



Quarz Specials

RONDA startech 5000

Caliber 5022.D – 12½"

Product Specifications

Analog quartz movement

Line	startech
Caliber	5022.D
Size	12½"
Standard battery life	54 months
Hand fitting height	1

Functions

- Chronograph
- Center stop second (1/1 sec)
- ADD and SPLIT functions
- 2 eyes
- Small second
- Date

Features

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

Quarz Specials

RONDA startech 5000

Caliber 5022.D – 12½"

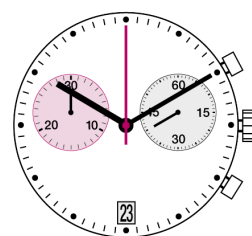
Technical Specifications

Diameter Total	28.60 mm
Case fitting	28.00 mm
Movement height	4.40 mm
Height over standard battery	4.40 mm
Movement rest	0.60 mm
Height over stem	1.90 mm
Length of stem travel	0.90 mm
Force to push the stem for screwed crown	10 / 15 N
Stem thread	0.90 mm
Standard battery	395
Standard battery life	54 months
Battery voltage	1.5 V
Current consumption – typical	1.32 µA
Current consumption – maximum	1.65 µA
Useful torque second – typical	6 µNm
Useful torque minute – typical	300 µNm
Useful torque center stop second – typical	7 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

RONDA startech 5000

Chronographs, Big Date & Date,
different calendar systems, Alarm

Caliber 5021.D – 12½'''



Product Specifications

Analog quartz movement

Line

startech

Caliber

5021.D

Size

12½'''

Version Swiss Made
Swiss Parts

10 Jewels / gold plated
5 Jewels / nickel plated

Standard battery life

54 months

Hand fitting height

1

Features

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

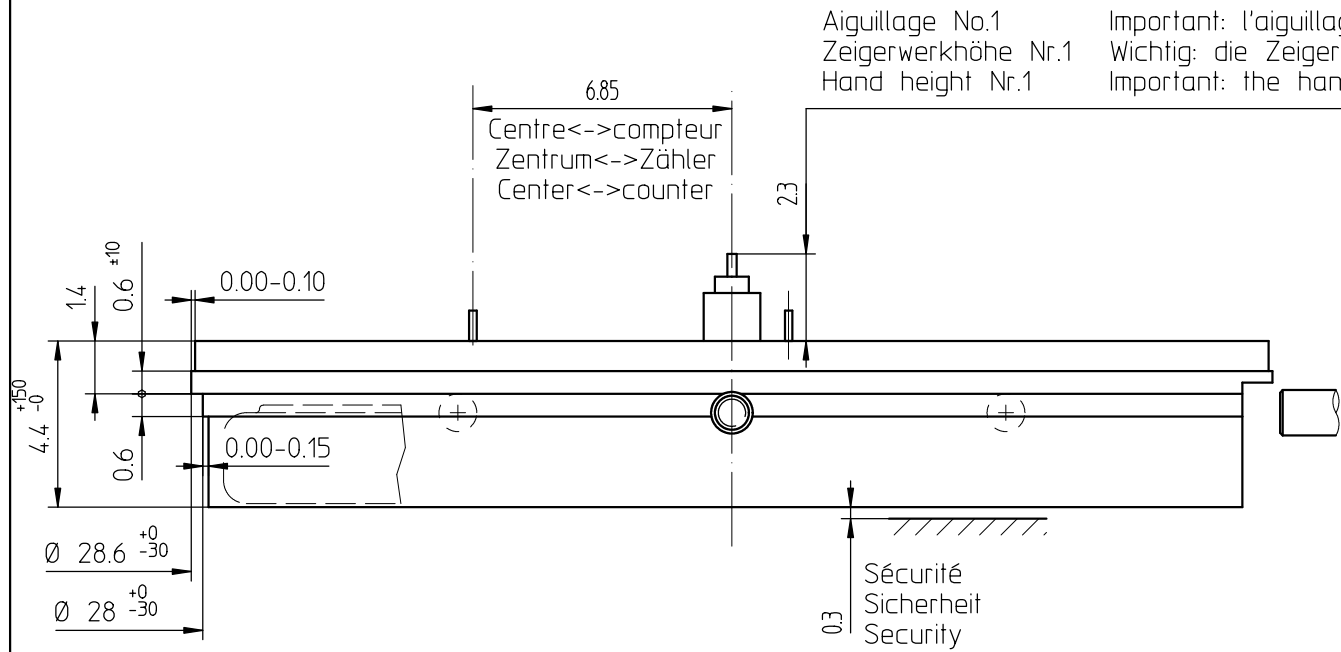
Functions

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

Technical Specifications

Diameter Total	28.60 mm
Case fitting	28.00 mm
Movement height	4.40 mm
Height over standard battery	4.40 mm
Movement rest	0.60 mm
Height over stem	1.90 mm
Length of stem travel	0.90 mm
Stem thread	0.90 mm
Standard battery	395
Standard battery life	54 months
Battery voltage	1.5 V
Current consumption – typical	1.32 µA (Date Mechanism not in Gear)
Current consumption – maximum	1.65 µA (Date Mechanism not in Gear)
Useful torque second – typical	6 µNm
Useful torque minute – typical	300 µNm
Useful torque center stop second – typical	7 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





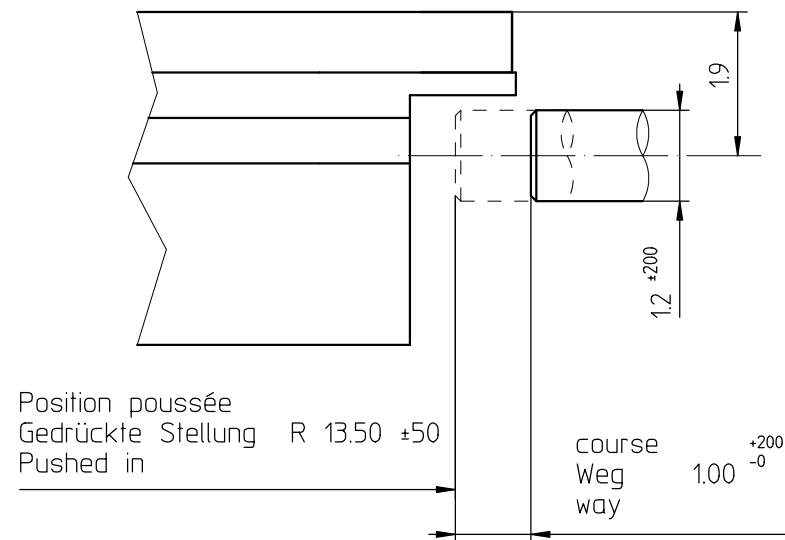
Côté fond de boîte
Seite Gehäuseboden
Case back side

Aiguillage No.1
Zeigerwerkhöhe Nr.1
Hand height Nr.1

Important: l'aiguillage peut varier selon le modèle
Wichtig: die Zeigerwerkhöhe kann bei verschiedenen Modellen unterschiedlich sein
Important: the hand height can vary between different models

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

Poussoirs
Drücker
Pushers

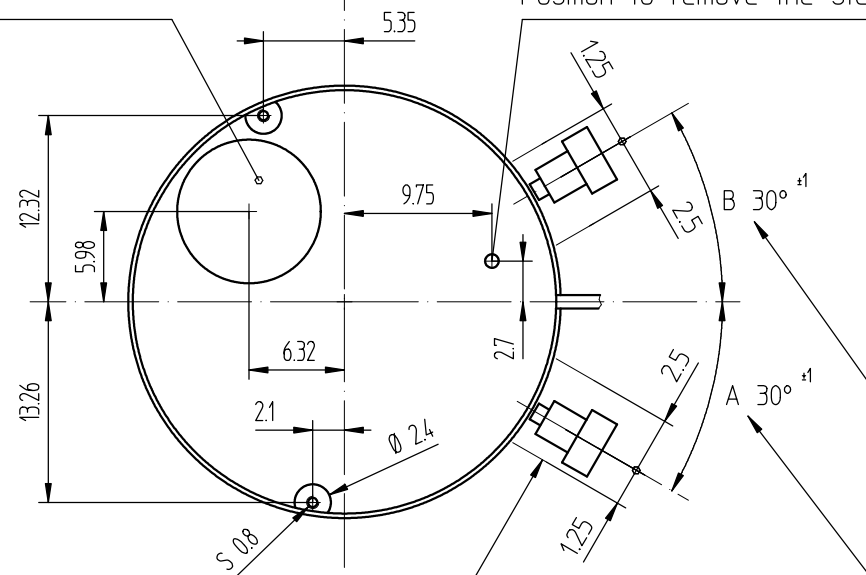


Le cadran doit être tenu par la boîte
Das Zifferblatt muss durch die Schale gehalten werden
The dial must be held by the case

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

Pile
Batterie (395) ∅ 9.50 x 2.60mm
Battery

Position pour extraire la tige
Position zum Entfernen der Stellwelle
Position to remove the stem

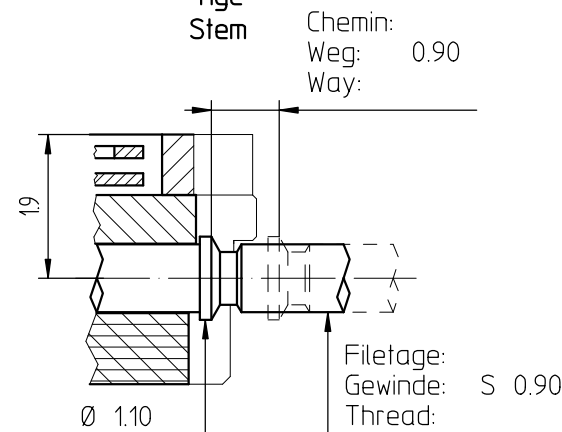


Dégagement cercle d'entourage
Freistellung Gehäuse ring
Opening movement holder

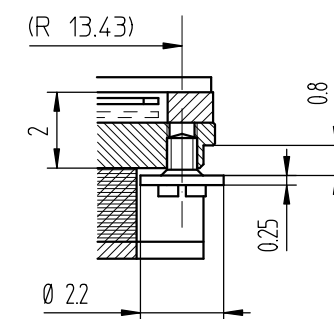
L'angle indiqué pour la direction du poussoir et la position doivent être respectés. Pour un angle de 0° des poussoirs A et B, voir plan 5000.345
Der angegebene Winkel für die Drückerrichtung und die Position müssen eingehalten werden. Für einen Drückerwinkel von 0° bei A und B, siehe Zeichnung 5000.345

