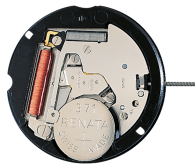


# Quartz Movements

## 经典功能

### 朗达 强力系列

型号 509 - 10□"



#### 产品规格

指针式石英机芯

系列

强力系列

型号

509

尺寸

10□"

版本 瑞士制造

1 钻石 / 银色

版本 瑞士零件 远东组装

1 钻石 / 银色

电池寿命

45 月

标准针高

1

#### 特点

- 金属机芯，可修理
- 拉停把心省电功能：节省大概70%耗电
- 所有10□" 机芯具相同厚度 3.00 mm 及把中1.50 mm：可共用配件
- 特强步进马达
- 大日历可快调

#### 功能

- 大日历不会由31跳至01，需要每月调校
- 三针

# Quartz Movements

## 经典功能

### 朗达 强力系列

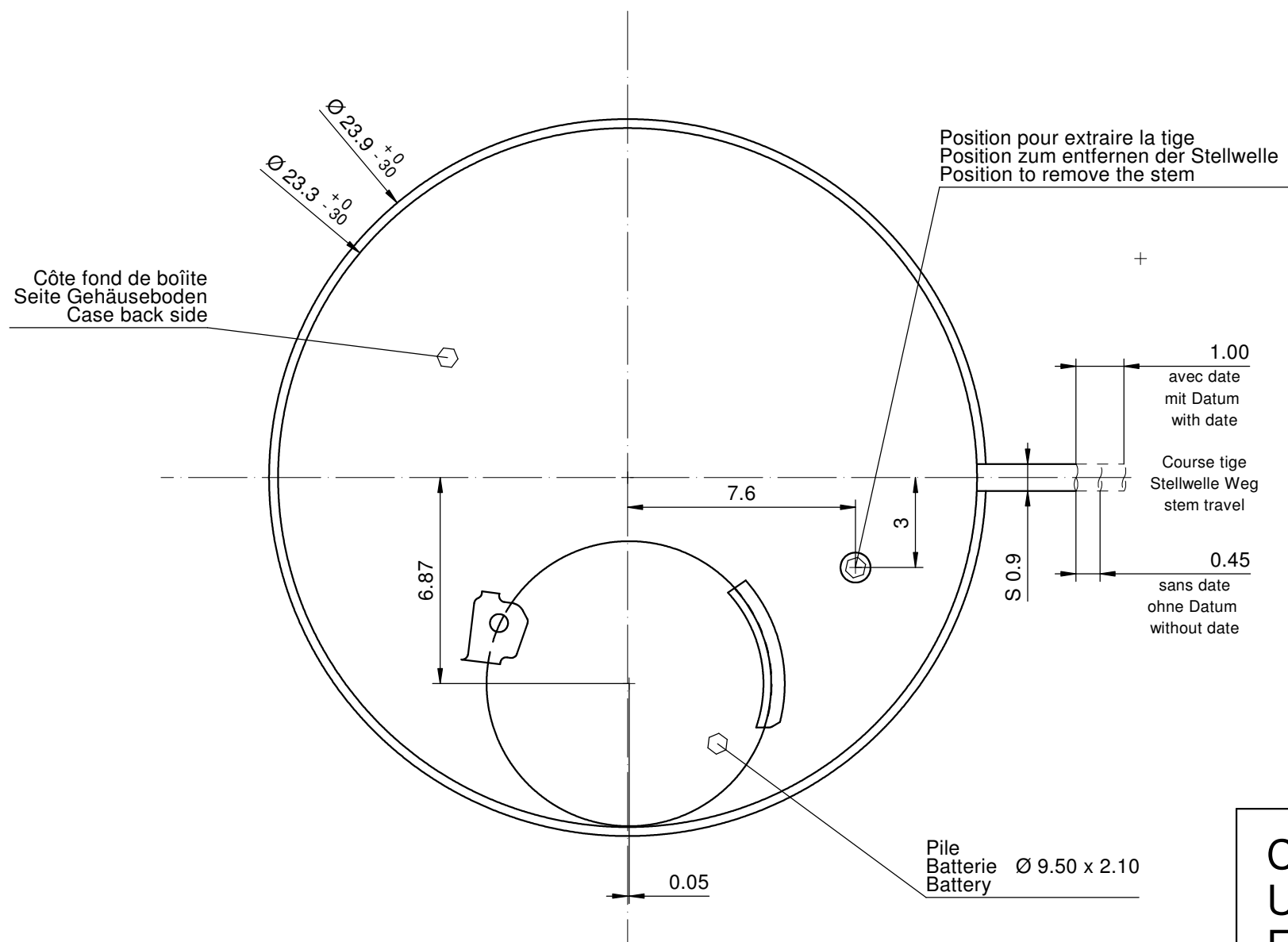
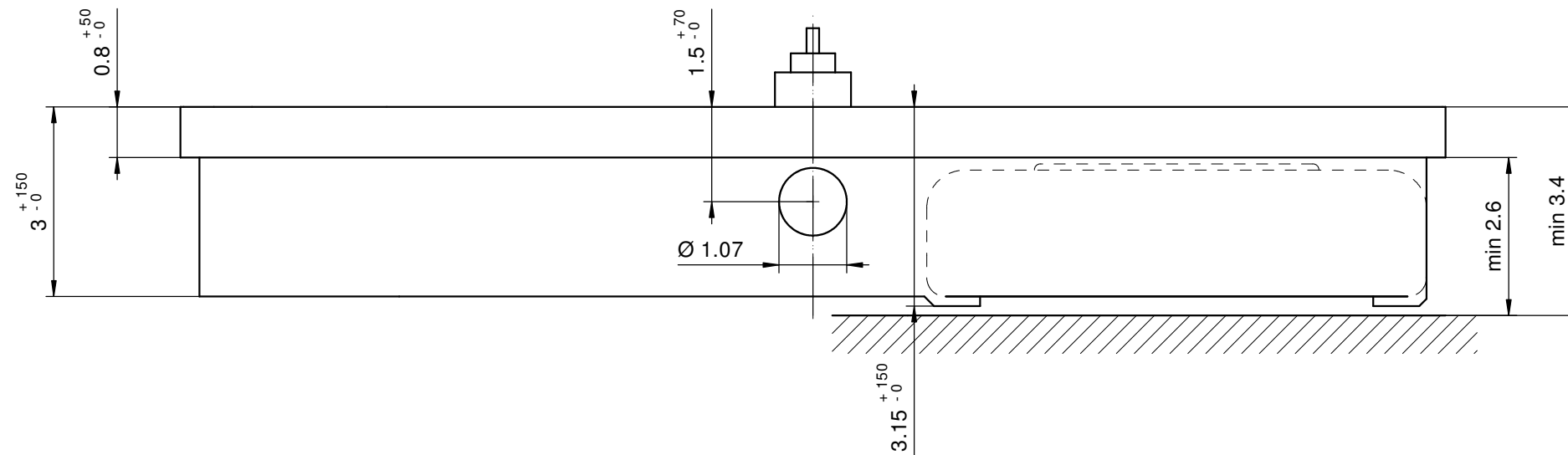
## 型号 509 - 10□□

