



## Ronda 509,519 Movement Parts (1)

*Compiled by EmmyWatch - <https://www.emmywatch.com>*

## Technische Anleitung

## Instructions techniques No. 314.3

## Technical Instructions



10 1/2'''



505.24.D



505.24.H



509



11 1/2'''



515.24.D



515.24.H



519

### 1. Werkdimensionen

### 1. Dimensions des mouvements

### 1. Movement dimensions

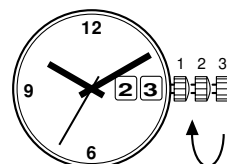
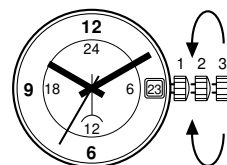
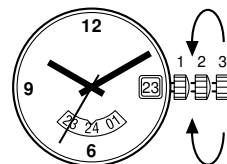
| Kaliber                                                         | Ø Total | Ø Werksitz     | Werkhöhe          | Höhe Batterie                          | Höhe Stellwelle | Höhe Werkauflage |
|-----------------------------------------------------------------|---------|----------------|-------------------|----------------------------------------|-----------------|------------------|
| Calibre                                                         | Ø Total | Ø Encageage    | Hauteur mouvement | Hauteur pile                           | Hauteur tige    | Hauteur filet    |
| Caliber                                                         | Ø Total | Ø Case fitting | Movement height   | Height of battery                      | Height of stem  | Movement rest    |
| Einh./ Unité/ Unit                                              | mm      | mm             | mm                | mm                                     | mm              | mm               |
| 505.24D, 505.24H                                                |         |                |                   |                                        |                 |                  |
| 509                                                             | 23,90   | 23,30          | 3,00              | 3,25                                   | 1,50            | 0,80             |
| 515.24D, 515.24H                                                |         |                |                   |                                        |                 |                  |
| 519                                                             | 26,20   | 25,60          | 3,00              | 3,25                                   | 1,50            | 0,80             |
| Stellwellengewinde/ Filetage de la tige/ Stem thread: Ø 0,90 mm |         |                |                   | Weg/ Chemin/ Length of travel: 1,00 mm |                 |                  |

### 2. Funktionen

### 2. Fonctions

### 2. Functions

| Kaliber                      | Stellwellenpos. | Funktionen                                                                                                                                                                                            |
|------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Calibre                      | Pos. de tige    | Fonctions                                                                                                                                                                                             |
| Caliber                      | Stem position   | Functions                                                                                                                                                                                             |
| 505.24<br>515.24             | 1               | Normale Position / Position normale / Running position                                                                                                                                                |
|                              | 2               | Datumkorrektur / 24-Stundenkorrektur<br>Correction de la date / Correction 24 heures<br>Date correction / 24 hours correction                                                                         |
|                              | 3               | Zeiger stellen, Sekunden-Stopp mit Unterbruch der Motorimpulse<br>Mise à l'heure, stop-seconde avec interruption des impulsions moteur<br>Hand setting, stop-second with interruption of motor pulses |
| 509<br>519                   | 1               | Normale Position / Position normale / Running position                                                                                                                                                |
|                              | 2               | Datumkorrektur / Correction de la date / Date correction                                                                                                                                              |
|                              | 3               | Zeiger stellen, Sekunden-Stopp mit Unterbruch der Motorimpulse<br>Mise à l'heure, stop-seconde avec interruption des impulsions moteur<br>Hand setting, stop-second with interruption of motor pulses |
| 505.24<br>515.24<br>509, 519 |                 | Hinweis Kalender-Schnellkorrektur: siehe Seite 6<br>Correction rapide du calendrier: voir page 6<br>Quick change date function: see page 6                                                            |



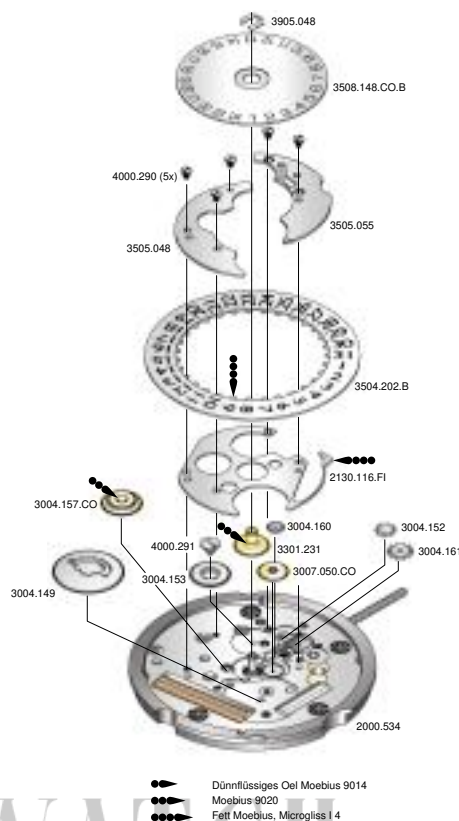
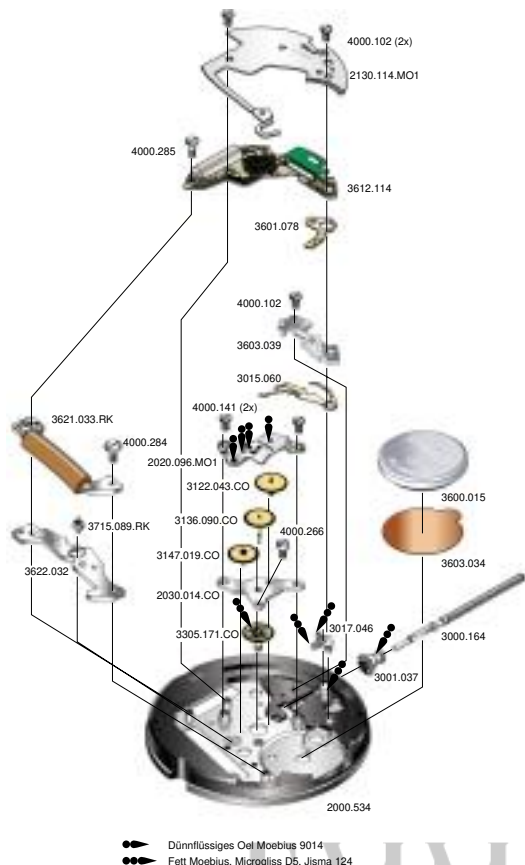
# Werkaufbau