The indicated angle of the pusher direction and the position must be fulfilled. For pusher angles of 0° (pusher A and B), see drawing 5000.345

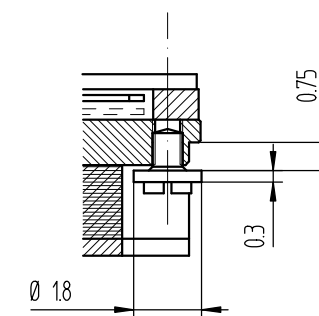
Stellwelle
Tige
Stem



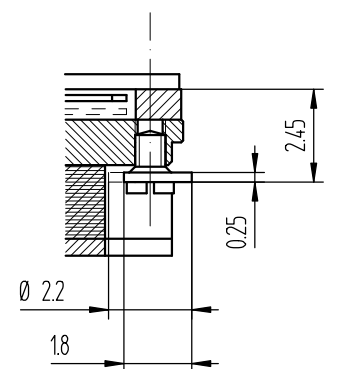
Vis
Schraube Nr. 4000.310
Screw



Vis
Schraube Nr. 4000.195
Screw



Vis
Schraube Nr. 4000.194
Screw



Cage
Uhrwerkgestell
Frame

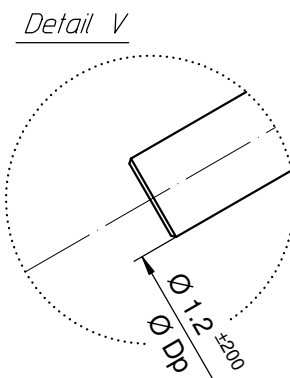
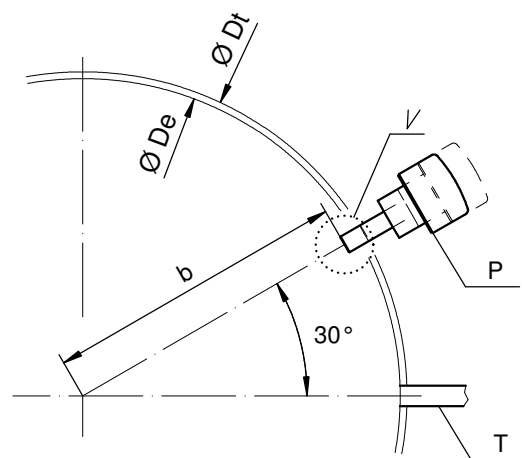
12 1/2'''

RONDA

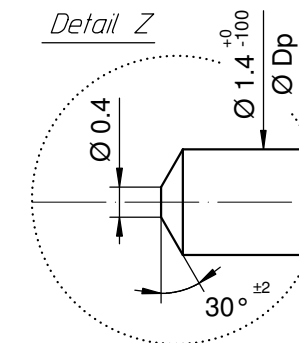
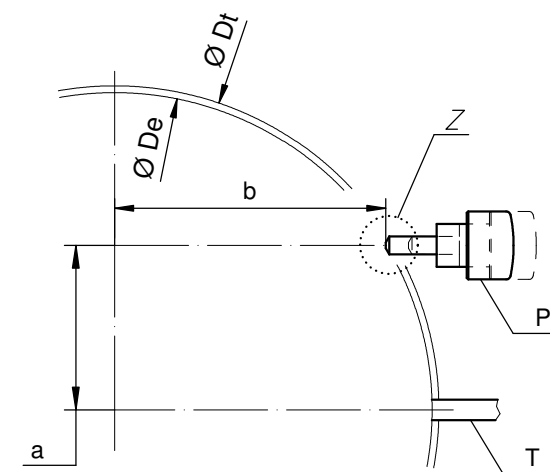
5040.B, 5040.D, 5030.D, 5021.D, 5040.E

Issued	08 Jan 2001	mg
Modified	08 Mär 2012 ÄÄ 11867	dh
Released	YES	
Tolerance	+/- 20 µm	
Scale	10 : 1 (5 : 1) (A3H)	
Sous réserve de modifications Änderungsvorbehalten Modifications reserved		
No.	5000.315	09

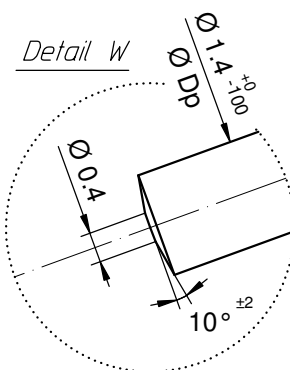
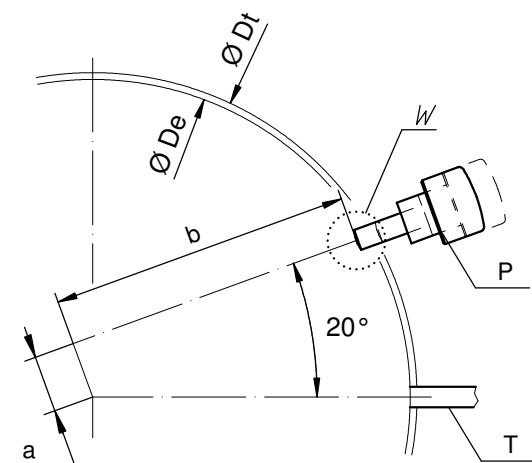
Angle Winkel Angle	30°	
Ø Dp	b	
1.00	13.50	
1.10	13.50	
1.20	13.50	
1.30	13.50	
1.40	13.50	



Angle Winkel Angle	0°	
Ø Dp	a	b
1.30	7.40	11.43
1.40	7.45	11.40



Angle Winkel Angle	20°	
Ø Dp	a	b
1.30	2.57	13.22
1.40	2.59	13.21



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

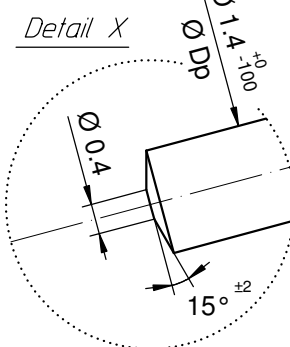
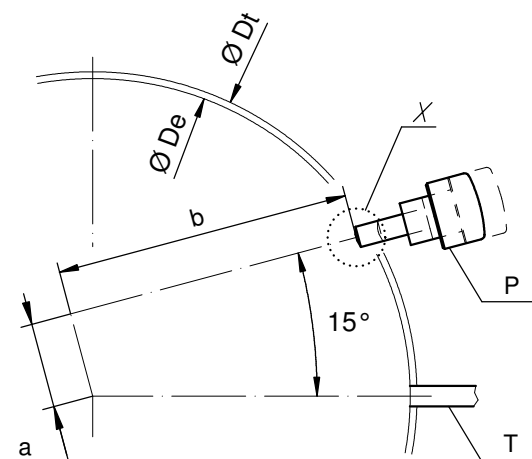
Ø Dp: diamètre du poussoir
Drückerdurchmesser
pusher-diameter

Ø Dt: diamètre total
Totaldurchmesser
total-diameter

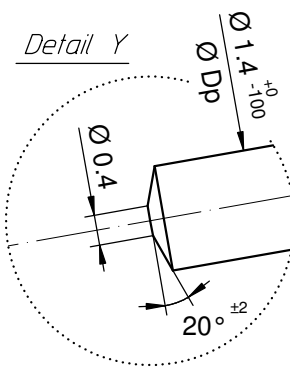
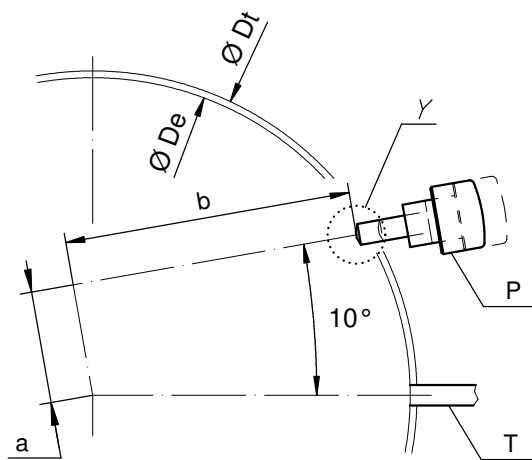
P: poussoir en position poussée
Drücker in gedrückter Stellung
pusher in pressed position