### 技术规格

机芯直径	23.90 mm
内罩座位直径	23.30 mm
机芯厚度	3.00 mm
电池以上厚度	3.25 mm
机芯座位	0.80 mm
把中	1.50 mm
把心行程	1.00 mm
把心螺纹直径	0.90 mm
秒针运行扭力 - 一般情况下	11 $\mu$ Nm
分针运行扭力 - 一般情况下	550 $\mu$ Nm
运作温度	0 - 50 °C
误差率	-10/ +20 秒/月
防磁度	18.8 Oe
防震度	NIHS 91-10

### 电池规格

电池类型	型号 371
电池寿命	45 月
电压	1.5 V
电耗 - 一般情况下	1.28 $\mu$ A (日历不在跳动当中)
电耗 - 上限	1.85 $\mu$ A (日历不在跳动当中)



+

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

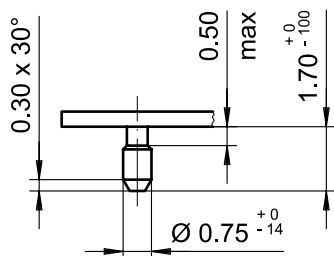
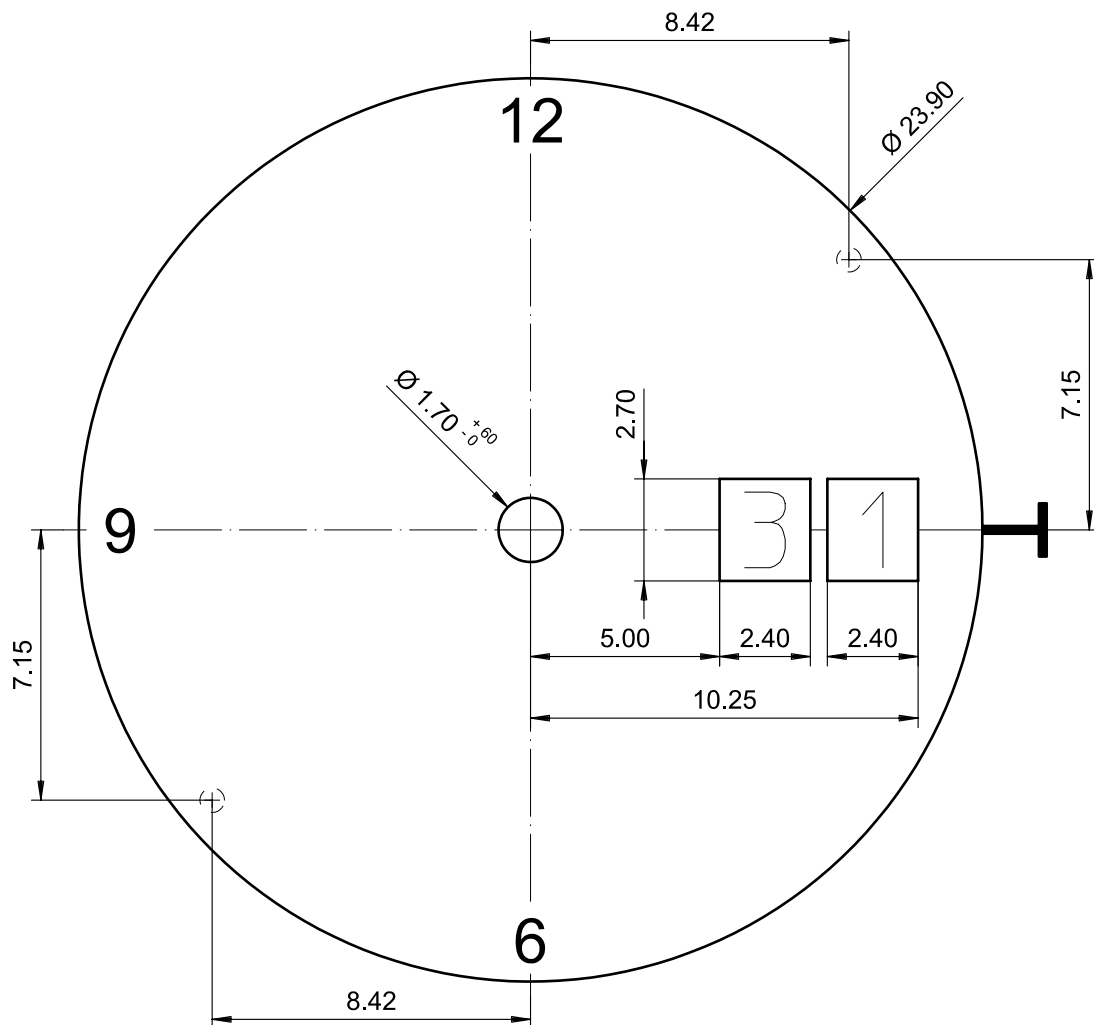
Le cadran doit être maintenu en hauteur par la boîte.  
Das Zifferblatt muss in der Höhe vom Gehäuse festgehalten werden.  
The dial must be held in the height by the case.

