

# Quartz Movements

## Multifunctions

### RONDA xtratech

Caliber 505.24H – 10½"



## Product Specifications

Analog quartz movement

Line	xtratech
Caliber	505.24H
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

## 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
- GMT function with quick change

## Functions

- Multifunction
- 24 hours hand - GMT
- Date
- 3 hands

# Quartz Movements Multifunctions RONDA xtratech

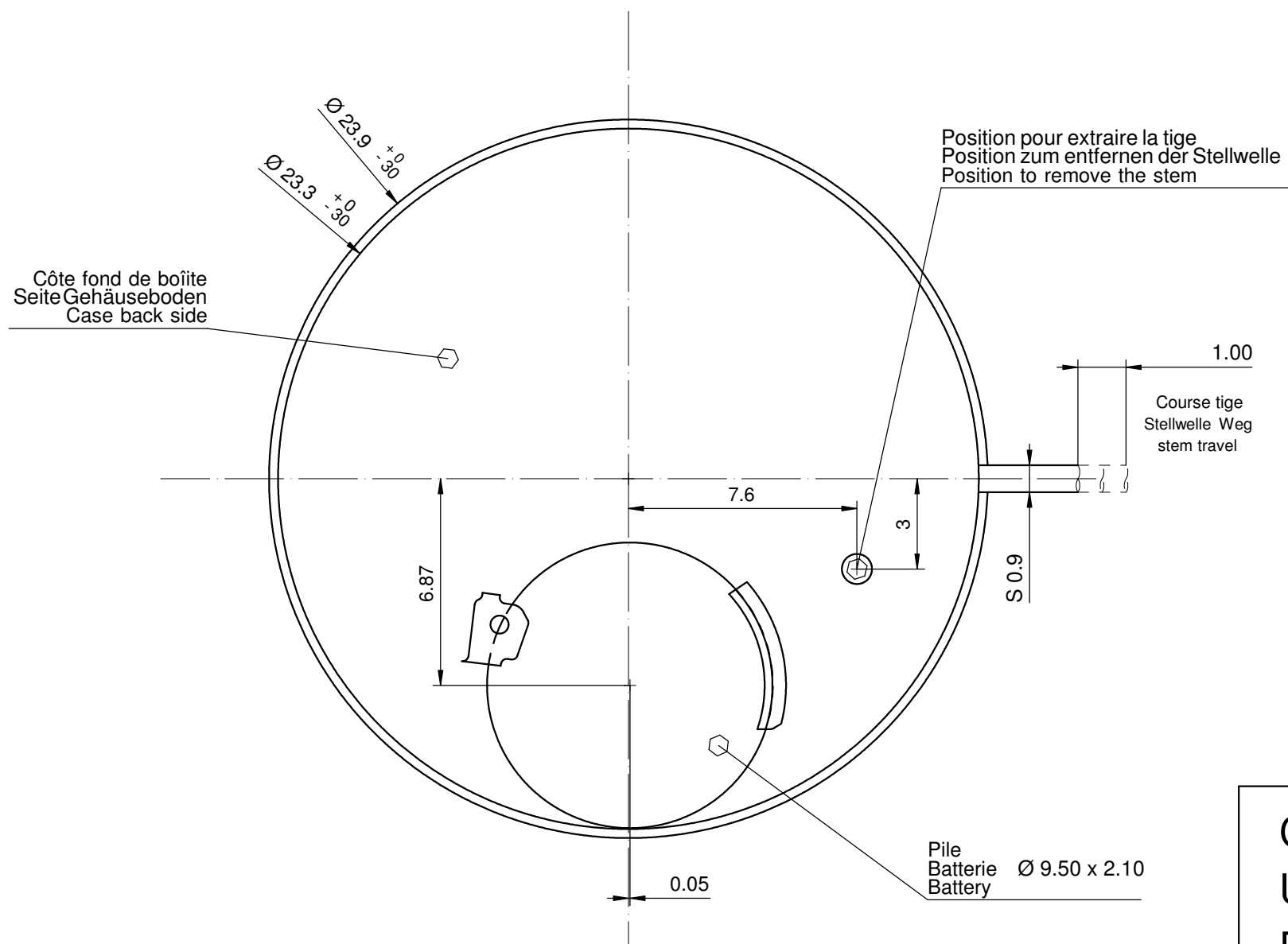
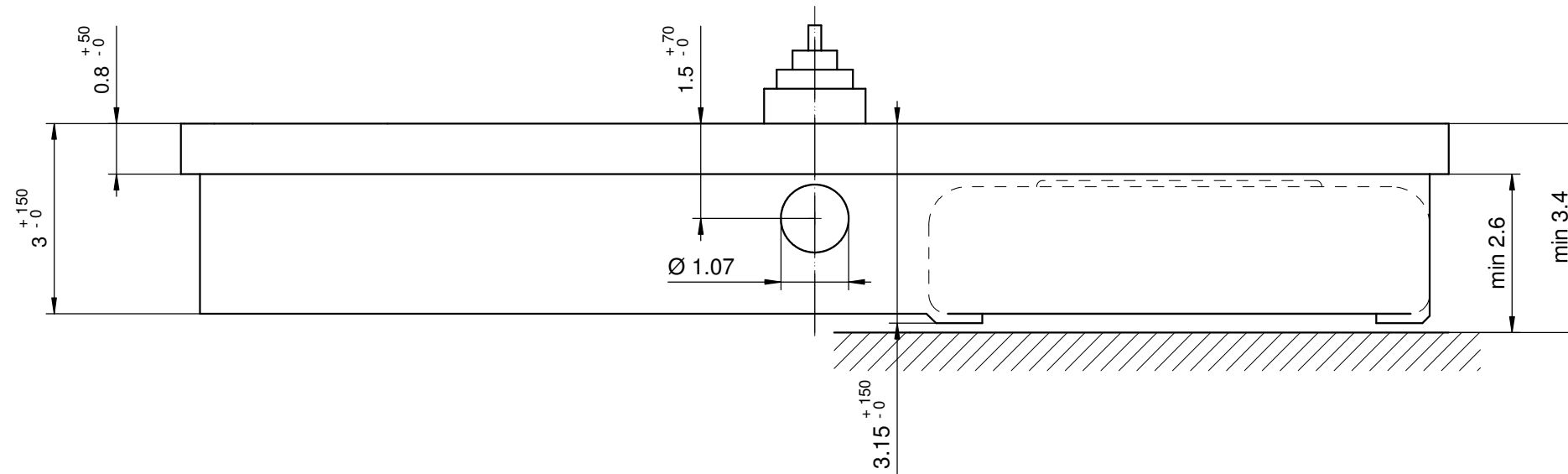
## Caliber 505.24H – 10½"

