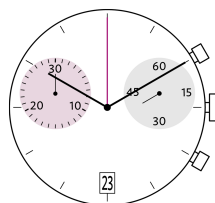


Caliber Z50 – 13¼"



Product Specifications

Analog quartz movement

Line startech

Caliber Z50

Size 13¼"

Version Swiss Made 0 Jewels / nickel plated

Version Swiss Parts 0 Jewels / nickel plated

Standard battery life 50 months

Standard hand fitting height 1

Features

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

Functions

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

Quartz Movements

Chronographs

RONDA startech

Caliber Z50 – 13¼"

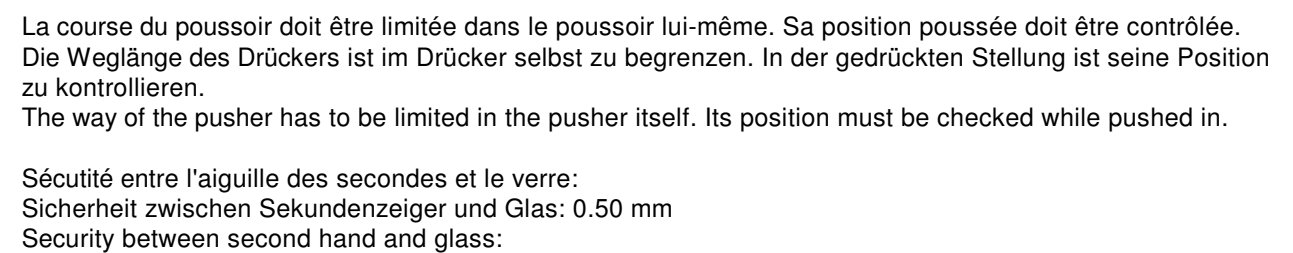
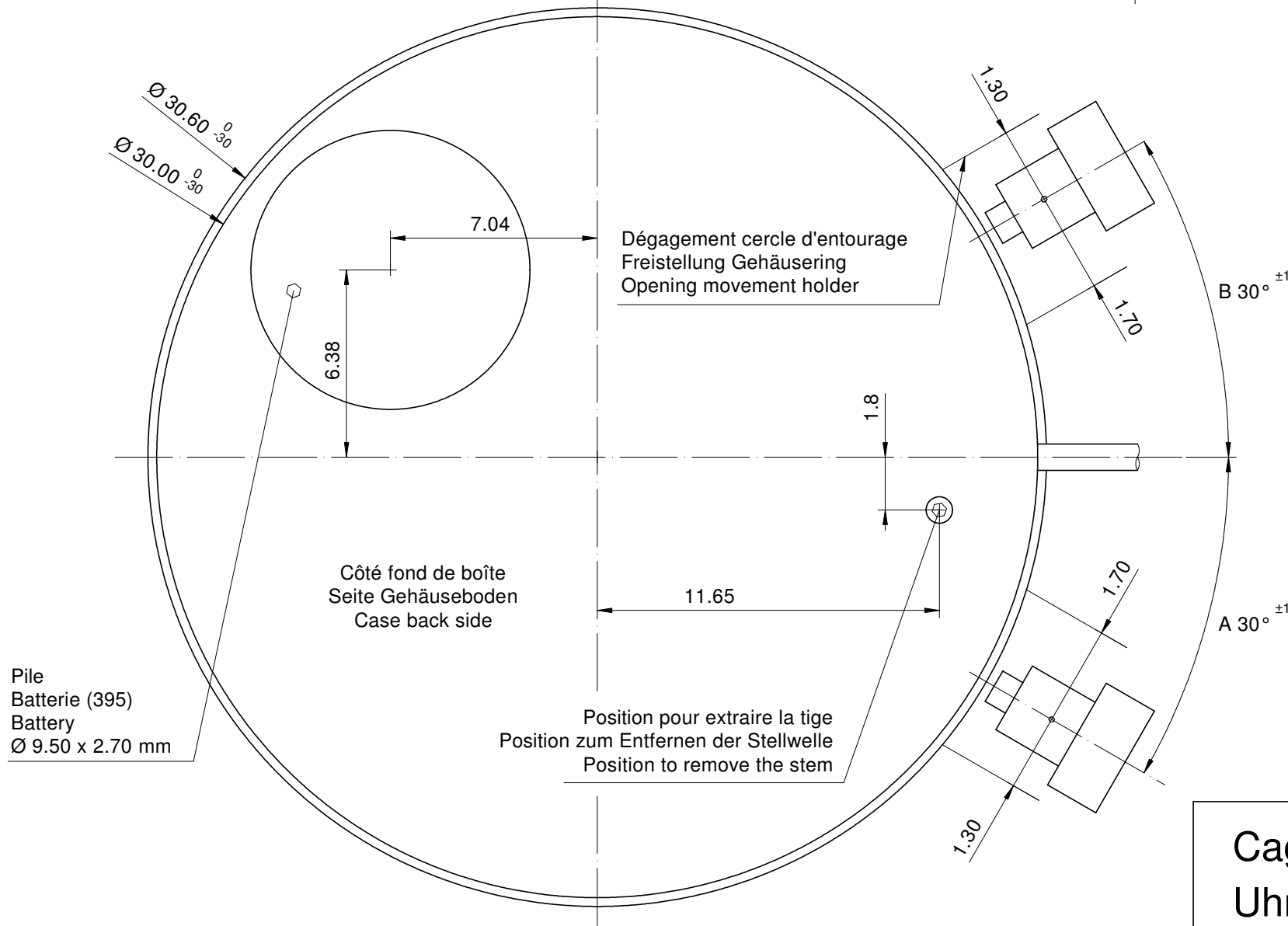
Technical Specifications

