1.55 V



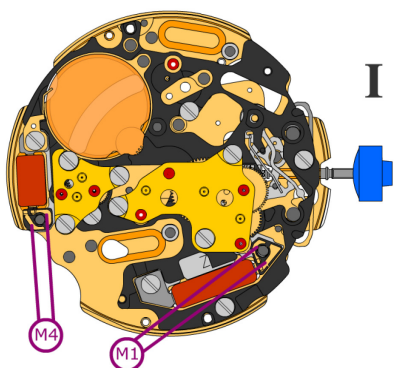
*Setting stem in position I, calendar not in gear,
60 s measuring interval for rate and consumption:*

Typical consumption	1.42 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:

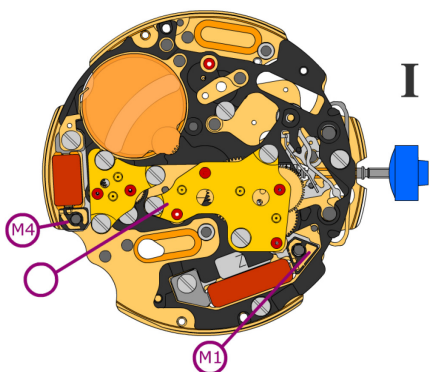
Typical consumption	0.10 μA
Maximal consumption	0.30 μA



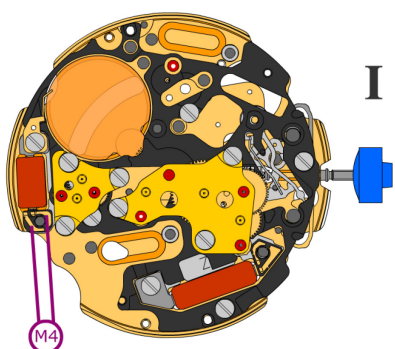
Coil resistance M1

1.90 k Ω .. 2.10 k Ω

Coil resistance M4

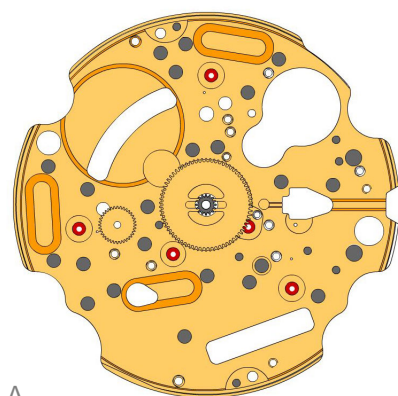
1.68 k Ω .. 1.88 k Ω


Coil isolation M1/M4

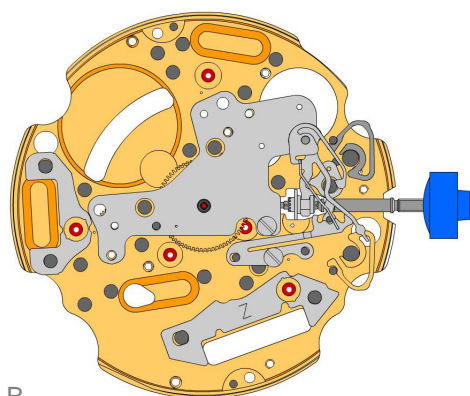
 ∞ k Ω

Signal generator (4.9 ms, 8 Hz):

