

Caliber 4003.B – 12½"



Product Specifications

Analog quartz movement

Line xtratech

Caliber 4003.B

Size 12½"

Version Swiss Made 5 Jewels / gold plated EOL

Standard battery life 60 months

Standard hand fitting height 0

Features

- Very long battery life
- Repairable metal watch movement
- Power saving mechanism with pulled out stem:
Reduction of consumption approximately 70%
- Big date with quick change

Functions

- Multifunction
- Big date
- 3 hands

Quartz Movements

Multifunctions

RONDA xtratech

Caliber 4003.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	60 months
Battery voltage	1.5 V
Current consumption – typical	1.19 µA (Date Mechanism not in Gear)
Current consumption – maximum	1.65 µA (Date Mechanism not in Gear)

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

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



Position pour extraire la tige
Position zum Entfernen der Stellwelle
Position to remove the stem



190

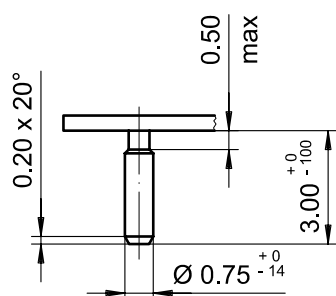
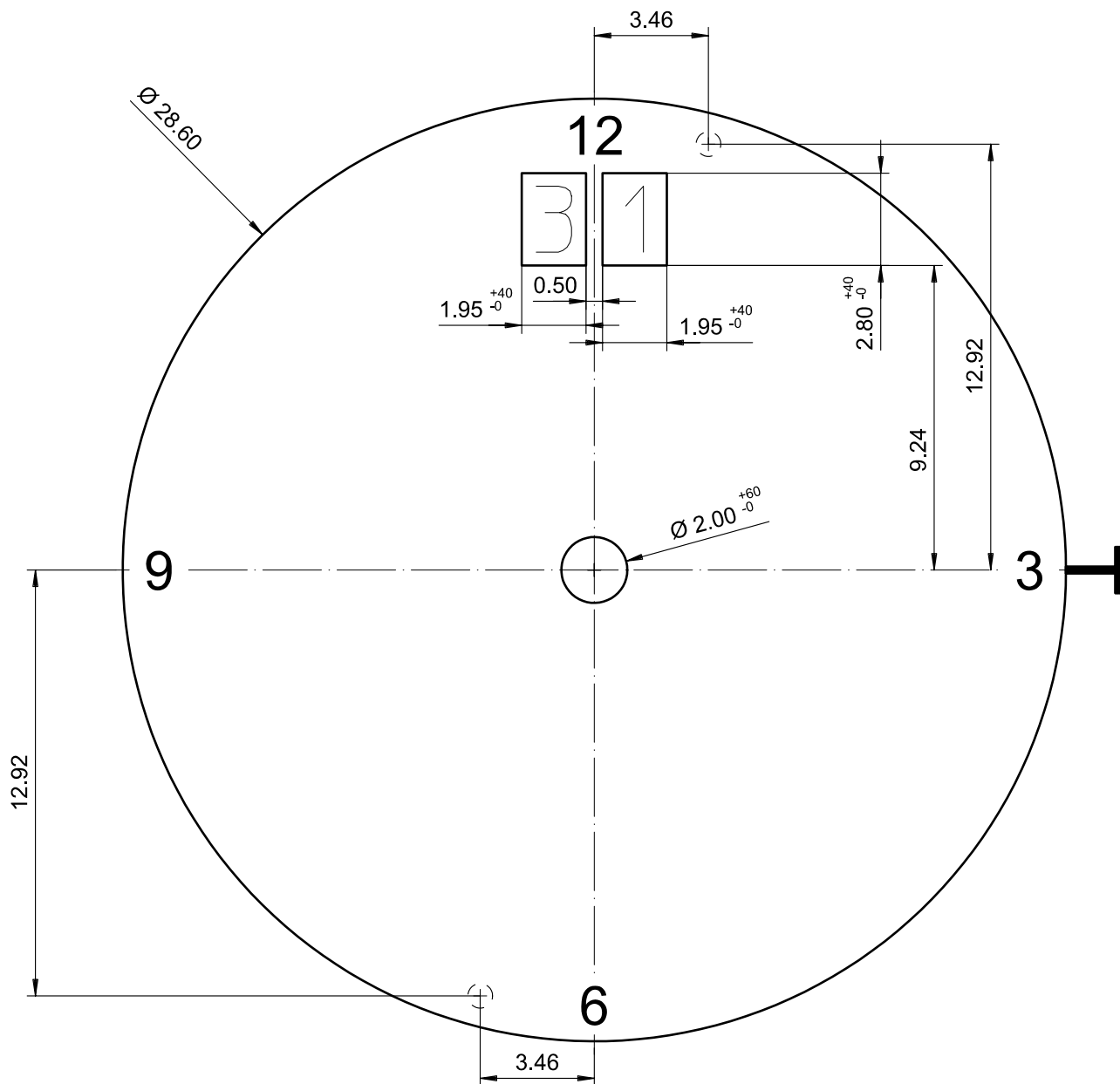
Ø 1.10

Filetage: Gewinde: Thread:

S 090

Technical drawing of a mechanical part, showing a cross-section with dimensions: (R 13.43), 2.00, 0.80, 0.25, and Ø 2.20.