T: tige de mise à l'heure
Stellwelle
stem

Angle Winkel Angle	15°	
Ø Dp	a	b
1.30	3.83	12.92
1.40	3.86	12.91



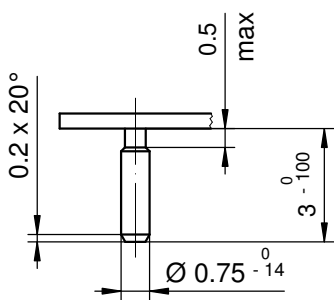
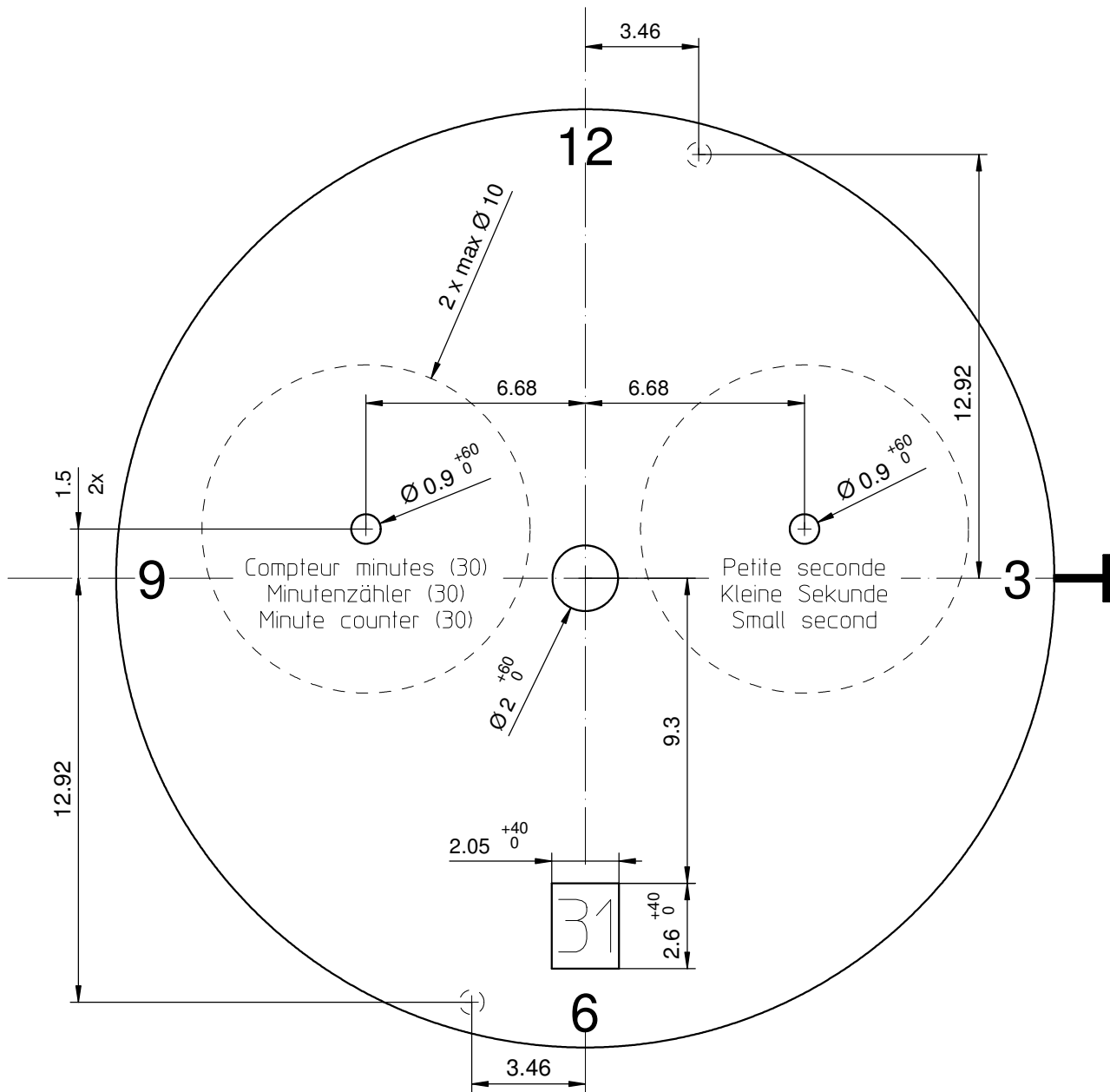
Angle Winkel Angle	10°	
Ø Dp	a	b
1.30	5.06	12.52
1.40	5.10	12.50



Angle des poussoirs A et B
Winkel der Drücker A und B
Angle of pusher A and B

RONDA 4xxx.x, 5xxx.x

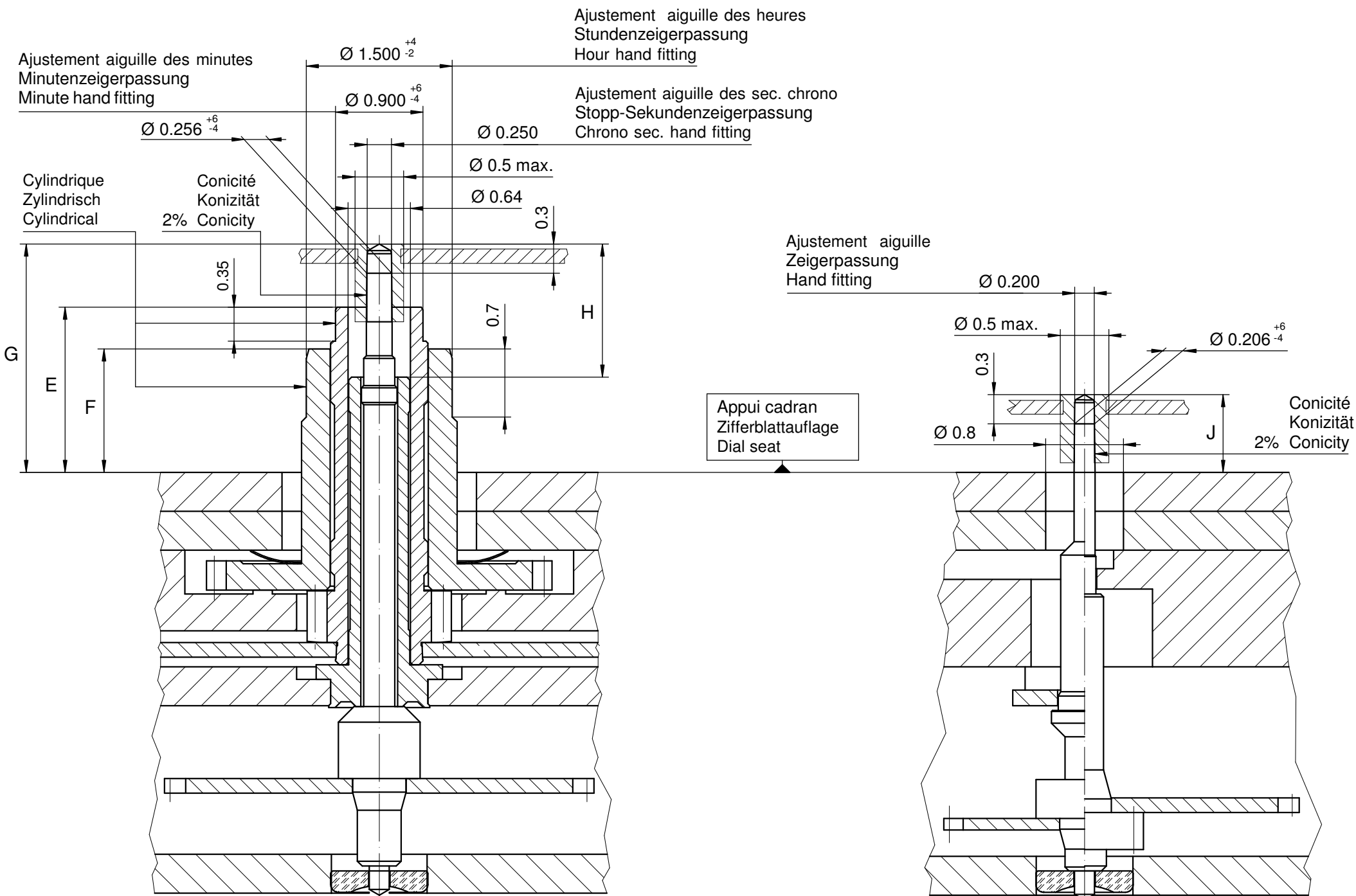
Issued	06 Sep 2004	mk
Modified	30.März 2005 ÄA 1784	mk
Released	YES	
Tolerance	+/- 20 µm	
Scale	10 : 1 (5 : 1) (A3H)	
Sous réserve de modifications Änderungsvorbehalten Modifications reserved		
No.	5000.345	01



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	6H

Cadran Zifferblatt Dial	12 1/2"	Issued	14 Sep 2003	mk
		Modified	21 Feb 2011 ÄA 10543	dh
		Released	YES	
		Tolerance	+/- 20 µm	
		Scale	5 : 1 (A4V)	
RONDA	5021.D	Sous réserve de modifications Aenderungsvorbehalten Modifications reserved		
		No.	5010.657	02



Heures / minutes / secondes chrono
Stunden / Minuten / Stopp-Sekunden
Hours / minutes / chrono second

Compteur 1 aiguille
1 Zeiger Zähler
1 Hand counter

Petite seconde
Kleine Sekunde
Small second

Aiguillages Zeigerwerkhöhe Hand fitting height					
Dépassement Höhe über Zifferblattauflage Height over dial seat					
No	G	E	F	H	J
1	2.35	1.70	1.27	1.37	0.80
-					

Aiguillages Zeigerwerkhöhe Hand fitting height						
Peinture comprise / inkl. Farbe / Paint included						
Epaisseur maximum du cadran Maximale Zifferblattstärke Maximum dial thickness						
No	Sous l'aiguille des secondes chrono Unter Stopp-Sekundenzeiger Under chrono second hand	Sous l'aiguille des minutes Unter Minutenzeiger Under minute hand	Sous l'aiguille des heures Unter Stundenzeiger Under hour hand	Sous l'aiguille de petite seconde Unter kleine Sekundenzeiger Under small second hand	Sous l'aiguille compteur 1 aiguille Unter Zeiger 1 Zeiger Zähler Under hand 1 hand counter	Epaisseur des aiguilles Zeigerdicke Hands thickness
1	1.85	1.30	0.85	0.40	0.40	0.15
-						

	Aig. des sec. chrono Stopp-Sekundenzeiger Chrono second hand	Aig. des minutes Minutenzeiger Minute hand	Aig. des heures Stundenzeiger Hour hand	Aig. petite secondes Kleine Sekundenzeiger Small second hand	Aiguille compteur (1 aig.) Zähler Zeiger (1 Zeiger) Counter hand (1 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	10	10	Masse / Masse / Weight *
µNm max.	0.06	0.80	0.80	0.07	0.03	Balourd / Unwucht / Unbalance *
gmm ² max.	1.0	-	-	0.4	-	Inertie / Massenträgheit / Inertia *
N max.	30	40	40	30	30	Force de chassage / Aufpresskraft / Force

