

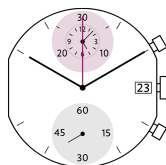
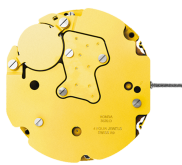
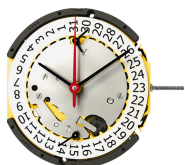


UNIQUE
BY SWISS DESIGN

#rondamovement

 **RONDA**

Caliber 3520.D – 10½ x 11½"



Product Specifications

Analog quartz movement

Line	startech
Caliber	3520.D
Size	10½ x 11½"
Version Swiss Made	4 Jewels / gold plated
Version Swiss Parts	4 Jewels / nickel plated
Standard battery life	54 months
Standard hand fitting height	1

Features

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

Functions

- 30 minute / 12 hour counter
- Center stop second (1/1 sec)
- 12 hour counter
- ADD and SPLIT functions
- Chronograph
- Small second
- Date

Quartz Movements

Chronographs

RONDA startech

Caliber 3520.D – 10½ x 11½"

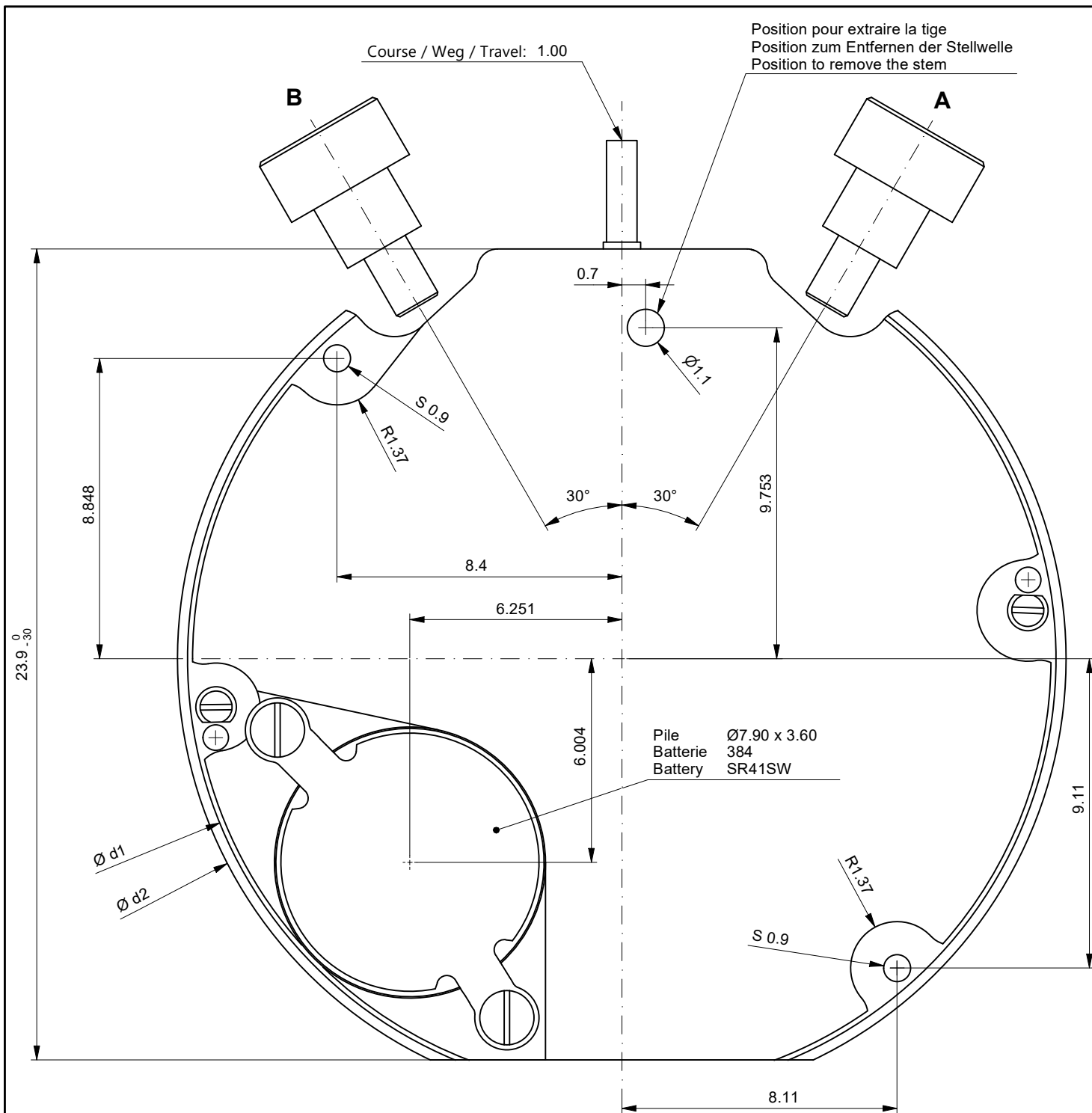
Technical Specifications

Diameter Total	26.20 mm
Case fitting	23.90 mm
Movement height	4.90 mm
Height over standard battery	4.90 mm
Movement rest	0.80 mm
Height over stem	1.70 mm
Length of stem travel	1.00 mm
Stem thread	0.90 mm
Useful torque second – typical	6 µNm
Useful torque minute – typical	300 µNm
Useful torque center stop second – typical	6 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

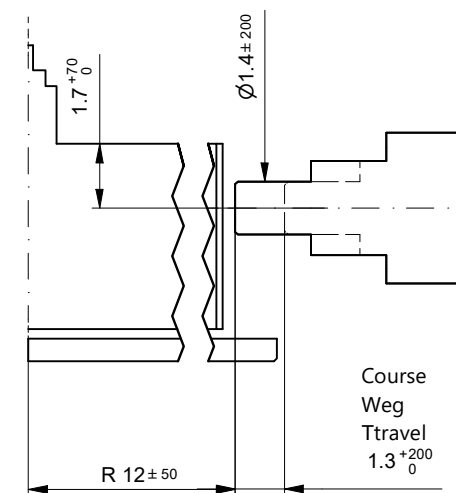


Battery Specifications

Standard battery	No. 384
Standard battery life	54 months
Battery voltage	1.5 V
Current consumption – typical	1.14 µA (Date Mechanism not in Gear)
Current consumption – maximum	1.65 µA (Date Mechanism not in Gear)



