

## Caliber 503 – 10½"



### Product Specifications

Analog quartz movement

Line	powertech
Caliber	503
Size	10½"
Version Swiss Made	1 Jewels / nickel plated
Version Swiss Parts	1 Jewels / nickel plated
Standard battery life	45 months
Standard hand fitting height	1

### Functions

- 3 hands

### Features

- Repairable metal watch movement
- Power saving mechanism with pulled out stem:  
Reduction of consumption approximately 70%
- Interchangeability: All versions 10½" with same  
movement height 3.00 mm and stem height 1.50 mm
- Very powerful stepping motor

# Quartz Movements

## Classic Functions

### RONDA powertech

## Caliber 503 – 10½"

### Technical Specifications

Diameter Total	23.90 mm
Case fitting	23.30 mm
Movement height	3.00 mm
Height over standard battery	3.25 mm
Movement rest	0.80 mm
Height over stem	1.50 mm
Length of stem travel	0.45 mm
Stem thread	0.90 mm
Useful torque second – typical	11 µNm
Useful torque minute – typical	550 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. 371
Standard battery life	45 months
Battery voltage	1.5 V
Current consumption – typical	1.28 µA
Current consumption – maximum	1.85 µA



+

1.00  
avec date  
mit Datum  
with date  
  
Course tige  
Stellwelle Weg  
stem travel  
  
0.45  
sans date  
ohne Datum  
without date

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

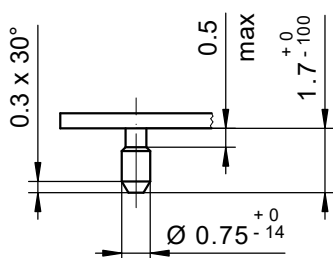
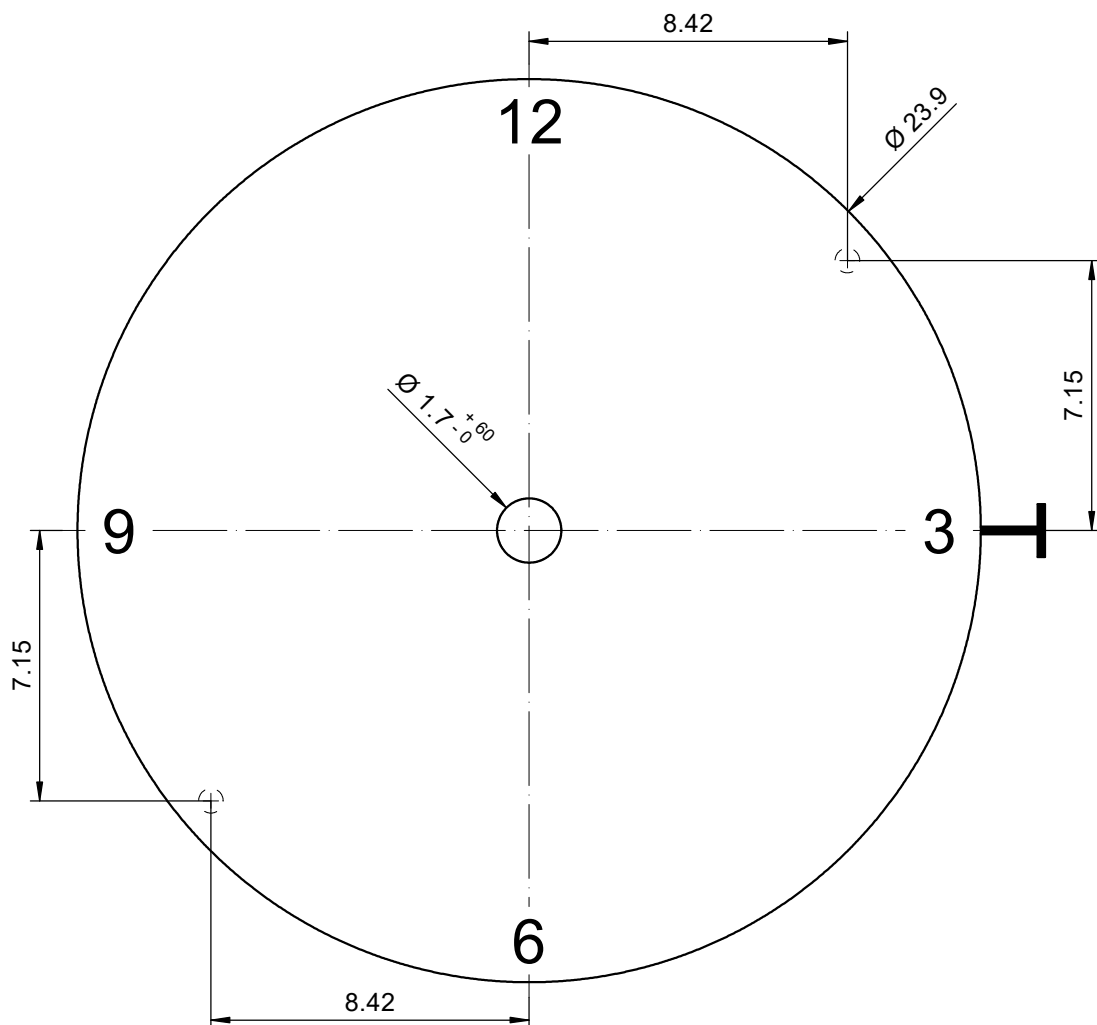
Le cadran doit être maintenu en hauteur par la boîte.  
Das Zifferblatt muss in der Höhe vom Gehäuse festgehalten werden.  
The dial must be held in the height by the case.