Cage Uhrwerkgestell Frame		12½"		Issued		01 Nov 2004		mk	
				Modified		20.Juni 2007 ÅA 2180		mk	
				Released		YES			
				Tolerance		+/- 20 µm			
				Scale		10 : 1 (5 : 1) (A3H)			
RONDA	4003.B	Sous réserve de modifications Änderungen vorbehalten Modifications reserved							
		No.	5000.347					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	12H

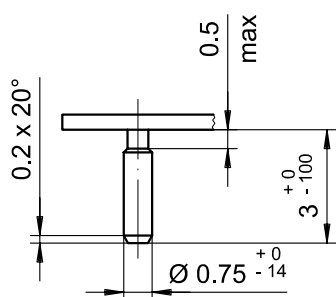
Cadran
Zifferblatt
Dial

12 1/2"

Issued	13 Dez 2006	cw
Modified	15.Dez.2006 ÄA ----	cm
Released	YES	
Tolerance	+/- 20 µm	
Scale	5 : 1 (A4V)	
Sous réserve de modifications Äenderungen vorbehalten Modifications reserved		
No.	5010.701	01

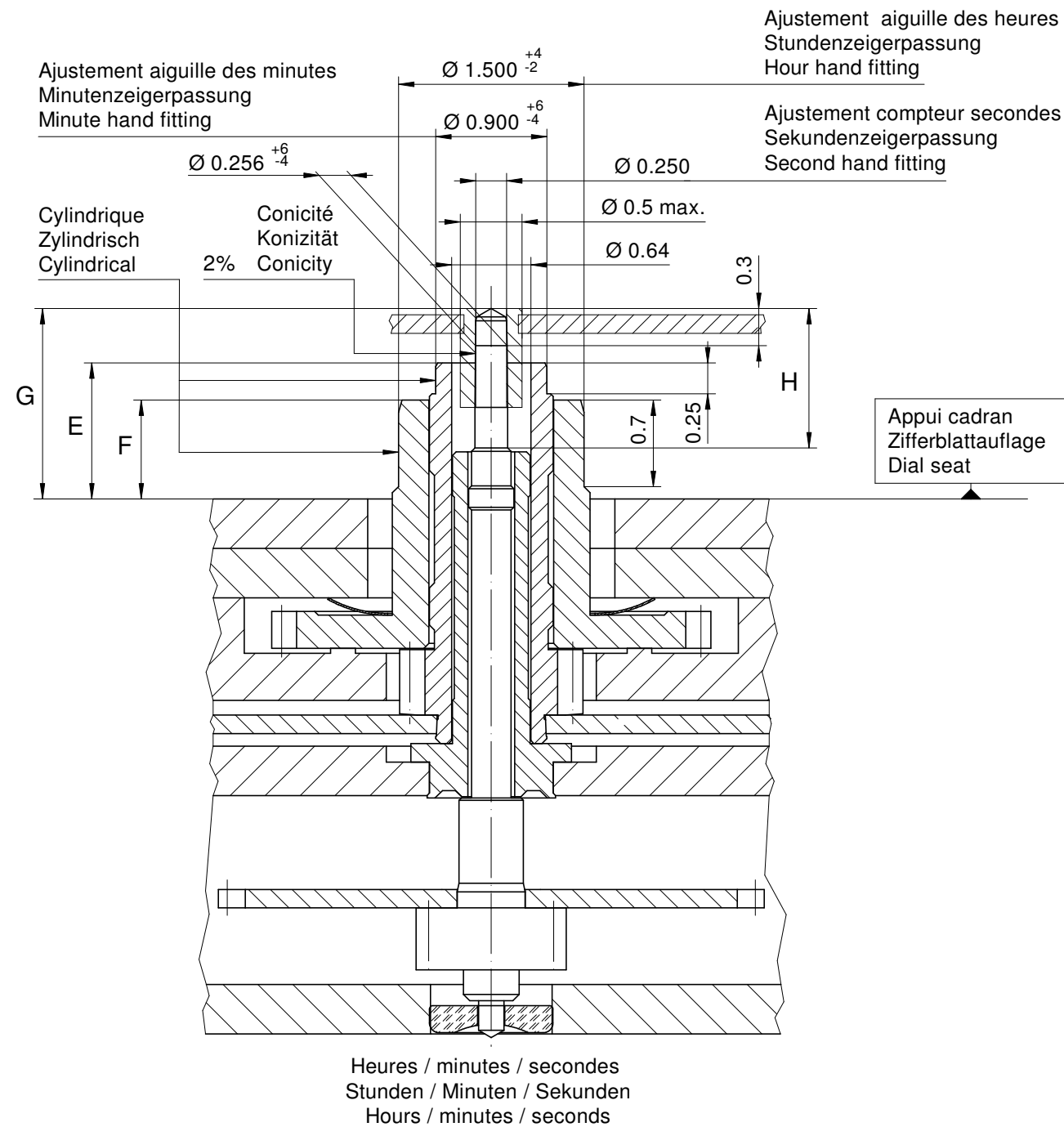
RONDA

4002.B, 4003.B



Tige	Date
Stellw.	Datum
Stem	Date
3H	6H
	<input type="text"/>

Cadran Zifferblatt Dial <div style="text-align: right; font-size: 2em;">12½"</div>		Issued	13 Dez 2006	cw
		Modified	15.Dez.2006 ÄÄ ----	cm
		Released	YES	
		Tolerance	+/- 20 µm	
		Scale	5 : 1 (A4V)	
RONDA	4002.B, 4003.B	Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
		No.	5010.702	01



		Aig. des secondes Sekundenzeiger Second hand	Aig. des minutes Minutenzeiger Minute hand	Aig. des heures Stundenzeiger Hour hand	Lors de la pose d'aiguilles, le mouvement doit être soutenu. Beim Zeigersetzen muss das Werk abgestützt werden. The movement needs to be supported for hand setting.
mg	max.	10	30	30	Masse / Masse / Weight *
µNm	max.	0.07	0.80	0.80	Balourd / Unwucht / Unbalance *
gmm ²	max.	0.4	-	-	Inertie / Massenträgheit / Inertia *
N	max.	30	40	40	Force de chassage / Aufpresskraft / Force

Aiguillages Zeigerwerkhöhe Hand fitting height				
Dépassement Höhe über Zifferblattauflage Height over dial seat				
	Pignon des secondes Sekundentrieb Second pinion	Chaussée Minutenrohr Cannon-pinion	Roue des heures Stundenrad Hour wheel	