# Assemblage

# Assembling

10 1/2''' 505.24D, 505.24H, 509  
11 1/2''' 515.24D, 515.24H, 519

10 1/2''' 505.24D  
11 1/2''' 515.24D



| 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-Abdeckpl.    | Couvre module  | Module cov. pl.    |
| 3000.164     | Stellwelle         | Tige           | Stem               |
| 3001.037     | Kupplungstrieb     | Pignon coulant | Sliding pinion     |
| 3015.060     | Kupplungstriebh.   | Bascule        | Yoke               |
| 3017.046     | Winkelhebel        | Tirette        | Setting lever      |
| 3122.043.CO  | Kleinbodenrad      | Rouemoyenne    | Third wheel        |
| 3136.090.CO  | Sekundenrad        | Rouessecondes  | Second-wheel       |
| 3147.019.CO  | Zwischenrad        | Roue interméd. | Intermed. wheel    |
| 3305.171.CO  | Minutenrohr        | Chaussée       | Cannon pinion      |
| 3600.015     | 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 |
| 3612.114     | Modul              | Module         | Module             |
| 3621.033.RK  | Spule              | Bobine         | Coil               |
| 3622.032     | Stator             | Stator         | Stator             |
| 3715.089.RK  | 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 |              |               |               |
|----------------------------------------------------------|--------------|---------------|---------------|
| Cal. 515.24H                                             |              |               |               |
| Plan No.                                                 | Bestandteile | Fournitures   | Spare Parts   |
| 3136.095.CO                                              | Sekundenrad  | Rouessecondes | Second-wheel  |
| 3305.180.CO                                              | Minutenrohr  | Chaussée      | Cannon pinion |
| Cal. 515.24D, Werkseite / Côté mouvement / Movement side |              |               |               |
| Cal. 515.24H                                             |              |               |               |
| Plan No.                                                 | Bestandteile | Fournitures   | Spare Parts   |
| 2000.530                                                 | Werkplatte   | Platine       | Main plate    |

| Plan No.      | Bestandteile                   | Fournitures                  | Spare Parts                 |
|---------------|--------------------------------|------------------------------|-----------------------------|
| 2130.116.FI   | Kalenderplatte                 | Plauecalendrier              | Date indicator pl.          |
| 3004.160      | Zeigerstellrad                 | Renvoi minuterie             | Setting wheel               |
| 3004.149      | Dat.-Mitn.rad                  | Renvoi entraîneur            | Ind. driving wh.            |
| 3004.161      | Verbindungsrad-Kupplungstrieb  | 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              |
| 3007.050.CO   | Wechselrad                     | Minuterie                    | Minute wheel                |
| 3301.231      | Stundenrad                     | Canon                        | Hour wheel                  |
| 3504.202.B    | Datumanzeiger                  | Baque                        | 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) |
| 3505.148.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                       |

## Abweichungen / Divergences / Deviations

|                                                         |                 |             |                |
|---------------------------------------------------------|-----------------|-------------|----------------|
| Cal. 515.24D Zifferblattseite / Côté cadran / Dial side |                 |             |                |
| Plan No.                                                | Bestandteile    | Fournitures | Spare Parts    |
| 3504.203.B                                              | Datumanzeiger   | Bague       | Date indicator |
| 3508.149.CO.B                                           | 24 Std.-Scheibe | Disque 24h  | 24h Disc       |
| Cal. 509 Werkseite / Côté mouvement / Movement side     |                 |             |                |
| Plan No.                                                | Bestandteile    | Fournitures | Spare Parts    |
| 2000.533                                                | Werkplatte      | Platine     | Main plate     |
| Cal. 519 Werkseite / Côté mouvement / Movement side     |                 |             |                |
| Plan No.                                                | Bestandteile    | Fournitures | Spare Parts    |
| 2000.519                                                | Werkplatte      | Platine     | Main plate     |