Cage  
Uhrwerkgestell 10½"  
Frame

RONDA

502, 503, 503S, 505,  
505S, 507, 509

Issued	09.02.2000	cs
Modified	16.11.2017	dh5221
Released	YES	
Mod. No.	36881	
Tolerance	±20 µm	
Scale	10 : 1	Page 1/1 A3
Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
No.	5000.284	07



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

Tige
Stellw.
Stem
3H

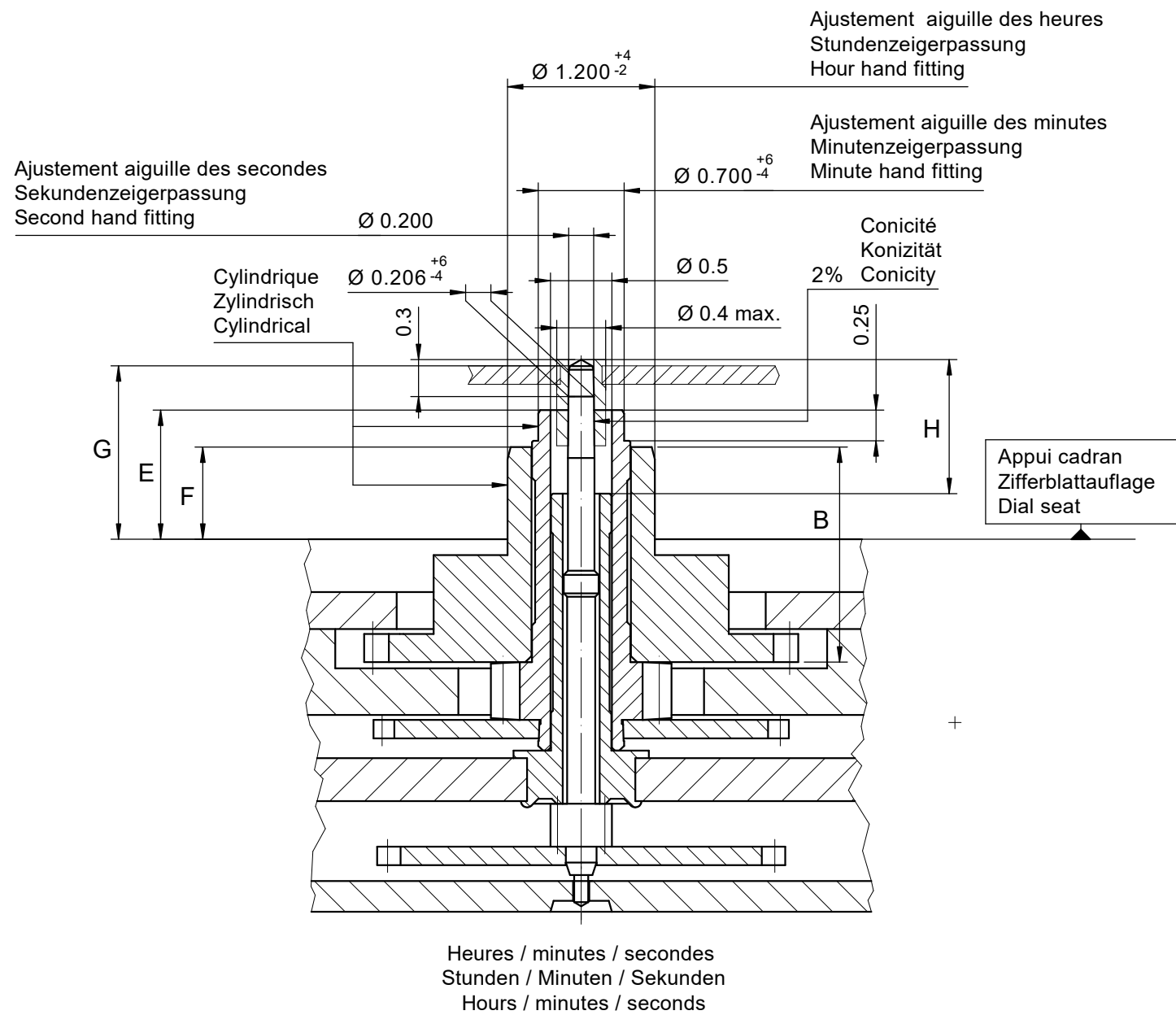
Cadran  
Zifferblatt 10½"  
Dial

Issued	13.12.2006	cw
Modified	06.01.2023	nk5222
Released	YES	
Mod. No.	45977	
Tolerance	±20 µm	
Scale	5 : 1	Page 1/1 A4

