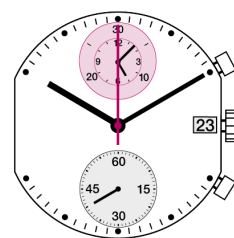
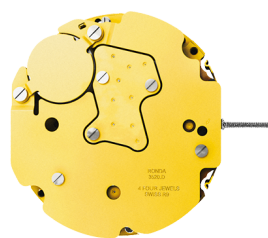
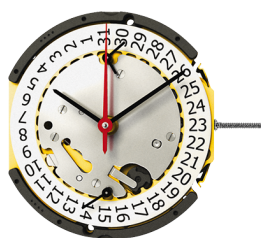


RONDA startech 3500

Chronographs,
eye positions 6-9-12 and 6-12

Caliber 3520.D – 10½ x 11½'''



Product Specifications

Analog quartz movement

Line

startech

Caliber

3520.D

Size

10½ x 11½'''

Version Swiss Made
Swiss Parts

4 Jewels / gold plated
4 Jewels / nickel plated

Standard battery life

54 months

Hand fitting height

1

Features

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

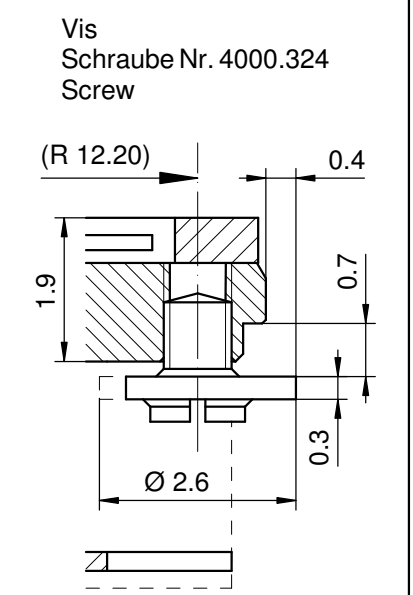
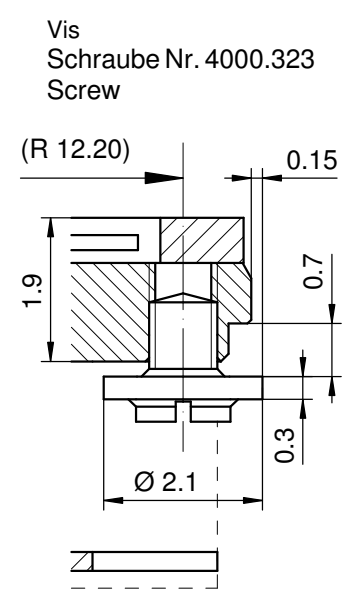
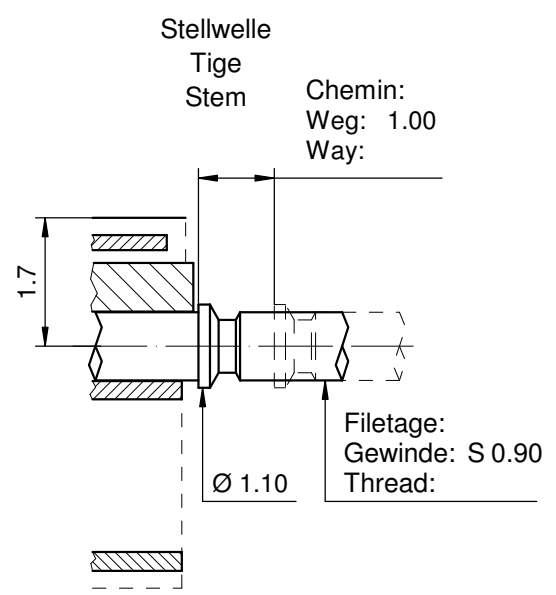
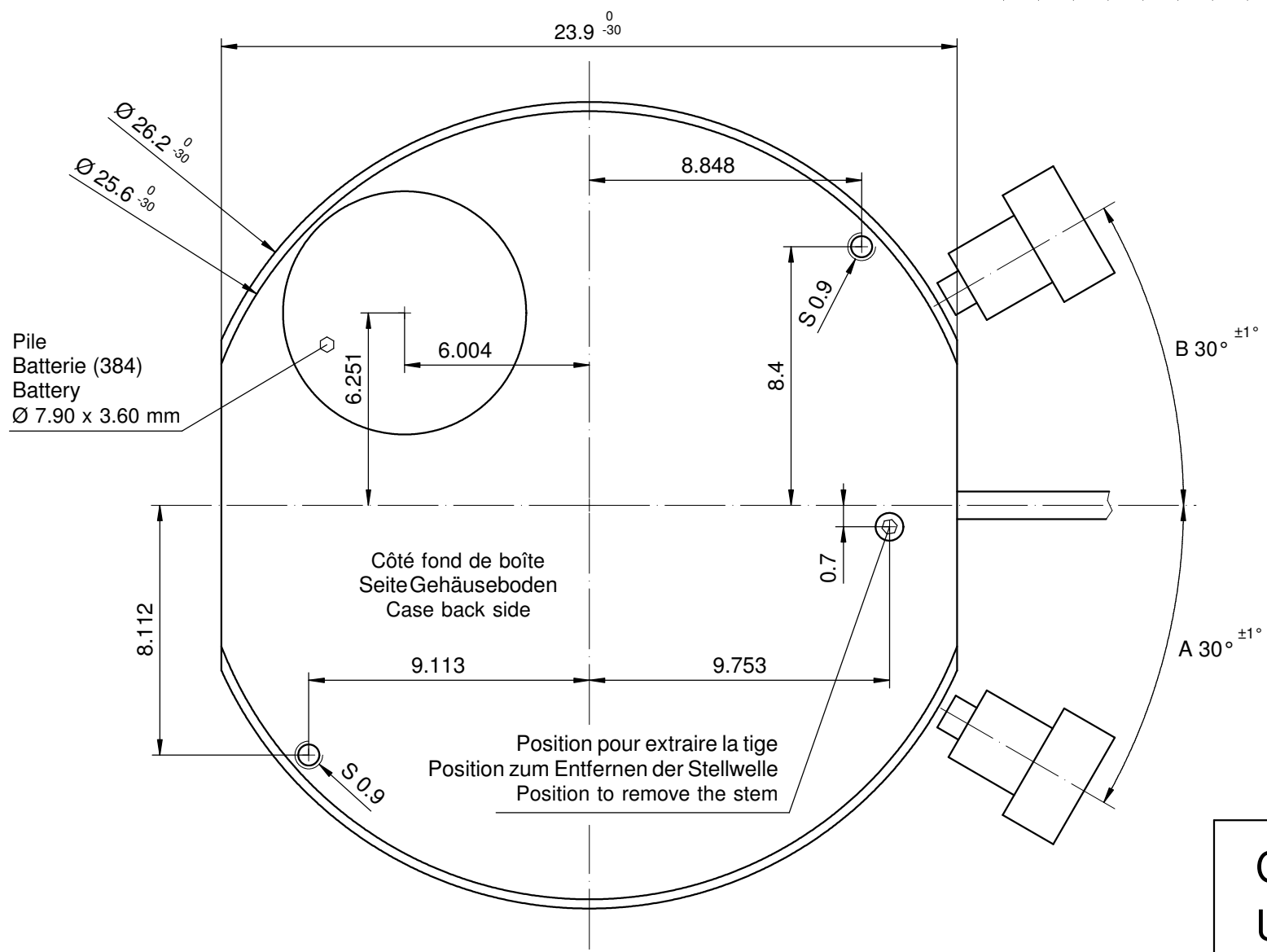
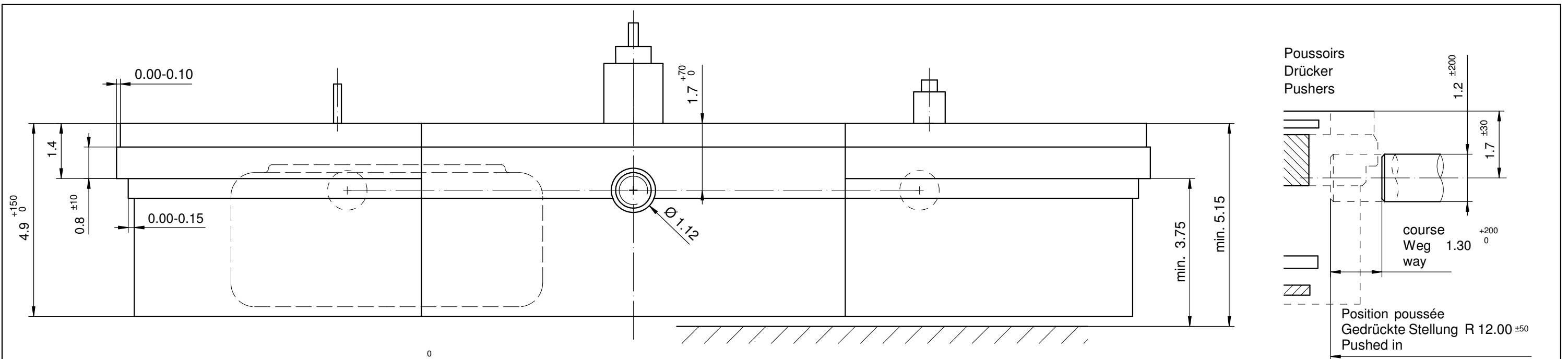
Functions