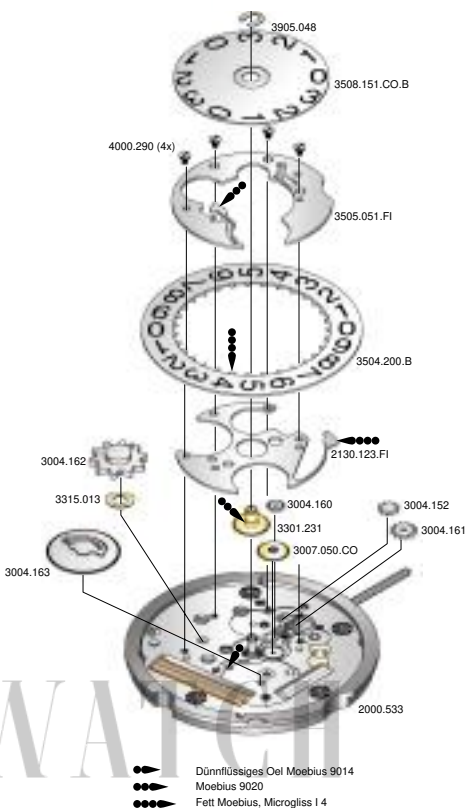
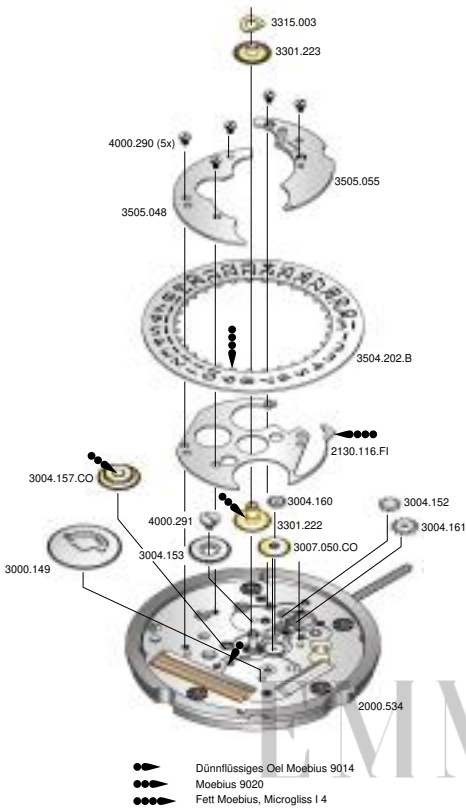
Werkaufbau

Assemblage

Assembling

10 1/2''' 505.24H  
11 1/2''' 515.24H

10 1/2''' 509  
11 1/2''' 519



| Cal. 505.24H Zifferblattseite / Côté cadran / Dial side |                               |                              |                             |
|---------------------------------------------------------|-------------------------------|------------------------------|-----------------------------|
| Cal. 515.24H                                            |                               |                              |                             |
| Plan No.                                                | Bestandteile                  | Fournitures                  | Spare Parts                 |
| 2130.116.FI                                             | Kalenderplatte                | Plaquecalendrier             | Date ind. plate             |
| 3004.160                                                | Zeigerstellrad                | Renvoi minuterie             | Setting wheel               |
| 3004.149                                                | Datummitn.-rad                | Renvoi entraîn.              | Ind. driving wheel          |
| 3004.161                                                | Verbindungsrad-Kupplungtrieb  | Renvoi pig. coulant          | Slid. pin. sett. wh.        |
| 3004.152                                                | Umkehrad                      | Baladeur                     | Correction wheel            |
| 3004.153                                                | Korrekturrad                  | Rouecorrecteur               | Correcteur wheel            |
| 3004.157.CO                                             | Frikionsrad                   | Friction                     | Friction wheel              |
| 3007.050.CO                                             | Wechselrad                    | Minuterie                    | Minute wheel                |
| 3301.222                                                | Stundenrad                    | Canon                        | Hour wheel                  |
| 3301.223                                                | Stundenrad                    | Canon                        | Hour wheel                  |
| 3315.003                                                | Spreizfeder                   | Clinquant                    | Washer                      |
| 3504.202.B                                              | Datumsanzeiger                | Baque                        | Dateindicator               |
| 3505.055                                                | Kalender-Abdeckplatte (Nr. 2) | Couvercle calendrier (no. 2) | Dateindicator cover (no. 2) |
| 3505.048                                                | Kalender-Abdeckplatte (Nr. 1) | Couvercle calendrier (no. 1) | Dateindicator cover (no. 1) |
| 4000.290                                                | Schraube                      | Vis                          | Screw                       |
| 4000.291                                                | Schraube                      | Vis                          | Screw                       |

Abweichungen / Divergences / Deviations

| Cal. 515.24H Zifferblattseite / Côté cadran / Dial side |               |             |               |
|---------------------------------------------------------|---------------|-------------|---------------|
| Plan No.                                                | Bestandteile  | Fournitures | Spare Parts   |
| 3504.203.B                                              | Datumanzeiger | Bague       | Dateindicator |

Batterien / Piles / Batteries

|                |            |             |
|----------------|------------|-------------|
| 505.24, 515.24 | Nr. 371    | SR 920 SW   |
| 509, 519       | Dim.Ø x H: | 9,50 x 2,06 |

| Cal. 509/519 Zifferblattseite / Côté cadran / Dial side |                              |                   |                    |
|---------------------------------------------------------|------------------------------|-------------------|--------------------|
| Plan No.                                                | Bestandteile                 | Fournitures       | Spare Parts        |
| 2130.123.FI                                             | Kalenderplatte               | Plaquecalendrier  | 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.   |
| 3007.050.CO                                             | Wechselrad                   | Minuterie         | Minute wheel       |
| 3301.231                                                | Stundenrad                   | Canon             | Hour wheel         |
| 3315.013                                                | Spreizfeder 3°               | Clinquant 3°      | Washer 3°          |
| 3504.200.B                                              | Datumanzeiger                | Baque             | Dateindicator      |
| 3505.051.FI                                             | Kal.-Abdeckplatte            | Couverclecalend.  | 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              |