No	G	E	F	H
0	1.54	1.10	0.80	1.10
-				

Aiguillages Zeigerwerkhöhe Hand fitting height					
Peinture comprise / inkl. Farbe / Paint included					
Epaisseur maximum du cadran Maximale Zifferblattdicke Maximum dial thickness					Epaisseur des aiguilles Zeigerdicke Hands thickness
No	Sous l'aiguille des secondes Unter Sekundenzeiger Under second hand	Sous l'aiguille des minutes Unter Minutenzeiger Under minute hand	Sous l'aiguille des heures Unter Stundenzeiger Under hour hand		
0	1.05	0.70	0.40		
-					

Aiguillages Zeigerwerkhöhen 12½" Hand fitting heights

RONDA

4003.B

Issued	01 Nov 2004	mk
Modified	15 Okt 2014 ÄA 13275	dh
Released	Yes	
Tolerance	µm	
Scale	20 : 1 (A3H)	
Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
No.	3316.092	05

* En cas de données différentes, veuillez contacter le service après-vente

* Bei abweichenden Werten, bitte technischen Kundendienst anfragen

* In case of different values, please contact the customer service



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)

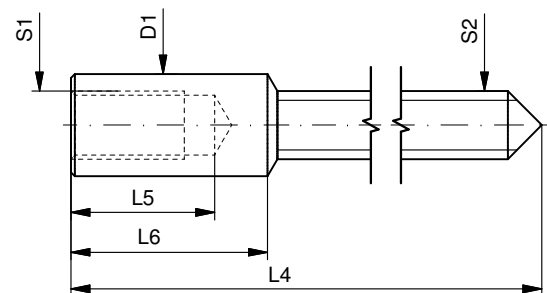
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.177	20.00	10.23	24.23	10.15	0.90	1.10
3000.191	32.00	22.23	36.23	22.15	0.90	1.10



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 Änderungen vorbehalten Modifications reserved		
No.	5030.018	02



Movement holder
Removing setting stem
H5XXX.1T



Movement holder
Setting hands
H5XXX.1A

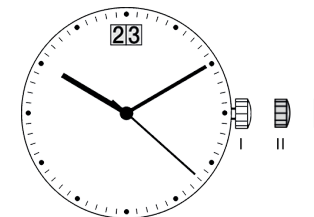
Fitting dial and hands

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

Date switching duration:

First and tenth digit discs

~2hrs



General Instructions

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

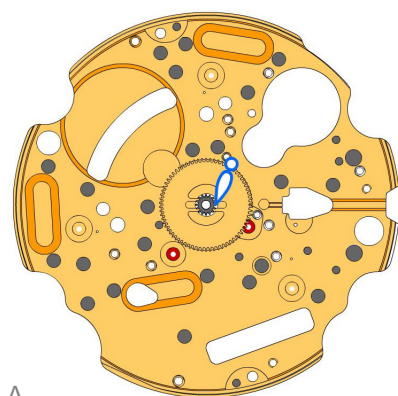
The use of supporting screws is essential when mounting the hands.