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

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
Force to push the stem for screwed crown	10 / 15 N
Stem thread	0.90 mm
Standard battery	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)
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





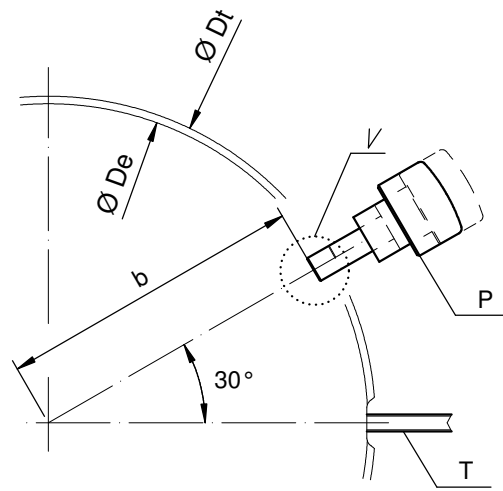
La course du poussoir doit être limitée dans le poussoir lui-même. Sa position poussée doit être contrôlée.
Die Weglänge des Drückers ist im Drücker selbst zu begrenzen. In der gedrückten Stellung ist seine Position zu kontrollieren.
The way of the pusher has to be limited in the pusher itself. Its position must be checked while pushed in.

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

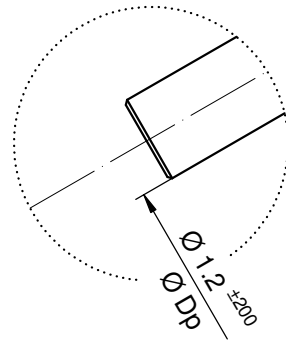
L'angle indiqué pour la direction du poussoir et la position doivent être respecté. pour un angle de 0° des poussoirs A et B, voir plan 5000.384.
Der angegebene Winkel für die Drückerrichtung und die Position müssen eingehalten werden. Für einem Drückerwinkel von 0° bei A und B, siehe Zeichnung 5000.384.
The indicated angle of the pusher direction and the position must be fulfilled. For pusher angles of 0° of pusher A - B, see drawing 5000.384.
The way of the pusher has to be limited in the pusher itself. Its position must be checked while pushed in.

Cage Uhrwerkgestell Frame	11 1/2 x 10 1/2'''	Issued	18 Mai 2009	mg
		Modified	03 Feb 2011 ÄA 6970	mK
RONDA	3520.D	Released	YES	
		Tolerance	+/- 20 µm	
		Scale	10 : 1 (5 : 1) (A3H)	
		Sous réserve de modifications Änderungsvorbehalten Modifications reserved		
		No.	5000.385	00

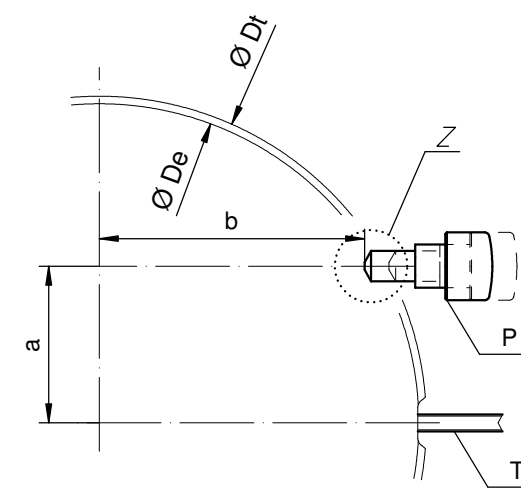
Angle Winkel Angle	30°	
Ø Dp	b	
1.00	11.95	
1.10	11.95	
1.20	11.95	
1.30	11.95	
1.40	11.95	