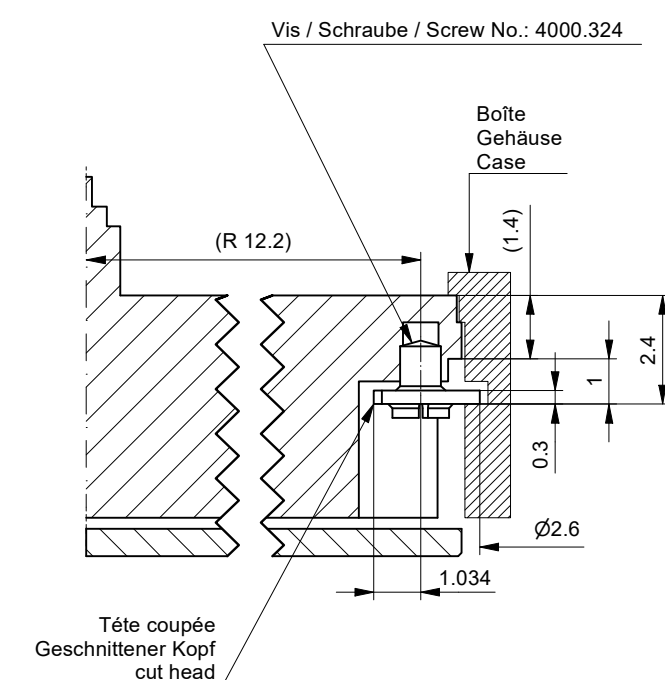
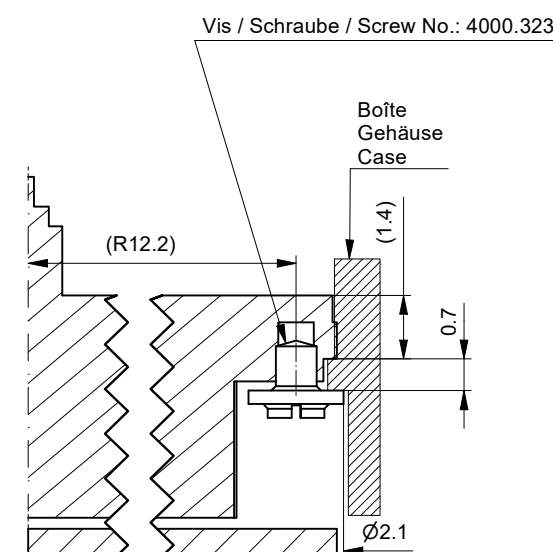
Poussoir / Drücker / Pusher A & B



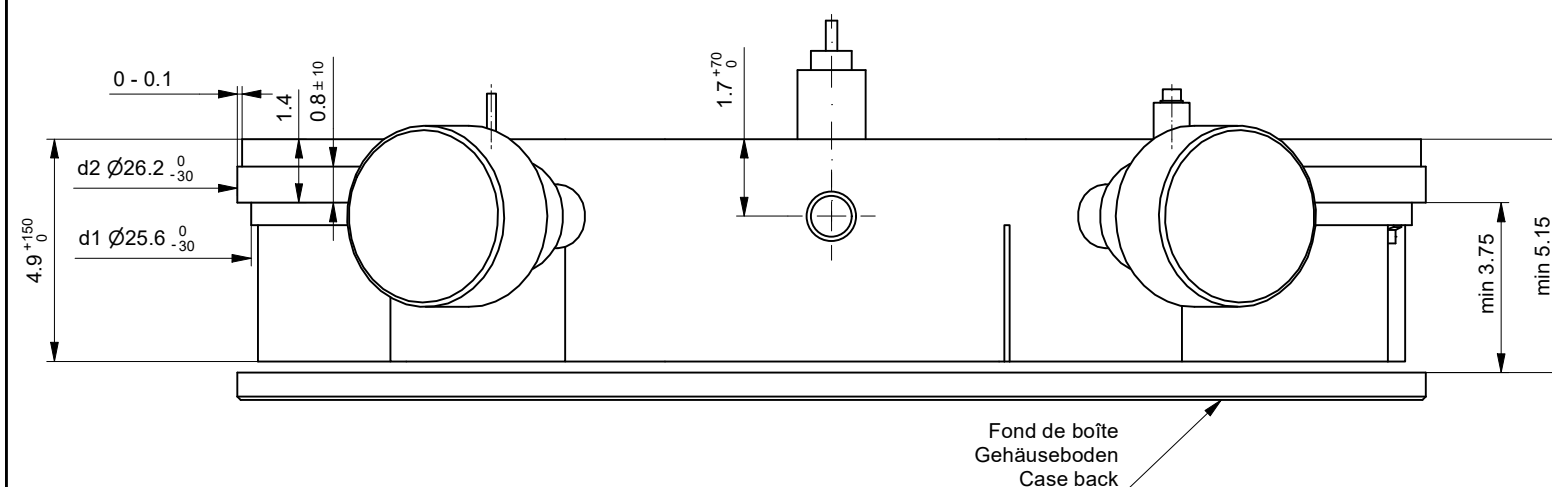
L'angle indiqué pour la direction du poussoir et la position doivent être respectés. pour un autre angle des poussoirs A et B, voir plan 5000.384.

Der angegebene Winkel für die Drückerrichtung und die Position müssen eingehalten werden. Für weitere Drückerwinkel A und B, siehe Zeichnung 5000.384.

The indicated angle of the pusher direction and the position must be fulfilled. For further angles of the pusher A and B, see drawing 5000.384.



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

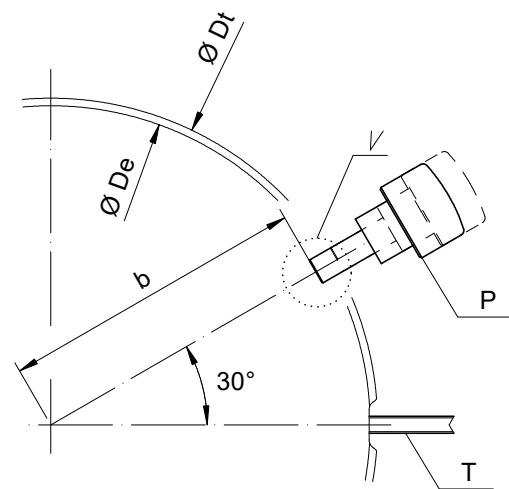


Cage Uhrwerkgestell 11½" X 10½" Frame

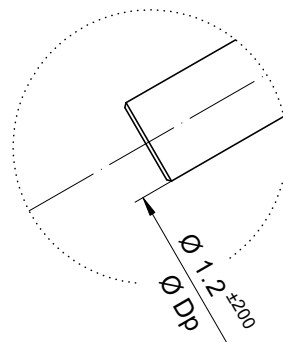
RONDA 3520.D

Issued	18.05.2009	mg5227
Modified	11.05.2022	dh5221
Released	YES	
Mod. No.	45310	
Tolerance	±20 µm	
Scale	6:1	Page 1 / 1 A3
Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
No.	5000.385	02

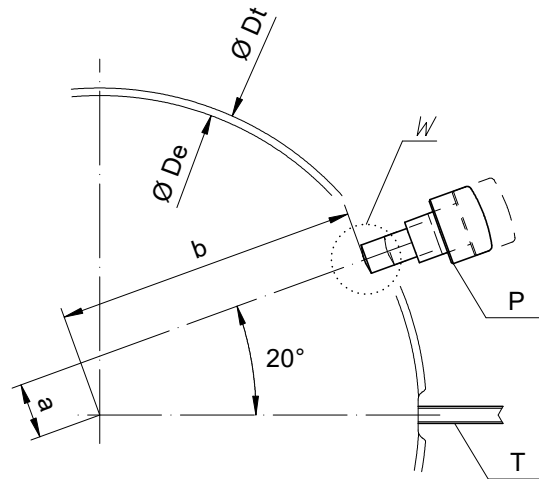
Angle Winkel Angle	30°	
Ø Dp	b	
1.00	11.95	
1.10	11.95	
1.20	11.95	
1.30	11.95	
1.40	11.95	