Permitted hand setting strengths:

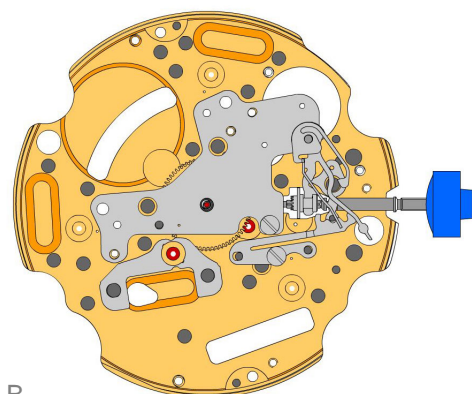
Hr / min. hands: <40N

Other hand: <30N

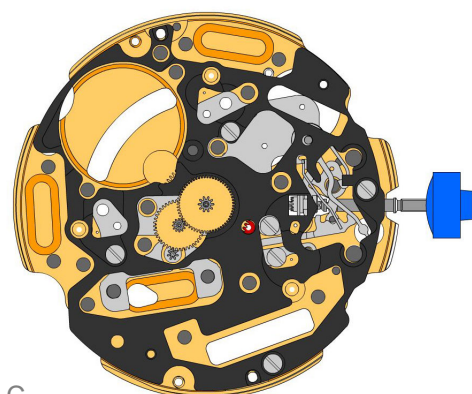
During quick date correction (setting stem in position II), a date switching speed of 5 d/s must not be exceeded.



A



B



C

2000.577.G

1.



Main plate

3305.314.CO

2.



Cannon pinion with driver (Aig.0)

2030.017.CO

3.



Centre bridge

Parts 2030.017.CO, 3004.223 and 3500.059 must be exchanged together. Centre bridge held by 1 screw 4000.250.

4000.250

4.



Screw

3001.055.FI

5.



Sliding pinion

3000.177.CO

6.



Setting stem

3017.049

7.



Setting lever

3905.049

8.



Setting lever jumper (3 positions)

Setting lever jumper held by 1 screw 4000.250.

4000.250

9.



Screw

3015.081

10.



Yoke (3 positions)

Parts 3015.081 and 3905.067 must be exchanged together.

3905.067

11.



Yoke spring

Tensioning the spring arm. Parts 3015.081 and 3905.067 must be exchanged together.

3622.039

12.



Stator (counter 6h, 9h, chrono)

3603.079

13.



Plastic bracket

Platic bracket held by 4 screws 4000.250.

4000.250

14.



Screw

3715.094.RK

15.



Rotor

3147.047.CO

16.



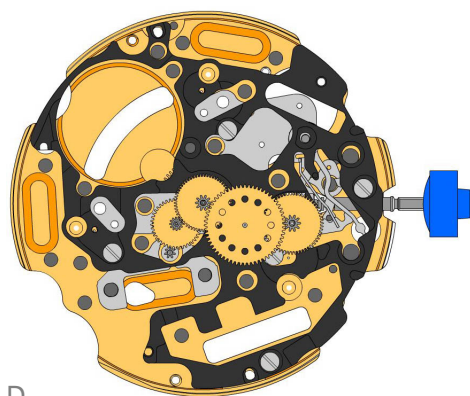
Intermediate wheel (chrono)

3136.172.CO

17.




Second wheel (Aig.0)



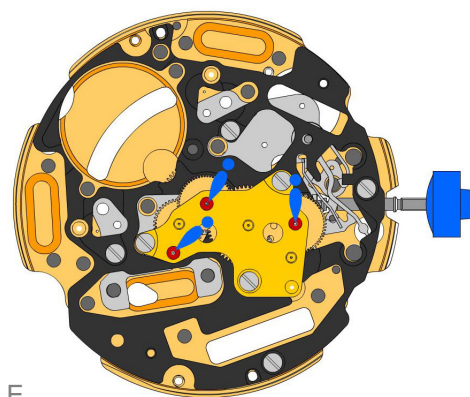
D

3136.148.CO
18.  Second wheel (short)


3122.056.CO
19.  Third wheel

2020.164.G
20.  Train wheel bridge
Train wheel bridge held by 3 screws 4000.250.

4000.250
21.  Screw



E

3621.079.RK
22.  Coil (center)
Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

4000.250
23.  Screw

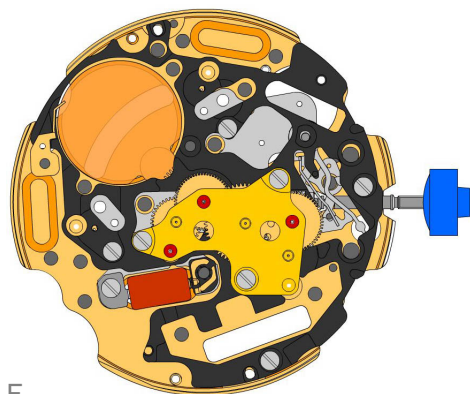
3603.034
24.  Battery insulator

3503.071
25.  Tube

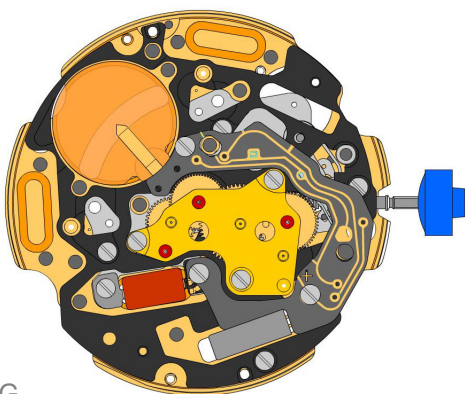
3503.059
26.  Tube

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

4000.250
28.  Screw



F



G

3612.147.4003
29.