Abweichungen / Divergences / Deviations

| Cal. 519 Zifferblattseite / Côté cadran / Dial side |               |             |               |
|-----------------------------------------------------|---------------|-------------|---------------|
| Plan No.                                            | Bestandteile  | Fournitures | Spare Parts   |
| 3504.201.B                                          | Datumanzeiger | Bague       | Dateindicator |
| 3508.145.CO.B                                       | Datumscheibe  | Disque      | Disc          |

3. Leistungen

3. Performances

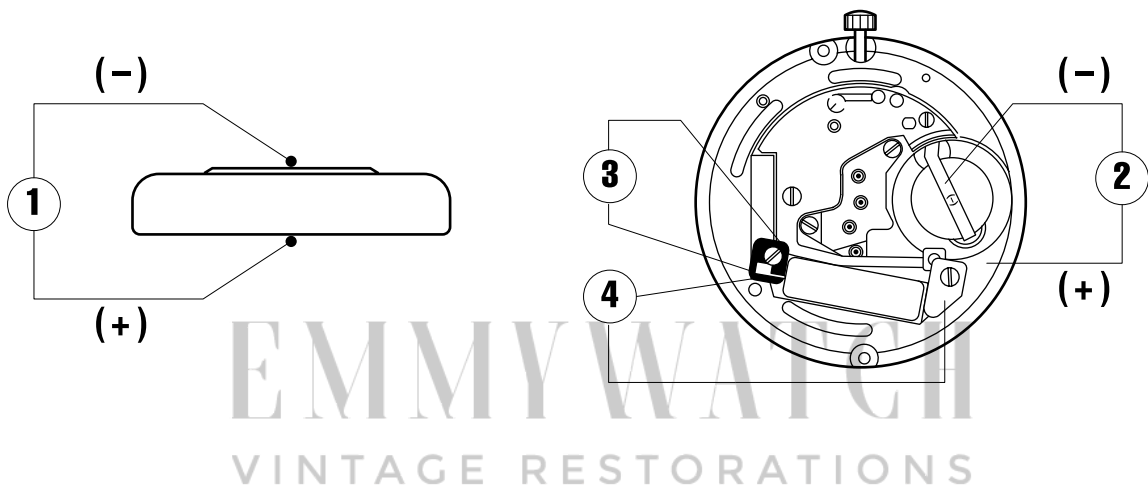
3. Performances

| Kaliber<br>Calibre<br>Caliber                                                 | Bedingungen<br>Conditions<br>Conditions             | Momentaner Gang<br>Marche instantanée<br>Instantaneous rate | Stromaufnahme<br>Consommation courant<br>Power consumption | Drehmoment<br>Couple utile<br>Torque | Gangreserve<br>Autonomie<br>Autonomy                                                     |
|-------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------|--------------------------------------|------------------------------------------------------------------------------------------|
|                                                                               | Einheit / Unité / Unit<br>Typ.Wert / Valeur / value | Mi (s/month)                                                | I (µA)                                                     | T (µNm)<br>sec. min.                 | A (Monat/mois/month)                                                                     |
| 505.24D<br>505.24H, 509<br>515.24D<br>515.24H, 519                            | 1,55 V 23°C<br><br>Batt./ Pile 43,0 mAh             | - 10/+ 20                                                   | 1,29 < 1,70                                                | 10,7 509                             | 45                                                                                       |
| Magnetfeldabschirmung / Résist. aux champs magn. / Resist. to magnetic fields |                                                     |                                                             | 18,8 Oe                                                    | 1500 A/M                             | Norm  |
| Betriebstemperatur / Température d'opération / Operating temperature          |                                                     |                                                             | 0–50°C                                                     |                                      |                                                                                          |
| Schockresistenz / Résistance au choc/ Shock resistance                        |                                                     |                                                             | NIHS 91–10                                                 |                                      |                                                                                          |