### 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	1.00 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

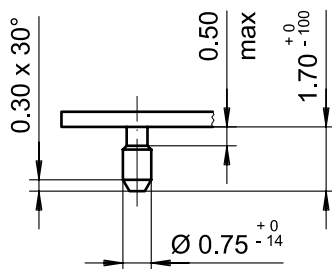
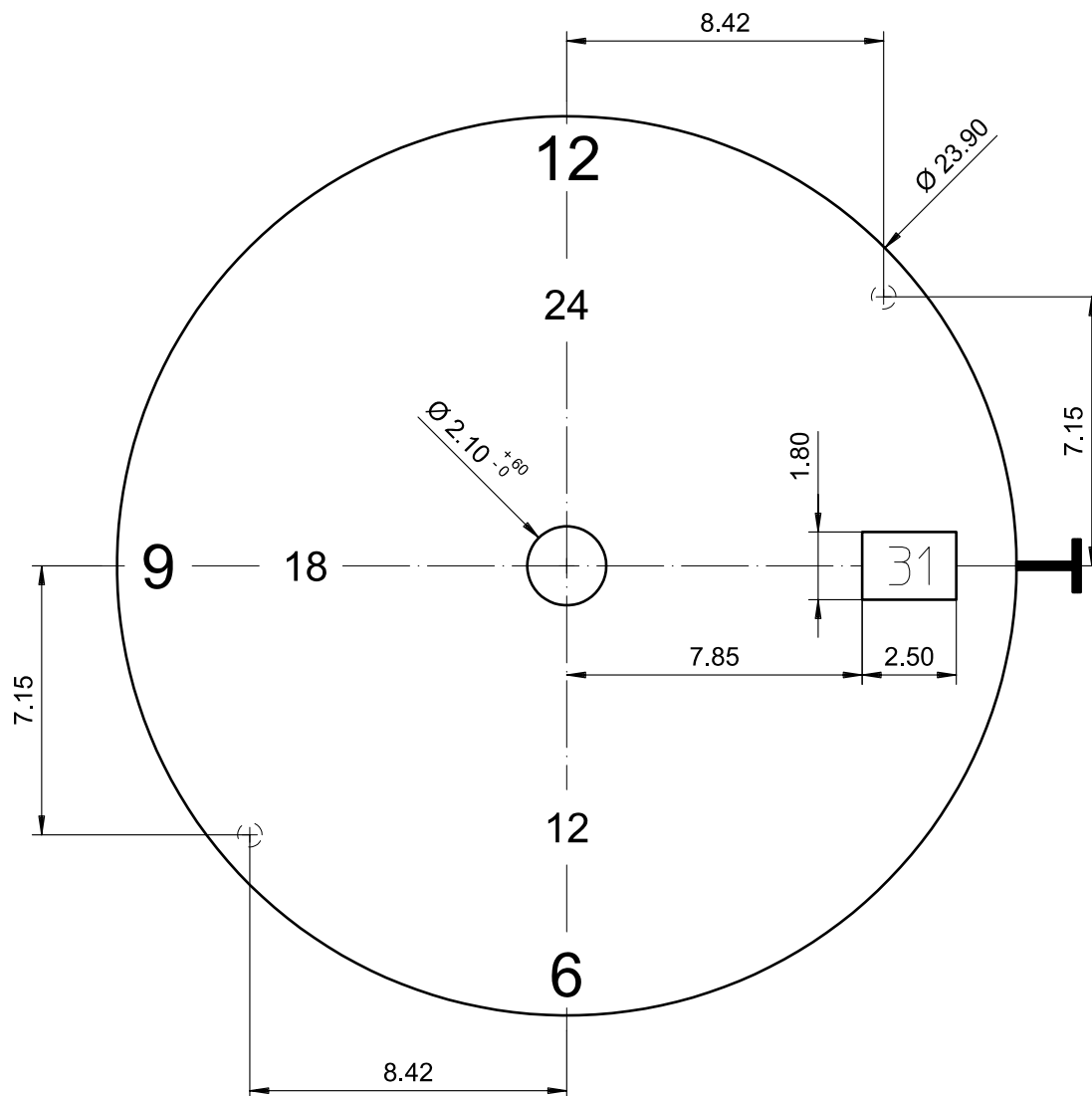
Standard battery	No. 371
Standard battery life	45 months
Battery voltage	1.5 V
Current consumption – typical	1.28 µA (Date Mechanism not in Gear)
Current consumption – maximum	1.85 µA (Date Mechanism not in Gear)