Electronic module

Electronic module held by 3 screws 4000.248. Electronic measurements may be realised now.

4000.248
30.

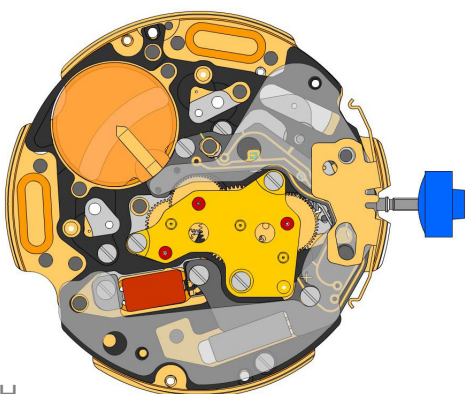


Screw

3503.068
31.



Tube



H

3603.069
32.



Circuit insulator

3601.107.G
33.



Pusher contact spring

2130.176.G.M01.4003B
34.



Electronic module cover

Electronic module cover held by 3 screws 4000.250.

3600.010.HGF
35.



Battery 395

3601.109.G
36.



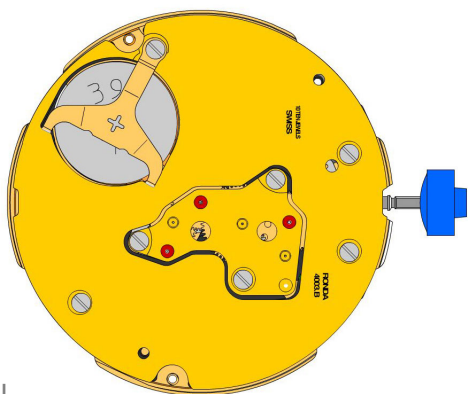
Bridle +

Bridle held by 1 screw 4000.250.

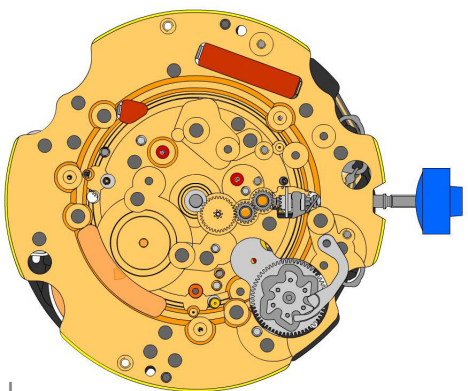
4000.250
37.

















Screw

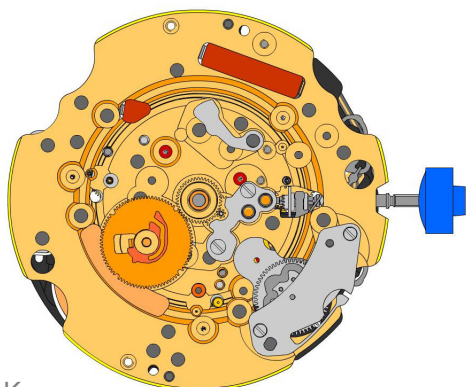


I

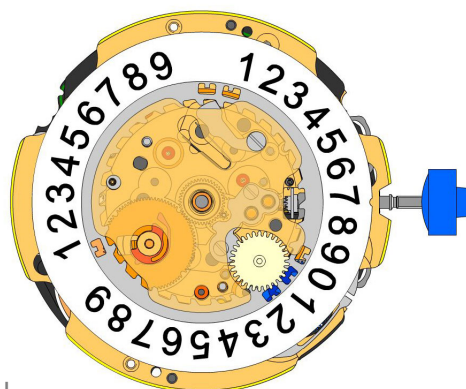


J

2000.577.G 38.		Main plate
3004.164 39.		Setting wheel
3004.164 40.		Setting wheel
3007.054.CO 41.		Minute wheel
2130.143 42.		Minute train bridge Minute train bridge held by 2 screws 4000.305.
4000.305 43.		Screw
3004.223 44.		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 45.		Tens jumper Parts 2030.017.CO, 3004.223 and 3500.059 must be exchanged together.
2130.142 46.		Tens jumper maintaining plate Tens jumper maintaining plate held by 2 screws 4000.306. Tensioning the spring arm.
4010.306 47.		Screw
3301.285 48.		Hour wheel (Aig.0)
3315.016 49.		Friction spring
3004.224.CO 50.		Date indicator driving wheel
3500.049 51.		Date jumper



K



L

3504.214.AF
52.