Sous réserve de toutes modifications

Aenderungen vorbehalten

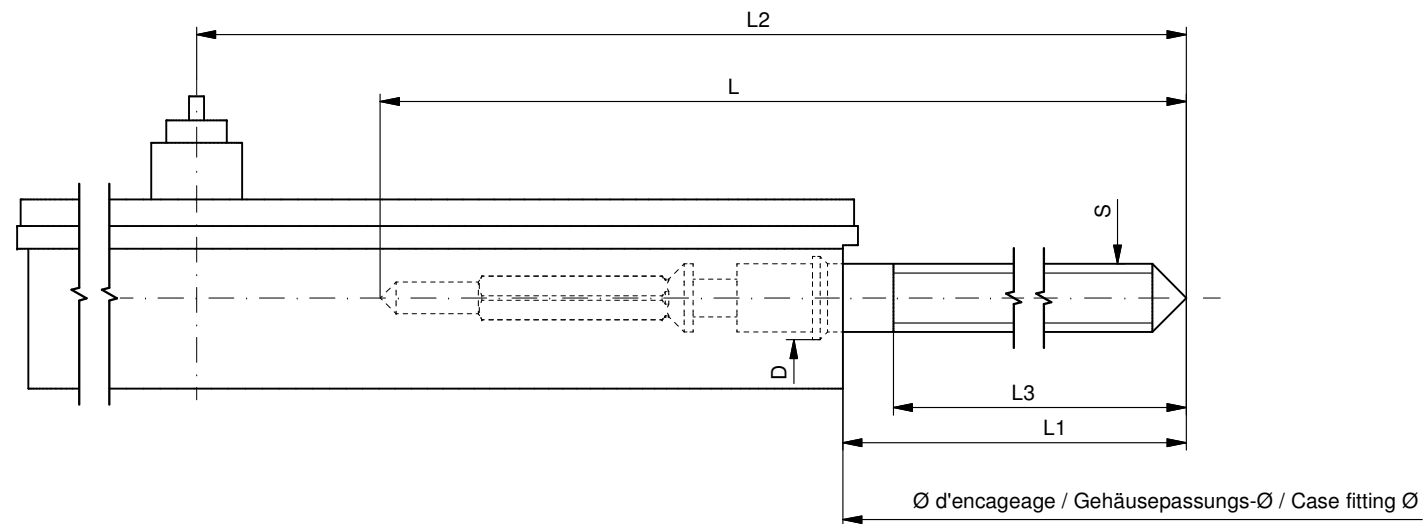
All modifications reserved

Aiguillages Zeigerwerkhöhen Hand fitting heights		Issued	21 Feb 2011	dh
12 1/2'''		Modified	21 Feb 2011	dh
		AA 10543		
RONDA 5021.D		Released	Yes	
		Tolerance	µm	
5021.D		Scale	20 : 1 (A3H)	
		Sous réserve de modifications Aenderungen vorbehalten Modifications reserved		
No.	3316.146	00		

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

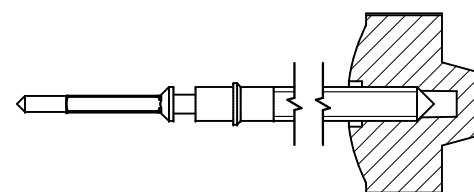
* Bei abweichenden Werten, bitte technischen Kundendienst anfragen

* In case of different values, please contact the customer service



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

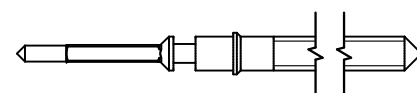
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.177.CO	20.00	10.23	24.23	10.15	0.90	1.10



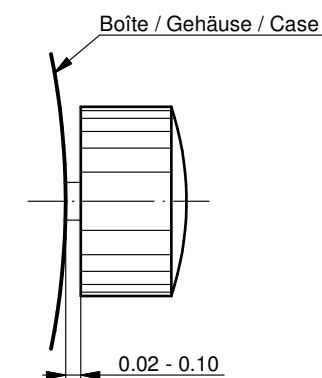
Couleur de la couronne Kronenfarbe Crown color	bleu foncé dunkelblau dark blue
Code	UN 5002

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

No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.177	20.00	10.23	24.23	10.15	0.90	1.10
3000.191	32.00	22.23	36.23	22.15	0.90	1.10



Couronne normale
 Normale Krone
 Normal crown

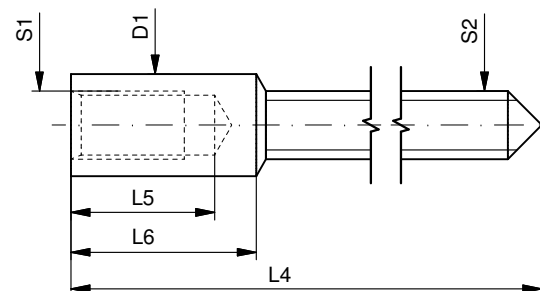


Couronne vissée
 Geschraubte Krone
 Screwed crown

Force ⇐ min. Kraft ⇐ min. Force ⇐ min.	10 N
Force ⇐ max. Kraft ⇐ max. Force ⇐ max.	15 N

Rallonge de tige / Stellwelle Verlängerung / Stem extension

No. d'article Artikelnummer Part number	L4	L5 (min)	L6	S1	S2	D1
3000.040	12.00	1.90	2.45	0.90	0.90	1.35



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


RONDA

5010.B, 5020.B, 5021.D, 5030.D,
 5040.B, 5040.D, 5040.E, 5040.F,
 5050.B, 5050.C, 5051.C, 5130.B, 5130.D

Issued	05 Sep 2012	ds5222
Modified	---	ds5222
Released	ÄA 11741	
Tolerance	YES	
Scale	10:1 (A3)	

Sous réserve de modifications
 Änderungen vorbehalten
 Modifications reserved

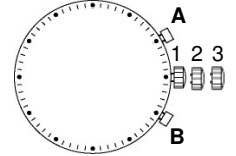
No.	5030.019	00
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	<h2>T2 Information</h2>	Dokument DOMVT081e	Seite 1 / 1
	Casing instructions RONDA startech 50xx.B, 50xx.C, 50xx.D	Änd.Datum 4.5.2007	Änd.Stand 04

Geht an: RTC, RHK, RTH, ERMANO, Pine Precision, Time & Time, 5250

Information & References

- Pushers and cases → case drawings
- Dials, position of date and counters → dial drawings
- Hand fitting heights & specifications for hands → hand fitting height drawings
- Adjusting the chrono hands (cal. 5xxx) to zero position → user's manual



Hand setting / Date change phases

50xx.B Place the hands to 12 o'clock, **after** termination of the unit indicator* change from **02** to **03**.

Date change phase for unit indicator* disk: approx. 1¼ hours

Date change phase for tens-** and unit indicator* disks together: approx. 1½ – 2 hours

03
** *

50xx.C Place the hands to 12 o'clock, **after** termination of the unit indicator* change from **02** to **03**.

Date change phase for unit indicator* disk only: approx. 1¼ hours

Date change phase for tens-** and unit indicator* disks together: approx. 1½ – 2 hours

Week day change phase: approx. 3 hours, from 02:00 to 05:00

IMPORTANT: To avoid any damages, the weekday indicator must be set by turning the stem (stem in Pos. 3).

03
** *

50xx.D Place the hands to 12 o'clock, **after** termination of the indicator change

Date change phase for all date changes: approx. 60 min

Remark: During the date setting with quick mode (stem position 2), the speed may not exceed 5 days/second.

Movement holder 4000-5999 A4 (part nr. H 5xxx.1A4)

Hand setting & check of pusher function



Hand setting

Maximal force:

Hour and minute hands: max. 40N

All other hands: max. 30N

The movement needs to be supported for hand setting.

Movement holder 4000-5999 T (part nr. H 5xxx.1T)

For removal of stem



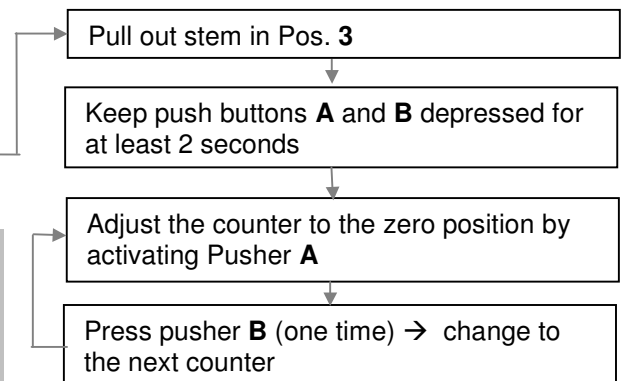
Stem removal

For removal of the stem, the stem must be pushed into position **1** (pressed in) prior to apply pressure to the setting lever.

Check of chrono hands

To ensure proper positioning of the chrono hands to the zero position, a complete initialisation must be issued after the hand setting operation is completed. Each counter must be adjusted 1x to the zero position


End: Push stem back to Pos 1.



Information re. BIG DATE

An extreme acceleration in setting the date with quick mode (BIG DATE) can induce a false date indication. The synchronization is re-established by setting the date from 01 till 31 (stem in Pos. 2).






erstellt, bzw. geändert und geprüft		überprüft und freigegeben	
Datum: 21.03.2006	Visum/Initialen:	Datum: 21.03.2006	Visum/Initialen:

	Werkhalter T2 Porte-pièce T2 Movement holder T2	DOMVT004
		Version: 1.8
	Verwendung & Übersicht Utilisation & Vue d'ensemble Utilisation & Overview	Prozess: 3.1.3
		Änd.-Dat.: 15.07.2013

→ 5110, 5112, 5150, 5151, 5152, 5160, 5161, 5163, 5164, 5166, 5310, 5311, 5312, RTC, RHK

→ Ermano, Pine Precision


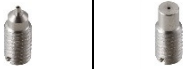







→ AF Switzerland SA, Horotec SA, Tschudin & Schneider

	A Zeiger setzen Poser les aiguilles Hand setting	T Stellwelle entfernen Enlever la tige Stem removal	Diverses Divers Various
Kalibergruppe Groupe de calibre Calibre group	Artikelnummer Numéro d'article Part number	Artikelnummer Numéro d'article Part number	Artikelnummer Numéro d'article Part number
Z60 Z60	H 80XX.1A 	H 80XX.1T 	
8000-8499 8040.B 8040.N	H 80XX.1A 	H 80XX.1T 	
7000-7999 700X.B 700X.L 700X.N 700X.P	H 7XXX.1A 	H 7XXX.1T 	

Wichtig! Die Höhe der Abstützschrauben muss vor Beginn jeder Serie eingestellt werden.

