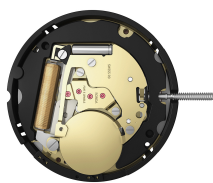


## Solar Quartz Movements

### 经典功能

### 朗达 光能系列

型号 215 - 11□"



### 产品规格

指针式石英机芯

系列

型号

尺寸

版本 瑞士制造

电池运行时间

标准针高

光能系列

215

11□"

5 钻石 / 金色

8个月

(充满电后，不暴露在光线下)

1

### 特点

- 快速启动功能：阳光照射1分钟
- 充电电池
- 拉停把心省电功能：节省大概70%耗电

### 功能

- 阳能石英机芯
- 日历
- 三针

# Solar Quartz Movements

## 经典功能

### 朗达 光能系列

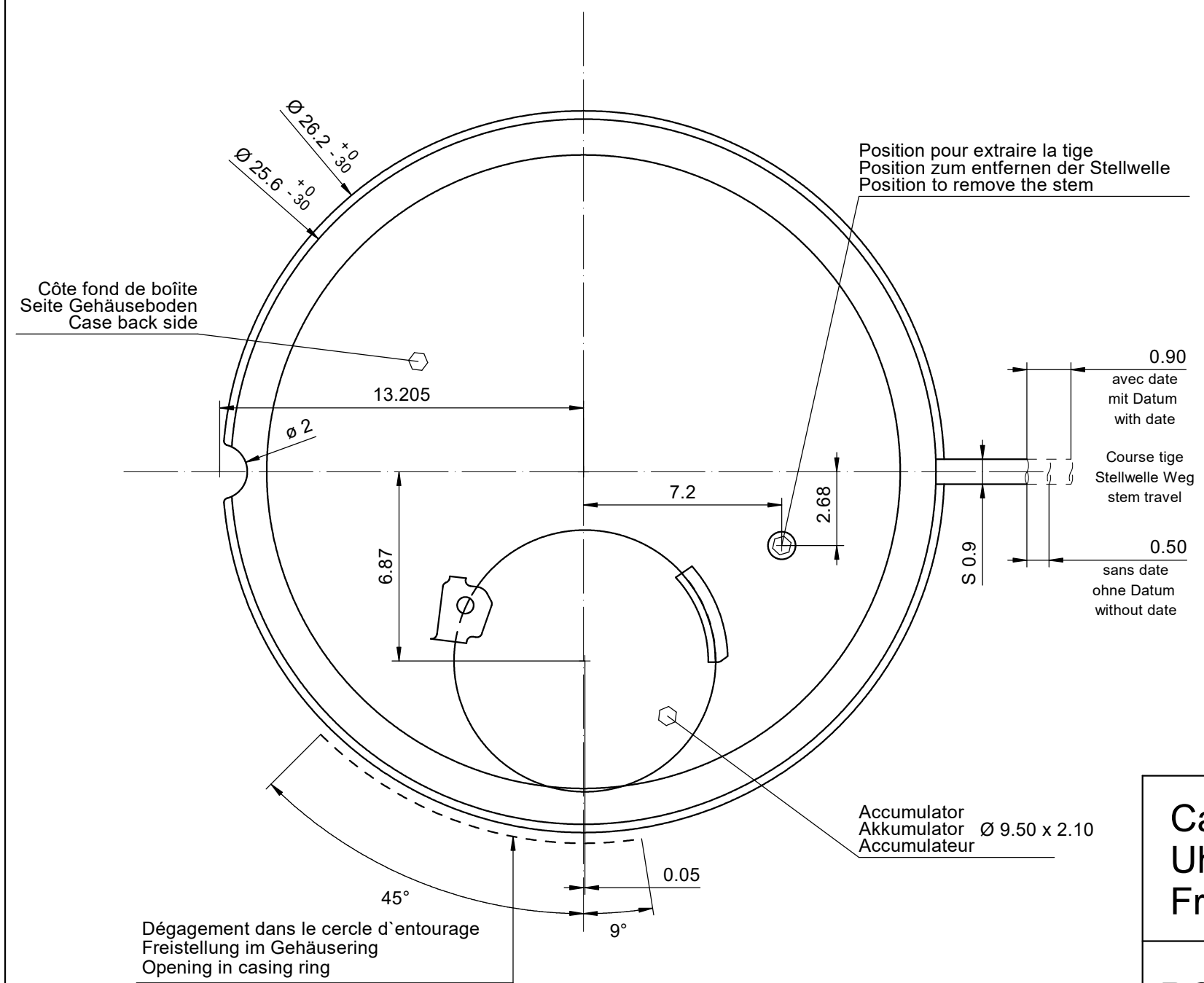
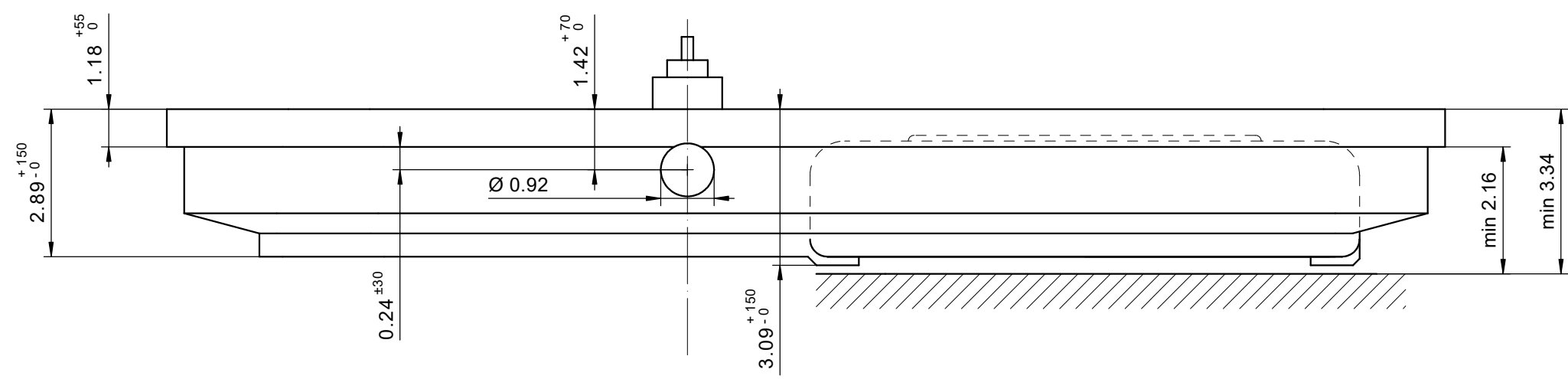
## 型号 215 - 11□”