4. Elektr. Messungen

4. Contrôles électriques

4. Electrical checking



| Kaliber<br>Calibre<br>Caliber                                                                                                                  | Pos.<br>Pos.<br>Pos. | Einheit<br>Unité<br>Unit              | Messwerte<br>Valeurs mesurées<br>Measured values      | Kontrolle<br>Contrôle<br>Check                                                                                                | Bemerkungen<br>Remarques<br>Remarks                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| 505.24–509                                                                                                                                     | 1                    | V                                     | 1,55<br>Battery voltage                               | Batterie-Spannung<br>Tension de la pile<br>Remove battery for measuring                                                       | Batterie herausnehmen und messen<br>Enlever et mesurer la pile                                                              |
| 505.24–509                                                                                                                                     | 2                    | µA                                    | 1,29 < 1,70<br>(1) = 2,10 < 2,45<br>(2) = 2,60 < 2,95 | Stromaufnahme<br>Consom. de courant<br>Power consumption                                                                      | Ohne Batterie, mit externer Speisung<br>Sans pile, avec alimentation externe<br>Without battery, with external power supply |
| 505.24–509                                                                                                                                     | 2                    | V                                     | ≤ 1,30                                                | Funktionskontrolle bei Minimalspannung<br>Contrôle de fonctionnement à tension minimale<br>Check with lowest possible voltage | Ohne Batterie, mit externer Speisung<br>Sans pile, avec alimentation externe<br>Without battery, with external power supply |
| 505.24–509                                                                                                                                     | 3                    | KΩ                                    | 1,90–2,10<br>2,45–2,55                                | Spulenwiderstand<br>Résistance de la bobine<br>Resistance of the coil                                                         | Ohne Batterie<br>Sans pile<br>Without battery                                                                               |
| 505.24–509                                                                                                                                     | 4                    | KΩ                                    | ∞                                                     | Spulenisolation<br>Isolation de la bobine<br>Coil insulation                                                                  | Ohne Batterie<br>Sans pile<br>Without battery                                                                               |
| 505.24–509                                                                                                                                     |                      | Sek./Monat<br>sec./mois<br>sec./month | - 10/+ 20                                             | Induktivsonde 60 Sek.<br>Senseur inductif 60 sec.<br>Inductive sensor 60 sec.                                                 | Mit Batterie<br>Avec pile<br>With battery                                                                                   |
| (1) Mit fixem Motorimpuls & Sekundenzeiger/ Avec impulsion moteur fixe & aiguille de secondes/ With fix motor puls & second-hand               |                      |                                       |                                                       |                                                                                                                               |                                                                                                                             |
| (2) Mit fixem Motorimpuls & Sekundenscheibe 85mg/ Avec impulsion moteur fixe & disque de secondes 85mg/ With fix motor puls & second-disc 85mg |                      |                                       |                                                       |                                                                                                                               |                                                                                                                             |

5. Zeigerwerk

5. Aiguillage

5. Dial-train

| Kaliber      | Zeigerwerk           | Einzelteil-Höhe          |      |      | mm   |      | Höhe ab Zifferblattauflage |      |      |      | mm |
|--------------|----------------------|--------------------------|------|------|------|------|----------------------------|------|------|------|----|
| Calibre      | Aiguillage           | Hauteur de la pièce ind. |      |      | mm   |      | Dépassement platine        |      |      |      | mm |
| Caliber      | Height of dial train | Height of individ. piece |      |      | mm   |      | Height from base           |      |      |      | mm |
|              | No.                  | A                        | B    | C    | D    | W    | E                          | F    | G    | RS   |    |
| 505.24D, 509 | 1                    | 2,77                     | 1,75 | 4,44 | 2,09 | —    | 1,10                       | 0,80 | 1,50 | —    |    |
| 515.24D, 519 |                      |                          |      |      |      |      |                            |      |      |      |    |
| 505.24D, 509 | 2                    | 3,12                     | 2,10 | 4,79 | 2,09 | —    | 1,45                       | 1,15 | 1,85 | —    |    |
| 515.24D, 519 |                      |                          |      |      |      |      |                            |      |      |      |    |
| 505.24H      | 1                    | 3,12                     | 2,10 | 4,79 | 2,09 | 1,28 | 1,45                       | 1,15 | 1,85 | 0,75 |    |
| 515.24H      |                      |                          |      |      |      |      |                            |      |      |      |    |

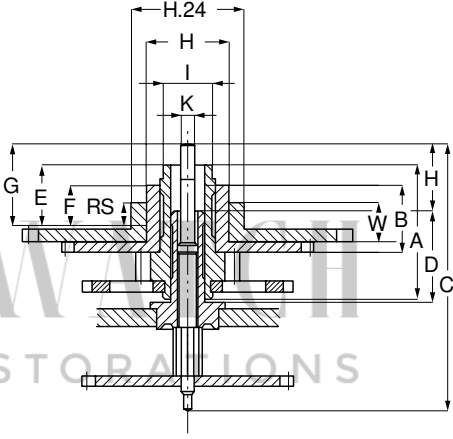
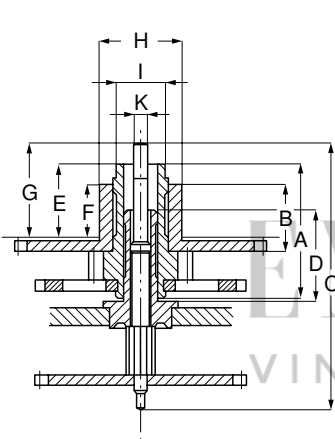
6. Einschalen

6. Emboîtage

6. Casing

10 1/2''' 505.24D, 509  
10 1/2''' 515.24D, 519

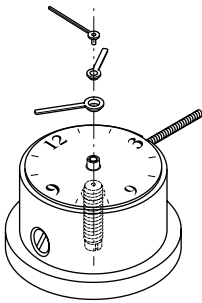
10 1/2''' 505.24H  
11 1/2''' 515.24H



Die Zeiger dürfen nur bei zentral abgestützter Räderwerkbrücke gesetzt werden.  
Der Aufpressdruck darf 30 N (3,0 kp) nicht übersteigen.