RONDA 502, 503, 503S, 702, 703

Sous réserve de modifications  
Änderungen vorbehalten  
Modifications reserved

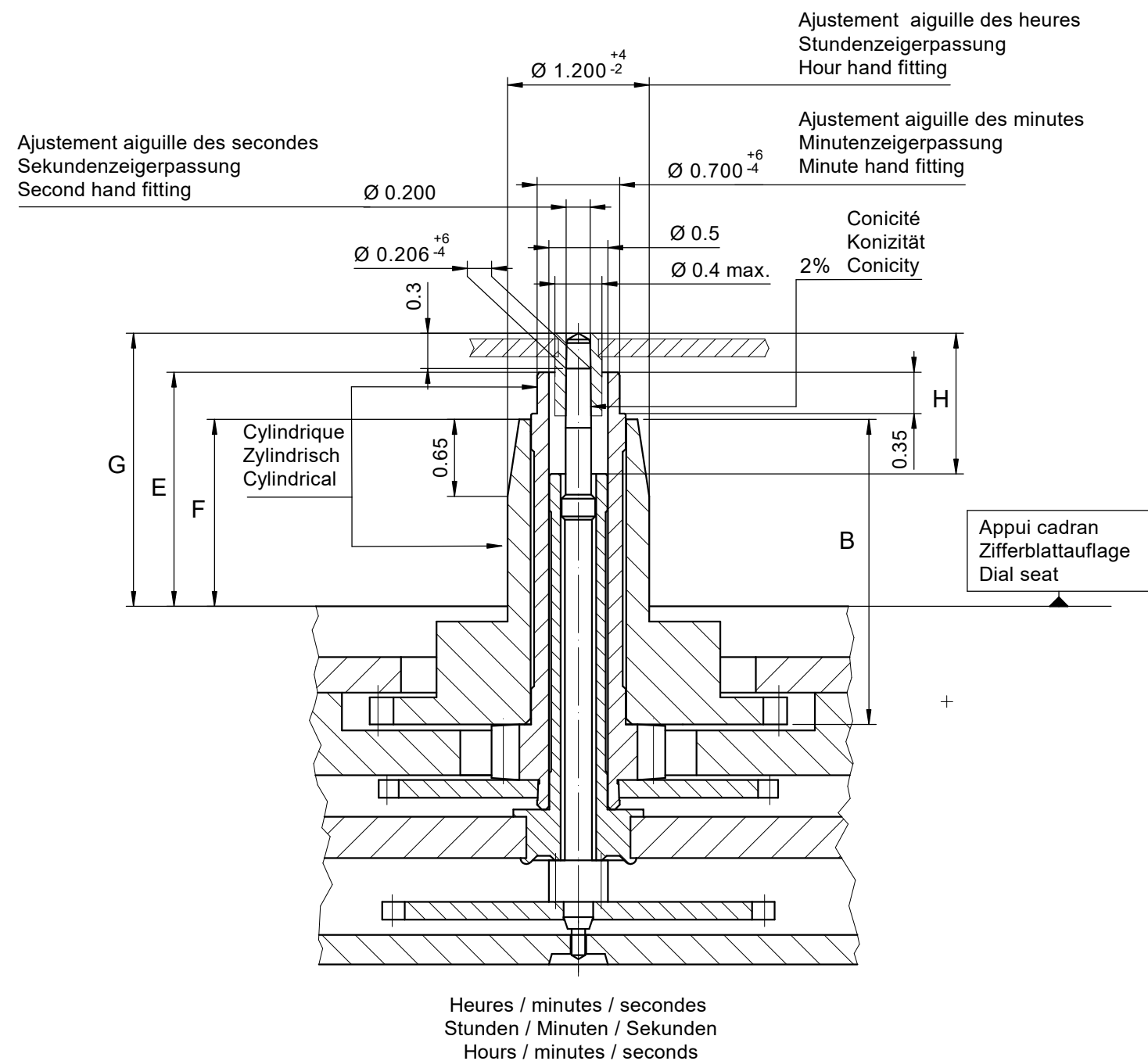
No. 5010.359 06



Aiguillage no Zeigerwerkhöhe Nr. Hand fitting height No	Dépassement Höhe über Zifferblattauflage Height over dial seat			Longueur Länge Length		Epaisseur max. (peinture comprise) Max. Dicke (inkl. Farbe) Max. thickness (paint included)		
	Pignon des secondes Sekundentrieb Second pinion	Chaussée Minutenrohr Cannon-pinion	Roue des heures Stundenrad Hour wheel	H	B	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
1	1.46	1.05	0.75	1.09	1.75	0.95	0.65	0.40
2	1.81	1.40	1.10	1.44	2.10	1.30	1.00	0.75