Diameter Total	30.60 mm
Case fitting	30.00 mm
Movement height	4.60 mm
Height over standard battery	4.60 mm
Movement rest	1.37 mm
Height over stem	1.75 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

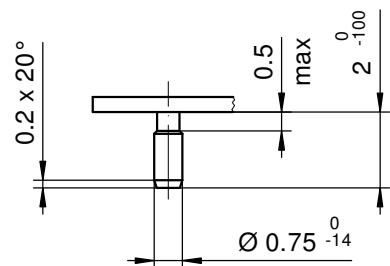


Battery Specifications

Standard battery	No. 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	3 µA (Date Mechanism not in Gear)



<div>Cage</div> <div>Uhrwerkgestell 13¼"</div> <div>Frame</div>		Issued	14 Mai 2014	mk
		Modified	31 Mär 2015 ÄÄ 13825	mk
		Released	Yes	
		Tolerance	+/- 20 µm	
		Scale	10 : 1 (5 : 1) (A3H)	
RONDA	Z 50	Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
		No.	5000.426	00

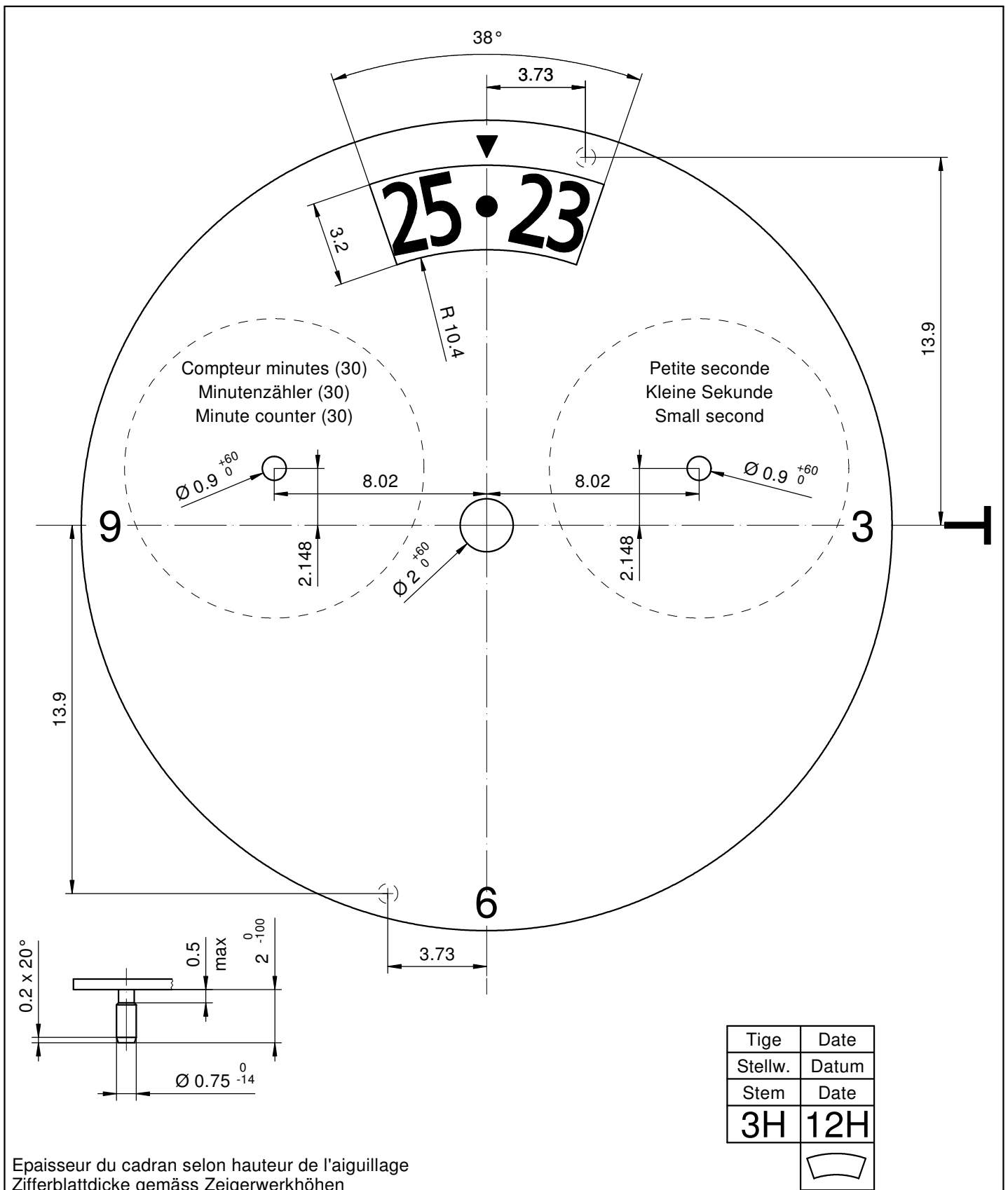


Tige	Date
Stellw.	Datum
Stem	Date
3H	6H
	<input type="text"/>

Issued	14 Mai 2014	mk
Modified	22 Mär 2017 ÄÄ 35959	di
Released	Yes	
Tolerance	+/- 20 µm	
Scale	5 : 1 (A4V)	