### 技术规格

机芯直径	26.00 mm
内罩座位直径	25.60 mm
机芯厚度	2.89 mm
充电电池以上的厚度	3.09 mm
机芯座位	1.18 mm
把中	1.42 mm
把心行程	0.90 mm
把心螺纹直径	0.90 mm
秒针运行扭力 - 一般情况下	8 $\mu$ Nm
分针运行扭力 - 一般情况下	400 $\mu$ 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

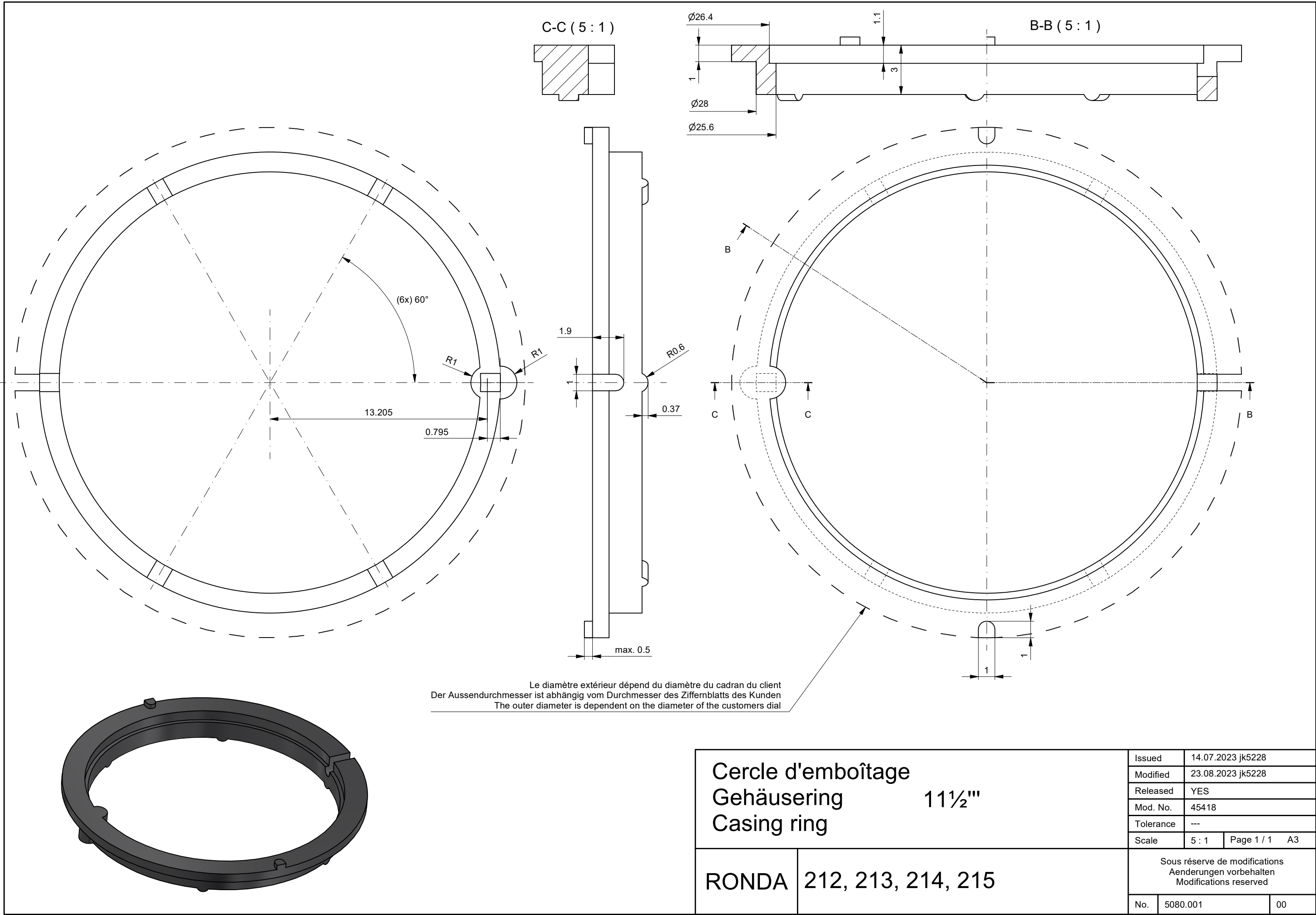
充电电池类型	MT920 - □9.50 x 2.00 mm
电池运行时间	8个月 (充满电后，不暴露在光线下)
更换电池	是
电压	1.5 V
电耗 - 一般情况下	0.96 $\mu$ A
电耗 - 上限	1.35 $\mu$ A