Important! Veuillez ajuster l'hauteur des vis de support au préalable de chaque série.

Important! Adjust height of support screws prior to each series.

	<p>A Zeiger setzen Poser les aiguilles Hand setting</p>	<p>T Stellwelle entfernen Enlever la tige Stem removal</p>	<p>P Alarm-Check Contrôle d'alarme Alarm check</p>
<p>Kalibergruppe Groupe de calibre Calibre group</p>	<p>Artikelnummer Numéro d'article Part number</p>	<p>Artikelnummer Numéro d'article Part number</p>	<p>Artikelnummer Numéro d'article Part number</p>
<p>6000-6999</p> <p>6XXX.B 6XXX.D</p>	<p>H 6XXX.1A</p>  <p>Swiss Made Swiss Parts</p> 	<p>H 6XXX.1T</p> 	
<p>4000-5999.B/.C/.D/.E</p> <p>4XXX.B 5XXX.B 5XXX.C 5XXX.D 5XXX.E</p>	<p>H 5XXX.1A</p> 	<p>H 5XXX.1T</p> 	<p>H 5XXX.1P</p> 
<p>4000-5999.F</p> <p>5XXX.F (4XXX.B) (5XXX.B) (5XXX.C) (5XXX.D) (5XXX.E)</p>	<p>H 5XXX.FA</p> 	<p>H 5XXX.1T</p> 	<p>H 5XXX.1P</p> 

Wichtig! Die Höhe der Abstützschrauben muss vor Beginn jeder Serie eingestellt werden.
Important! Veuillez ajuster l'hauteur des vis de support au préalable de chaque série.
Important! Adjust height of support screws prior to each series.

	A Zeiger setzen Poser les aiguilles Hand setting	T Stellwelle entfernen Enlever la tige Stem removal	Diverses Divers Various
Kalibergruppe Groupe de calibre Calibre group	Artikelnummer Numéro d'article Part number	Artikelnummer Numéro d'article Part number	Artikelnummer Numéro d'article Part number

3500-3999
3520.D 3540.D



1062-1069
1062 1063 1064 1069
1062
1063
1064
1069



1042
1042





Wichtig! Die Höhe der Abstützschrauben muss vor Beginn jeder Serie eingestellt werden.
Important! Veuillez ajuster l'hauteur des vis de support au préalable de chaque série.
Important! Adjust height of support screws prior to each series.

	A Zeiger setzen Poser les aiguilles Hand setting	T Stellwelle entfernen Enlever la tige Stem removal	Diverses Divers Various
Kalibergruppe Groupe de calibre Calibre group	Artikelnummer Numéro d'article Part number	Artikelnummer Numéro d'article Part number	Artikelnummer Numéro d'article Part number
1032 1032	H 1032.1A 	H 1032.1T 	
1012-1019 1012 1013 1014 1015 1016 1019	H 101X.1A 	H 101X.1T 	
1002-1009 1002 1003 1004 1005 1006 1009	H 100X.1A 	H 100X.1T 	

Wichtig! Die Höhe der Abstützschrauben muss vor Beginn jeder Serie eingestellt werden.
Important! Veuillez ajuster l'hauteur des vis de support au préalable de chaque série.
Important! Adjust height of support screws prior to each series.




	A Zeiger setzen Poser les aiguilles Hand setting	T Stellwelle entfernen Enlever la tige Stem removal	Diverses Divers Various
Kalibergruppe Groupe de calibre Calibre group	Artikelnummer Numéro d'article Part number	Artikelnummer Numéro d'article Part number	Artikelnummer Numéro d'article Part number

782-788
782 783 784 785 788

H 78X.1A	
	
Swiss Made	Swiss Parts
	

H 78X.1T


772-775
772 773 774 775





H 77X.1A	
	
Swiss Made	Swiss Parts
	

H 77X.1T


Wichtig! Die Höhe der Abstützschrauben muss vor Beginn jeder Serie eingestellt werden.
Important! Veuillez ajuster l'hauteur des vis de support au préalable de chaque série.
Important! Adjust height of support screws prior to each series.



	A Zeiger setzen Poser les aiguilles Hand setting	T Stellwelle entfernen Enlever la tige Stem removal	Diverses Divers Various
Kalibergruppe Groupe de calibre Calibre group	Artikelnummer Numéro d'article Part number	Artikelnummer Numéro d'article Part number	Artikelnummer Numéro d'article Part number

762-763
762 762E 763 763E
762 762E 763 763E

H 76X.1A	
	
Swiss Made	Swiss Parts
-	-
	-
	



751-753
751 753
751 753




H 75X.1A	
	
Swiss Made	Swiss Parts
-	-
	



Wichtig! Die Höhe der Abstützschrauben muss vor Beginn jeder Serie eingestellt werden.
Important! Veuillez ajuster l'hauteur des vis de support au préalable de chaque série.
Important! Adjust height of support screws prior to each series.

	A Zeiger setzen Poser les aiguilles Hand setting	T Stellwelle entfernen Enlever la tige Stem removal	Diverses Divers Various
Kalibergruppe Groupe de calibre Calibre group	Artikelnummer Numéro d'article Part number	Artikelnummer Numéro d'article Part number	Artikelnummer Numéro d'article Part number

712-715
712 713 714 715

H 71X.1A	
	
Swiss Made	Swiss Parts
	


H 71X.1T


702-708
702 703 704 705 708 (706)

H 70X.1A	
	
Swiss Made	Swiss Parts
	







H 70X.1T


706
706.1 706.2 706.3 706.B

H 706.1A	
	
Swiss Made	Swiss Parts
 6h	 6h
 	 

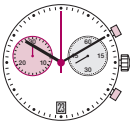
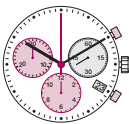
H 70X.1T


Wichtig! Die Höhe der Abstützschrauben muss vor Beginn jeder Serie eingestellt werden.
Important! Veuillez ajuster l'hauteur des vis de support au préalable de chaque série.
Important! Adjust height of support screws prior to each series.

	A Zeiger setzen Poser les aiguilles Hand setting	T Stellwelle entfernen Enlever la tige Stem removal	Diverses Divers Various
Kalibergruppe Groupe de calibre Calibre group	Artikelnummer Numéro d'article Part number	Artikelnummer Numéro d'article Part number	Artikelnummer Numéro d'article Part number
582-585 582 583 585	H 58X.1A 	H 58X.1T 	
512-519 512 513 515 517 519	H 51X.1A 	H 51X.1T 	
502-509 502 503 505 507 509	H 50X.1A 	H 50X.1T 	

Wichtig! Die Höhe der Abstützschrauben muss vor Beginn jeder Serie eingestellt werden.
Important! Veuillez ajuster l'hauteur des vis de support au préalable de chaque série.
Important! Adjust height of support screws prior to each series.

Cal. 5030.D



Cal. 5021.D

RONDA is a supplier of watch movements including their operating instructions. Please refer to the watch retailer, service centre or manufacturer, should you have any questions regarding the watch. All relevant contact information can be found in your sales and/or guarantee documents.

English User's Manual

Battery type: 395 (diameter 9.5mm x 2.6mm / SR 927 SW)
Accuracy: +20 / -10 seconds per month



Description of the display and control buttons

Display elements

- Second hand
- Minute hand
- Hour hand
- Centre stop-second
- Minute counter
- Hour counter
- Date

Control buttons

- Push button A
- Crown
- Push button B

Minute counter Push-button A

Hour counter Push-button B

Chronograph: Basic function

(Start / Stop / Reset)

Example:

- Start:** Press push-button A.
- Stop:** to stop the timing, press push-button A once more and read the three chronograph hands: **1h / 20min / 10 sec.**
- Zero positioning:** Press push-button B. (The three chronograph hands will be reset to their zero positions).

Minute counter Push-button A

Hour counter Push-button B

Chronograph: Accumulated timing

Example:

- Start:** (start timing)
- Stop:** (e.g. 15 min 5 sec following 1)
- Restart:** (timing is resumed)
- Stop:** (e.g. 13 min 5 sec following 3) = **28 min 10 sec**
(The accumulated measured time is shown)
- Reset:** The three chronograph hands are returned to their zero positions.

Please note:
* Following 5, the accumulation of the timing can be continued by pressing **push-button A** (Restart / Stop, Restart / Stop, ...)

Minute counter Push-button A

Hour counter Push-button B

Chronograph: Intermediate or interval timing

Example:

- Start:** (start timing)
- Display interval:** e.g. 10 minutes 10 seconds (timing continues in the background)
- Making up the measured time:** (the 3 chronograph hands are quickly advanced to the ongoing measured time).
- Stop:** (Final time is displayed)
- Reset:** The 3 chronograph hands are returned to their zero position

Please note:
* Following 2, further intervals or intermediates can be displayed by pressing **push-button B** (display interval / make up measured time, ...)

Minute counter Center stop-second

Hour counter Push-button A

Push-button B

Adjusting the chronograph hands to zero position

Example:
One or several chronograph hands are not in their correct zero positions and have to be adjusted (e.g. following a battery change).

- Pull out the crown to position III (all 3 chronograph hands are in their correct or incorrect zero position).
- Keep push-buttons A and B depressed simultaneously for at least 2 seconds (the centre stop-second rotates by 360° → corrective mode is activated).