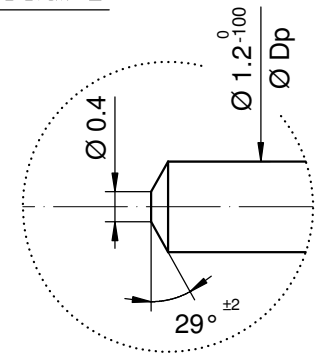
Detail V



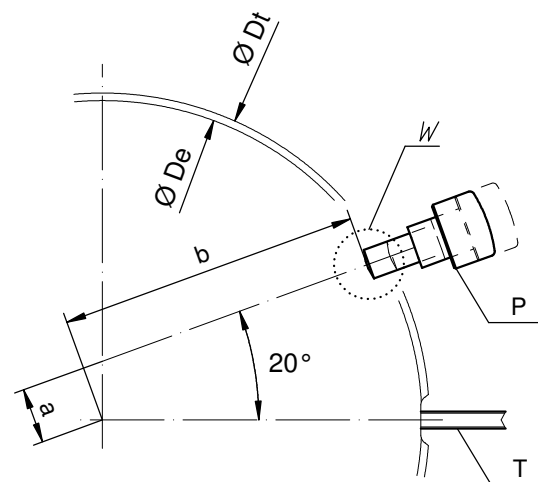
Angle Winkel Angle	0°	
Ø Dp	a	b
1.10	5.92	10.51
1.20	5.97	10.48



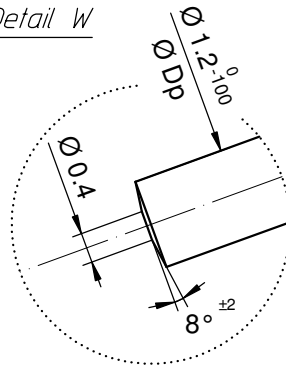
Detail Z



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



Detail W



Ø De: diamètre d'encageage
Durchmesser der Gehäusepassung
fitting-diameter

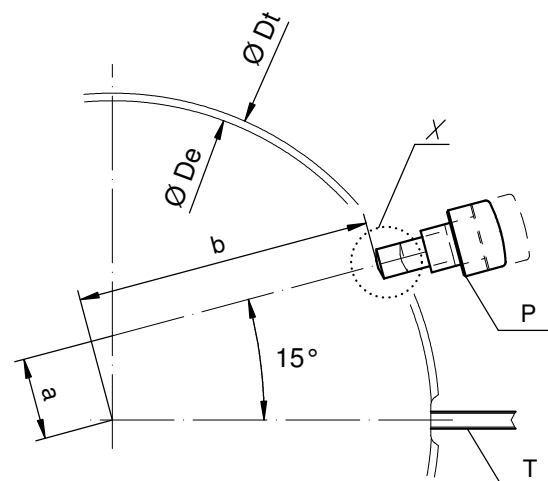
Ø Dp: diamètre du poussoir
Drückerdurchmesser
pusher-diameter

Ø Dt: diamètre total
Totaldurchmesser
total-diameter

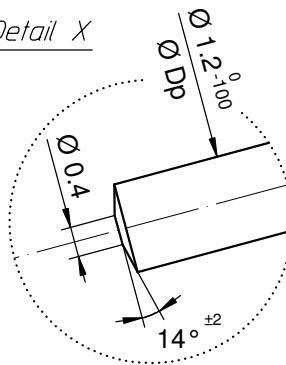
P: poussoir en position poussée
Drücker in gedrückter Stellung
pusher in pressed position

T: tige de mise à l'heure
Stellwelle
stem

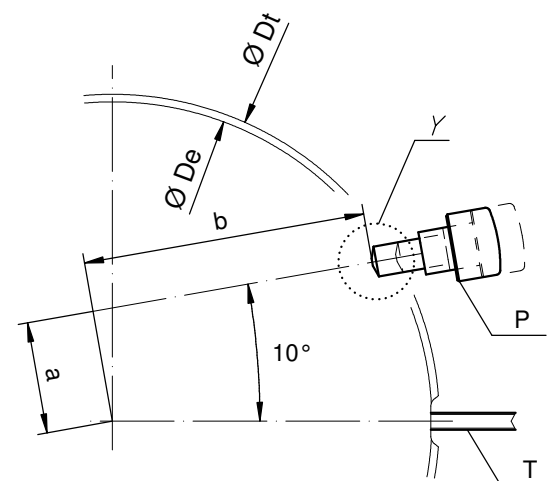
Angle Winkel Angle	15°	
Ø Dp	a	b
1.10	2.97	11.64
1.20	3.02	11.63