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	Date
Stellw.	Datum
Stem	Date
3H	3H

Cadran  
Zifferblatt  
Dial

10 1/2"

Issued	14 Dez 2006	cw
Modified	15.Dez. 2006 ÄA ----	cw
Released	YES	
Tolerance	+/- 20 µm	
Scale	5 : 1 (A4V)	

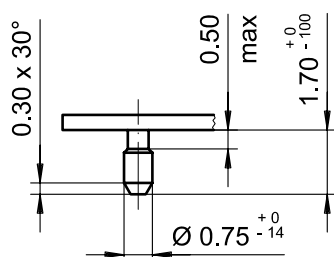
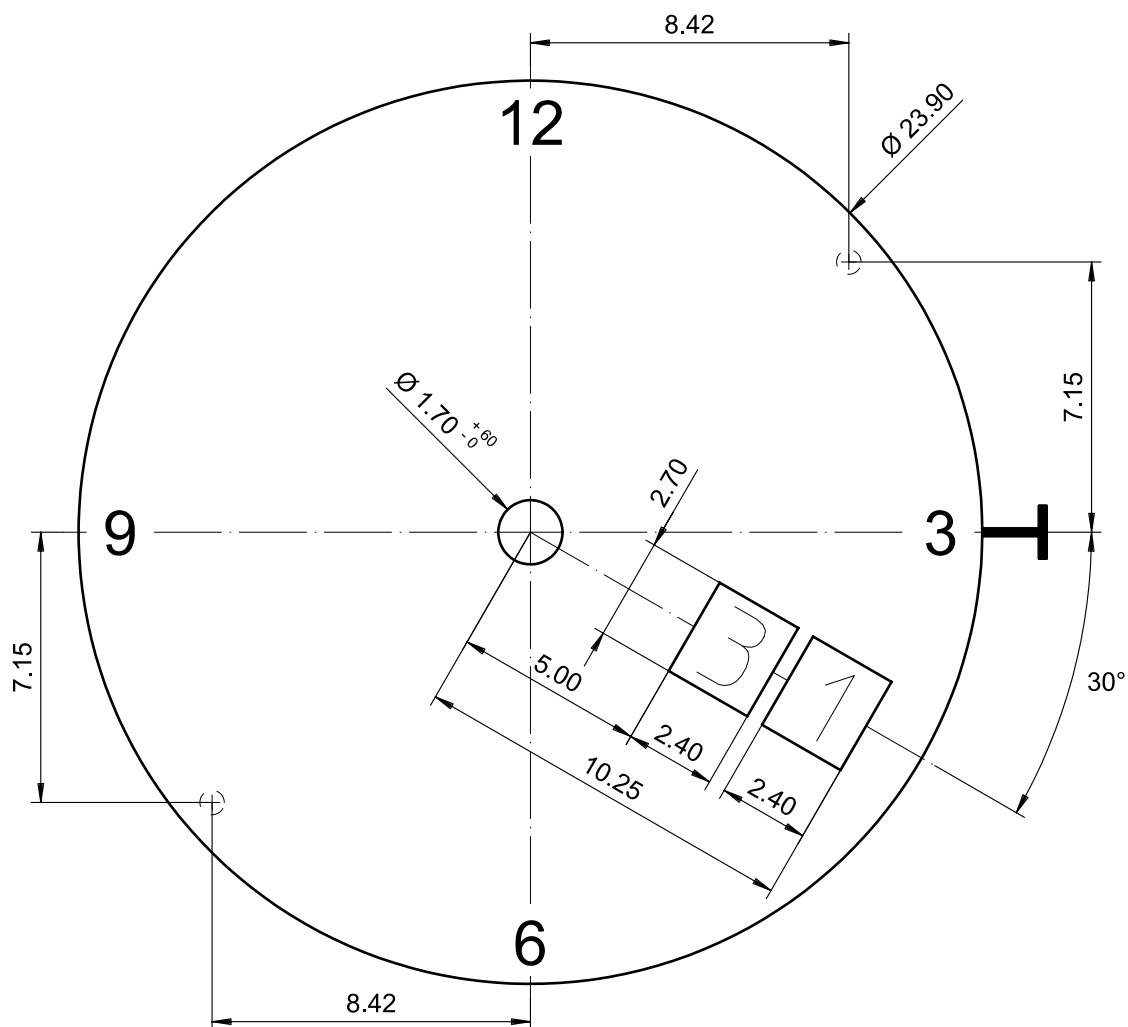
RONDA

509

Sous réserve de modifications  
Änderungen vorbehalten  
Modifications reserved

No. 5010.487 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	4H

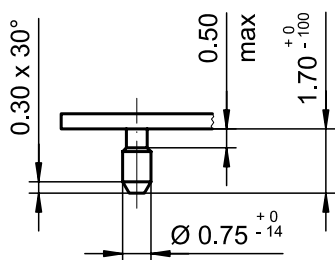
Cadran  
Zifferblatt  
Dial

10 1/2"

Issued	14 Dez 2006	cw
Modified	12.Dez. 2006 ÄA ----	cw
Released	YES	
Tolerance	+/- 20 µm	
Scale	5 : 1 (A4V)	
Sous réserve de modifications Äenderungen vorbehalten Modifications reserved		
No.	5010.505	01