Sous réserve de modification
Änderungen vorbehalten
Modifications reserved

01



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

Cadran
Zifferblatt 13¹/₄"
Dial

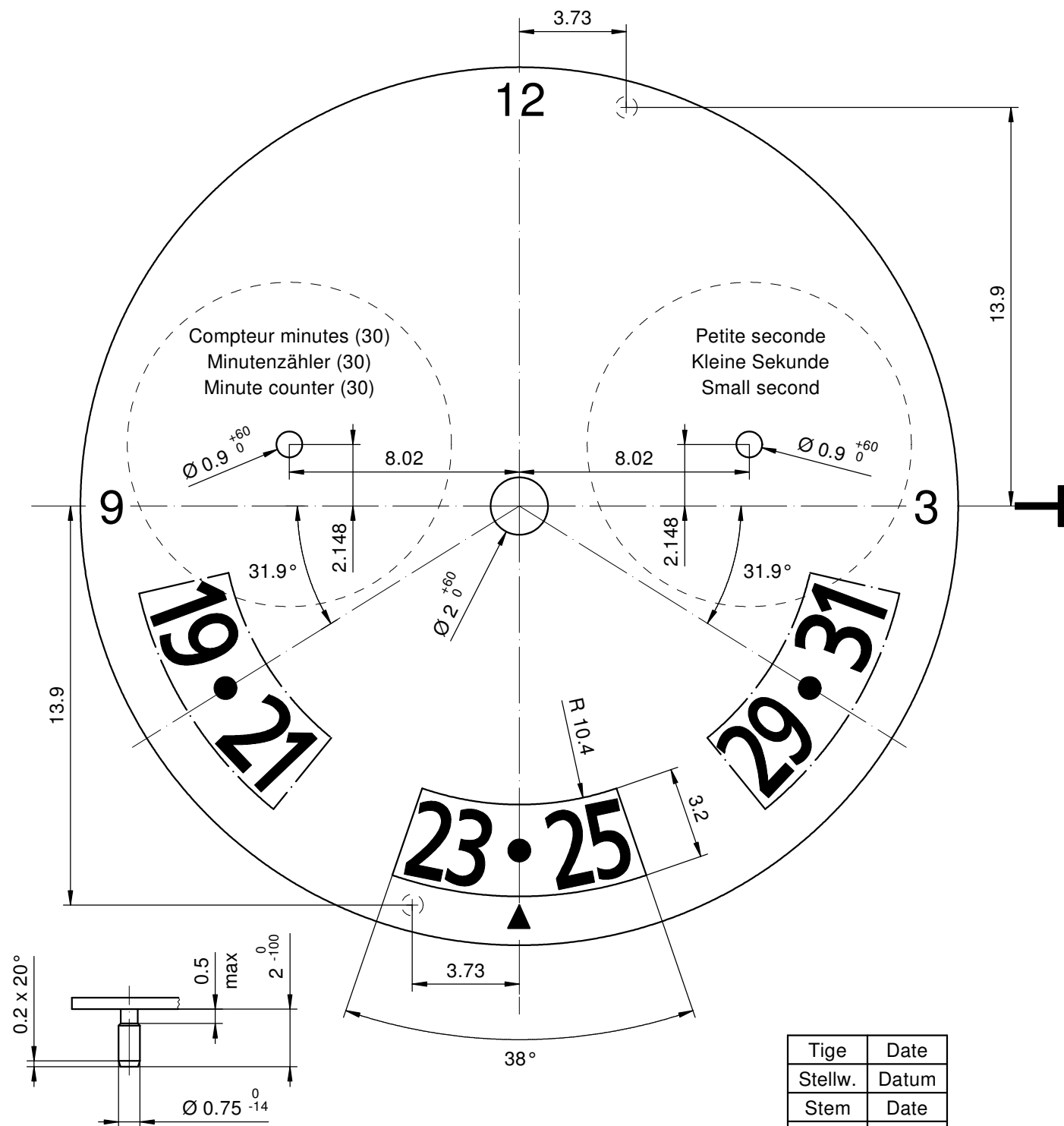
Issued	23 Sep 2015	di
Modified	22 Mär 2017 ÄA 35959	di
Released	Yes	
Tolerance	+/- 20 µm	
Scale	5 : 1 (A4V)	