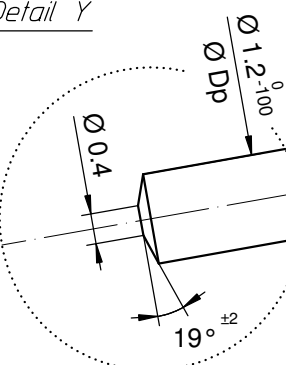
Detail X



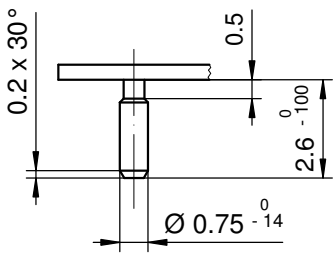
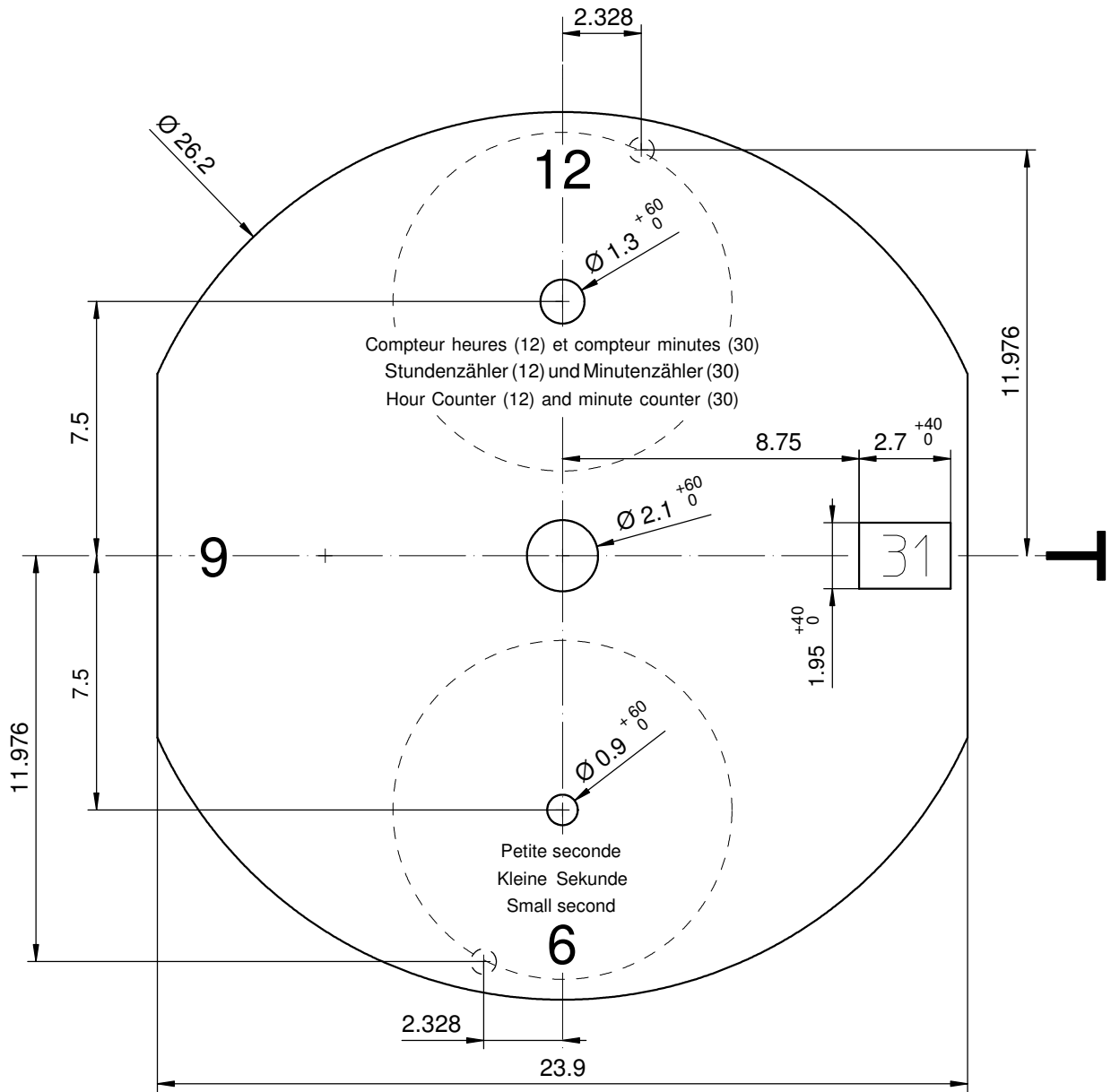
Angle Winkel Angle	10°	
Ø Dp	a	b
1.10	3.98	11.35
1.20	4.03	11.33