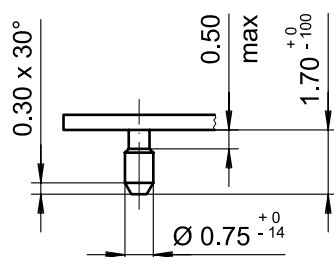
RONDA

509



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

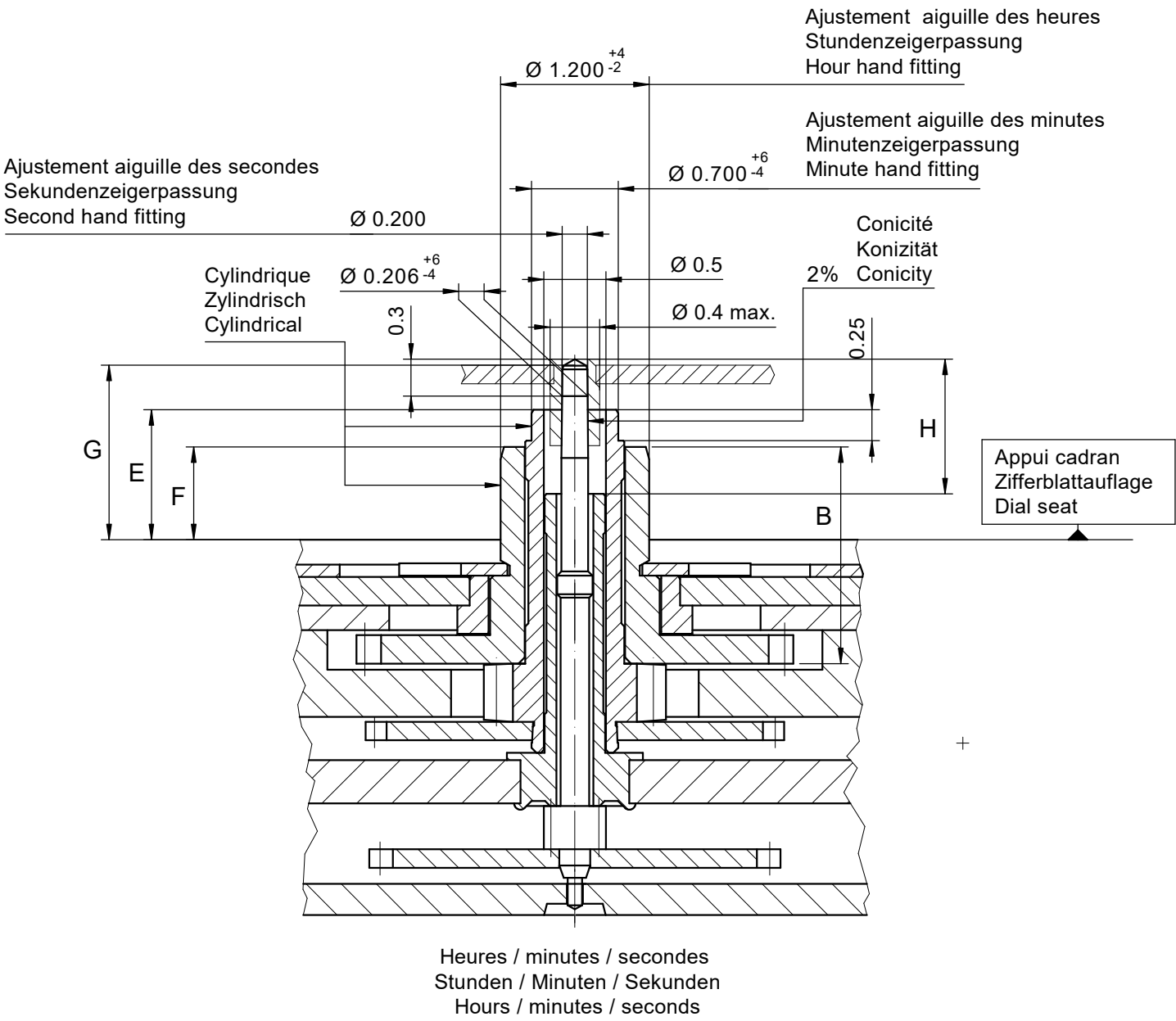
Cadran Zifferblatt Dial <div style="text-align: right; font-size: 2em;">10½"</div>		Issued	14 Dez 2006	cw
		Modified	15.Dez. 2006 ÄÄ ----	cw
		Released	YES	
		Tolerance	+/- 20 µm	
		Scale	5 : 1 (A4V)	
RONDA	509	Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
		No.	5010.506	01



Tige	Date
Stellw.	Datum
Stem	Date
12H	3H
	<input type="text"/>

<div> <div>Cadran</div> <div>Zifferblatt</div> <div>Dial</div> </div> <div>10½"</div>		Issued	14 Dez 2006	cw
		Modified	15.Dez.2006 ÄÄ ----	cw
		Released	YES	
		Tolerance	+/- 20 µm	
		Scale	5 : 1 (A4V)	
RONDA	509	Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
		No.	5010.529	01





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	
1	G	E	F	H	B	0.95	0.65	0.40	0.15
2	1.46	1.05	0.75	1.09	1.75	1.30	1.00	0.75	0.15