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 Frame		10½"	Issued	10 Mrz 1999	gd
			Modified	23 Jun 2011 ÄÄ 11169	dh
			Released	YES	
			Tolerance	+/- 20 µm	
			Scale	10 : 1 (5 : 1) (A3H)	
RONDA	505.24H	Sous réserve de modifications Änderungen vorbehalten Modifications reserved			
		No.	5000.287	05	



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"

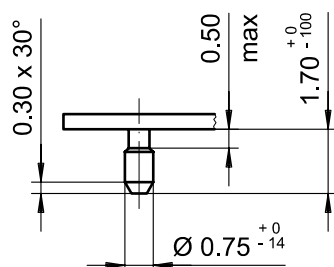
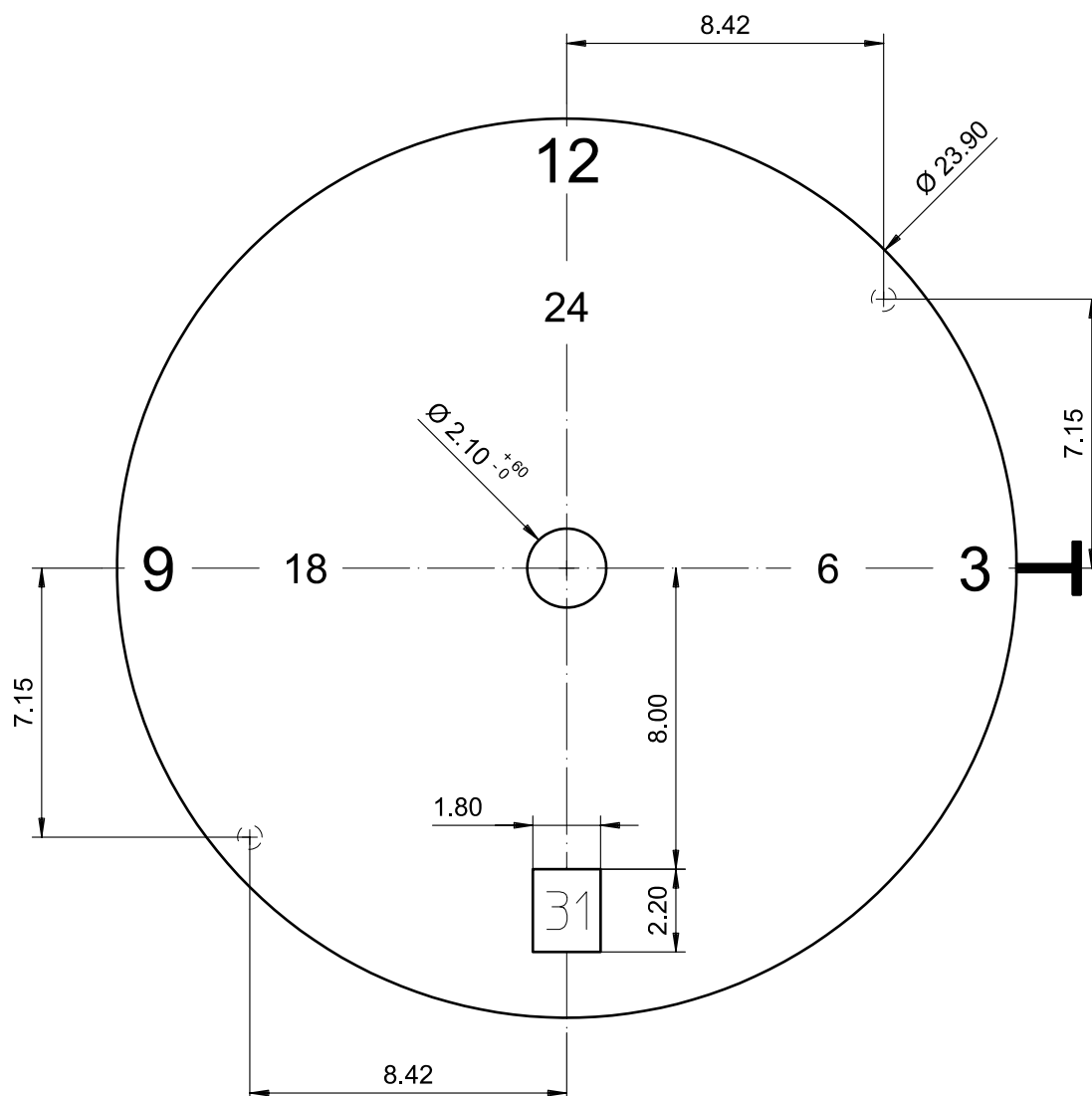
Issued	14 Dez 2006	cw
Modified	15.Dez.2006 ÄA ----	cm
Released	YES	
Tolerance	+/- 20 µm	
Scale	5 : 1 (A4V)	

RONDA

505.24H

Sous réserve de modifications  
Änderungen vorbehalten  
Modifications reserved

No. 5010.495 02



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

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

Cadran  
 Zifferblatt  
 Dial

10 1/2"

Issued	14 Dez 2006	cw
Modified	15.Dez.2006 ÄA ----	cm
Released	YES	
Tolerance	+/- 20 µm	
Scale	5 : 1 (A4V)	
Sous réserve de modifications Äenderungen vorbehalten Modifications reserved		
No.	5010.504	01