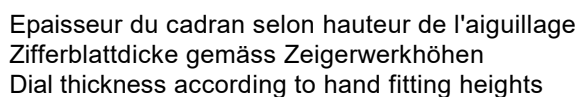
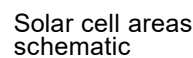
Sécurité entre aiguille seconde et verre : min 0.30 mm  
Sicherheit zwischen Sekundenzeiger und Glas : min 0.30 mm  
Security between second hand and glass : min 0.30 mm

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 11½" Frame		Issued	12.10.2022	aj5216
		Modified	03.05.2023	fl5223
		Released	Yes	
		Mod. No.	45418	
		Tolerance	±20 µm	
		Scale	5 : 1	Page 1/1 A3
RONDA	212, 213, 214, 215	Sous réserve de modifications Aenderungen vorbehalten Modifications reserved		
		No.	5000.461	01

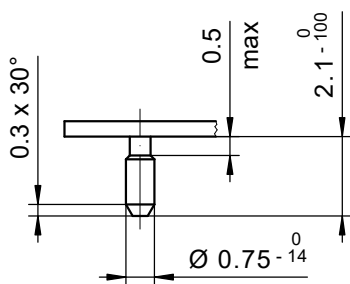
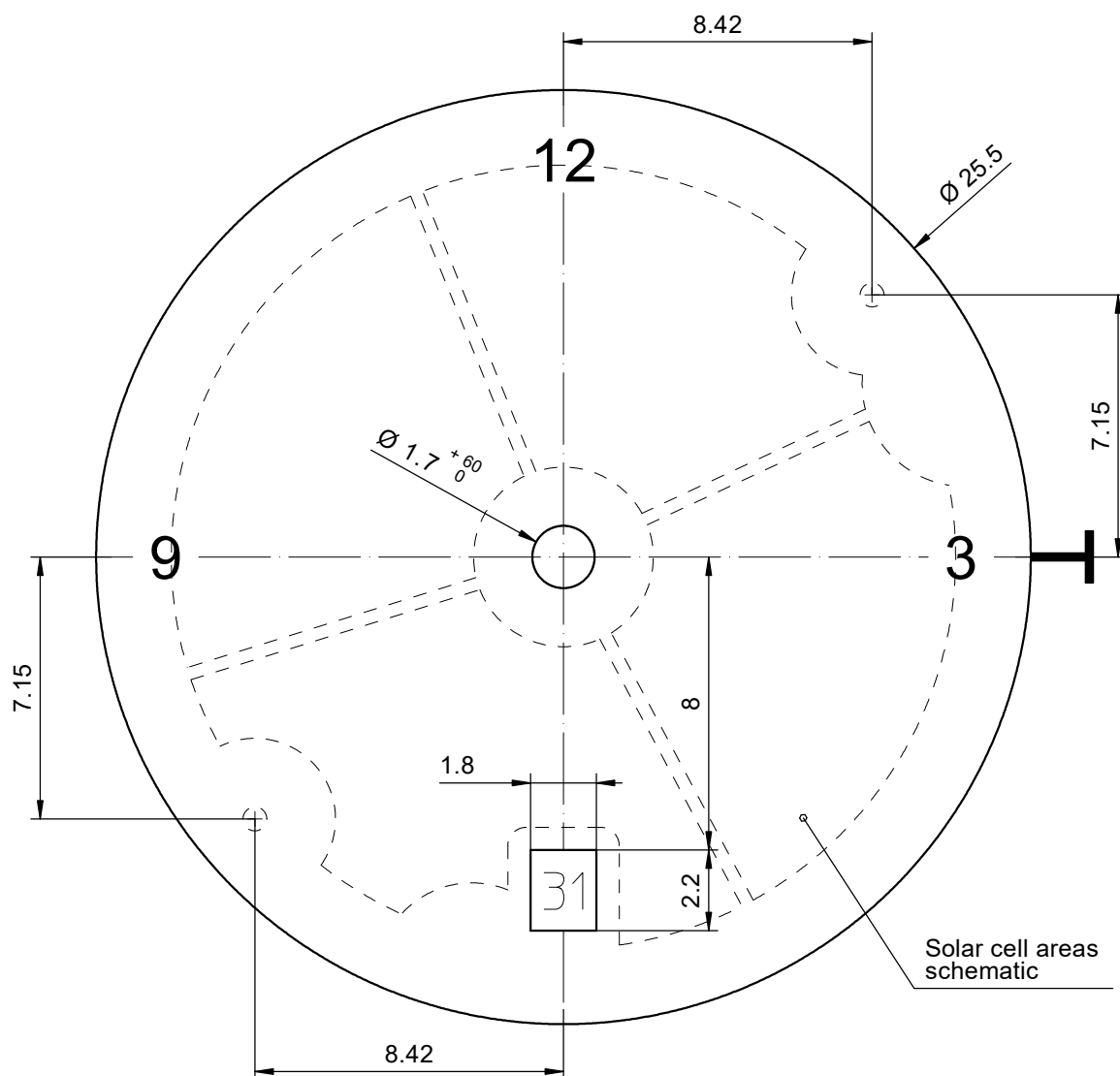