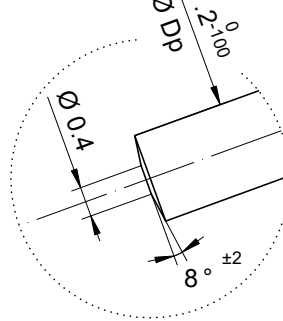
Detail V



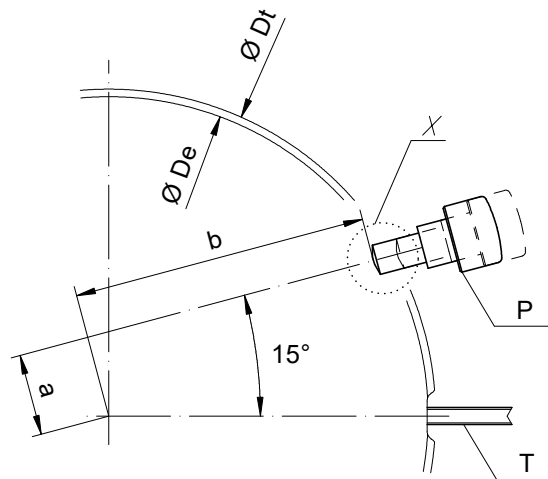
Angle Winkel Angle	20°	
Ø Dp	a	b
1.10	1.94	11.84
1.20	1.99	11.84



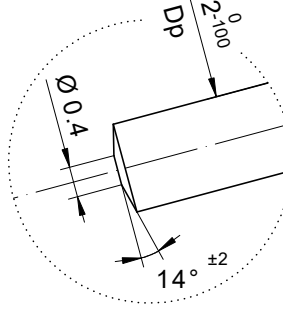
Detail W



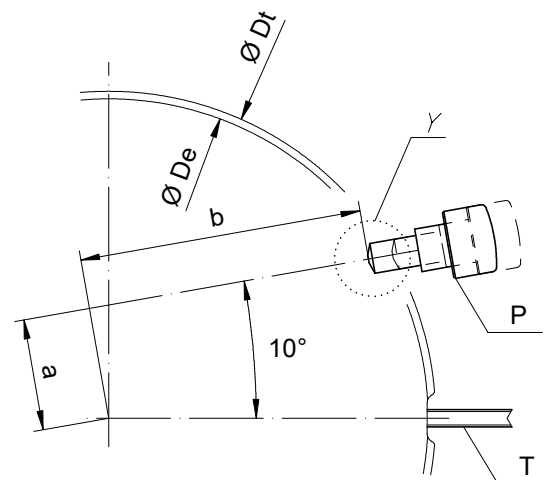
Angle Winkel Angle	15°	
Ø Dp	a	b
1.10	2.97	11.64
1.20	3.02	11.63



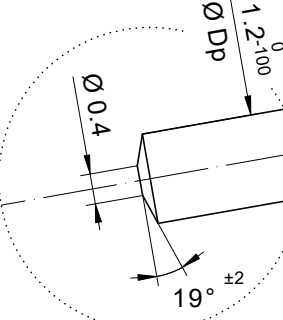
Detail X



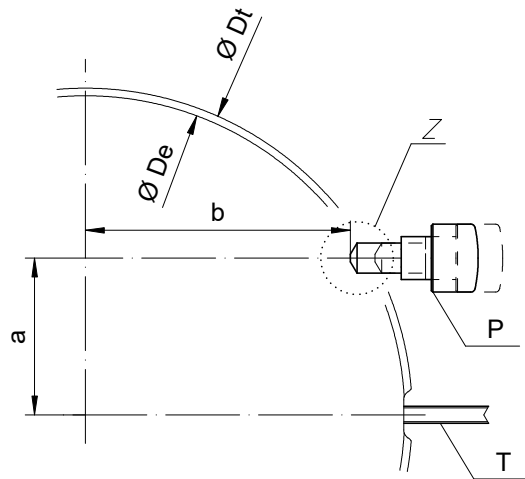
Angle Winkel Angle	10°	
Ø Dp	a	b
1.10	3.98	11.35
1.20	4.03	11.33