RONDA

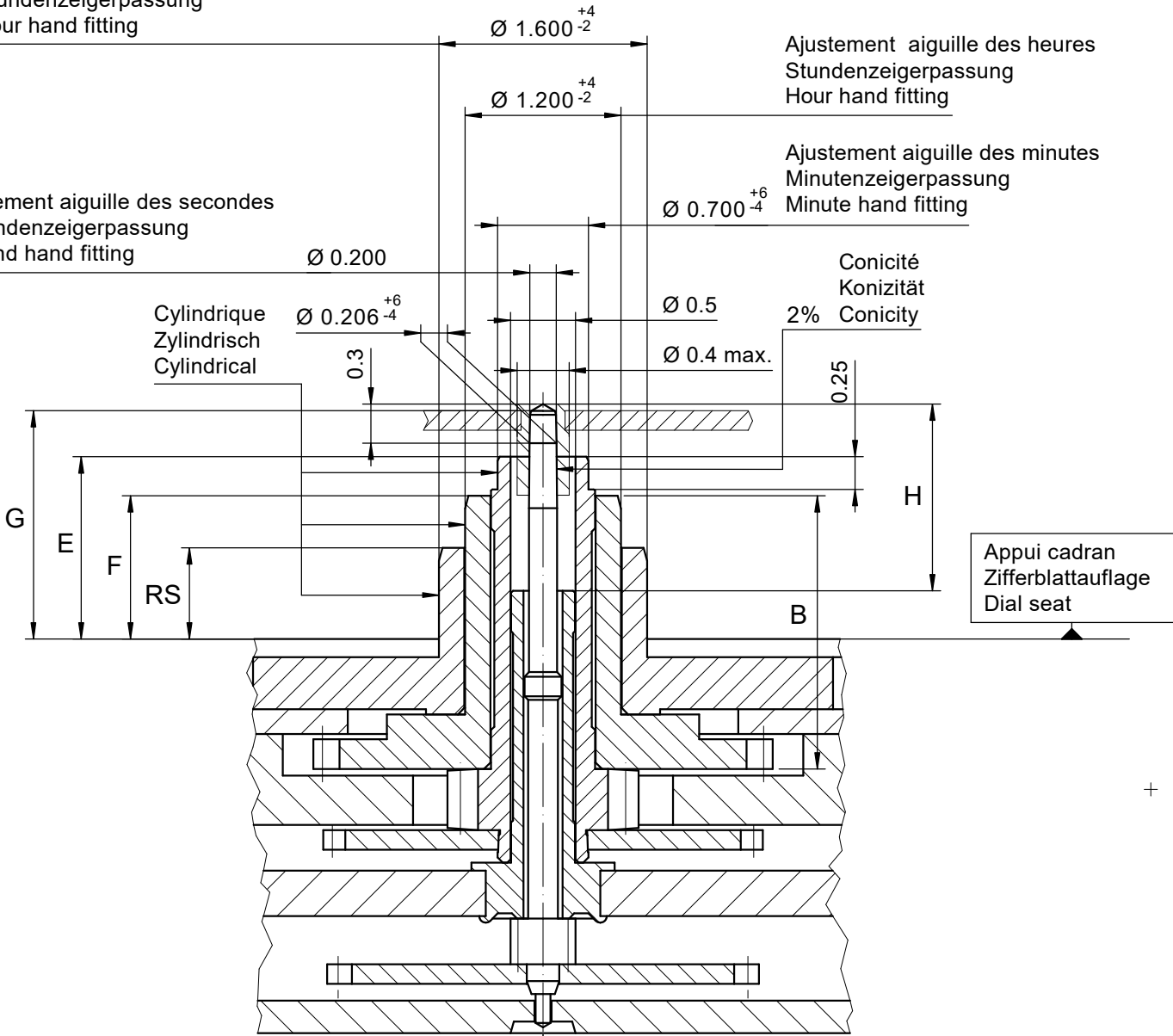
505.24H

Ajustement aiguille des 24 heures  
24 Stundenzeigerpassung  
24 Hour hand fitting

Ajustement aiguille des secondes  
Sekundenzeigerpassung  
Second hand fitting

Ajustement aiguille des heures  
Stundenzeigerpassung  
Hour hand fitting

Ajustement aiguille des minutes  
Minutenzeigerpassung  
Minute hand fitting



Heures 24H / Heures / minutes / secondes  
Stunden 24H / Stunden / Minuten / Sekunden  
Hours 24H / Hours / minutes / seconds

		Aig. des secondes Sekundenzeiger Second hand	Aig. des minutes Minutenzeiger Minute hand	Aig. des heures Stundenzeiger Hour hand	Aig. des heures 24H Stundenzeiger 24H Hour hand 24H	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	30	Masse / Masse / Weight *
µNm	max.	0.08	0.70	0.70	1.00	Balourd / Unwucht / Unbalance *
gmm <sup>2</sup>	max.	0.4	-	-	-	Inertie / Massenträgheit / Inertia *
N	max.	30	40	40	40	Force de chassage / Aufpresskraft / Force

Aiguillage no Zeigerwerkhöhe Nr. Hand fitting height No	Dépassement Höhe über Zifferblattauflege 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 24H Stundenrad 24H Hour wheel 24H		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	Sous l'aiguille des heures 24H Unter Stundenzeiger 24H Under hour hand 24H	
1	1.80	1.40	1.10	0.70	1.44	2.10	1.30	1.00	0.70	0.40	0.15
2	2.15	1.75	1.45	1.05	1.79	2.45	1.65	1.35	1.05	0.75	0.15

Aiguillages  
Zeigerwerkhöhen 10½", 11½"  
Hand fitting heights

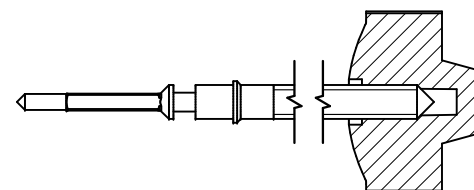
RONDA 505.24H, 515.24H

Issued	10.03.1999	gd
Modified	27.06.2022	nk5222
Released	YES	
Mod. No.	45427	
Tolerance	µm	
Scale	20 : 1	Page 1/1 A3
Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
No.	3316.061	08