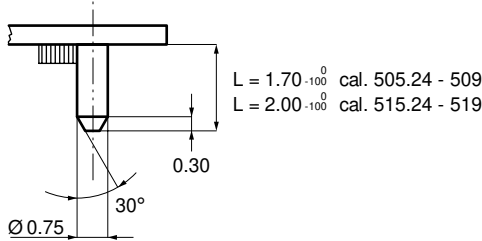
Lors de la pose des aiguilles, le pont de rouage doit être soutenu.  
La force de chassage ne doit pas dépasser 30 N (3,0 kp).

Hands can only be set if train wheel bridge is supported by a movement holder.  
Pressure while setting hands must not exceed 30 N (3,0 kp).



| Ø Zeigeranpassung      |      | mm   |      |
|------------------------|------|------|------|
| Ø Ajustement aiguilles |      | mm   |      |
| Ø Adjustment of hands  |      | mm   |      |
| H                      | H24  | I    | K    |
| 1,20                   | 1,60 | 0,70 | 0,20 |

| Zifferblattdicke    |          | mm   |  |
|---------------------|----------|------|--|
| Epaisseur du cadran |          | mm   |  |
| Dial thickness      |          | mm   |  |
| 1                   | standard | 0,40 |  |
| 2                   |          | 0,75 |  |



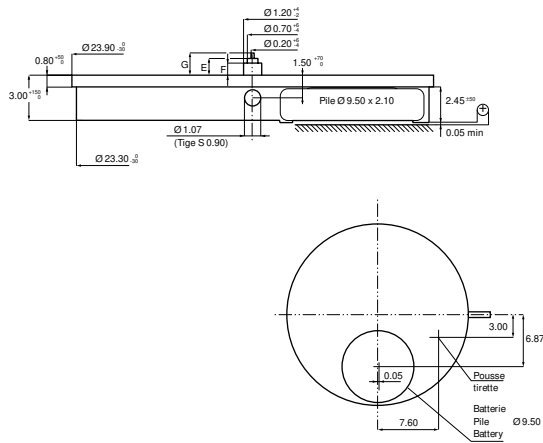
Für Einzelheiten verlangen Sie bitte die entsprechenden Zeigerwerkpläne!  
Pour plus de détails demandez nos plans d'aiguillage!  
For more detailed information please ask for the corresponding hand drawings!

## 6. Einschalen

## 6. Emboîtage

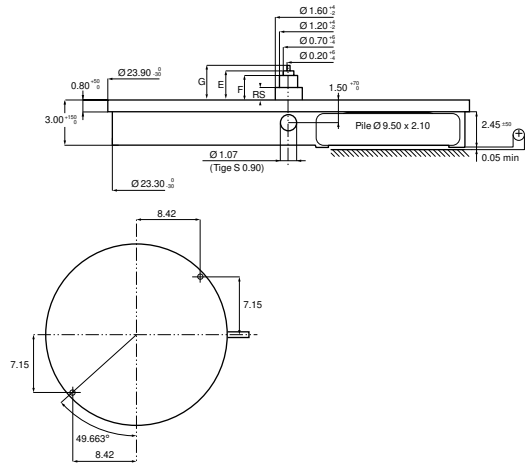
## 6. Casing

10 1/2''' 505.24D, 509



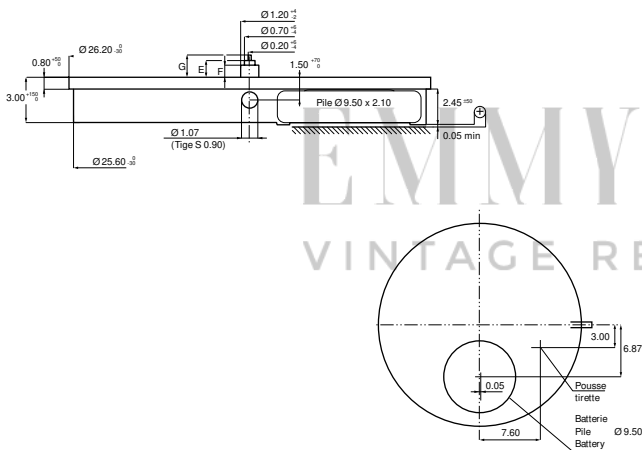
Seite gegen Gehäuseboden  
Côté fond de boîte  
Case back side

10 1/2''' 505.24H



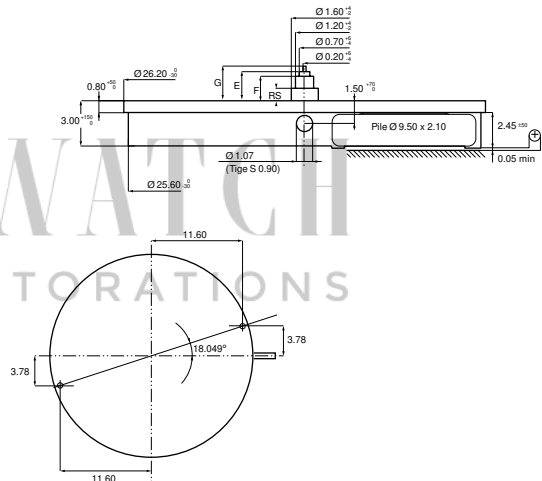
Zifferblattseite  
Côté cadran  
Dial side