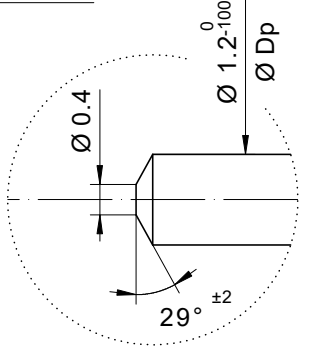
Detail Y



Angle Winkel Angle	0°	
Ø Dp	a	b
1.10	5.92	10.51
1.20	5.97	10.48



Detail Z



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

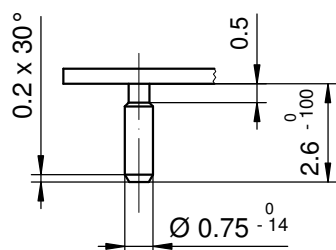
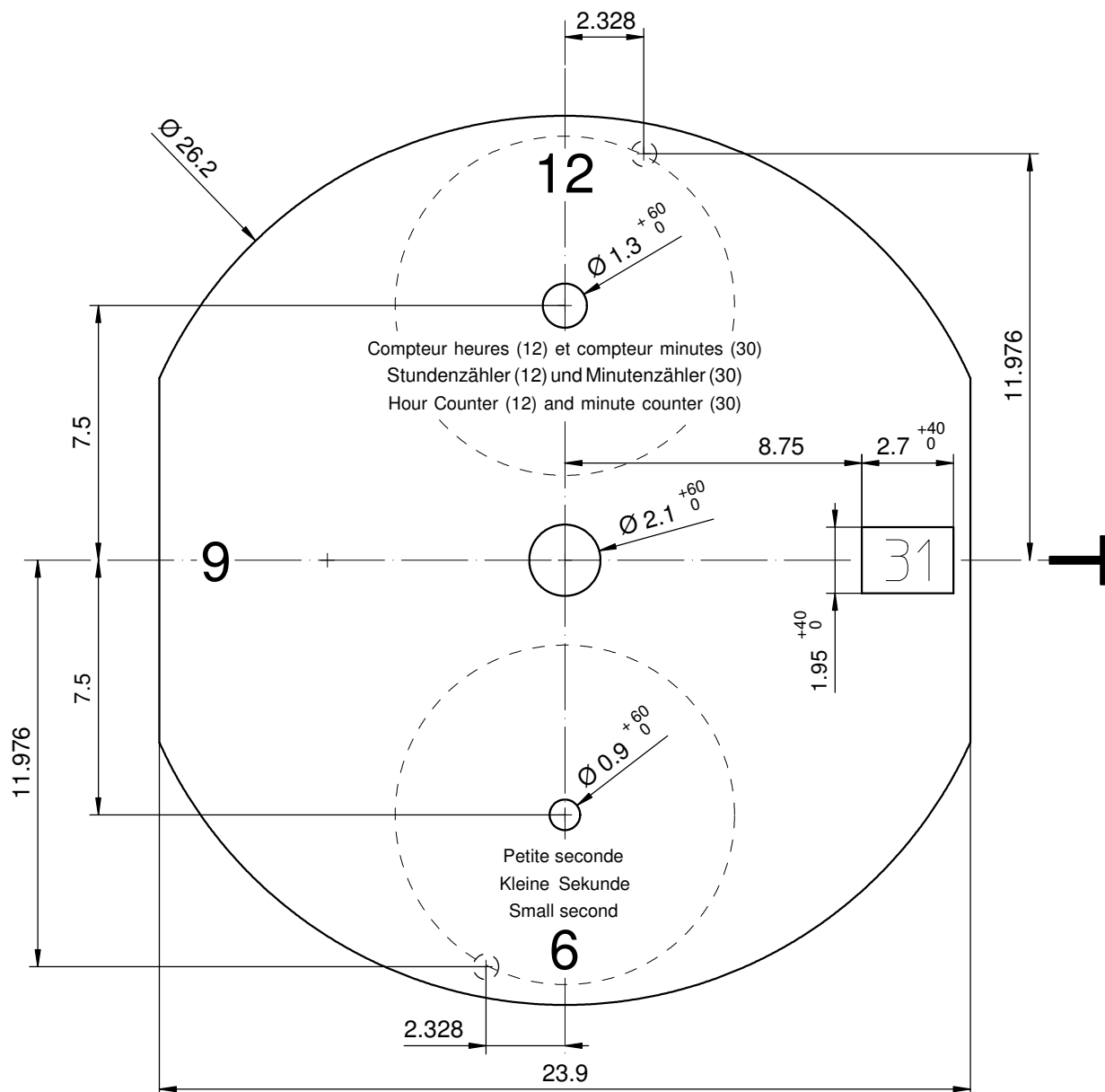
T: tige de mise à l'heure
Stellwelle
stem

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

RONDA

35xx.x

Issued	02 Feb 2010	mK
Modified	03 Feb 2011 ÄA 6970	mK
Released	YES	
Tolerance	+/- 20 µm	
Scale	2.5 : 1 (10 : 1) (A3H)	
Sous réserve de modifications Äenderungen vorbehalten Modifications reserved		
No.	5000.384	00



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	3H

Cadran
Zifferblatt
Dial

11½ x 10½"

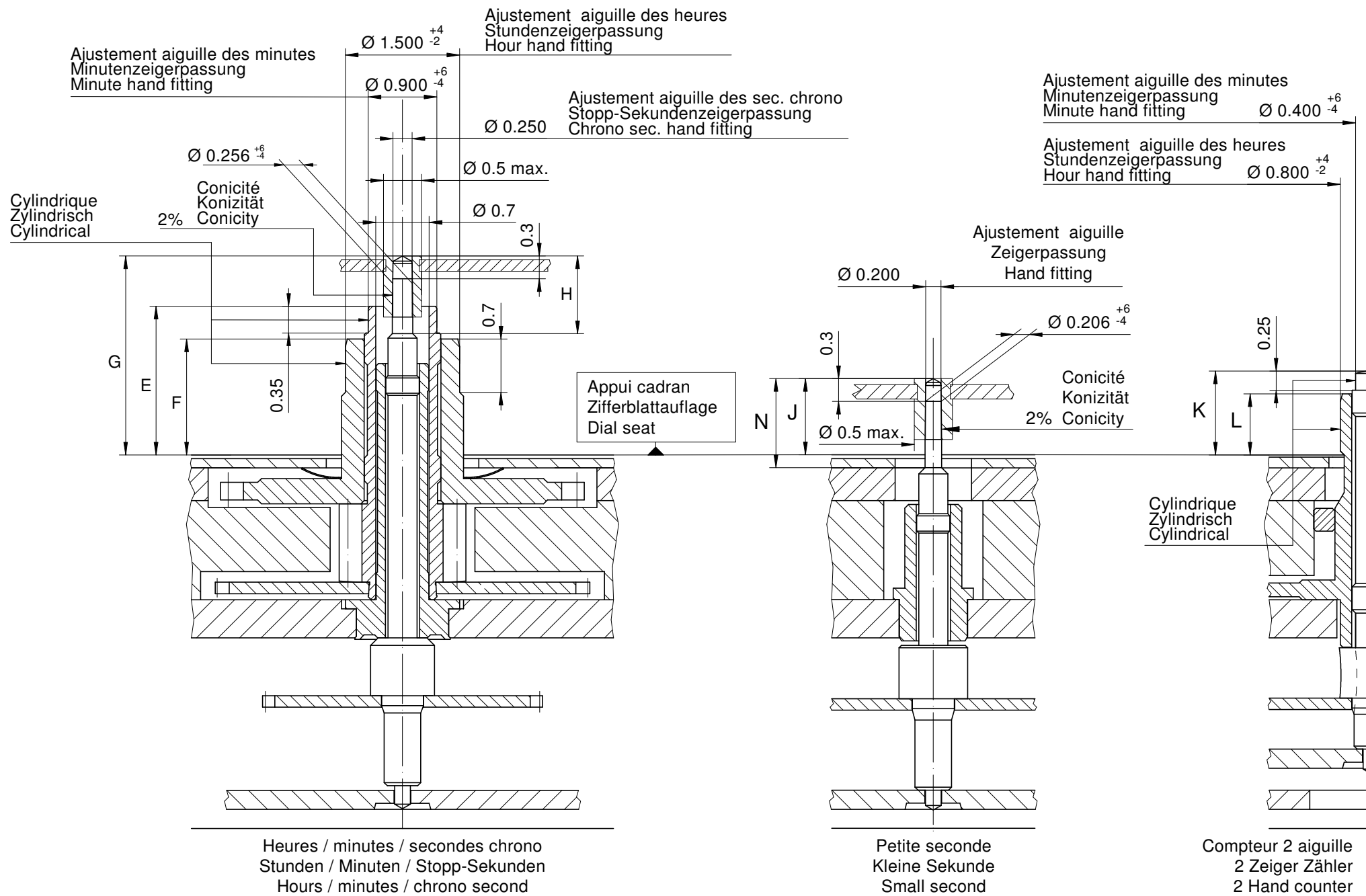
Issued	18 Mai 2009	mg
Modified	03 Feb 2011 ÄA 6970	mK
Released	YES	
Tolerance	± 20 µm	
Scale	5 : 1 (A4V)	