RONDA

Z 50

Sous réserve de modification
Änderungen vorbehalten
Modifications reserved

No.	5010.761	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 13¹/₄"
Dial

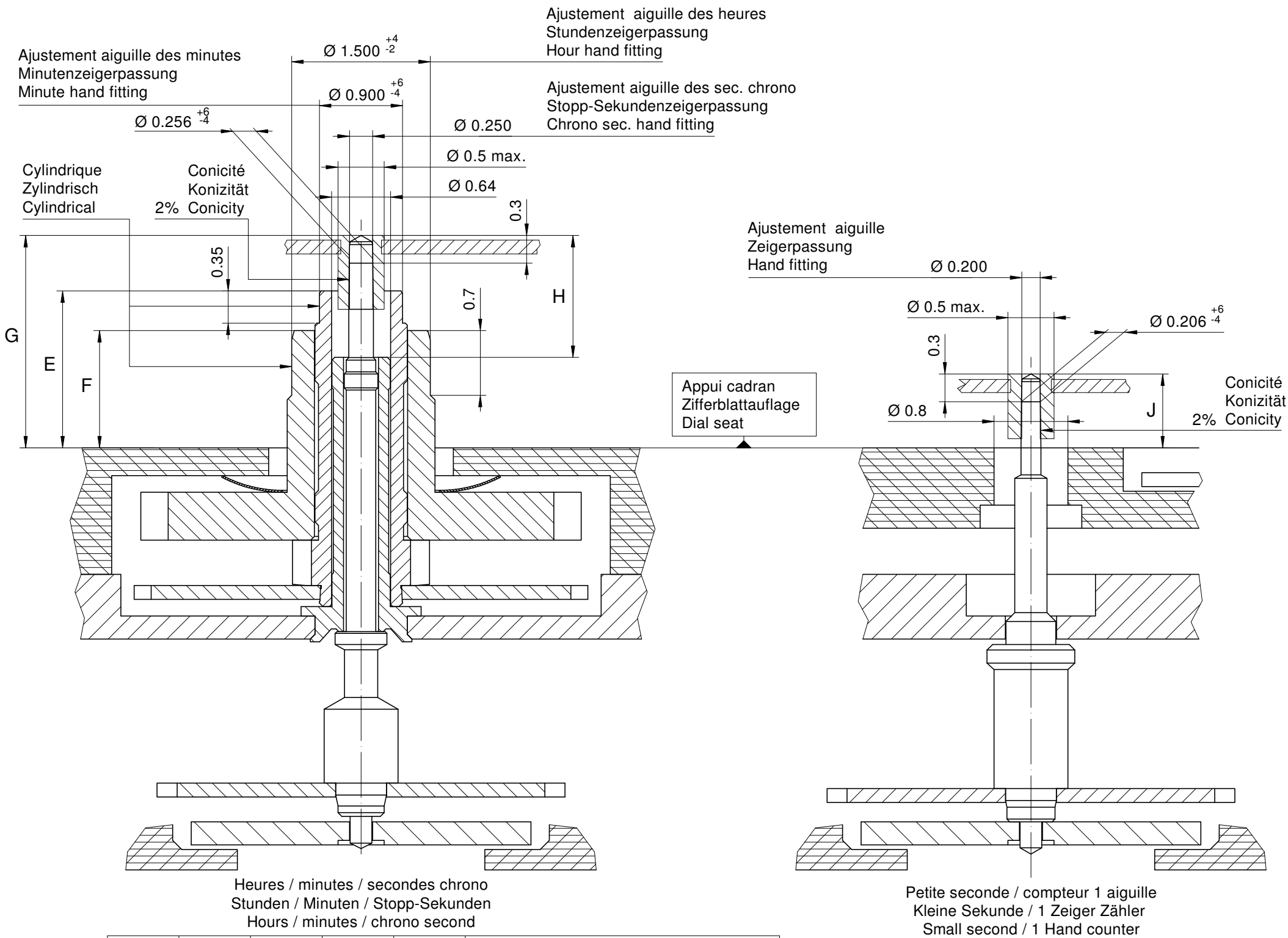
Issued	23 Sep 2015	di
Modified	22 Mär 2017 ÄA 35959	di
Released	Yes	
Tolerance	+/- 20 µm	
Scale	5 : 1 (A4V)	

RONDA

Z 50

Sous réserve de modification
Änderungen vorbehalten
Modifications reserved

No.	5010.770	02
-----	----------	----



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		Petite seconde Kleine Sekunde Small second	Pignon compteur Zählertrieb Counter pinion
1	G	E	F	H	J	J
1	2.30	1.70	1.27	1.32	0.80	0.80

Aiguillages Zeigerwerkhöhe Hand fitting height						
Peinture comprise / inkl. Farbe / Paint included						
Epaisseur maximum du cadran Maximale Zifferblattdicke 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	Sous l'aiguille de petite seconde Unter kleine Sekundenzeiger Under small second hand	Sous l'aiguille compteur 1 aiguille Unter Zeiger 1 Zeiger Zähler Under hand 1 hand counter	Epaisseur des aiguilles Zeigerdicke Hands thickness
1	1.80	1.30	0.85	0.40	0.40	0.15

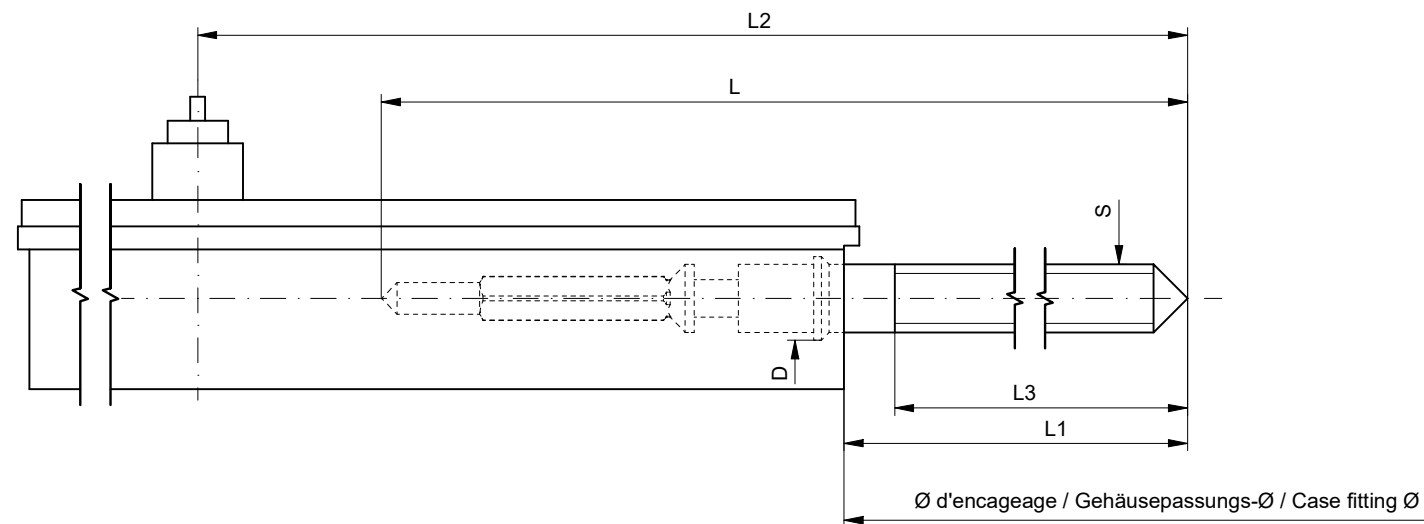
		Aig. des sec. chrono Stopp-Sekundenzeiger Chrono second hand	Aig. des minutes Minutenzeiger Minute hand	Aig. des heures Stundenzeiger Hour hand	Aig. petite secondes Kleine Sekundenzeiger Small second hand	Aiguille compteur (1 aig.) Zähler Zeiger (1 Zeiger) Counter hand (1 hand)	Lors de la pose d'aiguilles, 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	10	10	Masse / Masse / Weight *
µNm	max.	0.06	0.70	0.70	0.06	0.03	Balourd / Unwucht / Unbalance *
gmm ²	max.	1.0	-	-	0.4	1.0	Inertie / Massenträgheit / Inertia *
N	max.	30	40	40	30	30	Force de chassage / Aufpresskraft / Force