11 1/2''' 515.24D, 519



Seite gegen Gehäuseboden  
Côté fond de boîte  
Case back side

11 1/2''' 515.24H



Zifferblattseite  
Côté cadran  
Dial side

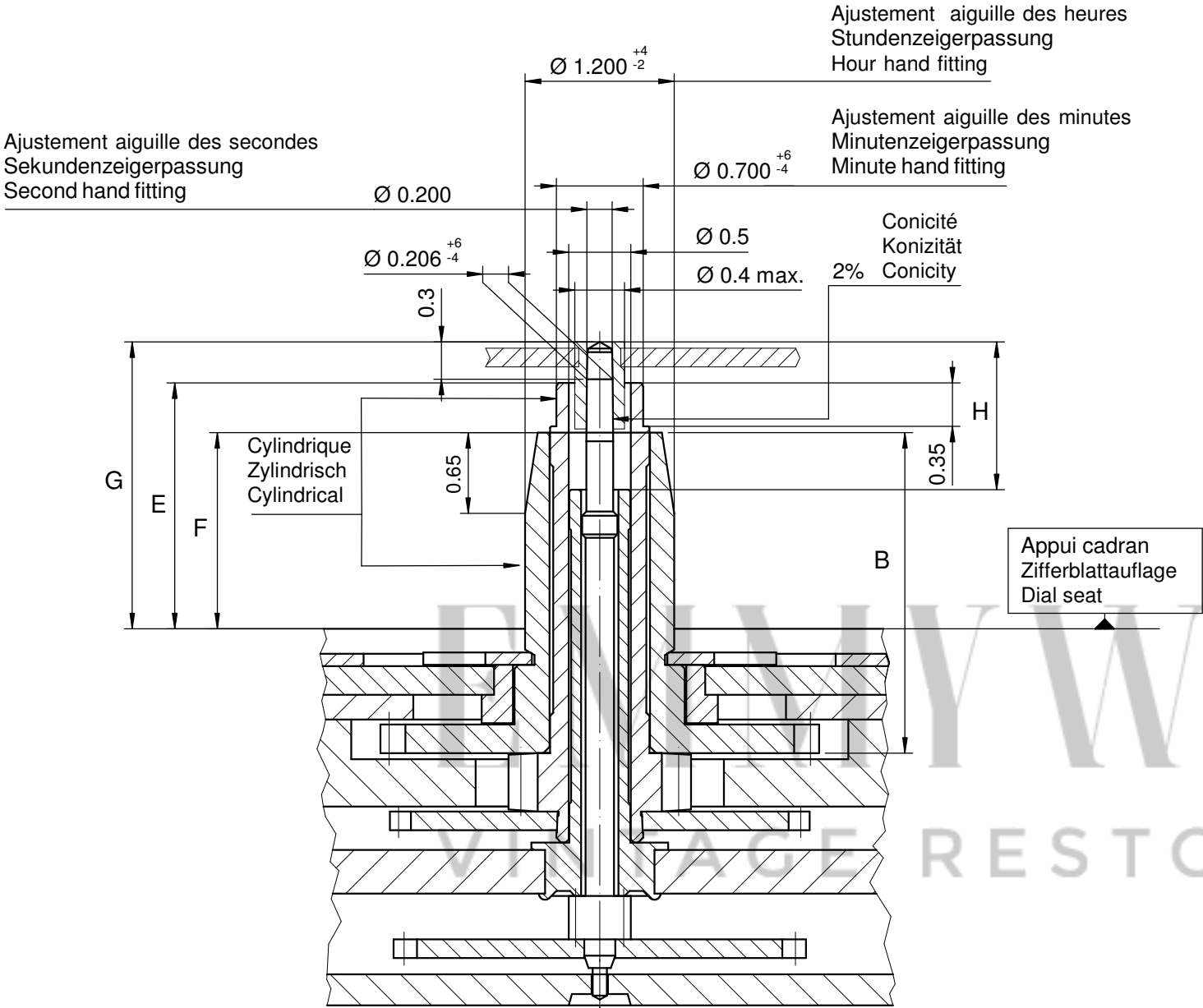
505.24 / 515.24 / 509 / 519

**Kalender-Schnellkorrektur**  
**Correction rapide du calendrier**  
**Quick change date function**

**Hinweis:** In der Kalenderschaltphase von **22.30 - 24.00 Uhr** (**22.00-24.00 Uhr** für Kaliber 509 und 519) kann das Datum korrigiert werden, wobei das Datum des folgenden Tages eingestellt werden muss, da in diesem Fall um Mitternacht keine automatische Schaltung erfolgt.

**Attention:** Le réglage de la date peut être effectué pendant la phase de saut entre **22.30 et 24.00 heures** (**22.00 et 24.00 heures** pour calibres 509 et 519). Dans ce cas, il faut adapter la date du jour suivant car il n'y a pas de saut à minuit.

**Indication:** During the calendar jump phase between **10.30pm and 00.00am** (**10.00pm and 00.00am** for calibers 509 and 519) the date can be changed. In this case the date of the following day needs to be set as there will be no jump at midnight.