Lower working voltage limit M4

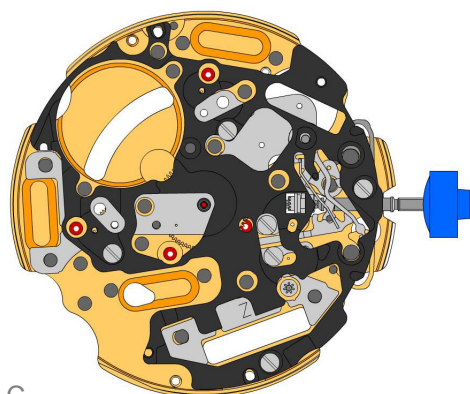
1.20 V






A



















B

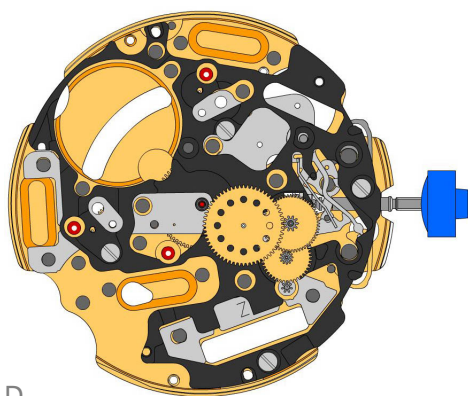


C

2000.574.G 1.		Main plate
3305.290.CO 2.		Cannon pinion with driver (Aig.2, closed)
3301.243 3.		Hour wheel (counter 24h)

2030.024.CO 4.		Centre bridge Center 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)

3603.079 17.		Plastic bracket Plastic bracket held by 4 screws 4000.250.
4000.250 18.		Screw
3715.094.RK 19.		Rotor

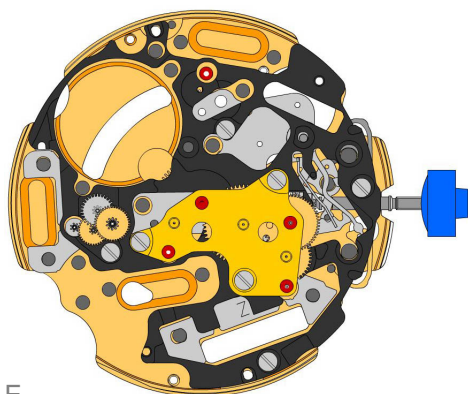


D


3147.046.CO
20.  Intermediate wheel

3136.142.CO
21.  Second wheel (long)

3122.056.CO
22.  Third wheel




E

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

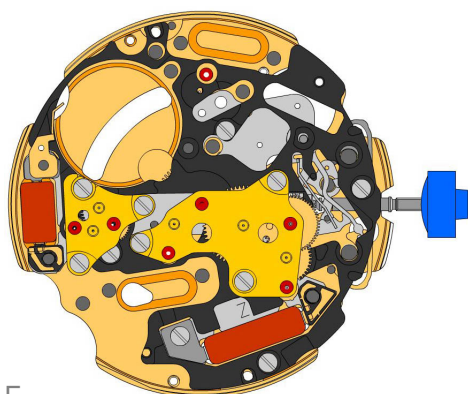
4000.250
24.  Screw

3715.095.RK
25.  Rotor


3147.048.CO
26.  Intermediate wheel (counter)

3007.055.CO
27.  Minute wheel (counter 24h)


3402.007.CO
28.  Minute counting wheel (24h)




F

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

4000.250
30.  Screw

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

3621.054.RK
32.  Coil (counter 9h, chrono)
Attention: Please hold the coil only on the grey coil core.

4000.250
33.  Screw

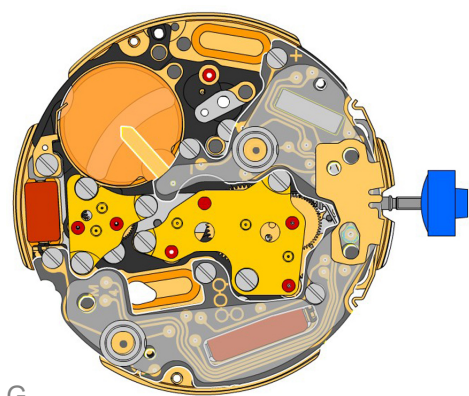
3601.118
34.  Contact strip
Contact strip held by 1 screw 4000.250.