Detail Y



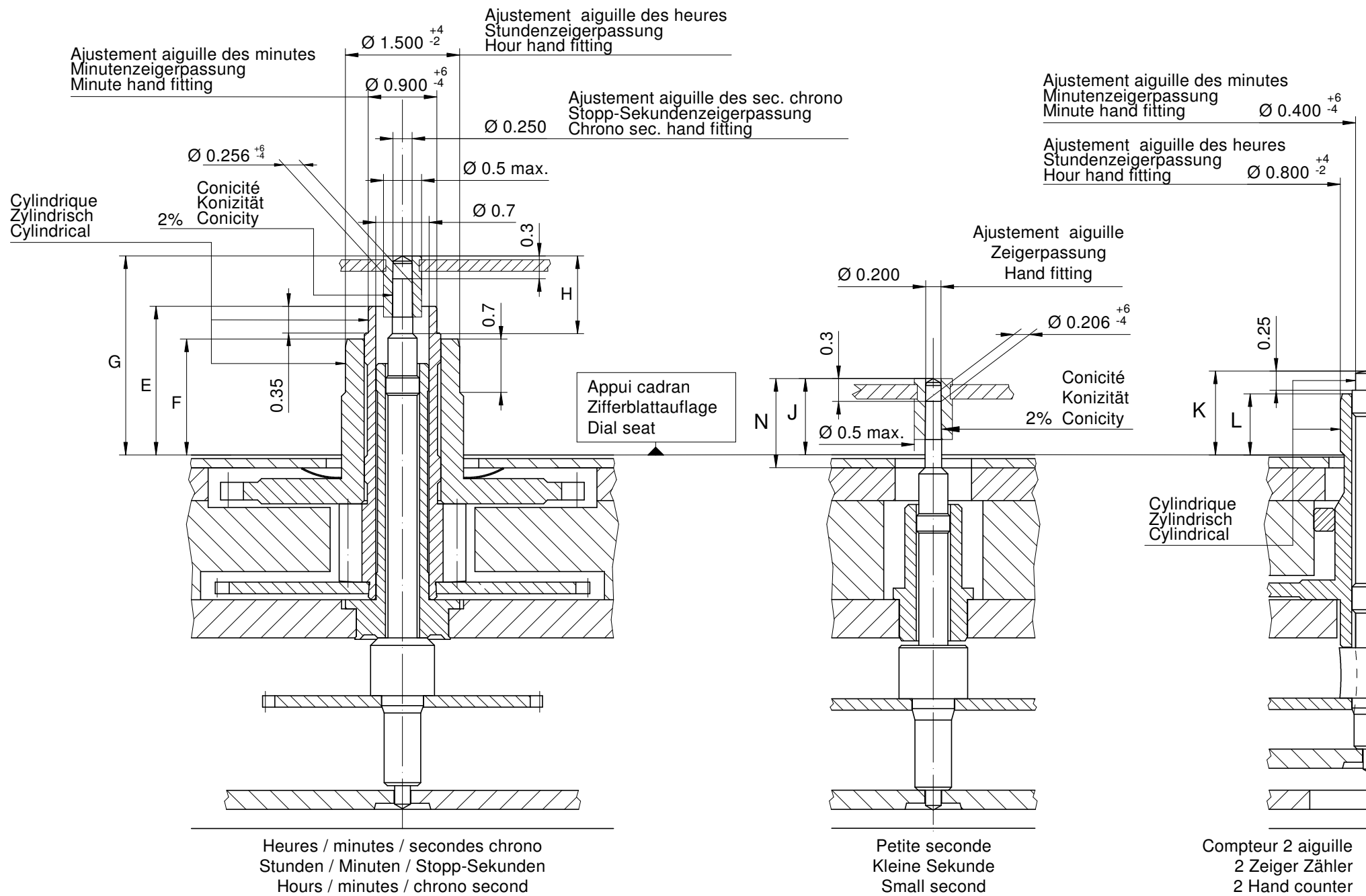
Angle des poussoirs A et B Winkel der Drücker A und B Angle of pusher A and B	Issued	02 Feb 2010	mK
	Modified	03 Feb 2011 ÄÄ 6970	mK
	Released	YES	
	Tolerance	+/- 20 µm	
	Scale	2.5 : 1 (10 : 1) (A3H)	
RONDA 35xx.x	Sous réserve de modifications Aenderungsvorbehalten Modificationsreserved		
	No.	5000.384	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)	
RONDA	3520.D	Sous réserve de modifications Aenderungsvorbehalten Modifications reserved		
		No.	5010.671	00



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	H	N	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
1	G	E	F	H	N	K	L	J
-	2.61	1.95	1.52	1.00	1.15	1.10	0.80	1.00