3 Returning the crown to position I
Termination of the chronograph hands adjustment (can be carried out at any time).

Adjusting the centre stop second

Single step: A 1 x short
Continuous: A long

Adjusting the next hand B

Single step: A 1 x short
Continuous: A long

Adjusting the hour counter hand (position 6h)

Single step: A 1 x short
Continuous: A long

Adjusting the next hand B

Single step: A 1 x short
Continuous: A long

Adjusting the minute counter hand (position 9h)

Single step: A 1 x short
Continuous: A long

Second hand

Setting the time

- * Pull out the crown to position III (the watch stops).
- Turn the crown until you reach the correct time 8:45.
- * Push the crown back into position I.

Please note:
* In order to set the time to the exact second, 2 must be pulled out when the second hand is in position 60s (I).
Once the hour and minute hands have been set, 3 must be pushed back into position I at the exact second.

Setting the date (quick mode)

- Pull out the crown to position II (the watch continues to run).
- Turn the crown until the correct date 11 appears.
- Push the crown back into position I.

Please note:
During the date changing phase between 9 PM and 12 PM; the date must be set to the date of the following day.

Crown

Date

Setting the date/time following a battery change

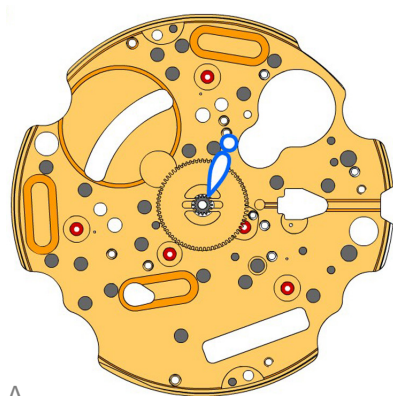
Example:
- Date / time on the watch: 17 / 1:25 AM
- Present date / time: 4 / 8:30 PM

- Pull out the crown to position II (the watch continues to run).
- Turn the crown until yesterday's date appears 3.

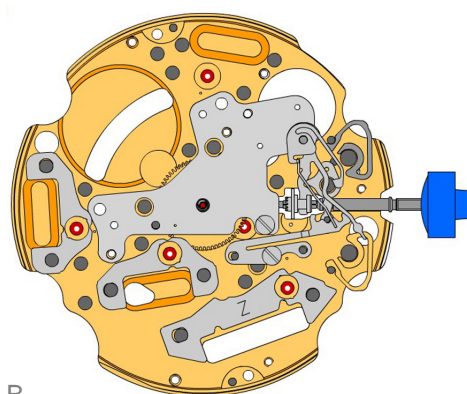
3 * Pull out the crown to position III (the watch stops).

- Turn the crown until the correct date 4 appears.
- * Continue to turn the crown until the correct time 8:30 PM appears.
- Push the crown back into position I.

















Please note:
* To set your watch to the exact second, please refer to the chapter entitled «setting the time».
** Please observe the AM/PM clock rhythm.

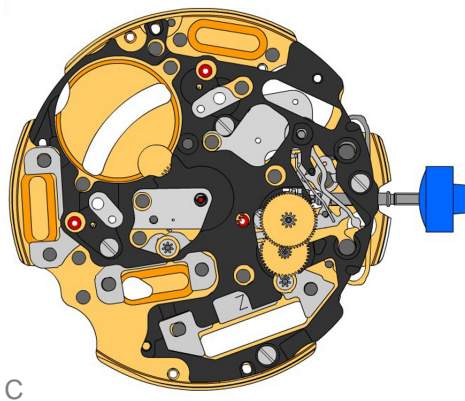








A

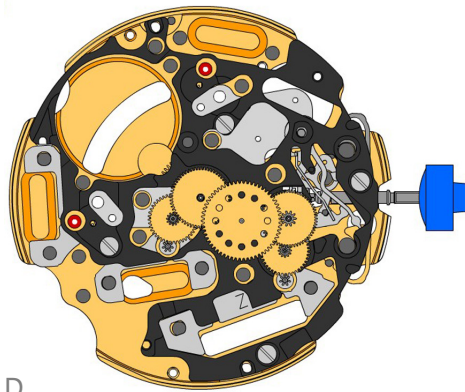





B

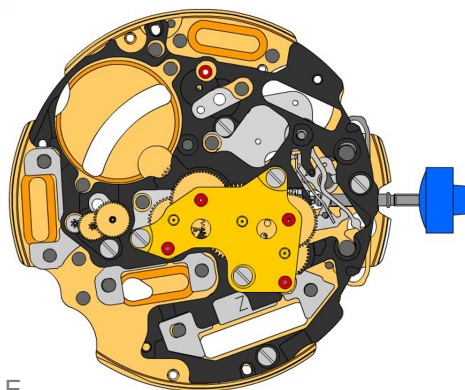
2000.574.G 1.		Main plate
3305.275.CO 2.		Cannon pinion with driver (Aig.1)
2030.017.CO 3.		Centre bridge Centre bridge held by 1 screw 4000.250.
4000.250 4.		Screw
3001.055.FI 5.		Sliding pinion
3000.177.CO 6.		Setting stem
3017.049 7.		Setting lever
3905.049 8.		Setting lever jumper (3 positions) Setting lever jumper held by 1 screw 4000.250.
4000.250 9.		Screw
3015.081 10.		Yoke (3 positions) Parts 3015.081 and 3905.067 must be exchanged together.
3905.067 11.		Yoke spring Tensioning the spring arm. Parts 3015.081 and 3905.067 must be exchanged together.
3406.030 12.		Pusher jumper B Put the grey jumper between the two posts on the further side.
3406.038 13.		Pusher jumper A Put the yellow jumper between the two posts on the closer side.
3622.040 14.		Stator Mark [Z] on stator.
3622.039 15.		Stator (counter 6h, 9h and chrono)
3622.039 16.		Stator (counter 6h, 9h and chrono)







C

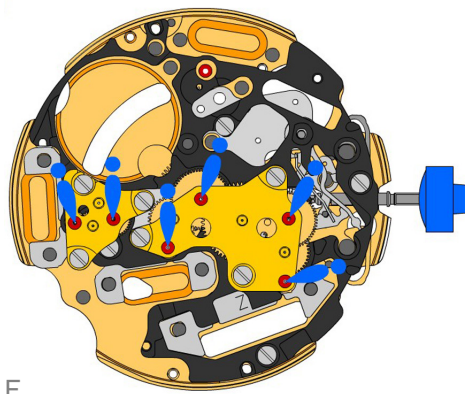
3603.079 17.		Plastic bracket Plastic bracket held by 4 screws 4000.250.
4000.250 18.		Screw
3715.094.RK 19.		Rotor
3715.094.RK 20.		Rotor
3147.046.CO 21.		Intermediate wheel
3136.142.CO 22.		Second wheel (long)


D

3147.047.CO 23.		Intermediate wheel (chrono)
3136.143.CO 24.		Chronograph wheel (Aig.1)
3122.056.CO 25.		Third wheel


E

2020.148.G 26.		Train wheel bridge Train wheel bridge held by 3 screws 4000.250.
4000.250 27.		Screw
3715.095.RK 28.		Rotor Parts 3612.144.5021, 3715.095.RK and 3147.048.CO must be exchanged together.
3147.048.CO 29.		Intermediate wheel (counter) Parts 3612.144.5021, 3715.095.RK and 3147.048.CO must be exchanged together.
3402.006.CO 30.		Minute counting wheel


F
2020.149.G
31.

Counter train wheel bridge
 Counter train wheel bridge held by 3 screws 4000.250.

4000.250
32.

Screw
4000.250
33.

Screw
3621.053.RK
34.

Coil
 Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

3621.054.RK
35.

Coil (counter 9h, chrono)
 Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

3621.054.RK
36.

Coil (counter 9h, chrono)
 Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

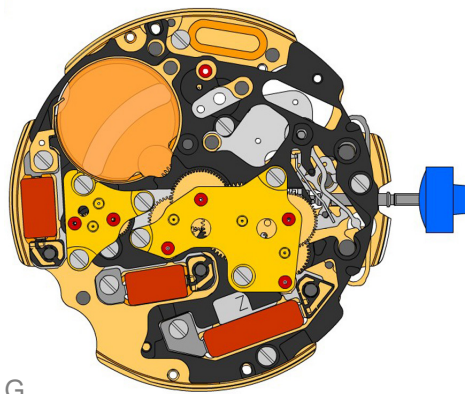
4000.250
37.

Screw
3601.118
38.

Contact strip
 Contact strip held by 1 screw 4000.250.

4000.250
39.

Screw
3603.034
40.

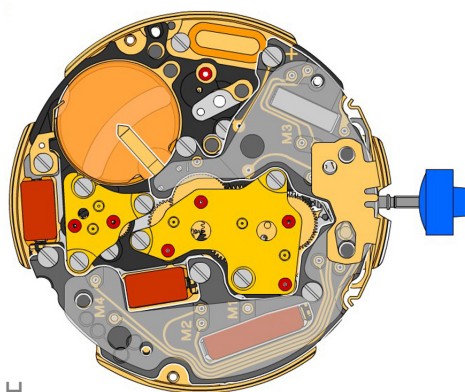
Battery insulator

G
3612.144.5021
41.

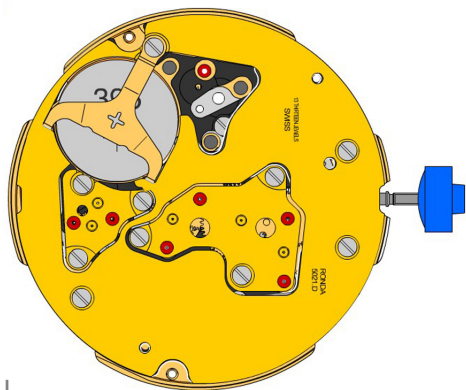
Electronic module
 Electronic module held by 5 screws 4000.248. Electronic measurements may be realised now. Parts 3612.144.5021, 3715.095.RK and 3147.048.CO must be exchanged together.