4000.250
35.  Screw







3603.034
36.  Battery insulator

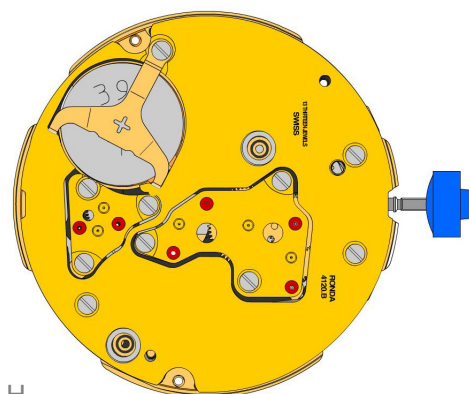
3503.054
37.  Tube

3503.054
38.  Tube







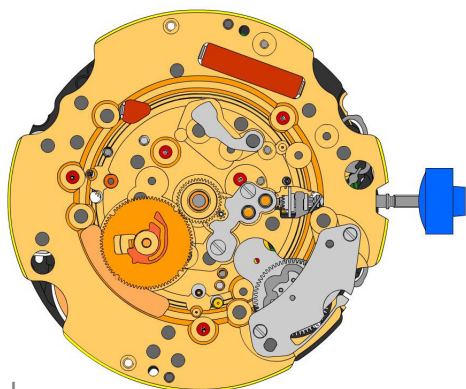
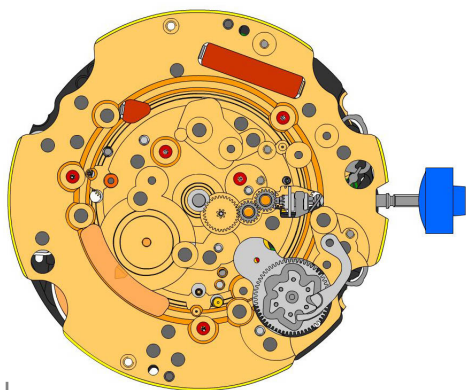
G















3612.176.4120 39.		Electronic module Electronic module held by 5 screws 4000.248. Electronic measurements may be realised now.
4000.248 40.		Screw
3603.069 41.		Circuit insulator
3603.070 42.		Contact insulator
3603.070 43.		Contact insulator
3601.107.G 44.		Pusher contact spring

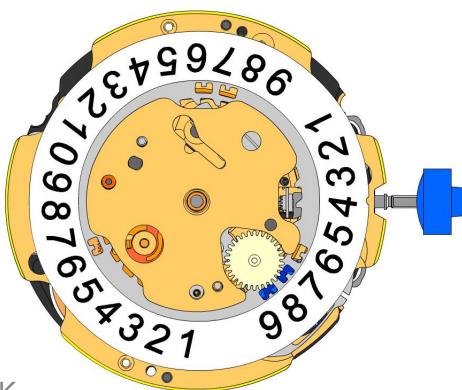


H

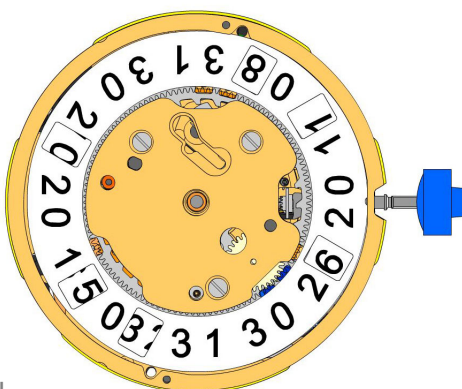
2130.160.G.M01.4120B 45.		Electronic module cover Electronic module held by 5 screws 4000.248.
3600.010.HGF 46.		Battery 395
3601.109.G 47.		Bridle + Bridle held by 1 screw 4000. 250.
4000.250 48.		Screw