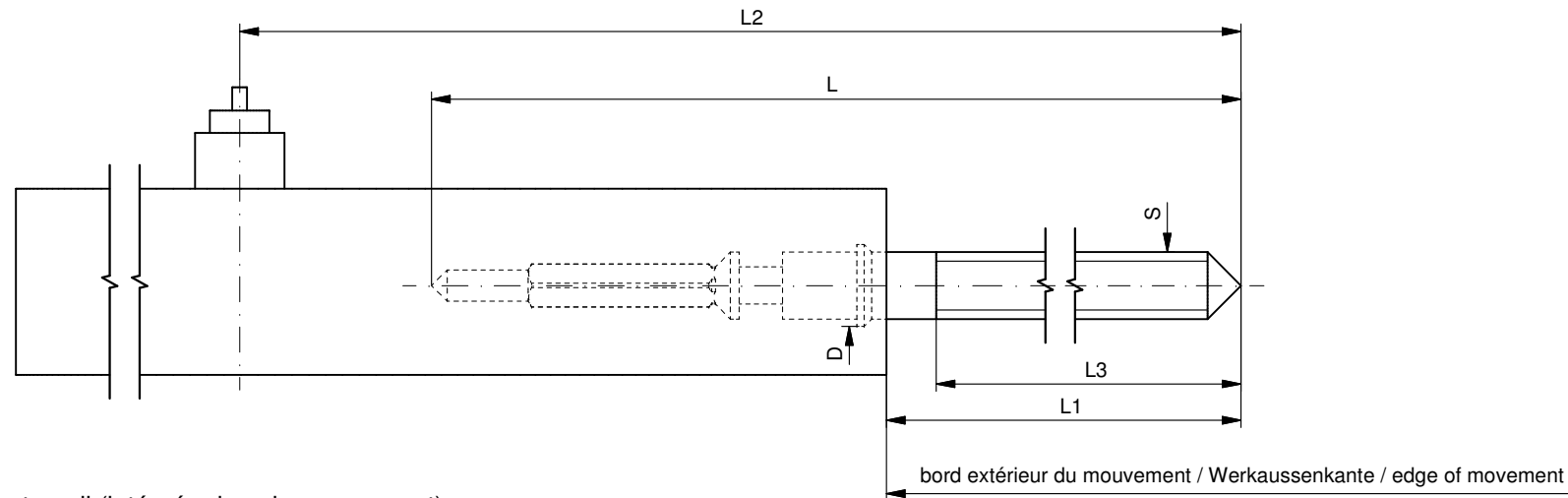
Aiguillages Zeigerwerkhöhe Hand fitting height								
Peinture comprise / inkl. Farbe / Paint included								
Epaisseur maximum du cadran Maximale Zifferblattstärke Maximum dial thickness								
No	Sous l'aiguille des secondes chrono Unter Stopp-Sekundenzeiger Under chrono second hand	Sous l'aiguille 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			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	Sous l'aiguille de petite seconde Unter kleine Sekundenzeiger Under small second hand		
1	2.00	1.45	1.00	0.70	0.40	0.40	0.15	

	mg max.	µNm max.	gmm ² max.	N max.	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		
Masse / Masse / Weight *	10	0.06	1.0	30	10	10	10	10	10	10	
Balourd / Unwucht / Unbalance *	0.06	0.03	-	40	0.03	0.03	-	0.03	0.03	0.07	
Inertie / Massenträgheit / Inertia *	1.0	-	-	40	1.0	-	-	1.0	-	0.4	
Force de chassage / Aufpresskraft / Force	30	0.03	-	40	30	30	30	30	30	30	

Aiguillages Zeigerwerkhöhen 1 1/2" Hand fitting heights

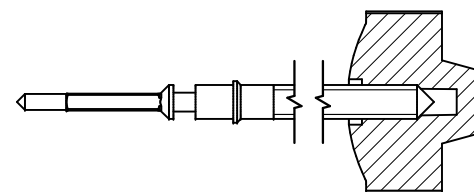
	Issued	30 Apr 2009	mg
	Modified	15 Okt 2014 ÄÄ 13275	dh
	Released	YES	
	Tolerance	µm	
	Scale	15 : 1 (A3H)	
Sous réserve de modifications Änderungen vorbehalten Modifications reserved			
RONDA	3520.D	No. 3316.130	01

* 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)
 Arbeitstellwelle (im Werk eingebaut)
 Working stem (implemented in the movement)

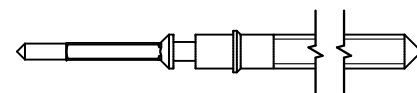
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.205.CO	19.24	10.95	22.90	10.15	0.90	1.10