Tige	Date
Stellw.	Datum
Stem	Date
3H	3H
	<input type="text"/>

Issued	03.10.2022	aj5216
Modified	24.10.2023	dh5221
Released	Yes	
Mod. No.	45418	
Tolerance	±20 µm	
Scale	5 : 1	Page 1/1 A4
<p>Sous réserve de modifications  Aenderungen vorbehalten  Modifications reserved</p>		
No.	5010.856	01



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

Dial 25% - 40% transparency

Tige	Date
Stellw.	Datum
Stem	Date
3H	6H

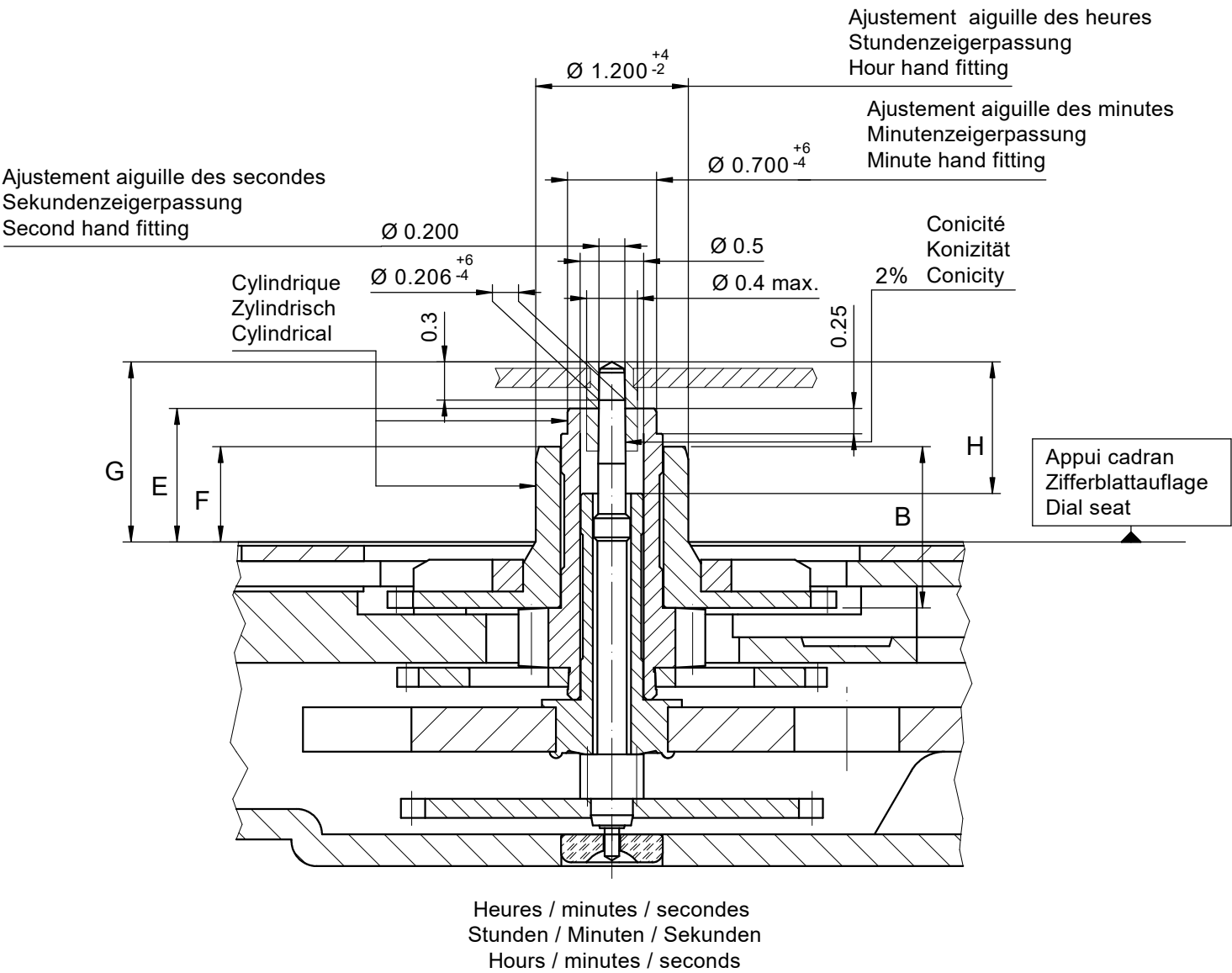
Cadran  
 Zifferblatt 11½"  
 Dial

Issued	19.04.2023	f15223
Modified	19.04.2023	f15223
Released	YES	
Mod. No.	45418	
Tolerance	±20 µm	
Scale	5 : 1	Page 1/1 A4

RONDA 214, 215

Sous réserve de modifications  
 Änderungen vorbehalten  
 Modifications reserved

No. 5010.859 00