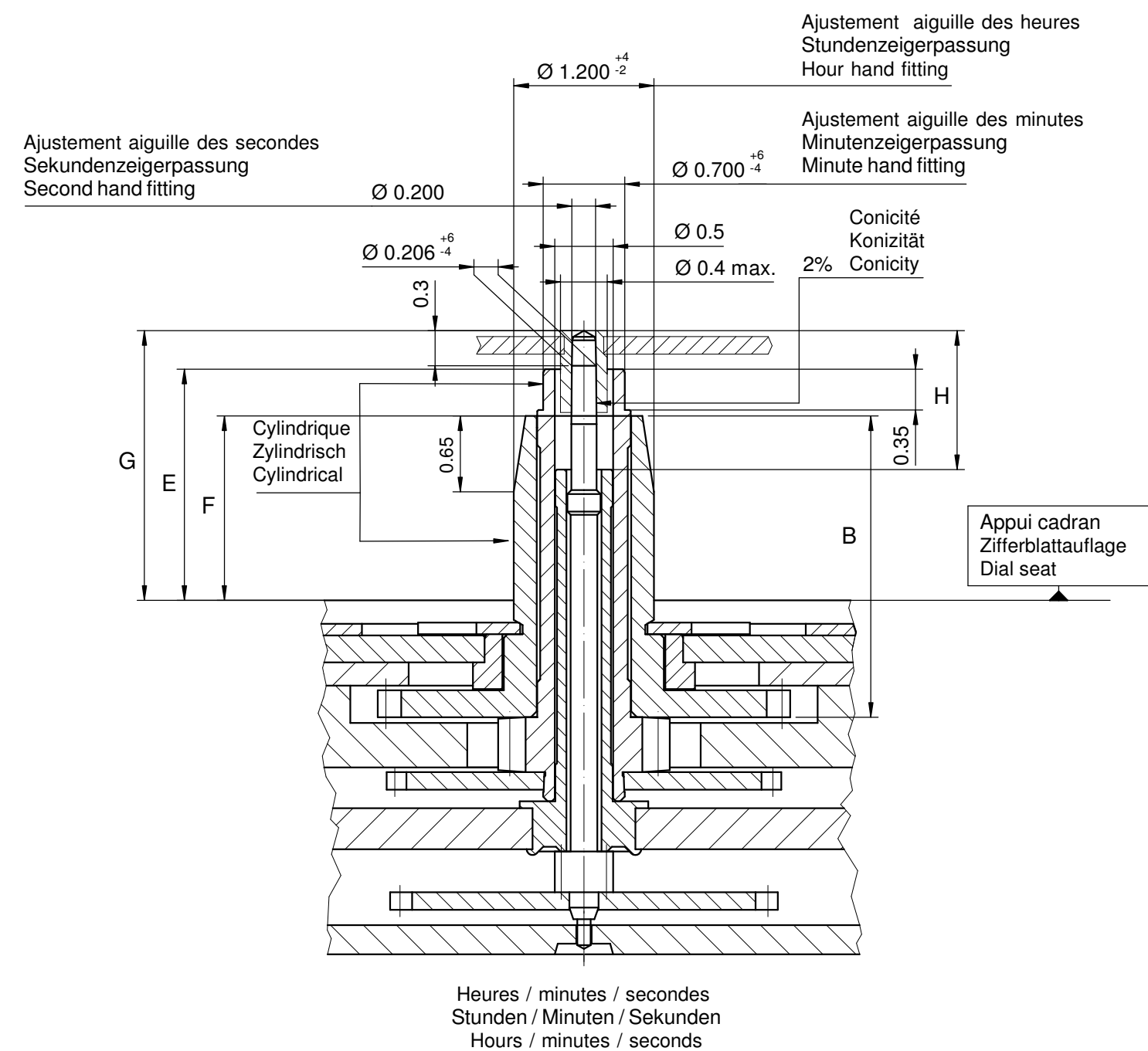
		Aig. des secondes Sekundenzeiger Second hand	Aig. des minutes Minutenzeiger Minute hand	Aig. des heures Stundenzeiger Hour hand	Lors de la pose d'aiguilles, le mouvement doit être soutenu. Beim Zeigersetzen muss das Werk abgestützt werden. The movement needs to be supported for hand setting.
mg	max.	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	25.02.2022	jk5228
		Released	YES	
		Mod. No.	38099	
		Tolerance	µm	
		Scale	10 : 1	Page 1/1 A3
RONDA	507, 509, 517, 519 505.24D, 515.24D	Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
		No.	3316.060	08

\* 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



Aiguillage no ZeigerwerkhöheNr. Hand fitting height No	Dépassement Höhe über Zifferblattaufage 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	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	
						G	E	F	
6	2.31	1.98	1.58	1.19	2.58	1.80	1.55	0.40	0.15

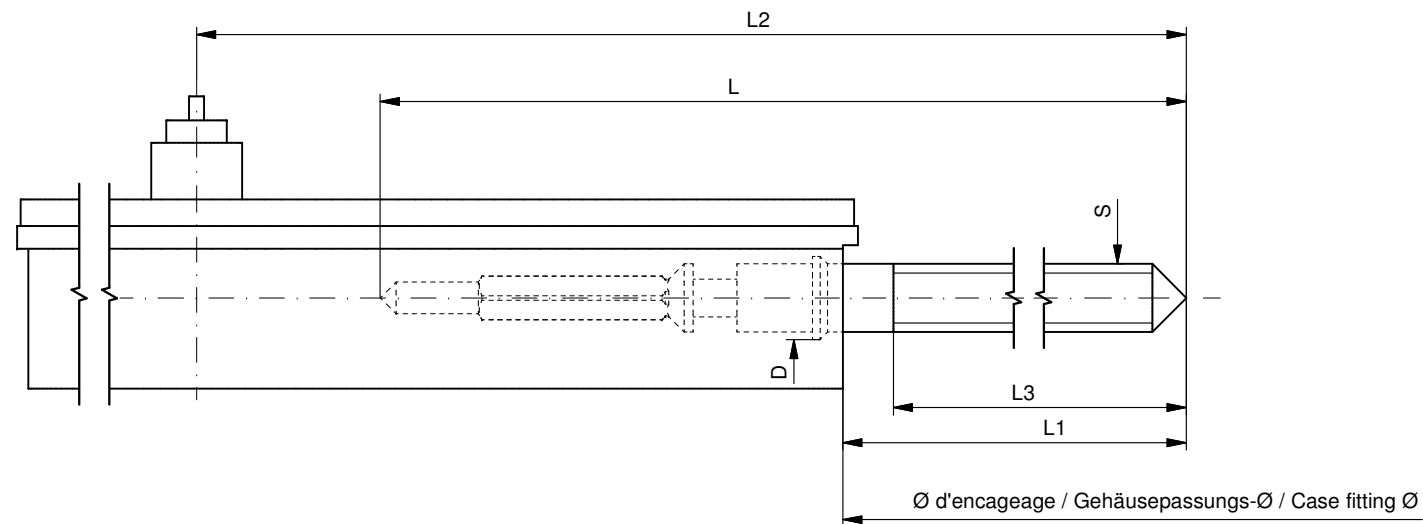
	Aig. des secondes Sekundenzeiger Second hand	Aig. des minutes Minutenzeiger Minute hand	Aig. des heures Stundenzeiger Hour hand	Lors de la pose d'aiguilles, le mouvement doit être soutenu. Beim Zeigersetzen muss das Werk abgestützt werden. The movement needs to be supported for hand setting.
mg max.	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