		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.	0.08	0.70	0.70	Balourd / Unwucht / Unbalance *
gmm <sup>2</sup>	max.	0.4	-	-	Inertie / Massenträgheit / Inertia *
N	max.	30	40	40	Force de chassage / Aufpresskraft / Force

Aiguillages Zeigerwerkhöhen Hand fitting heights		Issued	10.03.1999	gd
		Modified	24.02.2022	jk5228
		Released	YES	
		Mod. No.	44909	
		Tolerance	---	
		Scale	10 : 1	Page 1/1 A3
RONDA	503, 513, 505, 515	Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
		No.	3316.059	10



		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.	0.08	0.70	0.70	Balourd / Unwucht / Unbalance *
gmm <sup>2</sup>	max.	0.4	-	-	Inertie / Massenträgheit / Inertia *
N	max.	30	40	40	Force de chassage / Aufpresskraft / Force

Aiguillage no Zeigerwerkhöhe Nr. Hand fitting height No	Dépassement Höhe über Zifferblattauf­lage Height over dial seat			Longueur Länge Length		Epaisseur max. (peinture comprise) Max. Dicke (inkl. Farbe) Max. thickness (paint included)			
	Pignon des secondes Sekundentrieb Second pinion	Chaussée Minutenrohr Cannon-pinion	Roue des heures Stundenrad Hour wheel		Roue des heures Stundenrad Hour wheel	Cadran Zifferblatt Dial			Aiguilles Zeiger Hands
						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	
6	G	E	F	H	B	1.80	1.55	0.40	0.15

Aiguillages Zeigerwerkhöhen Hand fitting heights		Issued	10.03.1999	gd
		Modified	24.02.2022	jk5228
		Released	YES	
		Mod. No.	44909	
		Tolerance	---	
		Scale	10 : 1	Page 1/1 A3
RONDA	503, 505, 513, 515	Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
		No.	3316.067	05



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

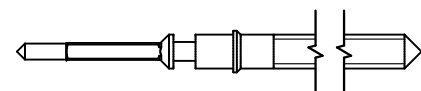
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.164.CO	20.50	11.09	22.74	11.83	0.90	1.05



Couleur de la couronne Kronenfarbe Crown color	brun braun brown
Code	UN 8052

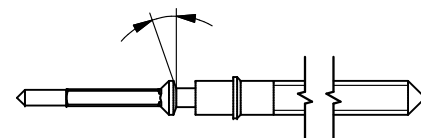
Tige (normale) / Stellwelle (normal) / Stem (normal)

No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.164	20.50	11.09	22.74	11.83	0.90	1.05
3000.171	32.50	24.34	34.74	23.83	0.90	1.05



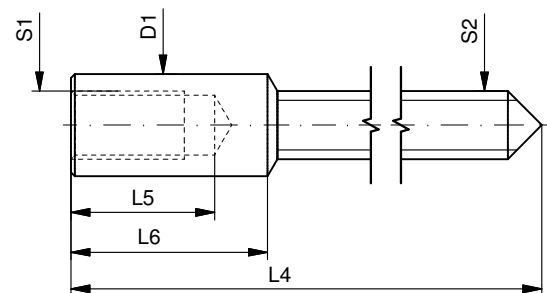
Tige (à arracher)  
Stellwelle (Ausreissversion)  
Stem (extractable version)

No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.163	20.50	12.34	22.74	11.83	0.90	1.05
3000.196	32.50	24.34	34.74	23.83	0.90	1.05

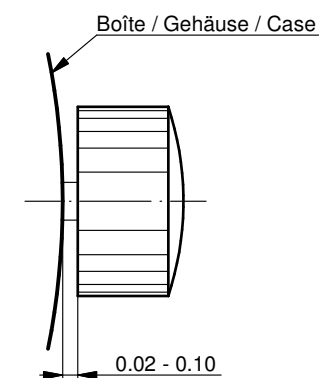


Rallonge de tige / Stellwelle Verlängerung / Stem extension

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



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

Tige (dimensions / forces)  
Stellwelle (Dimensionen / Kräfte)  
Stem (dimensions / forces)

RONDA

502, 503, 503S, 505, 505S,  
505.24H, 505.24D, 507, 509

Issued	05 Jul 2012	ds5212
Modified	17 Mär 2017 ÄA 34582	mg5224
Released	YES	
Tolerance	---	
Scale	10:1 (A3)	

Sous réserve de modifications  
Änderungen vorbehalten  
Modifications reserved

No.	5030.001	01
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User's Manual English  
Movements Caliber

RONDA powertech

- 585
- 505
- 515

RONDA normtech

- 774      - 6003.D
- 775      - 6004.D
- 704
- 705
- 784
- 785
- 714
- 715
- 715Li

RONDA slimtech

- 1005
- 1006
- 1009
- 1015
- 1016
- 1019

RONDA xtratech

- 6003.B
- 6004.B
- 7002.B
- 7003.B
- 7004.B

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.