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	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	H	B				
1	1.60	1.19	0.89	1.09	1.75	1.06	0.76	0.56	0.15
2	1.95	1.54	1.24	1.44	2.10	1.41	1.11	0.91	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.
		Alle/Tous/All	Alle/Tous/All	Alle/Tous/All	Kaliber/Calibre/Caliber
mg	max.	10	30	30	Masse / Masse / Weight *
µNm	max.	0.05	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

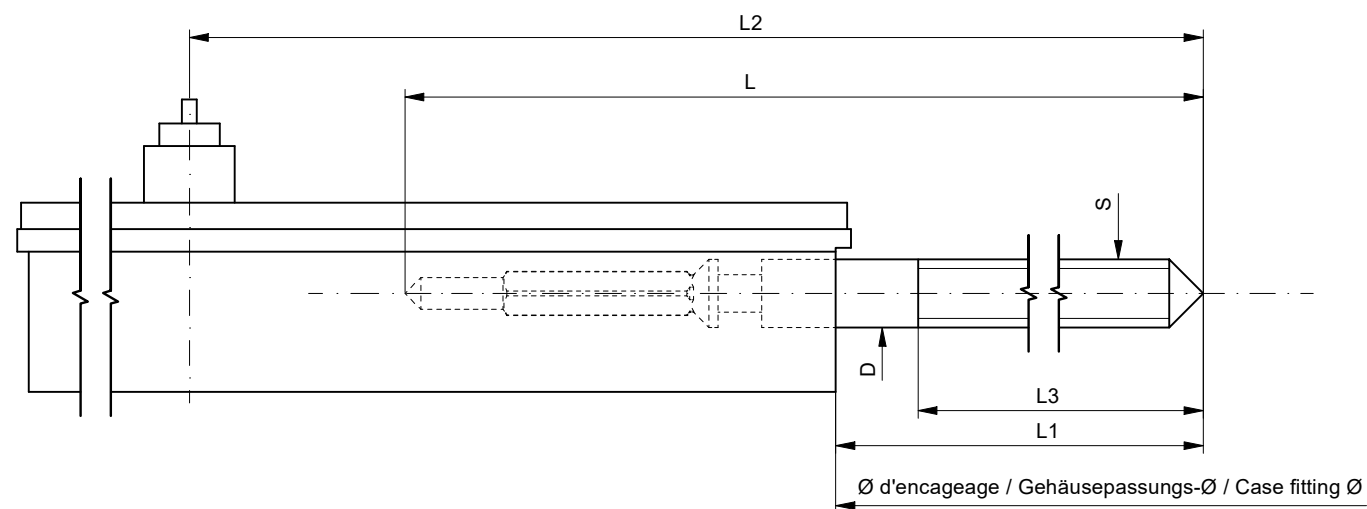
Aiguillages  
Zeigerwerkhöhen  
Hand fitting heights

11½"

RONDA 215

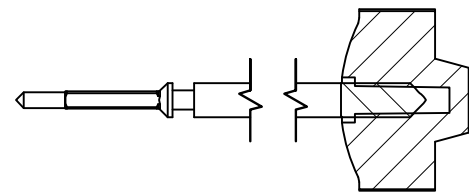
Issued	14.04.2023	f15223
Modified	24.04.2023	f15223
Released	YES	
Mod. No.	45418	
Tolerance	---	
Scale	20 : 1	Page 1/1 A3
Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
No.	3316.202	01