Aiguillages Zeigerwerkhöhen 13 ¹ / ₄ " Hand fitting heights		Issued		14 Mai 2014	mk
		Modified		31 Mär 2015 ÄA 13825	mk
		Released		Yes	
		Tolerance		µm	
		Scale		20 : 1 (A3H)	
RONDA	Z 50	Sous réserve de modifications Änderungen vorbehalten Modifications reserved			
		No.	3316.153	00	

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

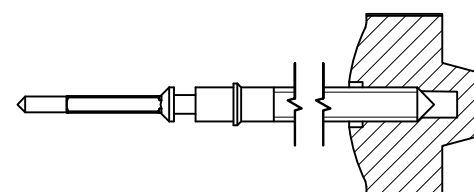
* Bei abweichenden Werten, bitte technischen Kundendienst anfragen

* 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)

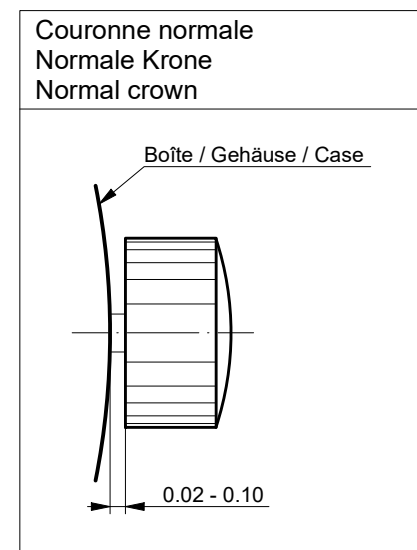
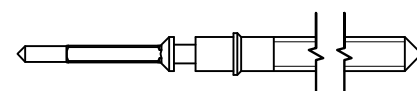
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.208.CO	21.85	11.15	26.15	10.85	0.90	1.35



Couleur de la couronne Kronenfarbe Crown color	jaune foncé dunkelgelb dark yellow
Code	UN 1509

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

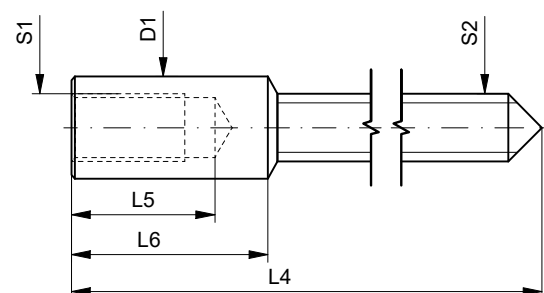
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.208	21.85	11.15	26.15	10.85	0.90	1.35



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 Z60, Z50, X30, X20

Issued	11.02.2013	f15223
Modified	03.09.2019	jk5228
Released	YES	
Mod. No.	41339	
Tolerance	---	
Scale	---	Page 1 / 1 A3
Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
No.	5030.026	04



Movement holder
Removing setting stem
HZXX.1T



Movement holder
Setting hands
HZXX.2A

Fitting dial and hands

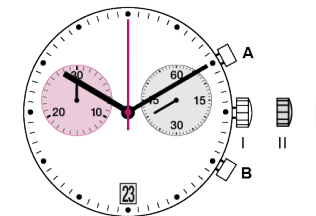
- Crown in position III
- Wind hour hand forwards, until date changes
- Remove working hand
- Fit dial
- Place all hands towards 12 o'clock
- Wind hand forwards to set actual time
- Zero chronograph hand*
- Crown in position II
- Set date
- Crown in position I

Date switching duration:

~1¼hrs

*Zeroing the Chronograph hand

- Press pushers A and B for 2 seconds at the same time
(Chrono seconds hand rotates once)
- Pusher A - to correct chrono seconds hand
- Pusher B - to jump to minute hand
- Pusher A - to correct hand 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.

Complement for T2 instructions Z50/Z60

It might be possible that the date jump will not be finalized when the date is set manually. In that case the movement will be adjusted automatically at the next date jump.

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

Second hand
 Minute hand
 Hour hand
 Second counter
 Day of the week hand
 Minute counter
 Date
 Control buttons
 Push-button A & B
 Crown

Display elements

Second hand
 Minute hand
 Hour hand
 Minute counter
 Second counter
 Date
 Control buttons
 Push-button A & B
 Crown

01

Setting the time

- * Pull out the crown to position III (the watch stops).
- Turn the crown until you reach the correct time 8:45.
- * 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, 2 must be pushed back into position I at the exact second.

02

Setting the date (quick mode)

- Pull out the crown to position II (the watch continues to run).
- Turn the crown anticlockwise until the correct date 11 appears.
- Push the crown back into position I.

Please note:
 During the date changing phase between approx. 09:45 PM and midnight, the date must be set to the date of the following day.

03

Setting the date, day of the week (Z60) and time

- Pull out the crown to position III (the watch stops).
- Turn the crown anticlockwise until yesterday's day of the week WED appears.
- Push the crown to position II.
- Turn the crown until yesterday's date appears 22.
- * Pull out the crown to position III (the watch stops).
- Turn the crown anticlockwise until the correct date 23 and day of the week THU appears.
- ** Continue to turn the crown anticlockwise until the correct time 8:35 PM appears.
- 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:

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

05

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, ...).