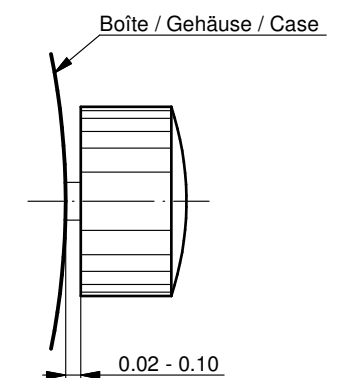
Couleur de la couronne Kronenfarbe Crown color	gris clair hellgrau light grey
Code	UN 7014

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 normale
 Normale Krone
 Normal crown

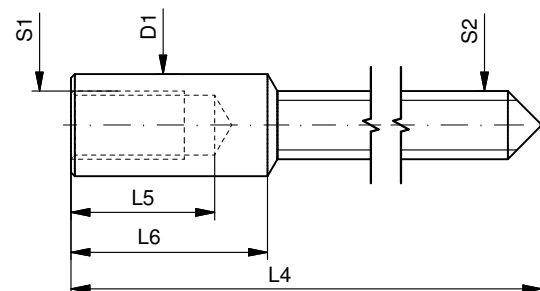


Couronne vissée
 Geschraubte Krone
 Screwed crown

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
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Movement holder
Removing setting stem
H35XX.1T



Movement holder
Setting hands
H35XX.1A

Fitting dial and hands

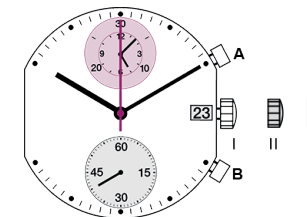
- Crown in position III
- Wind hour hand forwards, until date changes
- Remove working hand
- Position friction spring 3315.016 on hour wheel, if not already in place
- Fit dial
- Point all hands towards 12 o'clock
- Set time
- Zero the Chronograph hand*
- Crown in position II
- Set date
- Crown in position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

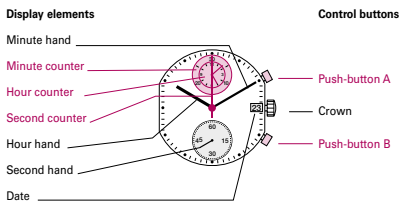
Other hands: <30N

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 watchmaker 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



01

Chronograph: Basic function

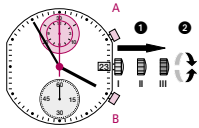
(Start / Stop / Reset)

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.)

05

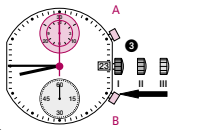
Setting the time



- 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

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:

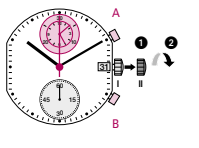
- Start:** (start timing)
- Display interval:** e.g. 20 minutes 17 seconds (timing continues in the background)
- Making up the measured time:** (the chronograph hands are quickly advanced to the ongoing measured time.)
- Stop:** (Final time is displayed)
- Reset:** The chronograph hands are returned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

Please note:

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

07

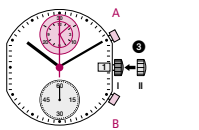
Setting the date (quick mode)



- Pull out the crown to position II (the watch continues to run).
- Turn the crown anticlockwise until the correct date 13 appears.
- Push the crown back into position I.

Please note:

During the date changing phase between approx. 08:30 PM and 12 PM, the date must be set to the date of the following day.



03

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.)

08

Setting the date/time

Example:

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

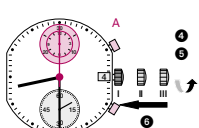
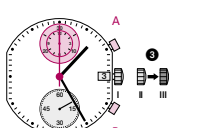
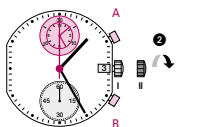
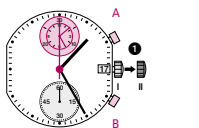
- Present date / time: 4 / 8:30 PM

- Pull out the crown to position II (the watch continues to run).
- Turn the crown anticlockwise until yesterday's date appears 3.
- Pull out the crown to position III (the watch stops).
- Turn the crown until the correct date 4 appears.
- ** Continue to turn the crown until the correct time 8:30 PM appears.
- Push the crown back into position I.

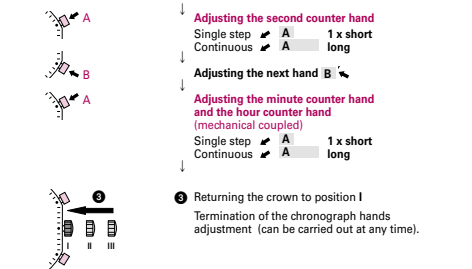
Please note:

* 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



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

Returning the crown to position I

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