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

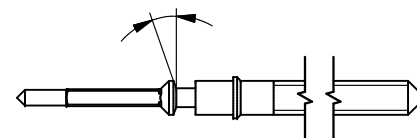
Tige (normale) / Stellwelle (normal) / Stem (normal)

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



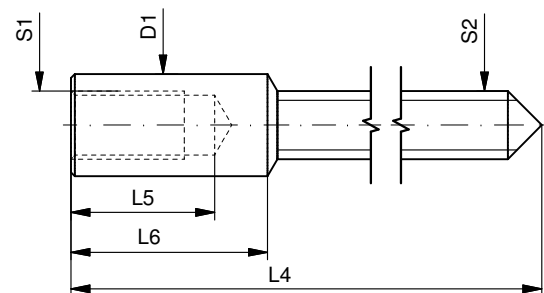
Tige (à arracher)  
Stellwelle (Ausreissversion)  
Stem (extractable version)

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

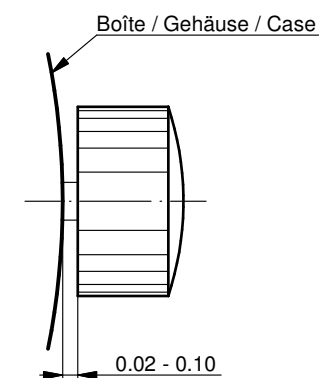


Rallonge de tige / Stellwelle Verlängerung / Stem extension

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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RONDA powertech

– 509/519

RONDA xtratech

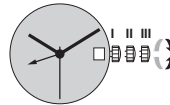
– 505.24D/515.24D

– 505.24H/515.24H

– 507/517

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

**Pos. I** Position of rest (watch running)

**Pos. II** Quick-change correction of the 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.



Cal. 507 / 517

**Pos. I** Position of rest (watch running)

**Pos. II** Quick-change correction of the 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**

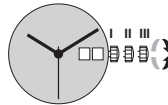
*The blocking time for the day of the week quick-change correction is from approx. 10 pm and midnight.*

- 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.

**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. 507 / 517



Cal. 509 / 519

**Pos. I** Position of rest (watch running)

**Pos. II** Quick-change correction of the 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)  
Accuracy: +20/-10 seconds per month

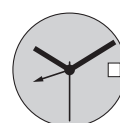




10 1/2'''



505.24D



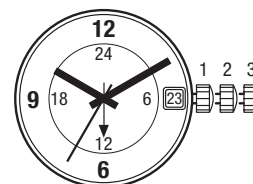
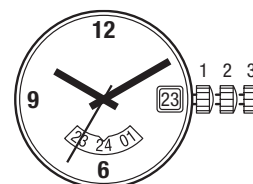
505.24H

## Funktionen

## Fonctions

## Functions

Kaliber Calibre Caliber	Stellwellenpos. Pos. de tige Stem position	Funktionen Fonctions Functions
505.24D 505.24H	1	Normale Position / Position normale / Running position
	2	Datumkorrektur / 24-Stundenkorrektur Correction de la date / Correction 24 heures Date correction / 24 hours 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