06

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

07

Adjusting the chronograph hands to zero position

Example:

- 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.)

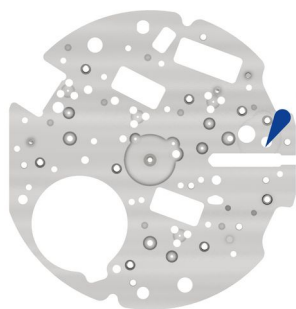
08



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

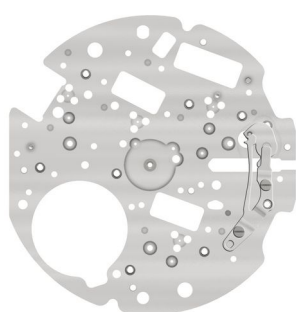
Adjusting the next hand B
 Single step Continuous A 1 x short long





Adjusting the minute counter hand (position 6h)
 Single step Continuous A 1 x short long

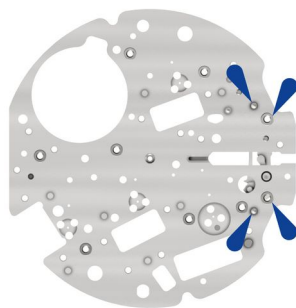
Returning the crown to position I
 Termination of the chronograph hands adjustment (can be carried out at any time).




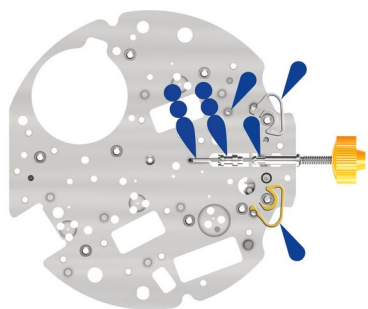
- | | | | |
|---|-----------------------------------------------------------------------------------|----------|--------------|
| 1 |  | 2000.717 | Main plate |
| 2 |  | 8200 | Moebius 8200 |


















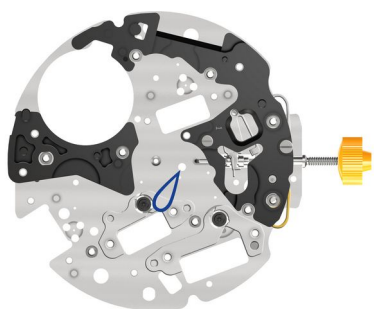
- | | | | |
|---|-------------------------------------------------------------------------------------|-------------|----------------------|
| 3 |  | 3017.064.CO | Setting lever |
| 4 |  | 3905.083 | Setting lever jumper |
| 5 |  | 4000.342 | Screw |
| 6 |  | 4000.342 | Screw |

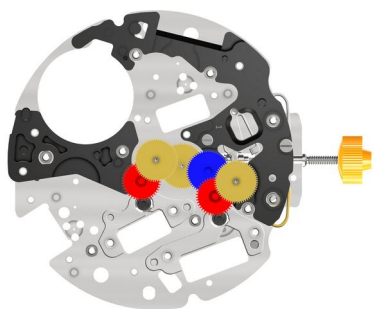














- | | | | |
|---|-------------------------------------------------------------------------------------|------|--------------|
| 7 |  | 8200 | Moebius 8200 |
|---|-------------------------------------------------------------------------------------|------|--------------|

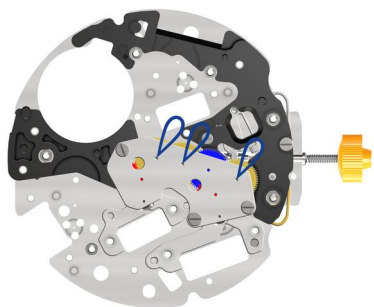










8		3406.043	Pusher jumper A
9		3406.042	Pusher jumper B
10		3000.208.CO	Working stem (dual)
11		3001.072.FI	Sliding pinion
12		8200 / 9020 4x Moebius 8200 / 2x Moebius 9020	Moebius 8200 / Moebius 9020
13		3016.034	Stop lever
14		3603.098	Electronic modul support
15		4000.248	Screw
16		4000.343	Screw
17		3603.101	Battery support
18		3622.070	Stator
19		3622.071	Stator (counter)
20		3715.132.RK	Rotor
21		3715.132.RK	Rotor
22		9014	Moebius 9014

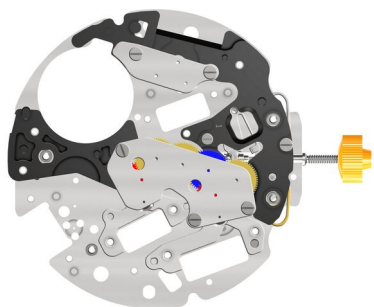









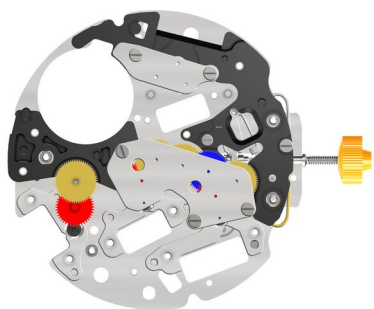
- | | | | | |
|----|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------|---------------------------|
| 23 |  |  | 3122.073.CO | Third wheel |
| 24 |  |  | 3147.089 | Intermediate wheel |
| 25 |  |  | 3136.215.CO | Chronograph wheel (Aig.) |
| 26 |  |  | 3136.214 | Second wheel (Aig.) |
| 27 |  |  | 3147.089 | Intermediate wheel |
| 28 |  |  | 3136.216.CO | Small second wheel (Aig.) |