4000.248
42.

Screw
3603.069
43.

Circuit insulator
3601.107.G
44.

Pusher contact spring

H

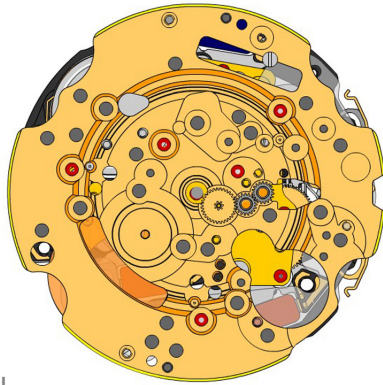


2130.137.G.M01.5021D
45.  **Electronic module cover**
Electronic module cover held by 3 screws 4000.250.





3600.010.HGF
46.  **Battery 395**

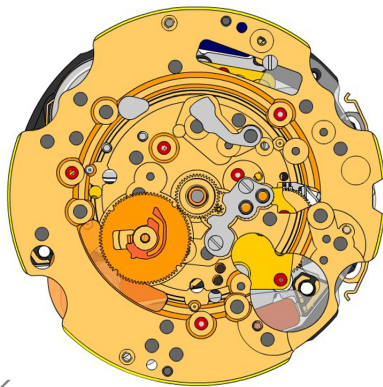
3601.109.G
47.  **Bridge +**
Bridge held by 1 screw 4000.250.

4000.250
48.  **Screw**









J

2000.574.G 49.		Main plate
3004.164 50.		Setting wheel
3004.164 51.		Setting wheel
3007.054.CO 52.		Minute wheel





K

2130.143 53.		Minute train bridge Minute train bridge held by 2 screws 4000.305.
4000.305 54.		Screw
3301.241 55.		Hour wheel (Aig.1)
3315.016 56.		Friction spring
3004.224.CO 57.		Date indicator driving wheel
3500.049 58.		Date jumper











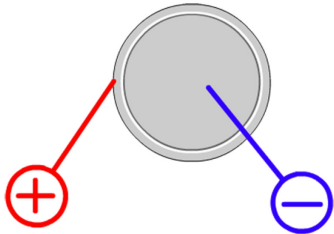
L

3504.208.AB.1.A 59.		Date indicator (standard) Nick of the indicator at 3 o'clock.
2130.141 60.		Date indicator maintaining plate Date indicator maintaining plate held by 1 screw 4000.250.

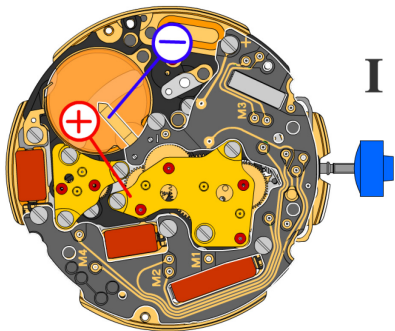


M

3905.070 61.		Date jumper spring Insert the date jumper spring in the provided opening.
2130.140.G 62.		Date mechanism maintaining plate Date mechanism maintaining plate held by 2 screws 4000.250.
4000.250 63.		Screw
3506.072.G 64.		Dial support
8200 65.		Moebius 8200
9014 66.		Moebius 9014
124 67.		Jismaa 124
9020 68.		Moebius 9020

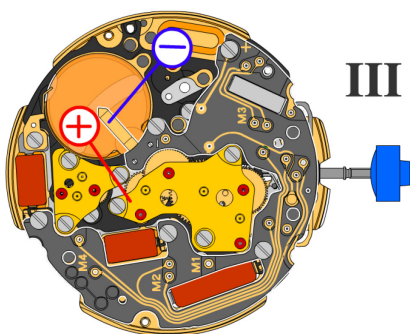


Battery	395
Voltage	1.55 V



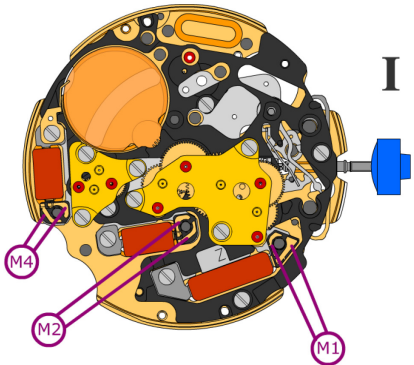
*Setting stem in position I, calendar not in gear,
60 s measuring interval for rate and consumption:*

Typical consumption	1.32 μA
Maximal consumption	1.65 μA
Rate	-10s/M. .. +20s/M.
Lower working voltage limit	1.20 V



Setting stem in position III, 60 s measuring interval:

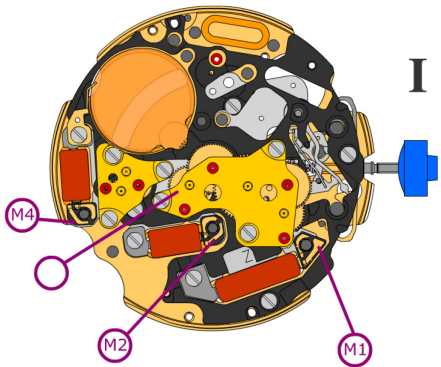
Typical consumption	0.10 μA
Maximal consumption	0.30 μA



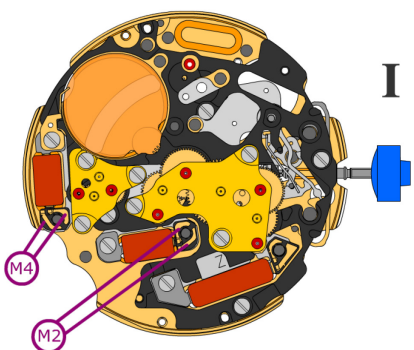
Coil resistance M1 **1.90 k Ω .. 2.10 k Ω**

Coil resistance M2 **1.68 k Ω .. 1.88 k Ω**

Coil resistance M4 **1.68 k Ω .. 1.88 k Ω**

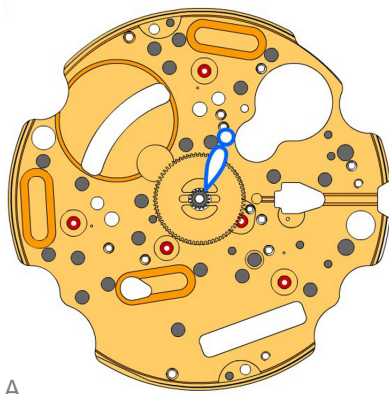


Coil resistances M1-M4 **∞ k Ω**

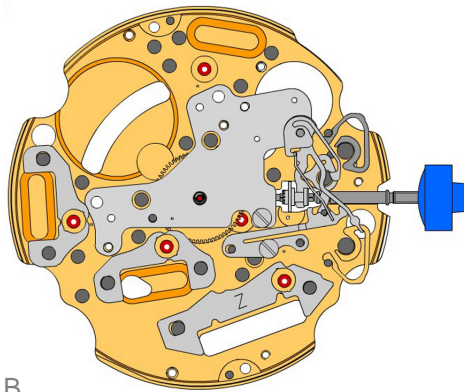


Signal generator (4.9 ms, 8 Hz):

















Lower working voltage limits M2-M4 **1.20 V**

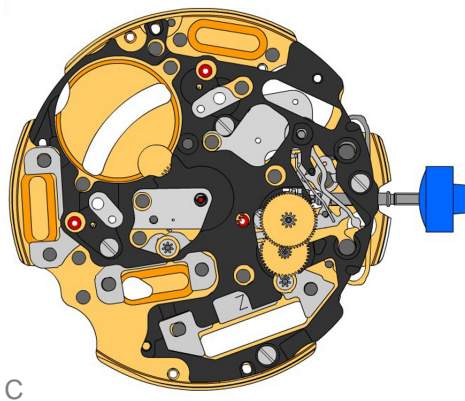








A

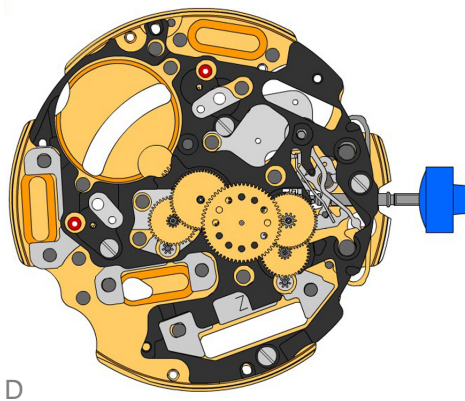





B

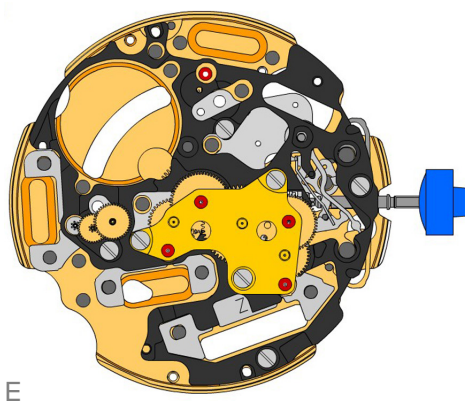
2000.574.G 1.		Main plate
3305.275.CO 2.		Cannon pinion with driver (Aig.1)
2030.017.CO 3.		Centre bridge Centre bridge held by 1 screw 4000.250.
4000.250 4.		Screw
3001.055.FI 5.		Sliding pinion
3000.177.CO 6.		Setting stem
3017.049 7.		Setting lever
3905.049 8.		Setting lever jumper (3 positions) Setting lever jumper held by 1 screw 4000.250.
4000.250 9.		Screw
3015.081 10.		Yoke (3 positions)
3905.067 11.		Yoke spring Tensioning the spring arm.
3406.030 12.		Pusher jumper B Put the grey jumper between the two posts on the further side.
3406.038 13.		Pusher jumper A Put the yellow jumper between the two posts on the closer side.
3622.040 14.		Stator Mark [Z] on stator.
3622.039 15.		Stator (counter 6h, 9h and chrono)
3622.039 16.		Stator (counter 6h, 9h and chrono)