\* En cas de données différentes, veuillez contacter le service après-vente      \* Bei abweichenden Werten, bitte technischen Kundendienst anfragen      \* In case of different values, please contact the customer service



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

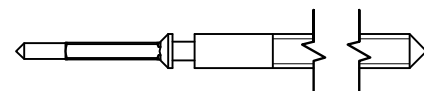
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.155.CO	20.24	10.11	22.91	9.82	0.90	0.90



Couleur de la couronne Kronenfarbe Crown color	rose foncé dunkelrosa dark pink
Code	FK 23.168

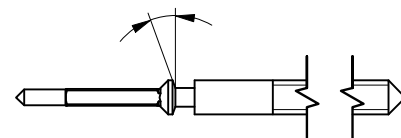
Tige (normale) / Stellwelle (normal) / Stem (normal)

No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.155	20.24	10.11	22.91	9.82	0.90	0.90
3000.158	25.00	14.87	27.67	14.58	0.90	0.90
3000.138	32.00	21.87	34.67	20.28	0.90	0.90



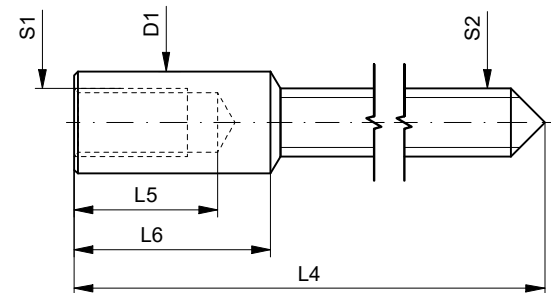
Tige (à arracher)  
Stellwelle (Ausreissversion)  
Stem (extractable version)

No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.157	32.00	21.87	34.67	21.58	0.90	0.90



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 212, 213, 214, 215

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

Issued	27.04.2023	f15223
Modified	27.04.2023	f15223
Released	YES	
Mod. No.	45418	
Tolerance	---	
Scale	---	Page 1 / 1 A3

Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
No.	5030.055	00



**Movement holder**  
Removing setting stem  
H21X.1T



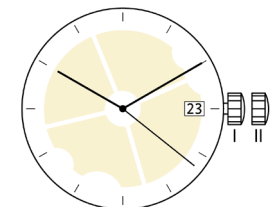
**Movement holder**  
Setting hands  
H71X.1A

#### Fitting dial and hand

- Crown in position III
- Wind hour hand forward, until date changes
- Remove working hand
- Put friction spring 3315.020 on the hour wheel
- Fit dial
- Set every hand towards 12 o'clock
- Set time
- Pull crown in position II
- Set calendar function
- Push crown in position I

**Date switching time:**

~ 1¼ h



#### General instructions

Removing the setting stem can only be effected in position I.

The use of supporting screws is essential when mounting the hands.

Permitted hand setting forces:

Hr. / min. / second hand: <40N / <40N / <30N

During quick date correction (setting stem in position II), a date switching speed of 5 d/s must not be exceeded.

This movement contains a rechargeable battery that is charged via the solar cell. Only batteries specified by RONDA may be used. Under no circumstances may a silver oxide battery or any other conventional watch battery be used.

A LED is built in as overvoltage protection. This lights up as soon as the battery cannot absorb all the energy of the solar cell or no battery is inserted.

#### Attention:

The movement is equipped with a solar cell on the dial side. Careful handling is therefore essential. Scratches or contact with any liquids can cause irreparable damage to the solar cell. Direct pressure on the plastic ring as well as on the electronics attached to it must be avoided. This can impair or damage the solar function.

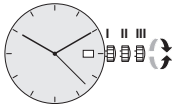
RONDA solartech

- 212
- 213
- 214
- 215

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.

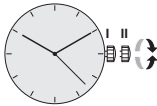
In case of repairs, guarantee claims and questions concerning the functioning of a watch, purchasers and consumers should contact their retailer or the watch manufacturer, for which the relevant information can be found in the sales or guarantee documentation provided with the watch.

Kal. 214      Kal. 215



- 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.
- 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.

Kal. 212      Kal. 213



- Pos. I    Position of rest** (watch running)
- Pos. II    Setting the time**
- Pull the crown out to position II (watch stopped).
  - Turn the crown, until the current time is displayed (remember the 24-hour cycle).
  - Push the crown back into position I.

**Function of a solar quartz movement**  
Ronda Solartech movements draw the electrical energy required for operation from a rechargeable battery. This eliminates the need to regularly change a battery. The battery is charged by incident light from a solar cell located under the dial. To do this, the watch with the dial up is exposed to direct light.

**Features**  
*Quick start function:*  
When the battery is empty, the movement starts within a few minutes after the watch is exposed to sunlight.  
*Battery protection mode:*  
As soon as the battery reaches a very low state of charge, switching off the movement prevents deep discharge of the battery. This protects the battery, ensuring a long service life.  
*Battery overcharge protection:*  
This prevents the battery from overcharging and thus impairing the function of the movement.