Cal. 585 / 785:  
Battery type: 362/SR721SW

Cal. 774 / 775 / 784:  
Battery type: 364/SR621SW

Cal. 505 / 515 / 704 / 705 / 714 / 715:  
Battery type: 371/SR920SW

Cal. 6003.D / 6004.D / 6003.B / 6004.B:  
Battery type: 373/SR916SW

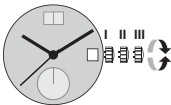
Cal. 1005 / 1006 / 1009 / 1015 / 1016 / 1019:  
Battery type: 341/SR714SW

Cal. 7002.B / 7003.B / 7004.B:  
Battery type: 381/SR1120SW

Cal. 715Li:  
Battery type: CR 2016

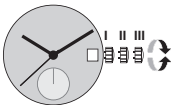
Precision: +20/-10 seconds per month

Cal. 585	Cal. 6003.D
Cal. 505	Cal. 6004.D
Cal. 515	Cal. 6003.B
	Cal. 6004.B



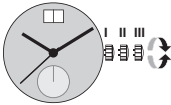
- Pos. I    Position of rest (watch running)**
- Pos. II    Quick-change correction for date**  
*The date can also be corrected during the day-changing phase between 10 pm and midnight. The date of the following day has to be set, because no automatic date change takes place at midnight.*
- Pull the crown out to position II (watch still running).
  - Turn the crown clockwise until the required date appears.  
*Cal. 6003.D & 6004.D:*
  - Turn the crown until the required date appears.
  - Push the crown back into position I.
- Pos. III    Setting the time**
- Pull the crown out to position III (watch stopped).
  - Turn the crown, until the current time is displayed (remember the 24-hour cycle).
  - Push the crown back into position I.

Cal. 774	Cal. 715Li
Cal. 775	
Cal. 704	Cal. 1005
Cal. 705	Cal. 1006
Cal. 784	Cal. 1009
Cal. 785	Cal. 1015
Cal. 714	Cal. 1016
Cal. 715	Cal. 1019



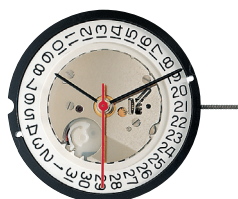
- Pos. I    Position of rest (watch running)**
- Pos. II    Quick-change correction for date**  
*Blocking time for the quick-change day correction is from approx. 9.30 pm and midnight.*
- Pull the crown out to position II (watch still running).
  - Turn the crown until the current date appears.
  - Push the crown back into position I.
- Pos. III    Setting the time**
- Pull the crown out to position III (watch stopped).
  - Turn the crown, until the current time is displayed (remember the 24-hour cycle).
  - Push the crown back into position I.

Cal. 7002.B
Cal. 7003.B
Cal. 7004.B



- Pos. I    Position of rest (watch running)**
- Pos. II    Quick-change correction for date**  
*The date can also be changed during the day-changing phase between approx. 8.00 pm and midnight. The date of the following day has to be set, because no automatic date change takes place at midnight.*
- Pull the crown out to position II (watch still running).
  - Turn the crown until the current date appears.
  - Push the crown back into position I.
- Pos. III    Setting the time**
- Pull the crown out to position III (watch stopped).
  - Turn the crown, until the current time is displayed (remember the 24-hour cycle).
  - Push the crown back into position I.

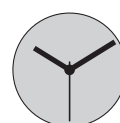




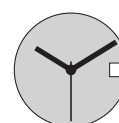
10 1/2'''



502



503



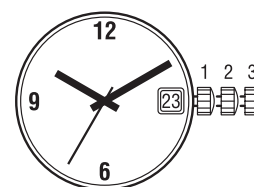
505

## Funktionen

## Fonctions

## Functions

Kaliber	Stellwellenpos.	Funktionen
Calibre	Pos. de tige	Fonctions
Caliber	Stem position	Functions
502, 503	1	Normale Position / Position normale / Running position
	2	Zeiger stellen, Sekunden-Stopp mit Unterbruch der Motorimpulse Mise à l'heure, stop-seconde avec interruption des impulsions moteur Hand setting, stop-second with interruption of motor pulses
505	1	Normale Position / Position normale / Running position
	2	Datumskorrektur / Correction de la date / Date correction
	3	Zeiger stellen, Sekunden-Stopp mit Unterbruch der Motorimpulse Mise à l'heure, stop-seconde avec interruption des impulsions moteur Hand setting, stop-second with interruption of motor pulses