Sous réserve de modifications
Änderungsvorbehalten
Modifications reserved

RONDA

3520.D

No.	5010.671	00
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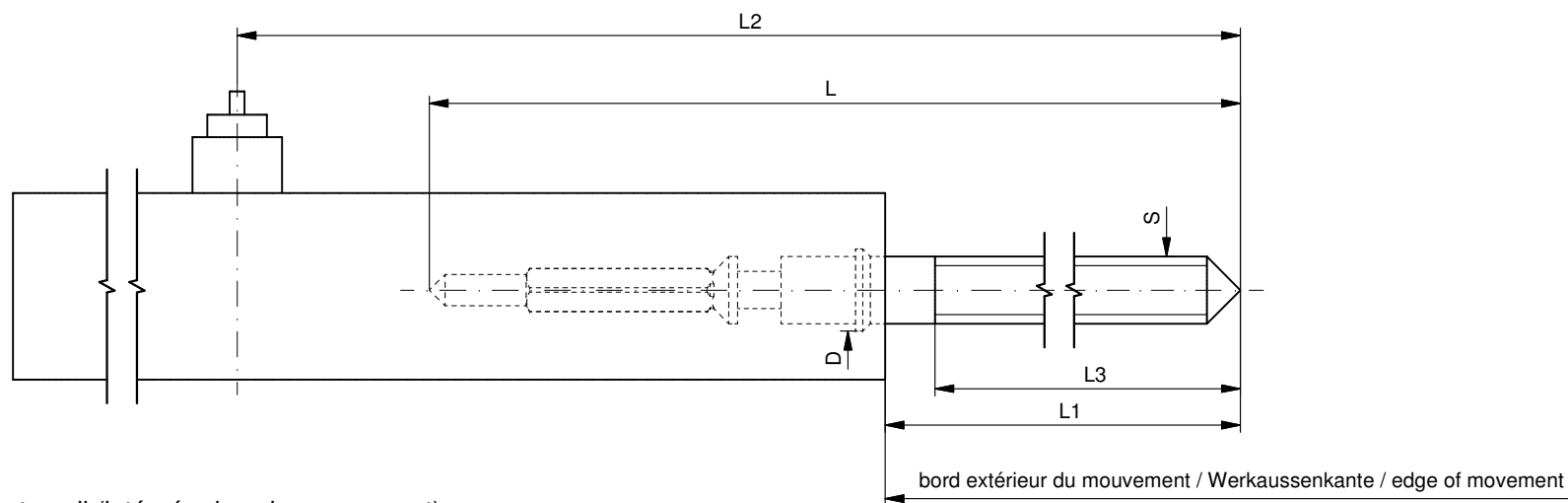
Aiguillages Zeigerwerkhöhe Hand fitting height								
Dépassement Höhe über Zifferblattauflage Height over dial seat								
No	Pignon des secondes chrono Stopp-Sekundentrieb Chrono second pinion	Chaussée Minutenrohr Cannon-pinion	Roue des heures Stundenrad Hour wheel			Compteur 2 aig. 2 Zeiger Zähler 2 Hand counter		
						Chaussée Minutenrohr Cannon-pinion	Roue des heures Stundenrad Hour wheel	Petite seconde Kleine Sekunde Small second
	G	E	F	H	N	K	L	J
1	2.61	1.95	1.52	1.00	1.15	1.10	0.80	1.00
-								

Aiguillages Zeigerwerkhöhe Hand fitting height								
Peinture comprise / inkl. Farbe / Paint included								
Epaisseur maximum du cadran Maximale Zifferblattstärke Maximum dial thickness								
No	Sous l'aiguille des secondes chrono Unter Stopp-Sekundenzeiger Under chrono second hand	Sous l'aiguille des minutes Unter Minutenzeiger Under minute hand	Sous l'aiguille des heures Unter Stundenzeiger Under hour hand	Compteur 2 aig. 2 Zeiger Zähler 2 Hand counter		Sous l'aiguille de petite seconde Unter kleine Sekundenzeiger Under small second hand		Epaisseur des aiguilles Zeigerdicke Hands thickness
				Sous l'aiguille des minutes Unter Minutenzeiger Under minute hand	Sous l'aiguille des heures Unter Stundenzeiger Under hour hand			
1	2.00	1.45	1.00	0.70	0.40	0.40		0.15
-								

		Aig. des sec. chrono Stopp-Sekundenzeiger Chrono second hand	Aig. des minutes Minutenzeiger Minute hand	Aig. des heures Stundenzeiger Hour hand	Compteur 2 aiguille 2 Zeiger Zähler 2 Hand counter		Aig. petite secondes Kleine Sekundenzeiger Small second 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.
					Aig. des minutes Minutenzeiger Minute hand	Aig. des heures Stundenzeiger Hour hand		
mg	max.	10	30	30	10	10	10	Masse / Masse / Weight *
μNm	max.	0.06	0.8	0.8	0.03	0.03	0.07	Balourd / Unwucht / Unbalance *
gmm ²	max.	1.0	-	-	1.0	-	0.4	Inertie / Massenträgheit / Inertia *
N	max.	30	40	40	30	30	30	Force de chassage / Aufpresskraft / Force

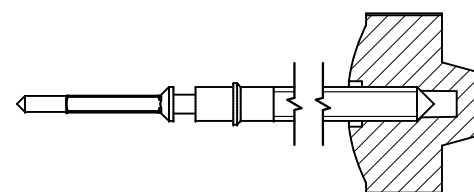
Aiguillages Zeigerwerkhöhen 11½" Hand fitting heights		Issued	30 Apr 2009	mg
		Modified	15 Okt 2014 ÄÄ 13275	dh
		Released	YES	
		Tolerance	μm	
		Scale	15 : 1 (A3H)	
RONDA 3520.D		Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
		No.	3316.130	01

* 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)

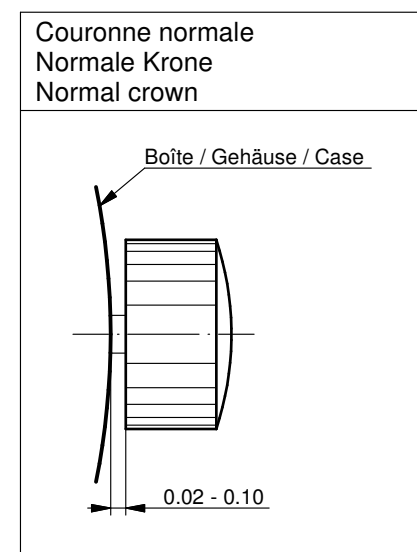
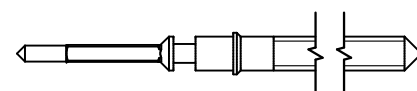
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.205.CO	19.24	10.95	22.90	10.15	0.90	1.10



Couleur de la couronne Kronenfarbe Crown color	gris clair hellgrau light grey
Code	UN 7014

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

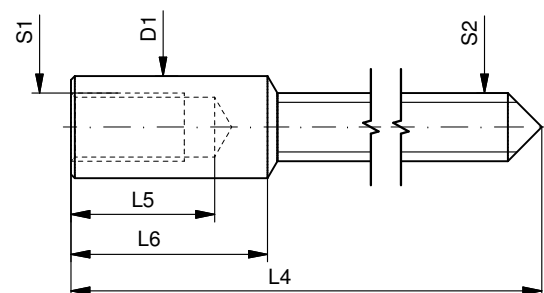
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.205	19.24	10.95	22.90	10.15	0.90	1.10
3000.210	32.00	23.71	35.66	22.91	0.90	1.10