2000.574.G 49.		Main plate
3004.164 50.		Setting wheel
3004.164 51.		Setting wheel
3007.054.CO 52.		Minute wheel
2130.143 53.		Minute train bridge Minute train bridge held by 2 screws 4000.250.
4000.305 54.		Screw
3004.227 55.		Tens indicator driving wheel The short tooth of the tens indicator driving wheel must point to the center of the movement.
3500.075 56.		Tens jumper
2130.142 57.		Tens jumper maintaining plate Tens jumper maintaining plate held by 2 screws 4000.306. Tensioning the spring arm.
4010.306 58.		Screw
3301.242 59.		Hour wheel (Aig.2)
3315.016 60.		Friction spring
3004.224.CO 61.		Date indicator driving wheel
3500.049 62.		Date jumper



K



L

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



3147.054
64. Tens intermediate wheel



2130.141
65. Date indicator maintaining plate
Date indicator maintaining plate held by 1 screw 4000.250.



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



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



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



4000.250
69. Screw



3506.072.G
70. Dial support



8200
71. Moebius 8200



9014
72. Moebius 9014



124
73. Jismaa 124

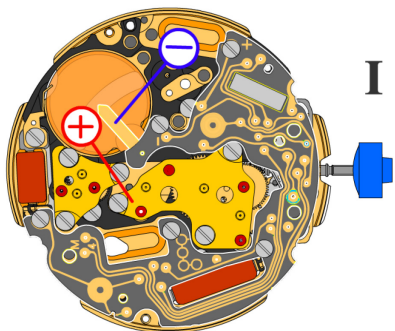


9020
74. Moebius 9020



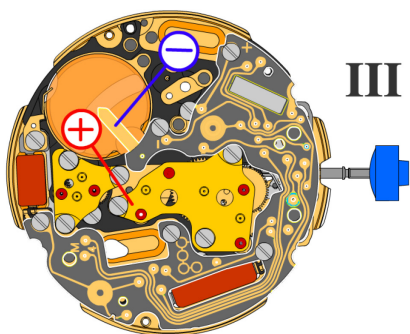


Battery	395
Voltage	1.55 V



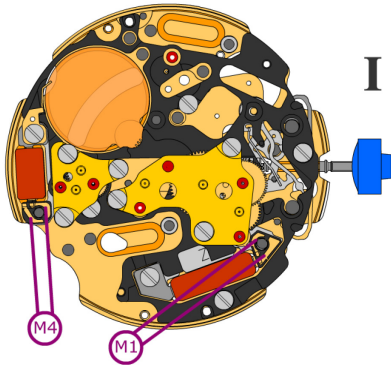
*Setting stem in position I, calendar not in gear,
60 s measuring interval for rate and consumption:*

Typical consumption	1.42 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:

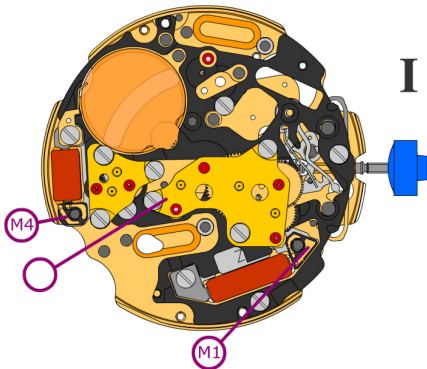
Typical consumption	0.10 μA
Maximal consumption	0.30 μA



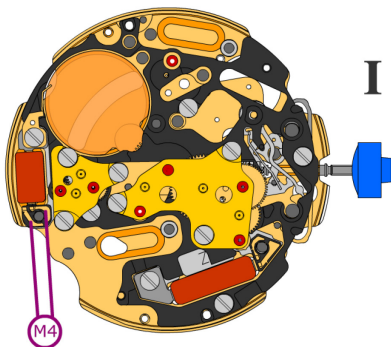
Coil resistance M1

1.90 k Ω .. 2.10 k Ω

Coil resistance M4

1.68 k Ω .. 1.88 k Ω


Coil isolation M1/M4

 ∞ k Ω

Signal generator (4.9 ms, 8 Hz):

Lower working voltage limit M4

1.20 V