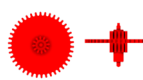



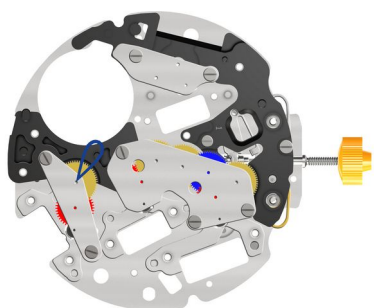
- | | | | | |
|----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------|-------|
| 29 |  | 2020.210.M01.Z50 | Train wheel bridge | |
| 30 |  |  | 4000.248 | Screw |
| 31 |  |  | 4000.248 | Screw |
| 32 |  |  | 4000.248 | Screw |
| 33 |  | 9014 | Moebius 9014 | |







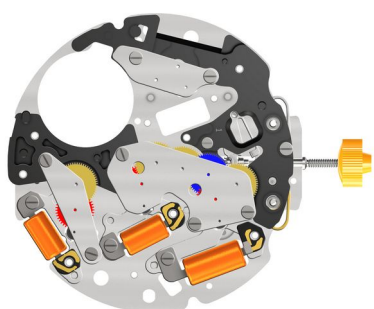
- | | | | | |
|----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------|-------|
| 34 |  | 2020.211 | Counter train wheel bridge | |
| 35 |  |  | 4000.248 | Screw |
| 36 |  |  | 4000.248 | Screw |









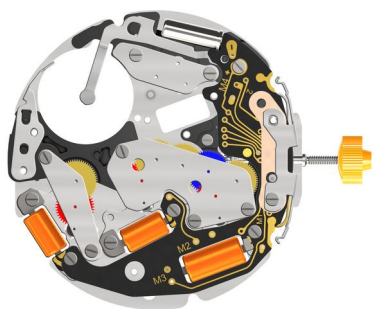
- | | | | |
|----|-----------------------------------------------------------------------------------|-------------|---------------------------|
| 37 |  | 3622.071 | Stator (counter) |
| 38 |  | 3715.132.RK | Rotor |
| 39 |  | 3147.089 | Intermediate wheel |
| 40 |  | 3136.216.CO | Small second wheel (Aig.) |













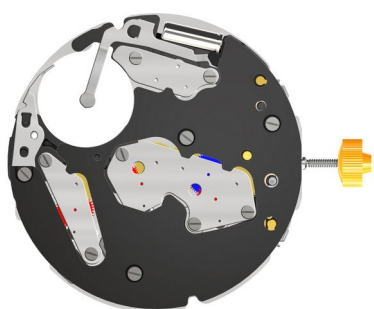
- | | | | |
|----|-------------------------------------------------------------------------------------|----------|----------------------------|
| 41 |  | 2020.219 | Counter train wheel bridge |
| 42 |  | 4000.248 | Screw |
| 43 |  | 4000.248 | Screw |
| 44 |  | 9014 | Moebius 9014 |








- | | | | |
|----|-------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------|
| 45 |  | 3621.099.RK | Coil
Attention: Please hold the coil only on the grey coil core. |
| 46 |  | 3621.054.RK | Coil
Attention: Please hold the coil only on the grey coil core. |
| 47 |  | 3621.054.RK | Coil
Attention: Please hold the coil only on the grey coil core. |
| 48 |  | 4000.248 | Screw |
| 49 |  | 4000.248 | Screw |
| 50 |  | 4000.248 | Screw |






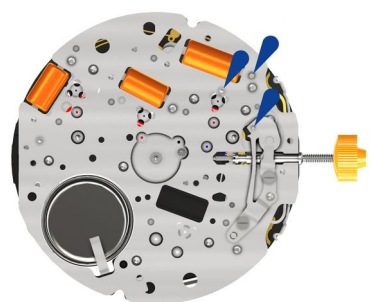
51		3601.153	Bridle -
52		3612.256	Electronic module
53	 1:2	4000.341	Screw
54	 1:2	4000.341	Screw
55	 1:2	4000.341	Screw
56	 1:2	4000.341	Screw
57		3603.102	Circuit insulator
58		3601.151	Contact spring for pusher
59		4000.248	Screw
60		3601.159	Lateral bridle




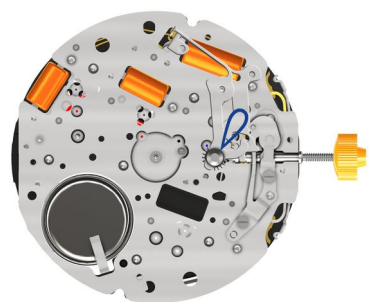
61		2130.248	Electronic module cover
62		4000.248	Screw
63	 1:2	4000.341	Screw
64	 1:2	4000.341	Screw
65	 1:2	4000.341	Screw






66		3600.010.HGF	Battery 395 (Ø 9.50 x 2.70)
67		3601.152	Bridle +
68	 1:2	4000.341	Screw



69		8200	Moebius 8200
----	-----------------------------------------------------------------------------------	------	--------------



70		3015.095	Yoke
71		3015.096.CO	Setting lever yoke
72		9014	Moebius 9014

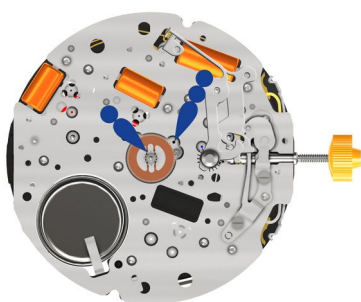


73



9020

Moebius 9020



74



3305.370.CO

Cannon pinion (Aig.)