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

3147.054
53.



Tens intermediate wheel

2130.141
54.



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

3905.070
55.



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

3504.216.AF
56.



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

2130.140.G
57.



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

4000.250
58.



Screw

3506.072.G
59.



Dial support

8200
60.



Moebius 8200

9014
61.



Moebius 9014

124
62.



Jismaa 124

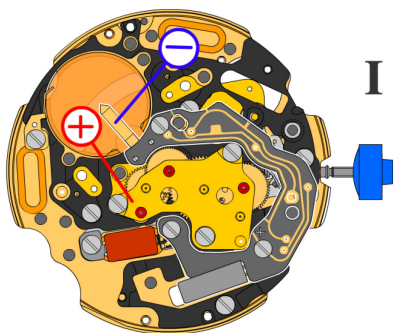
9020
63.



Moebius 9020

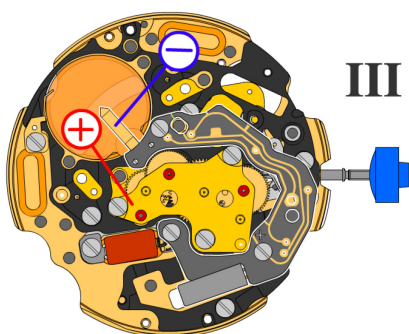


Battery	395
Voltage	1.55 V



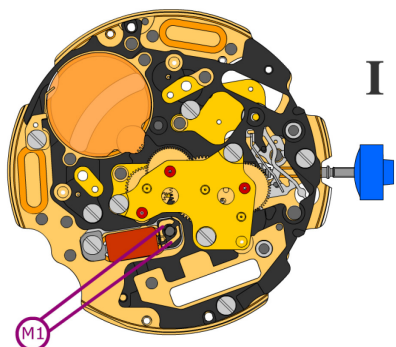
*Setting stem in position I, calendar not in gear,
60 s measuring interval for rate and consumption:*

Typical consumption	1.19 μA
Maximal consumption	1.65 μA
Rate	-10s/M. .. +20s/M.
Lower working voltage limit	1.20 V

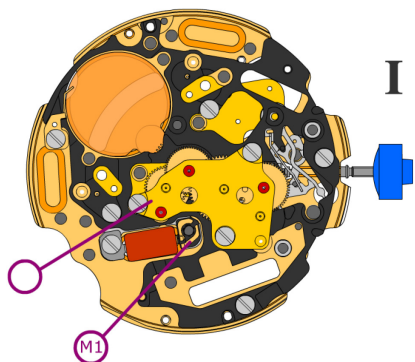


Setting stem in position III, 60 s measuring interval:

Typical consumption	0.10 μA
Maximal consumption	0.30 μA

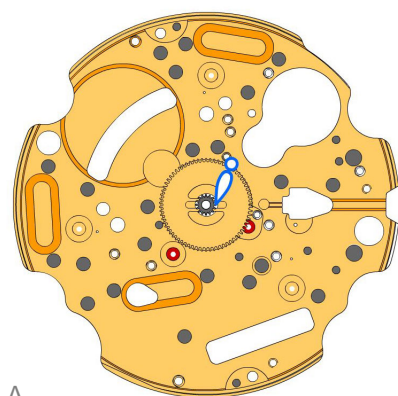


Coil resistance M1

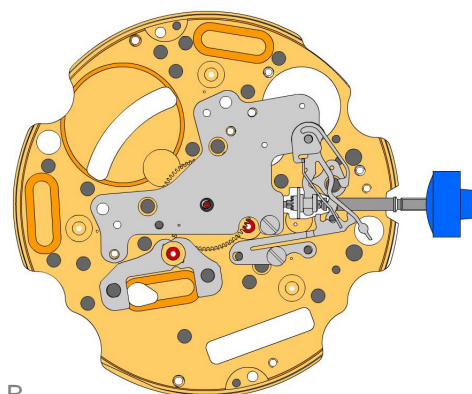
2.20 k Ω .. 2.40 k Ω


Coil isolation M1

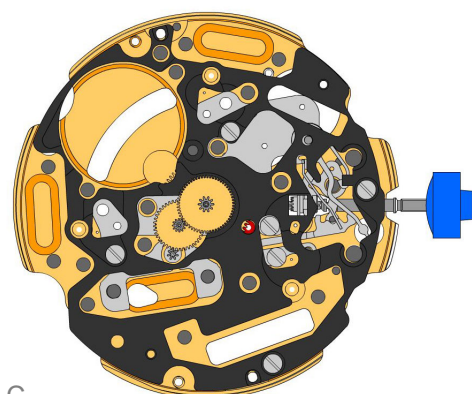
 ∞ k Ω



A



B



C

2000.577.G

1.



Main plate

3305.314.CO

2.



Cannon pinion with driver (Aig.0)

2030.037.CO

3.



Centre bridge

Centre bridge held by 1 screw 4000.250.