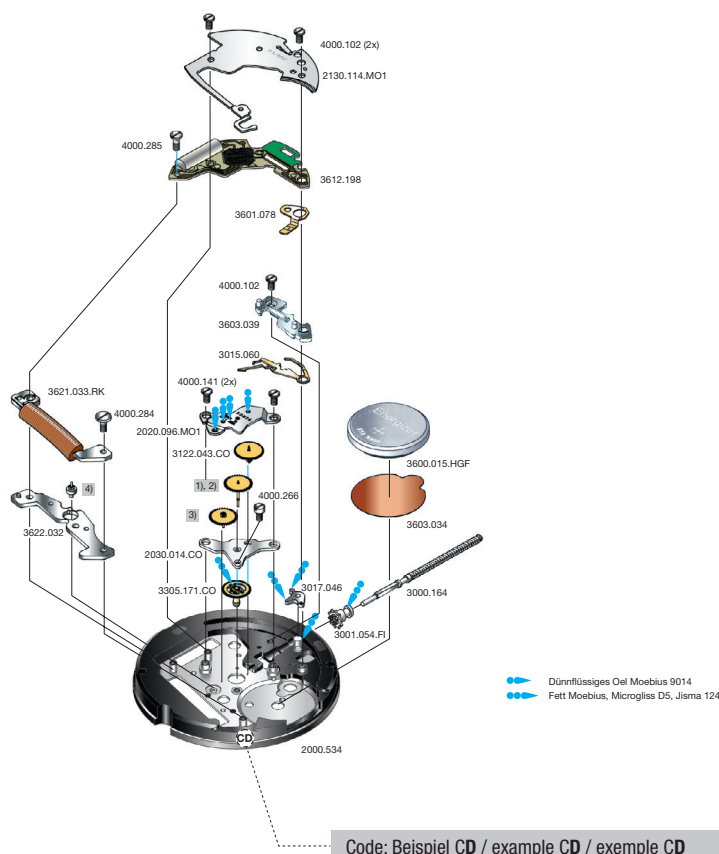
## Batterie

## Pile

## Battery

Kaliber Calibre Caliber	Batterie Pile Battery	Spannung Voltage Tension	Artikelnummer RONDA Numero d'article RONDA Part number RONDA
505.24D 505.24H	371 / SR920SW	1.55 V	3600.015.HGF

10 1/2''' 505.24H, 505.24D



Cal. 505.24D	Werkseite / Côté mouvement / Movement side		
Plan No.	Bestandteile	Fournitures	Spare Parts
2000.534	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

#### Abweichungen / Divergences / Deviations

Cal. 505.24H	Werkseite / Côté mouvement / Movement side		
Plan No.	Bestandteile	Fournitures	Spare Parts
A)	Sekundenrad	Roue secondes	Second-wheel
3305.180.CO	Minutenrohr	Chaussée	Cannon pinion

Cal. 505.24D		
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. 505.24H		
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>
2)	3136.095.CO	3136.218.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.

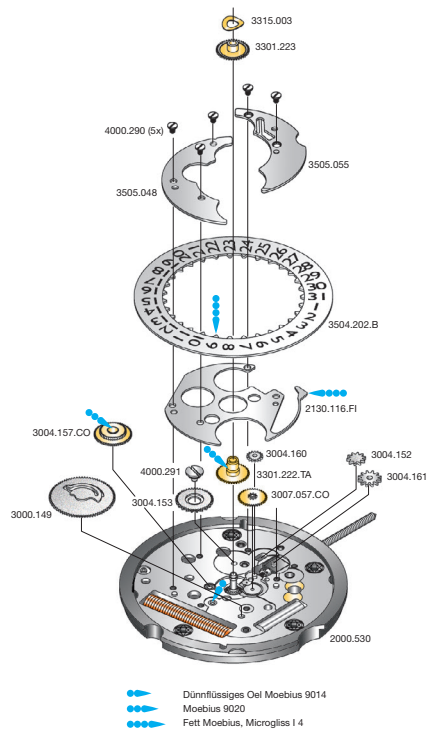
The 3 parts mentioned above are forming an individual group. Therefore the 3 parts of each group are not interchangeable.

# Verkaufbau

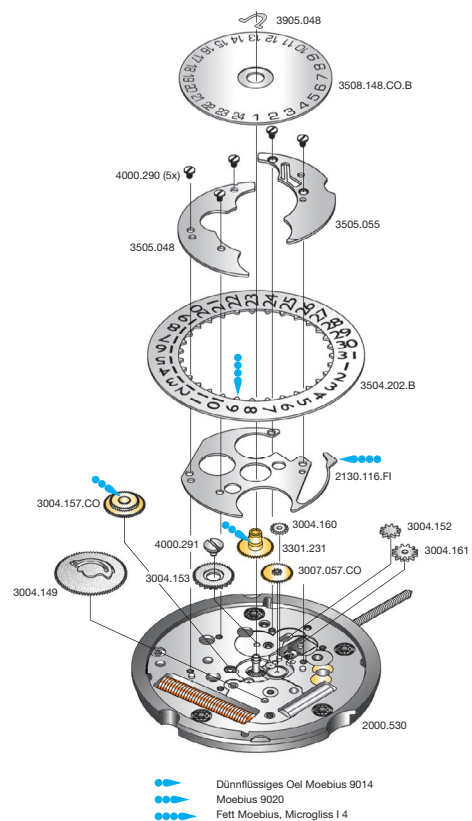
# Assemblage

# Assembling

10 1/2''' 505.24H

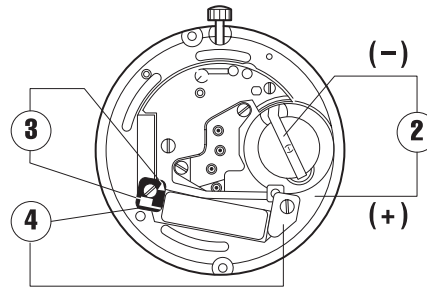
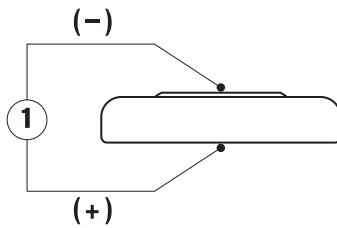