**Battery performance and charging**  
The running time of the movement after fully charging the battery is approximately 8 months.  
For optimum performance, RONDA recommends charging the battery regularly with an adequate light source; this is done most quickly in direct sunlight.  
**WARNING:** Avoid high temperatures of more than 60 °C (e.g. under an incandescent or halogen lamp, behind glass, etc.) to prevent malfunction.

Environment	Approximate charging time depending on light source *		
	Day charge	until the movement runs when the battery is empty	until fully charged when the battery is empty
Outdoors (sunny)	2 minutes	1 minute	7 hours
Outdoors (cloudy)	11 minutes	5 minutes	1.5 days
20 cm from a fluorescent lamp (30 W)	35 minutes	20 minutes	5.2 days
Indoor lighting	4.4 hours	2 hours	40 days

*\* based on a light transmission of the dial of 30%.*

**Day charge:** Time needed to charge the battery so that the movement runs for one day.  
**Until the movement runs when the battery is empty:** Time needed to charge the battery to the point where the movement starts running when the battery is discharged.  
**Until fully charged when the battery is empty:** Time required to fully charge an empty battery.

**Replacing the battery**  
Solartech movements are equipped with a special rechargeable battery that does not require regular replacement, so it should not be removed from the movement.  
If it is necessary to replace the battery, it is essential to ensure that only a battery approved by RONDA for this movement is used. The replacement must be carried out by a specialist dealer and the old battery must be disposed of properly.

**WARNING:** The use of a different type of battery or a conventional silver oxide battery may damage the movement and endanger the wearer.

**Recommendation for storage**  
Avoid storing the solar watch with an empty battery for long periods in the dark. This is important to ensure a long battery life.  
If the watch is not going to be worn for a long period of time, it is recommended that it be stored openly in a bright room. This ensures that the solar watch runs without having to be charged before wearing.  
By pulling the stem to the outermost position (energy-saving mode), the power consumption can be reduced by about 70%, which further extends the life of the battery.  
For movements with a calendar this corresponds to position III, for models without a calendar to position II.



11 1/2 mm



212



213



214



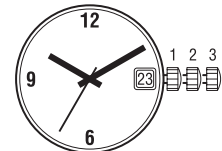
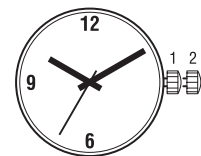
215

### Funktionen

### Fonctions

### Functions

Kaliber Calibre Caliber	Stellwellenpos. Pos. de tige Stem position	Funktionen Fonctions Functions
212/213	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 impulses
214/215	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 impulses



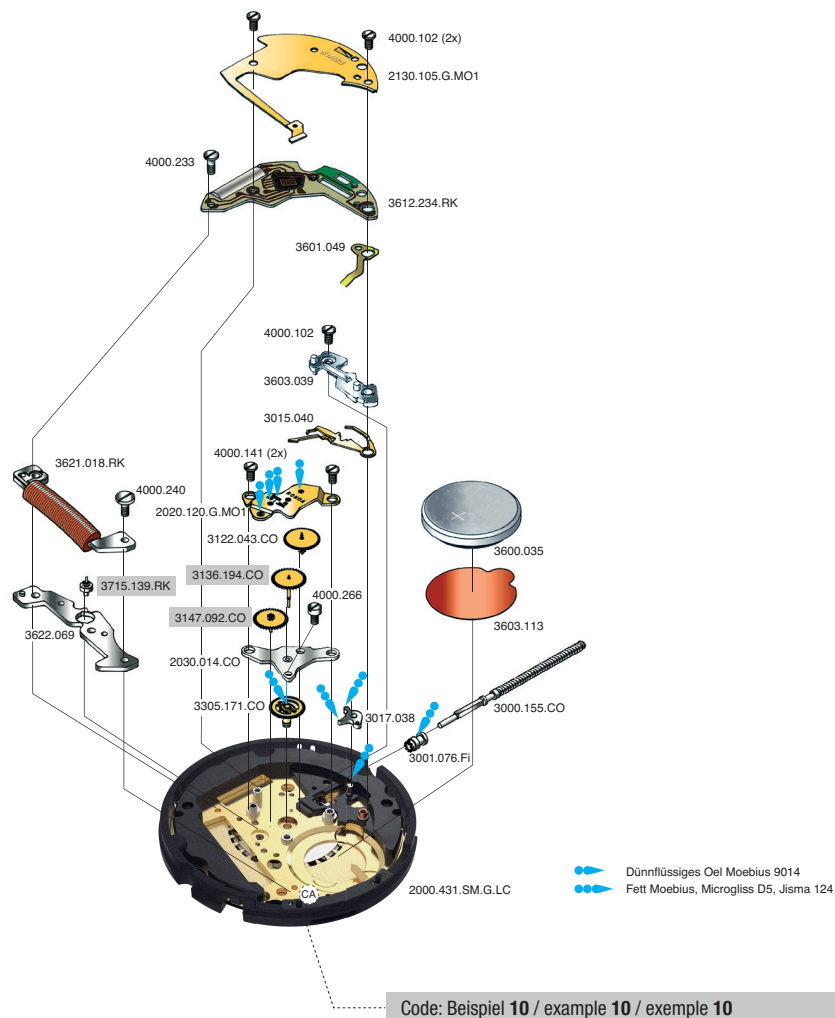
### Batterie

### Pile

### Battery

Kaliber Calibre Caliber	Wiederaufladbare Batterie Batterie rechargeable Rechargeable Battery	Spannung Tension Voltage	Artikelnummer RONDA Numero d'article RONDA Part number RONDA
212-215	MT 920	1.5 V	3600.035