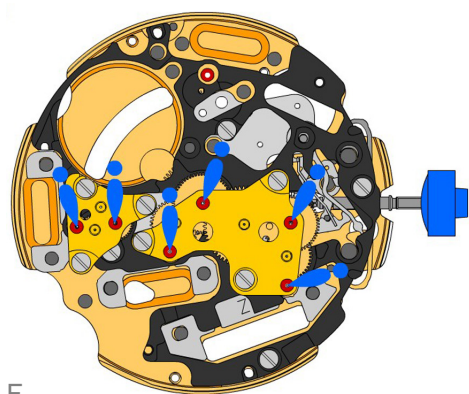
3603.079 17.		Plastic bracket Plastic bracket held by 4 screws 4000.250.
4000.250 18.		Screw
3715.094.RK 19.		Rotor
3715.094.RK 20.		Rotor
3147.046.CO 21.		Intermediate wheel
3136.142.CO 22.		Second wheel (long)




3147.047.CO 23.		Intermediate wheel (chrono)
3136.143.CO 24.		Chronograph wheel (Aig.1)
3122.056.CO 25.		Third wheel




2020.148.G 26.		Train wheel bridge Train wheel bridge held by 3 screws 4000.250.
4000.250 27.		Screw
3715.095.RK 28.		Rotor
3147.059.CO 29.		Intermediate wheel (counter)
3402.006.CO 30.		Minute counting wheel



F


2020.149.G
31.  Counter train wheel bridge
Counter train wheel bridge held by 3 screws 4000.250.

4000.250
32.  Screw

4000.250
33.  Screw

3621.053.RK
34.  Coil
Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

3621.054.RK
35.  Coil (counter 9h, chrono)
Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

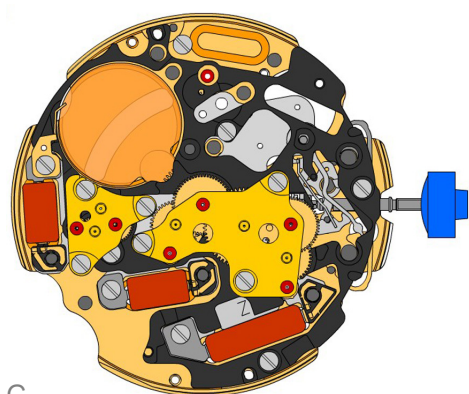
3621.054.RK
36.  Coil (counter 9h, chrono)
Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

4000.250
37.  Screw

3601.118
38.  Contact strip
Contact strip held by 1 screw 4000.250.

4000.250
39.  Screw

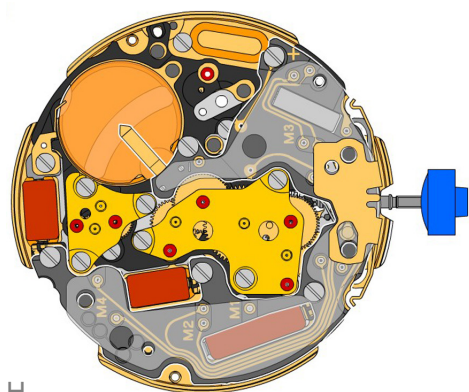
3603.034
40.  Battery insulator

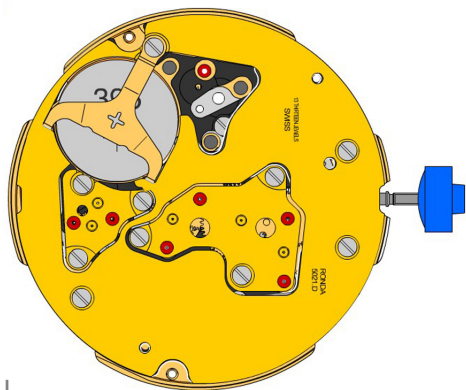

G

4000.248
41.  Screw

3603.069
42.  Circuit insulator

3601.107.G
43.  Pusher contact spring


H

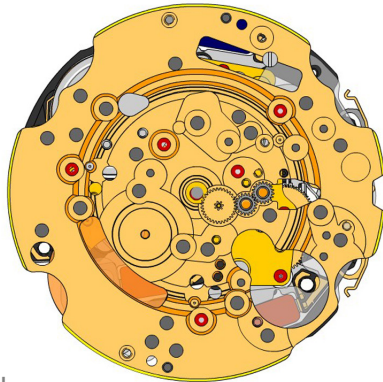


2130.137.G.M01.5021D Electronic module cover
44.  Electronic module cover held by 3 screws 4000.250.





3600.010.HGF Battery 395
45.  Battery 395

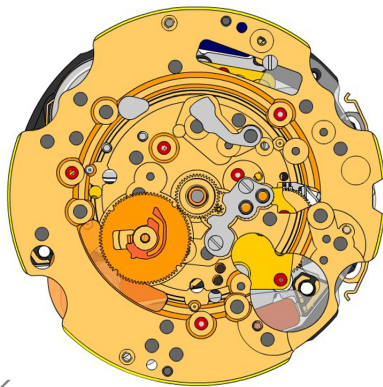
3601.109.G Bridle +
46.  Bridle held by 1 screw 4000.250.

4000.250 Screw
47.  Screw









J

2000.574.G 48.		Main plate
3004.164 49.		Setting wheel
3004.164 50.		Setting wheel
3007.054.CO 51.		Minute wheel





K

2130.143 52.		Minute train bridge Minute train bridge held by 2 screws 4000.305.
4000.305 53.		Screw
3301.241 54.		Hour wheel (Aig.1)
3315.016 55.		Friction spring
3004.224.CO 56.		Date indicator driving wheel
3500.049 57.		Date jumper











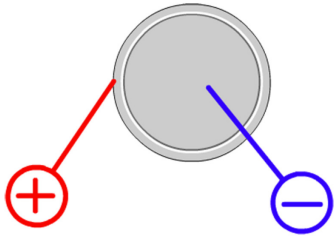
L

3504.208.AB.1.A 58.		Date indicator (standard) Nick of the indicator at 3 o'clock.
2130.141 59.		Date indicator maintaining plate Date indicator maintaining plate held by 1 screw 4000.250.

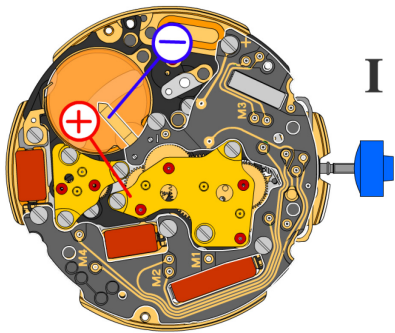


M

3905.070 60.		Date jumper spring Insert the date jumper spring in the provided opening.
2130.140.G 61.		Date mechanism maintaining plate Date mechanism maintaining plate held by 2 screws 4000.250.
4000.250 62.		Screw
3506.072.G 63.		Dial support
8200 64.		Moebius 8200
9014 65.		Moebius 9014
124 66.		Jismaa 124
9020 67.		Moebius 9020

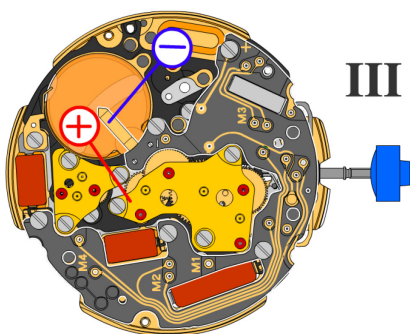


Battery	395
Voltage	1.55 V



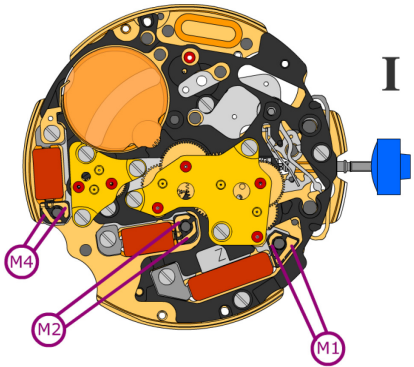
*Setting stem in position I, calendar not in gear,
60 s measuring interval for rate and consumption:*

Typical consumption	1.32 μA
Maximal consumption	1.65 μA
Rate	-10s/M. .. +20s/M.
Lower working voltage limit	1.20 V



Setting stem in position III, 60 s measuring interval:

Typical consumption	0.10 μA
Maximal consumption	0.30 μA



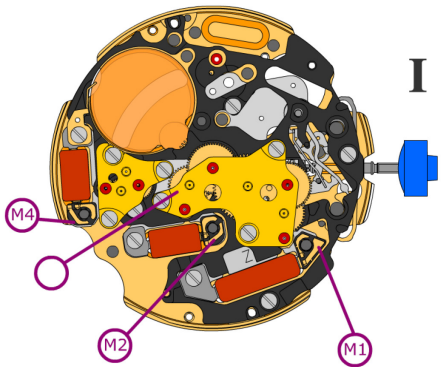
Coil resistance M1

1.90 k Ω .. 2.10 k Ω

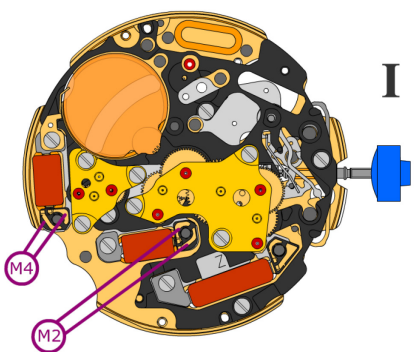
Coil resistance M2

1.68 k Ω .. 1.88 k Ω

Coil resistance M4

1.68 k Ω .. 1.88 k Ω


Coil resistances M1-M4

 ∞ k Ω

Signal generator (4.9 ms, 8 Hz):

 Lower working voltage
limits M2-M4

1.20 V