10 1/2''' 505.24D



Cal. 505.24H	Zifferblattseite / Côté cadran / Dial side		
Plan No.	Bestandteile	Fournitures	Spare Parts
2130.116.FI	Kalenderplatte	Plaque calendrier	Date ind. plate
3004.160	Zeigerstellrad	Renvoi minuterie	Setting wheel
3004.149	Datummitn.-rad	Renvoi entraî.	Ind. driving wheel
3004.161	Verbindungsrad-Kupplungtrieb	Renvoi pig. coulant	Slid. pin. sett. wh.
3004.152	Umkehrad	Baladeur	Correction wheel
3004.153	Korrekturrad	Roue correcteur	Correcteur wheel
3004.157.CO	Friktionsrad	Friction	Friction wheel
3007.057.CO	Wechselrad	Minuterie	Minute wheel
3301.222.TA	Stundenrad	Canon	Hour wheel
3301.223	Stundenrad	Canon	Hour wheel
3315.003	Spreizfeder	Clinquant	Washer
3504.202.B	Datumsanzeiger	Baquet	Date indicator
3505.055	Kalender-Abdeckplatte (Nr. 2)	Couvercle calendrier (no. 2)	cover (no. 2)
3505.048	Kalender-Abdeckplatte (Nr. 1)	Couvercle calendrier (no. 1)	cover (no. 1)
4000.290	Schraube	Vis	Screw
4000.291	Schraube	Vis	Screw

Cal. 505.24D	Zifferblattseite / Côté cadran / Dial side		
Plan No.	Bestandteile	Fournitures	Spare Parts
2130.116.FI	Kalenderplatte	Plaque calendrier	Date indicator pl.
3004.160	Zeigerstellrad	Renvoi minuterie	Setting wheel
3004.149	Dat.-Mitn.rad	Renvoi entraîneur	Ind. driving wh.
3004.161	Verbindungsrad-Kupplungtrieb	Renvoi pig. cou.	Sliding pin. set.
3004.152	Umkehrad	Baladeur	Sliding gear
3004.153	Korrekturrad	Roue corr. disque	Correcteur wheel
3004.157.CO	Friktionsrad	Friction	Friction wheel
3007.057.CO	Wechselrad	Minuterie	Minute wheel
3301.231.TA	Stundenrad	Canon	Hour wheel
3504.202.B	Datumanzeiger	Baquet	Date indicator
3505.048	Kalender- Abdeckplatte (Nr. 1)	Couvercle calendrier (no. 1)	Date indicaor cover (no. 1)
3505.055	Kalender- Abdeckplatte (Nr. 2)	Couvercle calendrier (no. 2)	Date indicaor cover (no. 2)
3508.148.CO.B	24 Std.-Scheibe	Disque 24 h	24 h indicator
3905.048	Klemmfeder für Tagesscheibe	Clavett disque	Disc spring clip
4000.290	Schraube	Vis	Screw
4000.291	Schraube	Vis	Screw



Kaliber Calibre Caliber	Pos. Pos. Pos.	Einheit Unité Unit	Messwerte Valeurs mesurées Measured values	Kontrolle Contrôle Check	Bemerkungen Remarques Remarks
505.24H 505.24D	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
505.24H 505.24D	2	µA	1,10–1,85	Stromaufnahme Consom. de courant Power consumption	Ohne Batterie, mit externer Speisung Sans pile, avec alimentation externe Without battery, with external power supply
505.24H 505.24D	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
505.24H 505.24D	3	KΩ	1,90–2,10	Spulenwiderstand Résistance de la bobine Resistance of the coil	Ohne Batterie Sans pile Without battery
505.24H 505.24D	4	KΩ	∞	Spulenisolation Isolation de la bobine Coil insulation	Ohne Batterie Sans pile Without battery
505.24H 505.24D		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. 505.24H, 505.24D  
Stellwelle entfernenBeim Entfernen der Stellwelle muss sich die Stellwelle in **Position 2** befinden, bevor auf den Winkelhebel gedrückt wird.Cal. 505.24H, 505.24D  
Enlever la tigeEn enlevant la tige, la tige doit se trouver en **position 2**, avant de pousser sur la tirette.Cal. 505.24H, 505.24D  
Stem removalFor removal of the stem, the stem must be in **position 2** prior to apply pressure to the setting lever.