Sous réserve de toutes modifications		Änderungen vorbehalten		All modifications reserved			
Aiguillages Zeigerwerkhöhen Hand fitting heights				Issued		23 Mai 2011	dh
				Modified		24 Mai 2011 ÄA 11034	dh
				Released		Yes	
				Tolerance		µm	
				Scale		20 : 1 (A3H)	
RONDA	507, 509, 517, 519 505.24D, 515.24D			Sous réserve de modifications Änderungen vorbehalten Modifications reserved			
				No.	3316.157	00	

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

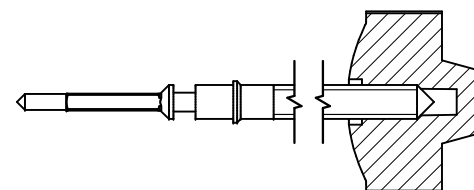
\* Bei abweichenden Werten, bitte technischen Kundendienst anfragen

\* 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)

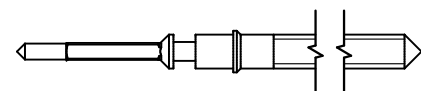
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.164.CO	20.50	11.09	22.74	11.83	0.90	1.05



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

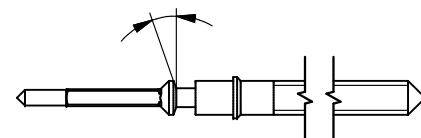
Tige (normale) / Stellwelle (normal) / Stem (normal)

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



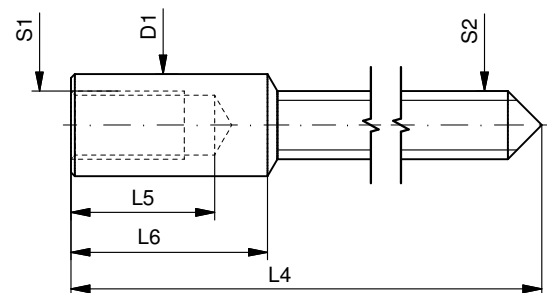
Tige (à arracher)  
Stellwelle (Ausreissversion)  
Stem (extractable version)

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

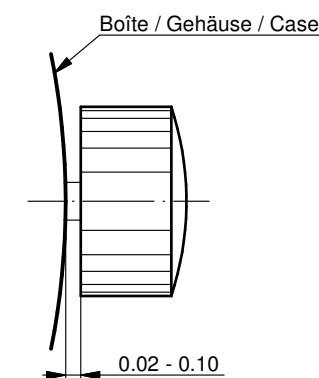


Rallonge de tige / Stellwelle Verlängerung / Stem extension

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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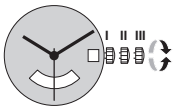
中文 使用手册  
机芯型号

朗达 强力系列

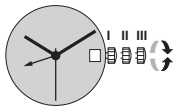
- 505.24D/515.24D
- 505.24H/515.24H
- 507/517
- 509/519

瑞士朗达是一个机芯供应商, 没有参与制造或分销成表。

若有任何手表相关之疑问, 如维修、保证期内投诉或手表功能问题, 请联络手表零售商、服务中心或制造商。所有联络资料可向您的销售员查询或参考保证文件。



Cal. 505.24D / 515.24D



Cal. 505.24H / 515.24H

把的位置. I 空檔位置 (腕錶運行)

把的位置. II 日期速調模式

以上型号机芯可以在日历转换时段(10:00 PM至12 PM)速调日历, 若在这时段内设定日期, 必须比正确日期多转一天. 因机芯在12PM后不再自动转换日期.

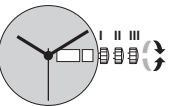
- 把的拉至位置 II (腕表继续运行).
- 顺时针转动把的至正确日期
- 推把的回位置 I

24小时显示速調模式

- 把的拉至位置 II (腕表继续运行).
- 逆时针转动把的至期望的时间显示
- 推把的回位置 I

把的位置. III 设定时间

- 把的拉至位置 III (腕表停止运行).
- 转动把的至正确时间 (留意24小时之上 / 下午时段).
- 推把的回位置 I



Cal. 507 / 517

把的位置. I 空檔位置 (腕錶運行)

把的位置. II 日期速調模式

以上型号机芯可以在日历转换时段(10:00 PM至12 PM)速调日历, 若在这时段内设定日期, 必须比正确日期多转一天. 因机芯在12PM后不再自动转换日期.