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

3520.D, 3540.D

Issued	07 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.	5030.024	01



Movement holder
Removing setting stem
H35XX.1T



Movement holder
Setting hands
H35XX.1A

Fitting dial and hands

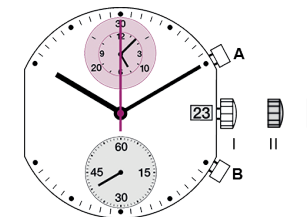
- Crown in position III
- Wind hour hand forwards, until date changes
- Remove working hand
- Position friction spring 3315.016 on hour wheel, if not already in place
- Fit dial
- Point all hands towards 12 o'clock
- Set time
- Zero the Chronograph hand*
- Crown in position II
- Set date
- Crown in position I

Date switching duration:

~1¼hrs

*Zeroing the Chronograph hand

- Push correctors A and B at the same time for 2 seconds
(Chrono-seconds hand rotates once)
- Pusher A → to correct chrono seconds
- Pusher B → to make minute and hour counters jump
- Pusher A → to correct counter position



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

Minute hand

Minute counter

Hour counter

Second counter

Second hand

Date

Control buttons

Push-button A

Crown

Push-button B

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.

Setting the date (quick mode)

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

2 Turn the crown anticlockwise until the correct date 11 appears.

3 Push the crown back into position I.

Please note:

During the date changing phase between approx. 08.30 PM and midnight, the date must be set to the date of the following day.

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 anticlockwise 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.

Chronograph: Basic function
 (Start / Stop / Reset)

Example:

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

Chronograph: Accumulated timing

Example:

- Start: (start timing)
- Stop: (e.g. 15 min 5 sec following 1)
- Restart: (timing is resumed)
- Stop: (e.g. 5 min 12 sec following 3) = 20 min 17 sec (The accumulated measured time is shown)
- 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, ...).

Chronograph: Intermediate or interval timing

Example:

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

Please note:

* Following 2, further intervals or intermediate times can be displayed by pressing push-button B (display interval / make up measured time, ...).

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).

- Pull out the crown to position III (all chronograph hands are in their correct or incorrect zero position.)
- Keep push-buttons A and B depressed simultaneously for at least 2 seconds (the second counter hand rotates by 360° → corrective mode is activated.)

Adjusting the second counter hand
 Single step A 1 x short
 Continuous A long

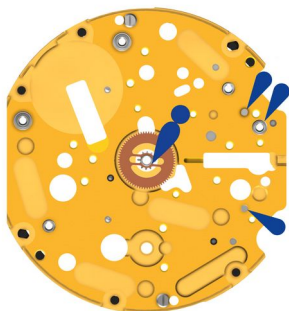
Adjusting the next hand B
 Single step A 1 x short
 Continuous A long



Adjusting the minute counter hand and the hour counter hand (mechanical coupled)
 Single step A 1 x short
 Continuous A long

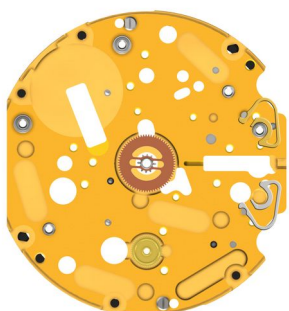
3 Returning the crown to position I
 Termination of the chronograph hands adjustment (can be carried out at any time).

Battery type: 384/SR41SW
 Accuracy: +20 / -10 seconds per month

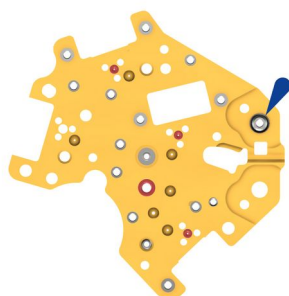
11/2022




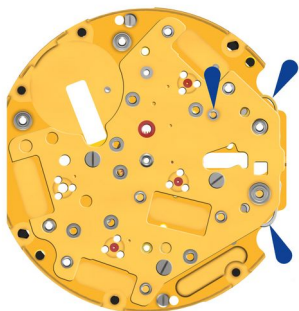
- | | | | |
|---|---|--|---------------------------|
| 1 |  | 2000.703.G | Main plate |
| 2 |  | 3305.357.CO | Cannon pinion (Aig.) |
| 3 |  | 8200 / J124
1x Jismaa 124 / 3x Moebius 8200 | Moebius 8200 / Jismaa 124 |








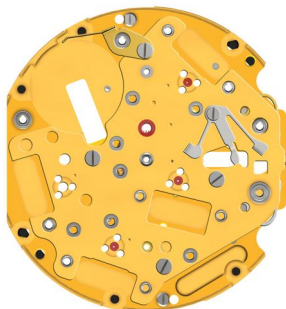
- | | | | |
|---|--|----------|---|
| 4 |  | 3406.030 | Push jumper B
Put the grey jumper between the two pillars. |
| 5 |  | 3406.038 | Pusher jumper A
Put the yellow jumper between the two pillars. |
| 6 |  | 3301.318 | Hour wheel counter (Aig.) |




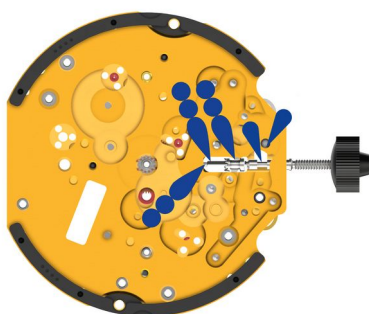
- | | | | |
|---|---|------|---|
| 7 |  | 8200 | Moebius 8200
Lubricate the following part before assembling. |
|---|---|------|---|






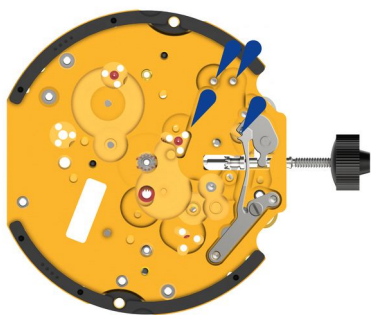
8		2030.035.CO	Center bridge
9		4000.250	Screw
10		4000.250	Screw
11		4000.250	Screw
12		8200	Moebius 8200







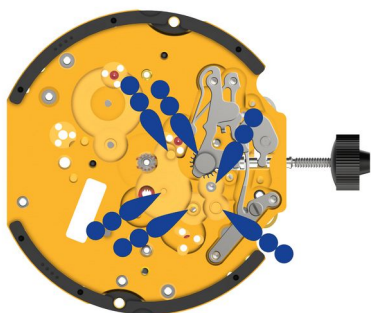
13		3016.030	Stop lever
14		4000.305	Screw
15		3601.140.G	Lateral bridle
16		4000.250	Screw