11 1/2''' 212, 213, 214, 215



Cal. 215	Werkseite / Côté mouvement / Movement side		
Plan No.	Bestandteile	Fournitures	Spare Parts
2000.431.SM.G.LC	Werkplatte	Platine	Main plate
2020.120.G.M01	Räderwerkbrücke	Pont rouage	Train w. bridge
2030.014.CO	Zentrumbrücke	Pont centre	Centre bridge
2130.105.G.M01	Modul-Abdeckpl.	Couvre module	Module cover pl.
3000.155.CO	Stellwelle	Tige	Stem
3001.076.FI	Kupplungstrieb	Pignon coulant	Sliding pinion
3015.040	Kuppl.-triebhebel	Bacule	Yoke
3017.038	Winkelhebel	Tirette	Setting lever
3122.043.CO	Kleinbodenrad	Roue moyenne	Third wheel
3136.194.CO	Sekundenrad	Roue secondes	Second wheel
3147.092.CO	Zwischenrad	Roue interméd.	Intermed. Wheel
3305.171.CO	Minutenrohr	Chaussée	Cannon pinion
3600.035	Wiederauf. Batt.	Pile secondaire	Recharg. batt.
3601.049	Batteriekontakt	Bride contact	Battery contact
3603.113	Batterie-Isolation	Isolateur pile	Battery insulation
3603.039	Deckplatte / Ste.	Couvre mech.	Setting lev. Cover
3612.234.RK	Elektr.modul	Module electr.	Electr. Module
3621.018.RK	Spule	Bobine	Coil
3622.069	Stator	Stator	Stator
3715.139.RK	Rotor	Rotor	Rotor
4000.102	Schraube	Vis	Screw
4000.141	Schraube	Vis	Screw
4000.233	Schraube	Vis	Screw
4000.240	Schraube	Vis	Screw
4000.266	Schraube	Vis	Screw

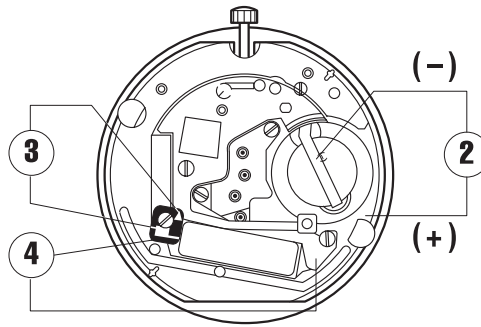
#### Abweichungen / Divergences / Deviations

Cal. 214	Werkseite / Côté mouvement / Movement side		
Plan No.	Bestandteile	Fournitures	Spare Parts
3136.196.CO	Sekundenrad	Roue secondes	Second wheel
4200.227	Zapfen für Minutenrohr	Bouchon pour chaussée	Bush for cannon pinion

Cal. 213	Werkseite / Côté mouvement / Movement side		
Plan No.	Bestandteile	Fournitures	Spare Parts
3015.045	Kuppl.-triebhebel	Bacule	Yoke

Cal. 212	Werkseite / Côté mouvement / Movement side		
Plan No.	Bestandteile	Fournitures	Spare Parts
2030.012.CO	Zentrumbrücke	Pont centre	Centre bridge
3015.045	Kuppl.-triebhebel	Bacule	Yoke
3136.196.CO	Sekundenrad	Roue secondes	Second wheel
3305.197.CO	Minutenrohr	Chaussée	Cannon pinion





Kaliber Calibre Caliber	Pos. Pos. Pos.	Einheit Unité Unit	Messwerte Valeurs mesurées Measured values	Kontrolle Contrôle Check	Bemerkungen Remarques Remarks
212–215	2	µA	0,70–1,35	Stromaufnahme (Kalender nicht im Eingriff) Consommation de courant (quantième non en prise) Current consumption (Date mechanism not in gear)	Ohne Batterie, mit externer Speisung Sans pile, avec alimentation externe Without battery, with external power supply
212–215	2	V	≤ 1,35	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
212–215	3	KΩ	1,75–1,95	Spulenwiderstand Résistance de la bobine Resistance of the coil	Ohne Batterie Sans pile Without battery
212–215	4	KΩ	∞	Spulenisolation Isolation de la bobine Coil insulation	Ohne Batterie Sans pile Without battery
212–215		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