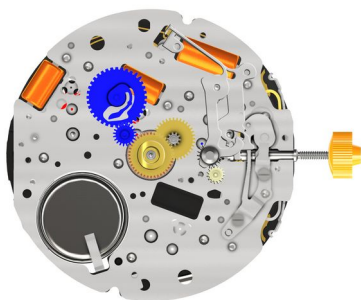
75



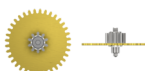
J124 / 9020

Jismaa 124 / Moebius 9020

1x Jismaa 124 / 1x Moebius 9020



76



3007.092.CO

Minute wheel

77



3301.332.TA

Hour wheel (Aig.)

78



3315.003

Friction spring

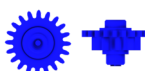
79



3004.264

Date indicator driving wheel

80



3147.091

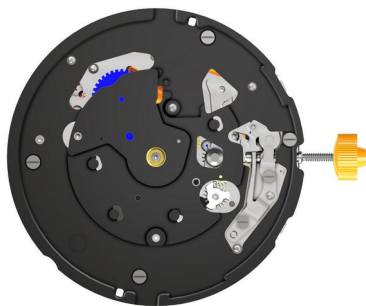
Intermediate date wheel







81

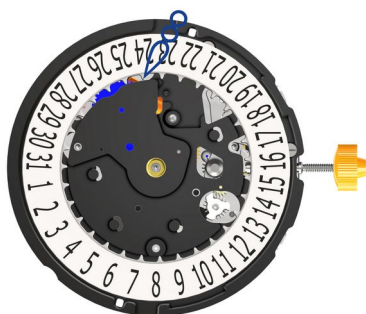




3004.245

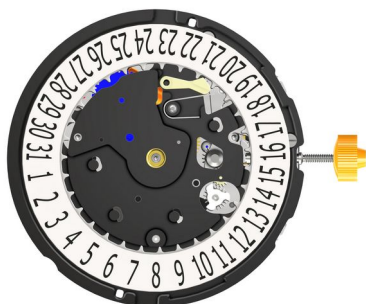
Date setting wheel





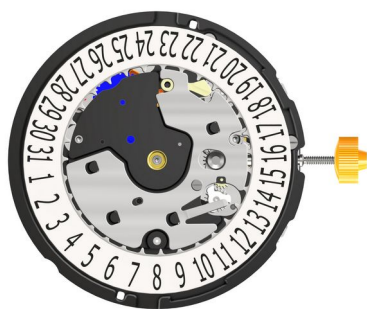
82		2130.231	Setting mechanism cover
83		4000.248	Screw
84		4000.248	Screw
85		4000.248	Screw
86		4000.248	Screw
87		3507.067	Date corrector





88		3504.2436.AP.3.A	Date indicator Nick of the indicator at 3 o'clock.
89		I-4	Moebius I-4

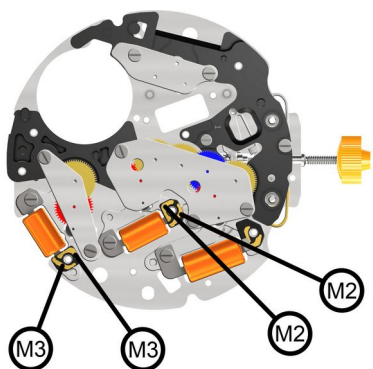


90		3500.081	Date jumper
91		3905.084	Date jumper spring

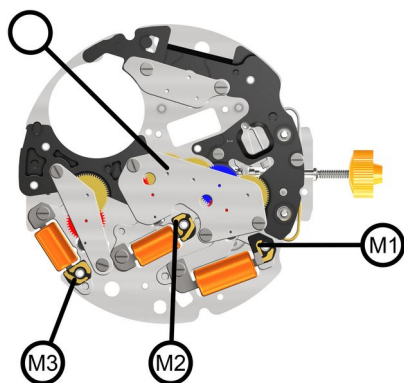


92		2130.229	Date mechanism maintaining plate
93		4000.343	Screw

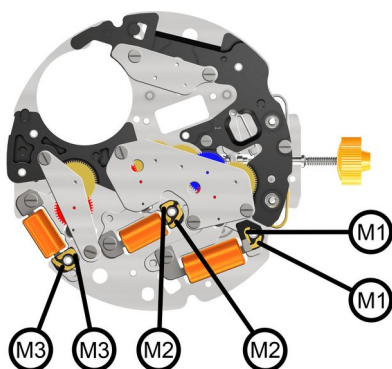
Measurement



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



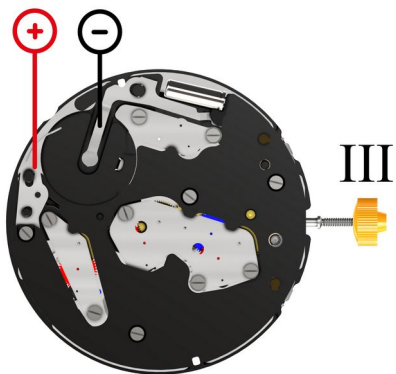
Coil isolation M2 / M3
infinite



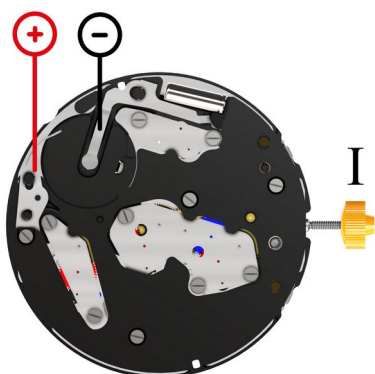
Coil resistance movement
(min./max.) 1900 - 2100 Ohm

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.) 1.42 / 3 μ A

60s measuring interval

-10 .. +20s/mth

Lower working voltage limit

<1.20 V



Voltage
typ 1.5V