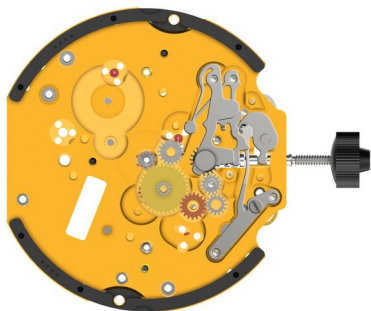
17		3000.205.CO	Working stem (dual)
18		3001.066.FI	Sliding pinion
19		8200 / 9020 2x Moebius 8200 / 3x Moebius 9020	Moebius 8200 / Moebius 9020



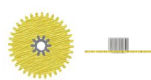




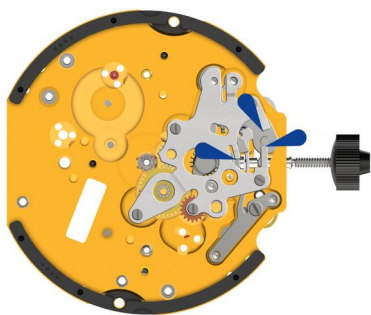
20		3017.061.CO	Setting lever
21		3905.078	Setting lever jumper
22		4000.304	Screw
23		8200	Moebius 8200










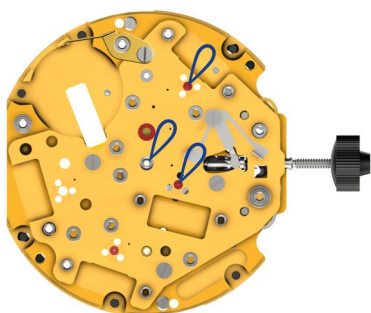
24		3015.092	Yoke
25		3015.093.CO	Setting wheel yoke
26		9020	Moebius 9020



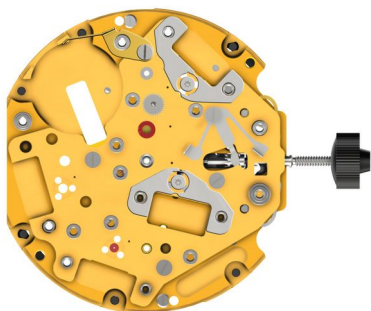
27		3004.200	Corrector setting wheel
28		3004.200	Corrector setting wheel
29		3007.090.CO	Minute wheel
30		3004.234.TA	Date corrector setting wheel
31		3004.233	Intermediate setting wheel








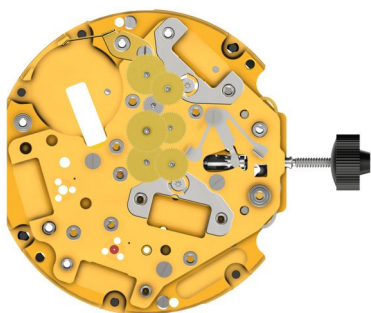
32		2130.215	Setting mechanism cover
33		4000.336	Screw
34		4000.336	Screw
35		4000.336	Screw
36		4000.336	Screw
37		4000.336	Screw
38		8200	Moebius 8200















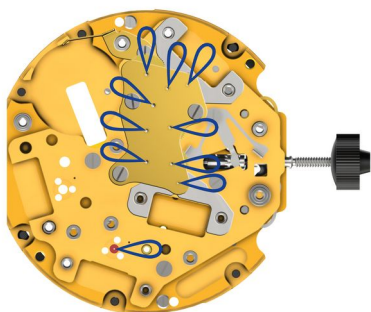
39		9014	Moebius 9014
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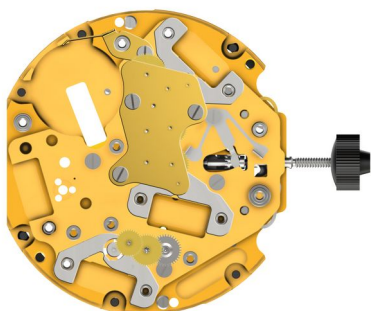
40		3622.057 Mark 1 / 2 on stator.	Stator
41		3622.057 Mark 1 / 2 on stator.	Stator
42		3715.124.RK	Rotor
43		3715.124.RK	Rotor
44		3004.229	Second intermediate wheel










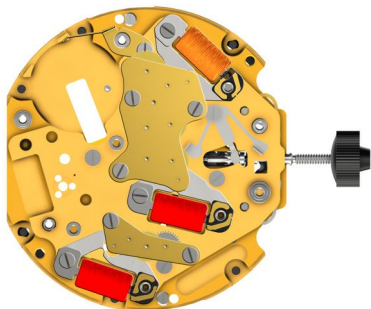
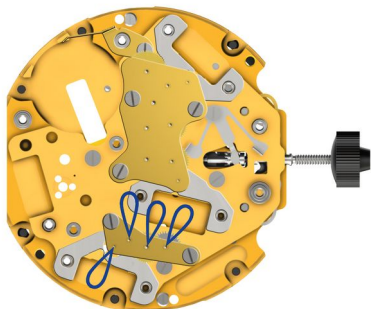
45			3136.197.CO	Small second wheel (Aig.)
46			3147.079.CO	Intermediate wheel
47			3136.198.CO	Second wheel (Aig.)
48			3136.199.CO	Chronograph wheel (Aig.)
49			3147.079.CO	Intermediate wheel
50			3122.069.CO	Third wheel

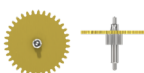


51			2020.199.G	Train wheel bridge
52			4000.282	Screw
53			4000.282	Screw
54			4000.282	Screw
55			9014	Moebius 9014




56			3622.058 Mark 3 on stator.	Stator
57			3715.125.RK	Rotor
58			3007.091.CO	Minute wheel (counter)
59			3402.048.CO	Minute-counting wheel



60  3147.083.CO Intermediate wheel

61  2020.201.G Counter train wheel bridge

62  4000.282 Screw


63  4000.282 Screw


64  9014 Moebius 9014


65  3621.080.RK Coil
Attention: Please hold the coil only on the grey coil core.

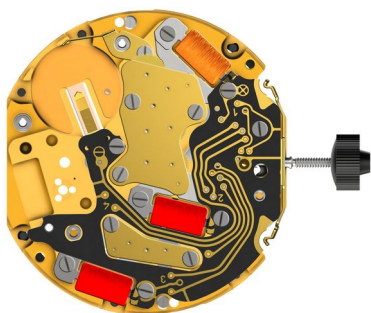
66  3621.054.RK Coil
Attention: Please hold the coil only on the grey coil core.









67  3621.054.RK Coil
Attention: Please hold the coil only on the grey coil core.