4000.250

4.



Screw

3001.055.FI

5.



Sliding pinion

3000.177.CO

6.



Setting stem

3017.049

7.



Setting lever

3905.049

8.



Setting lever jumper (3 positions)

Setting lever jumper held by 1 screw 4000.250.

4000.250

9.



Screw

3015.081

10.



Yoke (3 positions)

3905.067

11.



Yoke spring

Tensioning the spring arm.

3622.039

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Stator (counter 6h, 9h, chrono)

3603.079

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Plastic bracket

Platic bracket held by 4 screws 4000.250.

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3715.094.RK

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Rotor

3147.047.CO

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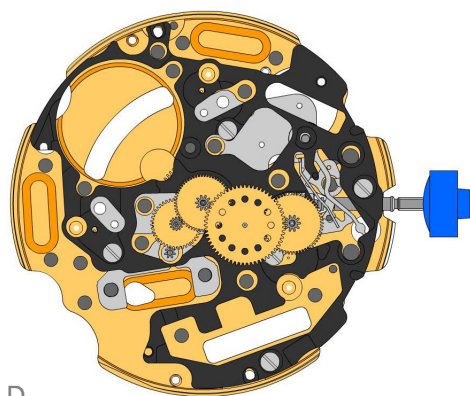
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3136.172.CO

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Second wheel (Aig.0)



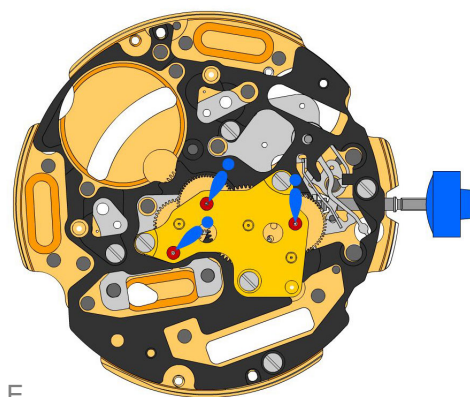
D

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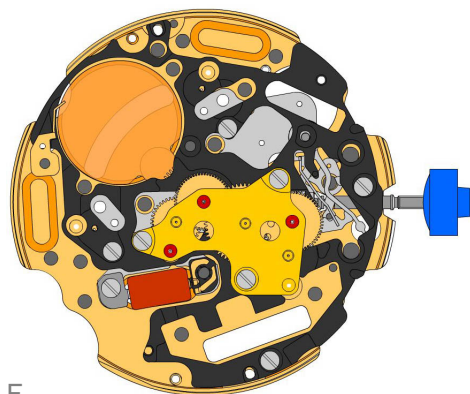
3603.034
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3503.071
25.  Tube

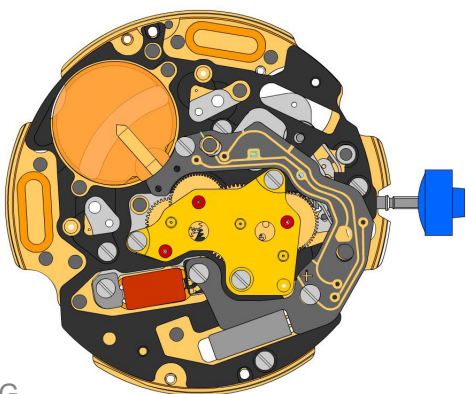
3503.059
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3601.118
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4000.250
28.  Screw



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3612.147.4003
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4000.248
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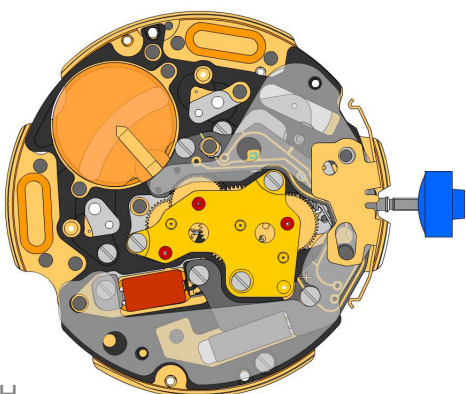


Screw

3503.068
31.



Tube



H

3603.069
32.



Circuit insulator

3601.107.G
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Pusher contact spring

2130.176.G.M01.4003B
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Electronic module cover

Electronic module cover held by 3 screws 4000.250.

3600.010.HGF
35.



Battery 395

3601.109.G
36.