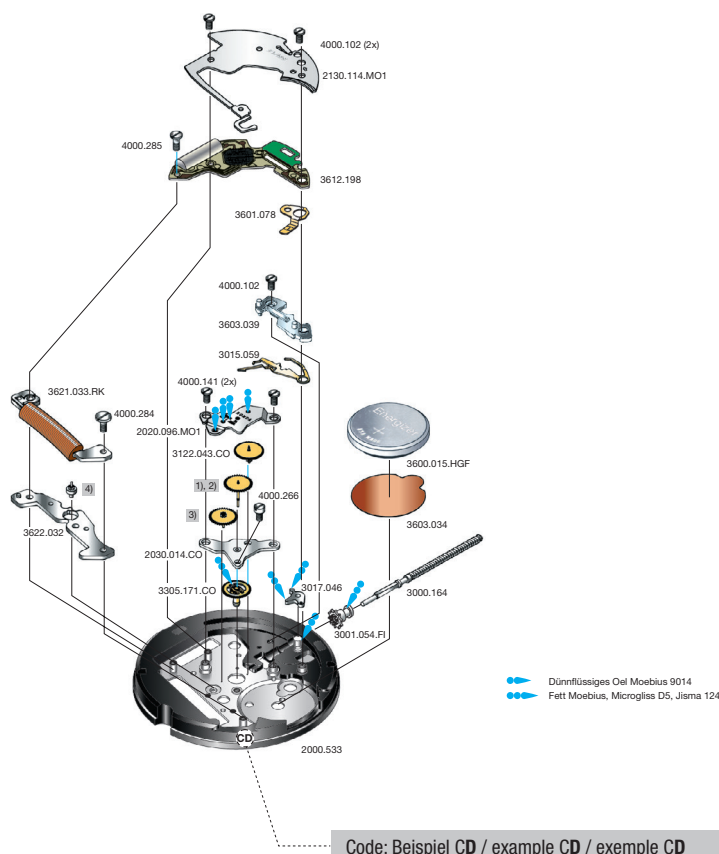
## Batterie

## Pile

## Battery

Kaliber	Batterie	Spannung	Artikelnummer RONDA
Calibre	Pile	Voltage	Numero d'article RONDA
Caliber	Battery	Tension	Part number RONDA
502, 503, 505	371 / SR920SW	1.55 V	3600.015.HGF

10 1/2''' 502, 503, 505



Cal. 503	Werkseite / Côté mouvement / Movement side		
Plan No.	Bestandteile	Fournitures	Spare Parts
2000.533	Werkplatte	Platine	Main plate
2020.096.MO1	Räderwerkbrücke	Pont rouage	Train w. bridge
2030.014.CO	Zentrumbrücke	Pont centre	Centre bridge
2130.114.MO1	Modul-Abdeckp.	Couvre module	Module cover pl.
3000.164	Stellwelle	Tige	Stem
3001.054.FI	Kupplungstrieb	Pignon coulant	Sliding pinion
3015.059	Kuppl.-triebhebel	Bascule	Yoke
3017.046	Winkelhebel	Tirette	Setting lever
3122.043.CO	Kleinbodenrad	Roue moyenne	Third wheel
1)	Sekundenrad	Roue secondes	Second-wheel
3)	Zwischenrad	Roue interméd.	Intermed. wheel
3305.171.CO	Minutenrohr	Chaussée	Cannon pinion
3600.015.HGF	Batterie	Pile	Battery
3601.078	Batterie-Kontakt	Bride contact	Battery contact
3603.034	Batterie-Isolation	Isolateur pile	Battery insulation
3603.039	Deckplatte/ Ste.	Couvre mécan.	Setting lev. cover
3612.198	Modul	Module	Module
3621.033.RK	Spule	Bobine	Coil
3622.032	Stator	Stator	Stator
4)	Rotor	Rotor	Rotor
4000.102	Schraube	Vis	Screw
4000.141	Schraube	Vis	Screw
4000.266	Schraube	Vis	Screw
4000.284	Schraube	Vis	Screw
4000.285	Schraube	Vis	Screw

#### Abweichungen / Divergences / Deviations

Cal. 505	Werkseite / Côté mouvement / Movement side		
Plan No.	Bestandteile	Fournitures	Spare Parts
3015.060	Kuppl.-triebhebel	Bascule	Yoke