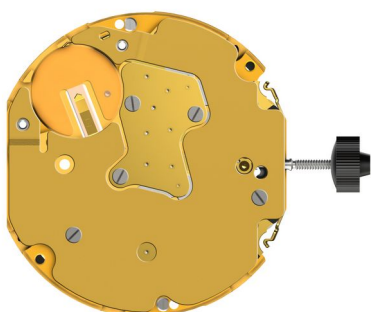
68  4000.250 Screw




69  4000.250 Screw

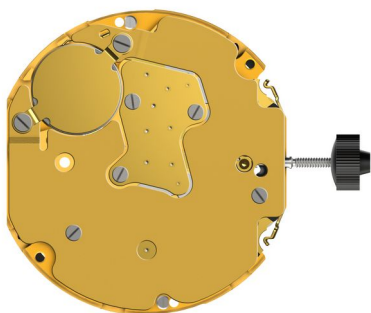
70  4000.250 Screw




71		3603.092	Battery insulator
72		3601.141.G	Contact spring for pusher
73		3612.244.RK.3520	Electronic module
74		4000.248	Screw
75		4000.248	Screw
76		4000.248	Screw
77		4000.248	Screw
78		4000.248	Screw





79		2130.212.G.M01.3520D	Electronic modul cover
80		4000.250	Screw
81		4000.250	Screw

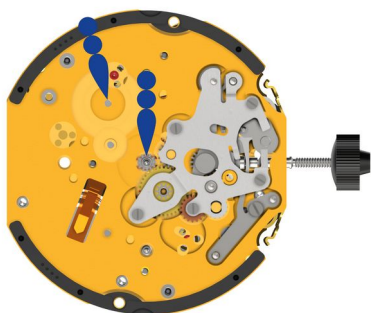



82  3600.011.HGF Battery 384 (Ø 7.90 x 3.60)

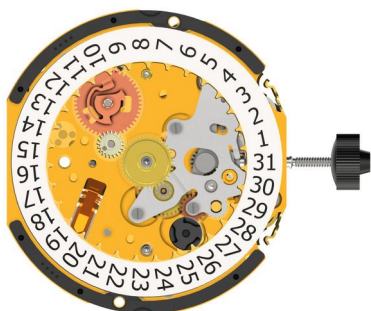
83  3601.139.G Bridle +


84  4000.335 Screw


85  4000.335 Screw





86  9020 Moebius 9020




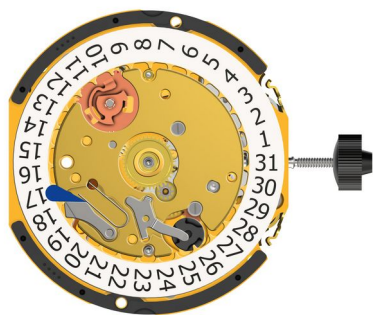
87  3301.317 Hour wheel (Aig.)







88  3507.062 Date corrector

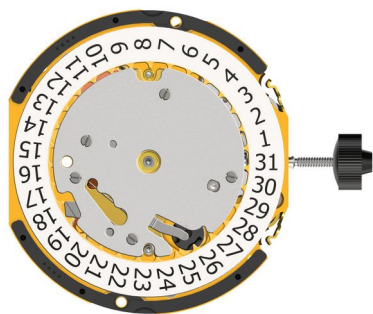
89  3004.230.CO Date indicator driving wheel







90  3147.082 Intermediate date wheel

91  3504.238.AA.1.A Date indicator (T3, G3)
Nick of the indicator at 3 o'clock.

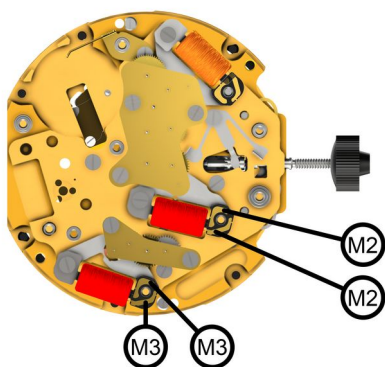


92		2130.213	Date indicator maintaining plate
93		3315.016	Friction spring
94		3905.079	Date corrector spring
95		3500.076	Date jumper
96		3905.077	Date jumper spring
97		8200	Moebius 8200

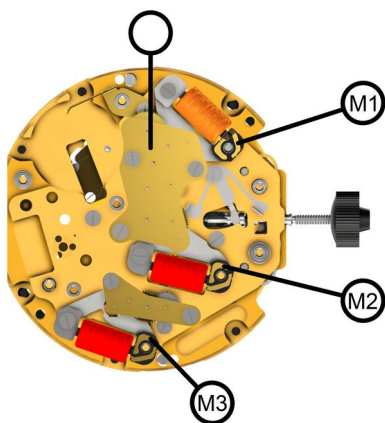


98		2130.214	Date mechanism maintaining plate
99		4000.337	Screw
100		4000.337	Screw
101		4000.337	Screw
102		4000.337	Screw
103		4000.337	Screw

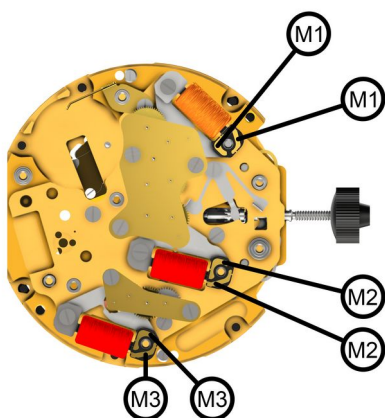
Measurement



Signal generator (4.9ms, 8Hz)
< 1.20 V



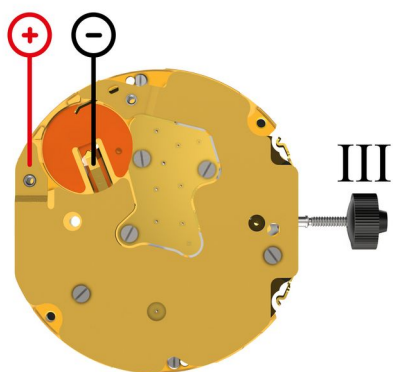
Coil isolation M1 - M3
infinite



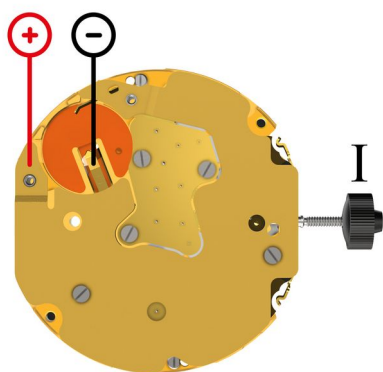
Coil resistance movement
(min./max.) 2200 - 2400 Ohm

Coil resistance M2
(min./max.) 1680 - 1880 Ohm

Coil resistance M3
(min./max.) 1680 - 1880 Ohm



Setting stem in position III, 60 s measuring interval.
(typ./max.) 0.10 / 0.30 μ A



Setting stem in position I, calendar not in gear, 60s measuring interval.

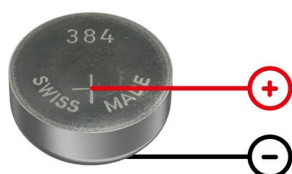
(typ./max.) 1.48 / 2.00 μ A

60s measuring interval

-10 .. +20s/mth

Lower working voltage limit

<1.20 V



Voltage
typ. 1.5 V