- 把的拉至位置 II (腕表继续运行).
- 转动把的至正确日期
- 推把的回位置 I

星期速調模式

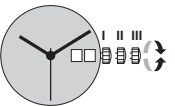
以上型号机芯不能在星期日历史转换时段(10:00 PM至12 PM)速调星期

- 次选语言通常会在24小时后约两小时显示, 直至显示转换至所需的语言
- 把的拉至位置 II (腕表继续运行).
- 逆时针转动把的至正确的星期显示
- 推把的回位置 I

Cal. 507 / 517

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. 509 / 519

Pos. I Position of rest (watch running)

Pos. II Quick-change correction for date

The date display comprises a 2-disc system. For construction reasons, on the first day of a new month, the date must be set on 01 via the quick-change method passing through 31–39.

The date can also be changed during the day-changing phase between approx. 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.
- 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.

Applies to all calibers:  
Battery type: 371/SR920SW (Ø 9.5 mm x 2.05 mm)  
Precision: +20/-10 seconds per month



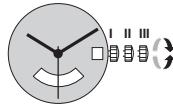


RONDA powertech

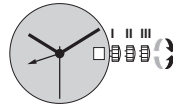
- 505.24D/515.24D
- 505.24H/515.24H
- 507/517
- 509/519

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.

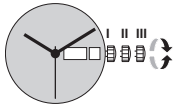
In case of repairs, guarantee claims and questions concerning the functioning of a watch, purchasers and consumers should contact their retailer or the watch manufacturer, for which the relevant information can be found in the sales or guarantee documentation provided with the watch.



Cal. 505.24D / 515.24D

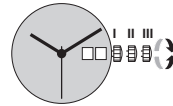


Cal. 505.24H / 515.24H



Cal. 507 / 517

Cal. 507 / 517



Cal. 509 / 519

**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.
- Push the crown back into position I.

**Quick-change correction for 24-hour display**

- Pull the crown out to position II (watch still running).
- Turn the crown anticlockwise until the desired time 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.

**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 until the required date appears.
- Push the crown back into position I.

**Quick-change correction for day of the week**

*The blocking time for the day of the week quick-change correction is from approx. 10 pm and midnight.*

- The second language always first appears around 24.00hrs for about 2 hours, until the display changes to the required language.
- Pull the crown out to position II (watch still running).
- Turn crown anticlockwise until the desired day of the week appears in the required language.
- Push the crown back into position.

**把的位置. III 设定时间**

- 把的拉至位置III (腕表停止运行).
- 转动把的至正确时间 (留意24小时之上 / 下午时段).
- 推把的回位置 I

**把的位置. I 空槽位置** (腕表运行)

**把的位置. II 日期速调模式**

*此日期显示由 2 盆系统所组成. 由于结构的原因, 在每一个月的开始, 必须使用速调模式去调走 31–39 号, 直至显示 01。*

*机芯可以在日历转换时段(10:00 PM至12 PM)速调日历, 若在这时段内设定日期, 必须比正确日期多转一天. 因机芯在12PM后不再自动转换日期.*

- 把的拉至位置 II (腕表继续运行).
- 顺时针转动把的至正确日期
- 推把的回位置 I

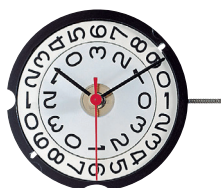
**把的位置. III 设定时间**

- 把的拉至位置III (腕表停止运行).
- 转动把的至正确时间 (留意24小时之上 / 下午时段).
- 推把的回位置 I

以上所有型号:

电池种类: 371/SR920SW (Ø 9.5 mm x 2.05 mm) 误差规格: +20 / -10 秒(每月)





10 1/2'''



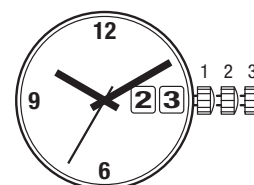
509

## Funktionen

## Fonctions

## Functions

Kaliber	Stellwellenpos.	Funktionen
Calibre	Pos. de tige	Fonctions
Caliber	Stem position	Functions
509	1	Normale Position / Position normale / Running position
	2	Datumkorrektur / 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

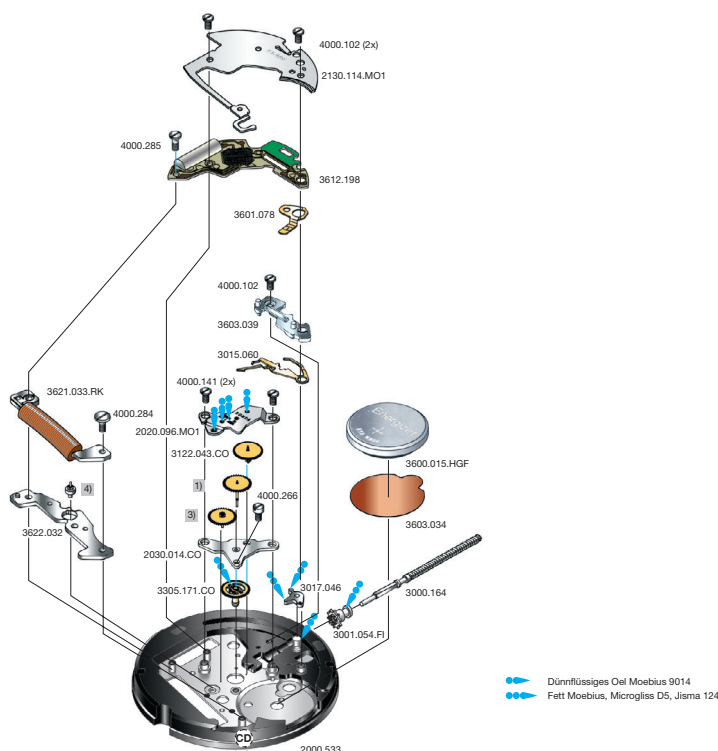


## Batterie

## Pile

## Battery

Kaliber	Batterie	Spannung	Artikelnummer RONDA
Calibre	Pile	Voltage	Numero d'article RONDA
Caliber	Battery	Tension	Part number RONDA
509	371 / SR920SW	1.55 V	3600.015.HGF