Cal. 502	Werkseite / Côté mouvement / Movement side		
Plan No.	Bestandteile	Fournitures	Spare Parts
2030.012.CO	Zentrumbrücke	Pont centre	Centre bridge
2)	Sekundenrad	Roue secondes	Second-wheel
3)	Zwischenrad	Roue interméd.	Intermed. wheel
3305.210.CO	Minutenrohr	Chaussée	Cannon pinion
4)	Rotor	Rotor	Rotor

#### Cal. 503, 505

Bis Dezember 2015 Jusqu' en Decembre 2015 Untill December 2015	Ab Januar 2016 A partir de Janvier 2016 From January 2016
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Code	2. Buchstabe ... D Second letter ... D 2 <sup>ème</sup> chiffre: ... D	2. Buchstabe: ab E Second letter: from E 2 <sup>ème</sup> chiffre: à partir de E
1)	3136.090.CO	3136.194.CO
3)	3147.019.CO	3147.092.CO
4)	3715.089.RK	3715.144.RK

Die obigen 3 Teile bilden jeweils eine Gruppe. Deshalb sind die 3 Teile jeder Gruppe nicht einzeln gegeneinander austauschbar.

Les 3 fournitures ci-dessous forment un groupe individuel. C'est pourquoi les 3 fournitures de chaque groupe ne sont pas interchangeables.

The 3 parts mentioned above are forming an individual group. Therefore the 3 parts of each group are not interchangeable.

#### Cal. 502

Bis Dezember 2015 Jusqu' en Decembre 2015 Untill December 2015	Ab Januar 2016 A partir de Janvier 2016 From January 2016
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Code	2. Buchstabe ... D Second letter ... D 2 <sup>ème</sup> chiffre: ... D	2. Buchstabe: ab E Second letter: from E 2 <sup>ème</sup> chiffre: à partir de E
2)	3136.093.CO	3136.196.CO
3)	3147.019.CO	3147.092.CO
4)	3715.089.RK	3715.144.RK

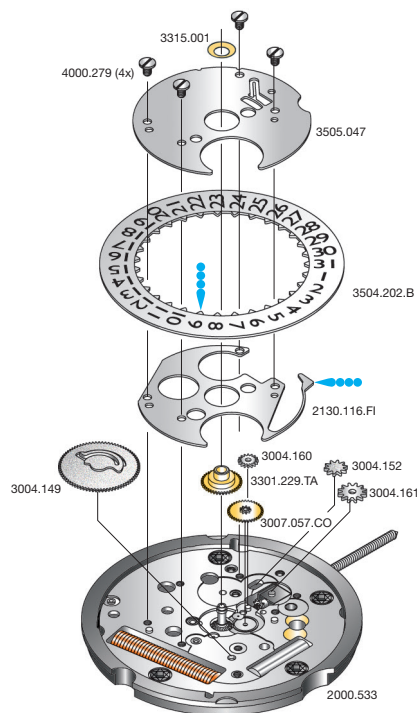
Die obigen 3 Teile bilden jeweils eine Gruppe. Deshalb sind die 3 Teile jeder Gruppe nicht einzeln gegeneinander austauschbar.

Les 3 fournitures ci-dessous forment un groupe individuel. C'est pourquoi les 3 fournitures de chaque groupe ne sont pas interchangeables.

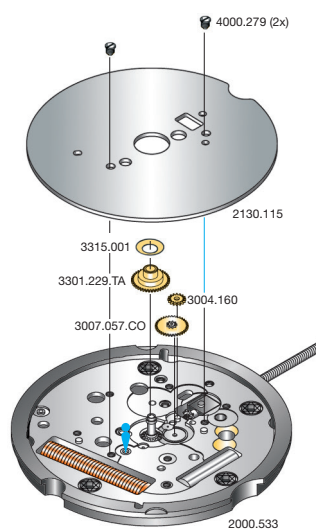
The 3 parts mentioned above are forming an individual group. Therefore the 3 parts of each group are not interchangeable.

10 1/2''' 505

10 1/2''' 502, 503



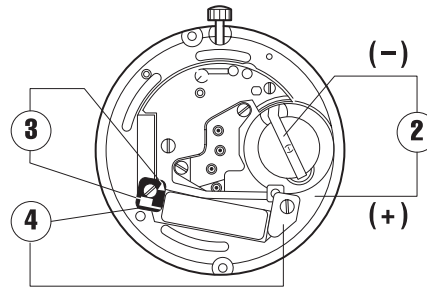
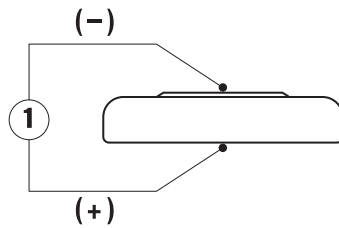
Fett Moebius, Microgloss I 4