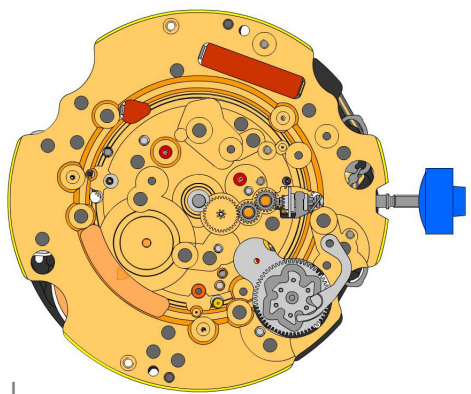
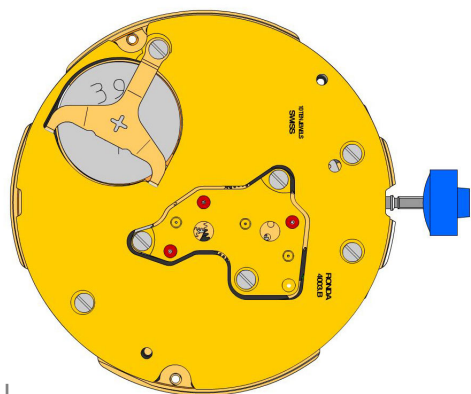
Bridle +














Bridle held by 1 screw 4000.250.

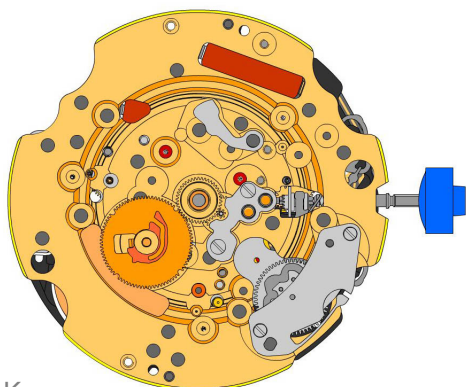
4000.250
37.



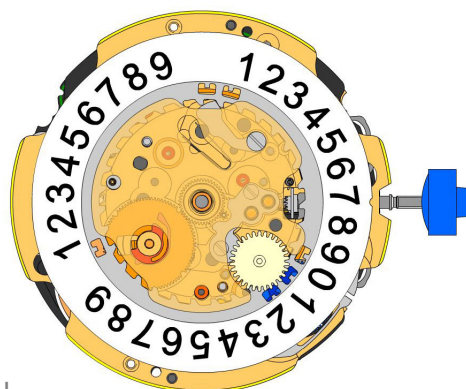
Screw



2000.577.G 38.		Main plate
3004.164 39.		Setting wheel
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3007.054.CO 41.		Minute wheel
2130.143 42.		Minute train bridge Minute train bridge held by 2 screws 4000.305.
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3504.214.AF
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Tens intermediate wheel

2130.141
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3905.070
55.



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3504.216.AF
56.



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

2130.140.G
57.



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

4000.250
58.



Screw

3506.072.G
59.



Dial support

8200
60.



Moebius 8200

9014
61.



Moebius 9014

124
62.



Jismaa 124

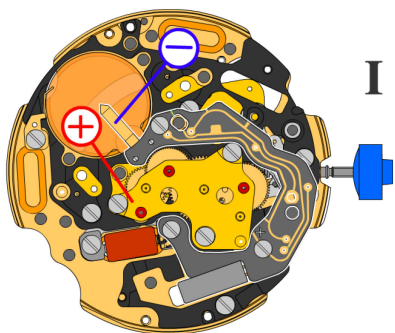
9020
63.



Moebius 9020

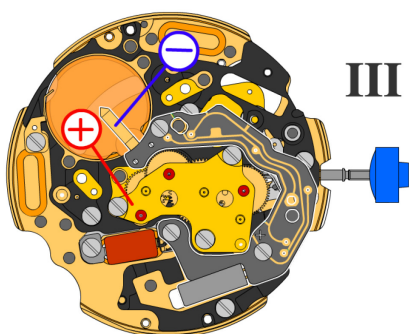


Battery	395
Voltage	1.55 V



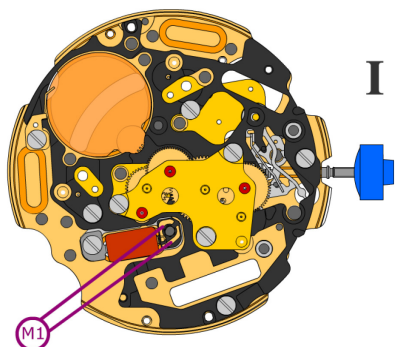
*Setting stem in position I, calendar not in gear,
60 s measuring interval for rate and consumption:*

Typical consumption	1.19 μA
Maximal consumption	1.65 μA
Rate	-10s/M. .. +20s/M.
Lower working voltage limit	1.20 V

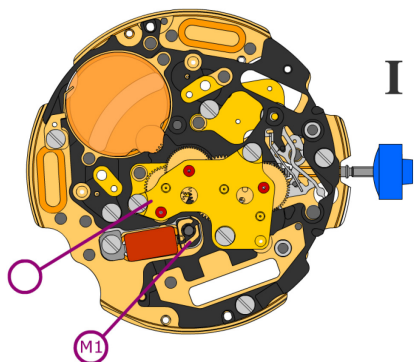


Setting stem in position III, 60 s measuring interval:

Typical consumption	0.10 μA
Maximal consumption	0.30 μA



Coil resistance M1

2.20 k Ω .. 2.40 k Ω


Coil isolation M1

 ∞ k Ω