Code: Beispiel CD / exemple CD / exemple CD

Cal. 509	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
3015.060	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

#### Cal.509

Bis Dezember 2015  
Jusqu' en Décembre 2015  
Untill December 2015

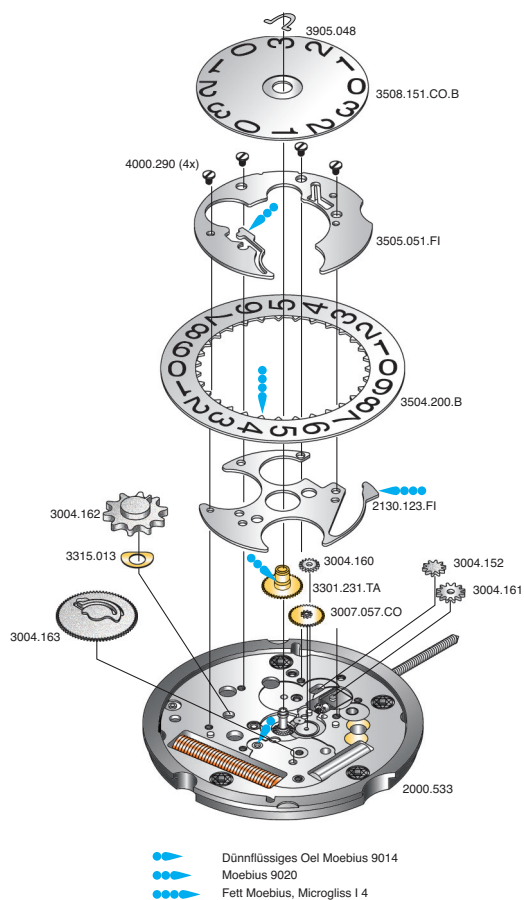
Ab Januar 2016  
A partir de Janvier 2016  
From January 2016

Code	2. Buchstabe ... <b>D</b> Second letter ... <b>D</b> 2 <sup>ème</sup> chiffre: ... <b>D</b>	2. Buchstabe: ab <b>E</b> Second letter: from <b>E</b> 2 <sup>ème</sup> chiffre: à partir de <b>E</b>
1)	3136.090.CO	3136.194.CO
3)	3147.019.CO	3147.092.CO
4)	3715.089.RK	3715.144.RK

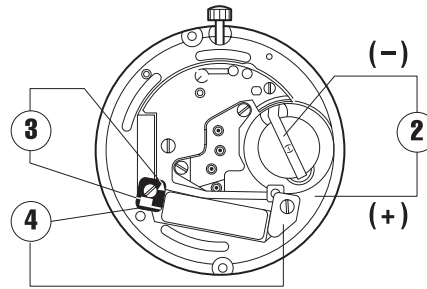
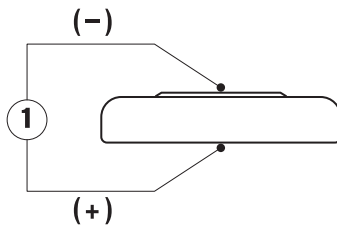
Die obigen 3 Teile bilden jeweils eine Gruppe. Deshalb sind die 3 Teile jeder Gruppe nicht einzeln gegeneinander austauschbar.

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. 509	Zifferblattseite / Côté cadran / Dial side		
Plan No.	Bestandteile	Fournitures	Spare Parts
2130.123.FI	Kalenderplatte	Plaque calendrier	Date indicator pl.
3004.152	Umkehrad	Baladeur	Sliding gear
3004.160	Zeigerstellrad	Renvoi minuterie	setting wheel
3004.161	Verbindungsrad-Kupplungtrieb	Renvoi pig. cou.	Sliding pin. set.
3004.162	Verbindungsrad Kal.-Ring	Renvoi baque	Sl. wheel dt. ind.
3004.163	Dat.-Mitn.rad	Renvoi entraîneur	Ind. driving wh.
3007.057.CO	Wechselrad	Minuterie	Minute wheel
3301.231.TA	Stundenrad	Canon	Hour wheel
3315.013	Spreizfeder 3°	Clinquant 3°	Washer 3°
3504.200.B	Datumanzeiger	Baque	Date indicator
3505.051.FI	Kal.-Abdeckplatte	Couvercle calend.	Date ind. cover
3508.151.CO.B	Datumscheibe	Disque	Disc
3905.048	Klemmfeder für Tagesscheibe	Clavett disque	Disc spring clip
4000.290	Schraube	Vis	Screw



Kaliber Calibre Caliber	Pos. Pos. Pos.	Einheit Unité Unit	Messwerte Valeurs mesurées Measured values	Kontrolle Contrôle Check	Bemerkungen Remarques Remarks
509	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
509	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
509	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
509	3	KΩ	1,90–2,10	Spulenwiderstand Résistance de la bobine Resistance of the coil	Ohne Batterie Sans pile Without battery
509	4	KΩ	∞	Spulenisolation Isolation de la bobine Coil insulation	Ohne Batterie Sans pile Without battery
509		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.

## Kal. 509 Stellwelle entfernen

Beim Entfernen der Stellwelle muss sich die Stellwelle in **Position 2** befinden, bevor auf den Winkelhebel gedrückt wird.

## Cal. 509 Enlever la tige

En enlevant la tige, la tige doit se trouver en **position 2**, avant de pousser sur la tirette.

## Cal. 509 Stem removal

For removal of the stem, the stem must be in **position 2** prior to apply pressure to the setting lever.