Dünnflüssiges Öl Moebius 9014

Cal. 505	Zifferblattseite / Côté cadran / Dial side		
Plan No.	Bestandteile	Fournitures	Spare Parts
2130.116.FI	Kalenderplatte	Plaque calendrier	Date ind. plate
3004.149	Datummitn.-rad	Renvoi entraî.	Ind. driving wheel
3004.152	Umkehrad	Baladeur	Sliding gear
3004.160	Zeigerstellrad	Renvoi minuterie	Setting wheel
3004.161	Verbindungsrad-Kupplungtrieb	Renvoi pig. coulant	Sliding pinon setting wheel
3007.057.CO	Wechselrad	Minuterie	Minute wheel
3301.229.TA	Stundenrad	Canon	Hour wheel
3315.001	Spreizfeder	Clinquant	Washer
3504.202.B	Datumanzeiger	Bague	Date indicator
3505.047	Kal.-Abdeckplatte	Couvercle calend.	Date ind. cover
4000.279	Schraube	Vis	Screw

Cal. 502, 503	Zifferblattseite / Côté cadran / Dial side		
Plan No.	Bestandteile	Fournitures	Spare Parts
2130.115	Zeigerwerkplatte	Plaque maintien	Maintening plate
3004.160	Zeigerstellrad	Renvoi minuterie	Setting wheel
3007.057.CO	Wechselrad	Minuterie	Minute wheel
3301.229.TA	Stundenrad	Canon	Hour wheel
3315.001	Spreizfeder	Clinquant	Washer
4000.279	Schraube	Vis	Screw



Kaliber Calibre Caliber	Pos. Pos. Pos.	Einheit Unité Unit	Messwerte Valeurs mesurées Measured values	Kontrolle Contrôle Check	Bemerkungen Remarques Remarks
502, 503, 505	1	V	1,55	Batterie-Spannung Tension de la pile Battery voltage	Batterie herausnehmen und messen Enlever et mesurer la pile Remove battery for measuring
502, 503, 505	2	µA	1,10–1,85 2,20–2,65	Stromaufnahme Consom. de courant Power consumption	Ohne Batterie, mit externer Speisung Sans pile, avec alimentation externe Without battery, with external power supply
502, 503, 505	2	V	≤ 1,30	Funktionskontrolle bei Minimalspannung Contrôle de fonctionnement à tension minimale Check with lowest possible voltage	Ohne Batterie, mit externer Speisung Sans pile, avec alimentation externe Without battery, with external power supply
502, 503, 505	3	KΩ	1,90–2,10 2,35–2,55	Spulenwiderstand Résistance de la bobine Resistance of the coil	Ohne Batterie Sans pile Without battery
502, 503, 505	4	KΩ	∞	Spulenisolation Isolation de la bobine Coil insulation	Ohne Batterie Sans pile Without battery
502, 503, 505		Sek./Monat sec./mois sec./month	- 10/+ 20	Induktivsonde 60 Sek. Senseur inductif 60 sec. Inductive sensor 60 sec.	Mit Batterie Avec pile With battery

## Einschalen / Werkzeuge

## Emboîtage / outils

## Casing / tools

Nr. H 50x.1A



Nr. H 50x.1T



	SWISS MADE & SWISS PARTS
Schraube Vis Screw	

## Zeigersetzen

Maximale Aufpresskraft:

- Stunden und Minutenzeiger: max. 40N
- Sekundenzeiger: max. 30N

Beim Zeigersetzen muss das Werk abgestützt werden.

## Poser les aiguilles

Force de chassage maximale:

- Aiguilles des heure et des minutes: max. 40N
- Aiguille des secondes: max. 30N

Lors de la pose d'aiguilles, le mouvement doit être soutenu.

## Hand setting

Maximal force:

- Hour and minute hands: max. 40N
- Second hand: max. 30N

The movement needs to be supported for hand setting.

<b>Kal. 502, 503 Stellwelle entfernen</b>	<b>Kal. 505 Stellwelle entfernen</b>
Beim Entfernen der Stellwelle muss sich die Stellwelle in <b>Position 1</b> (gedrückt) befinden, bevor auf den Winkelhebel gedrückt wird.	Beim Entfernen der Stellwelle muss sich die Stellwelle in <b>Position 2</b> befinden, bevor auf den Winkelhebel gedrückt wird.
<b>Kal. 502, 503 Enlever la tige</b>	<b>Kal. 505 Enlever la tige</b>
En enlevant la tige, la tige doit se trouver en <b>position 1</b> (poussée), avant de pousser sur la tirette.	En enlevant la tige, la tige doit se trouver en <b>position 2</b> , avant de pousser sur la tirette.
<b>Kal. 502, 503 Stem removal</b>	<b>Kal. 505 Stem removal</b>
For removal of the stem, the stem must be in <b>position 1</b> (pressed in) prior to apply pressure to the setting lever.	For removal of the stem, the stem must be in <b>position 2</b> prior to apply pressure to the setting lever.