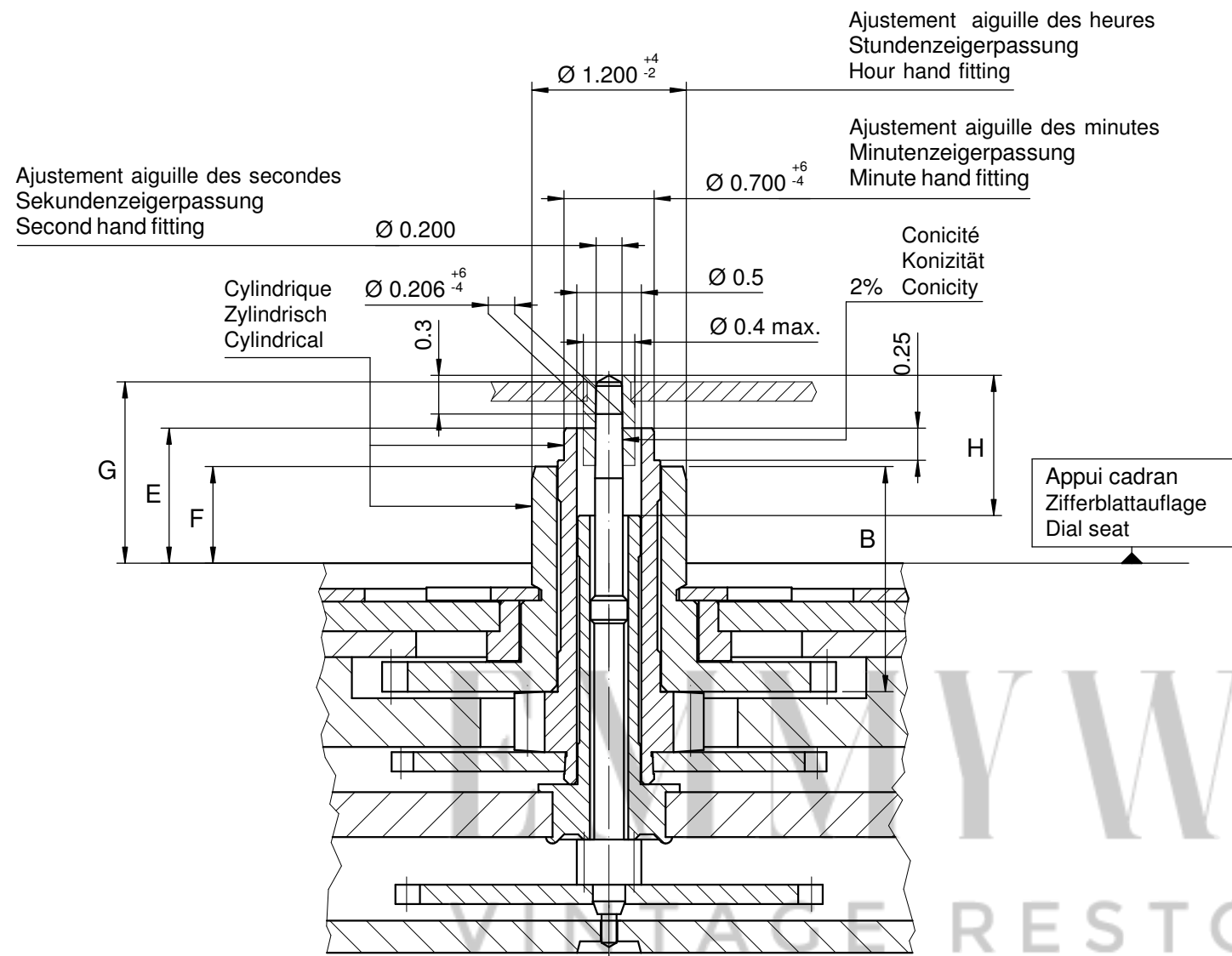
Heures / minutes / secondes  
Stunden / Minuten / Sekunden  
Hours / minutes / seconds

|                       | Aig. des secondes<br>Sekundenzeiger<br>Second hand | Aig. des minutes<br>Minutenzeiger<br>Minute hand | Aig. des heures<br>Stundenzeiger<br>Hour hand | Lors de la pose d'aiguilles, le mouvement doit être soutenu.<br>Beim Zeigersetzen muss das Werk abgestützt werden.<br>The movement needs to be supported for hand setting. |
|-----------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| mg max.               | 10                                                 | 30                                               | 30                                            | Masse / Masse / Weight *                                                                                                                                                   |
| µNm max.              | 0.08                                               | 0.70                                             | 0.70                                          | Balourd / Unwucht / Unbalance *                                                                                                                                            |
| gmm <sup>2</sup> max. | 0.4                                                | -                                                | -                                             | Inertie / Massenträgheit / Inertia *                                                                                                                                       |
| N max.                | 30                                                 | 40                                               | 40                                            | Force de chassage / Aufpresskraft / Force                                                                                                                                  |

| Aiguillage no<br>ZeigerwerkhöheNr.<br>Hand fitting height No | Dépassement<br>Höhe über Zifferblattauf­lage<br>Height over dial seat |                                          |                                             | Longueur<br>Länge<br>Length |   | Epaisseur max. (peinture comprise)<br>Max. Dicke (inkl. Farbe)<br>Max. thickness (paint included) |                                                                         |                                                                      |                              |
|--------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------|---------------------------------------------|-----------------------------|---|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------|
|                                                              | Pignon des secondes<br>Sekundentrieb<br>Second pinion                 | Chaussée<br>Minutenrohr<br>Cannon-pinion | Roue des heures<br>Stundenrad<br>Hour wheel | H                           | B | Cadran<br>Zifferblatt<br>Dial                                                                     |                                                                         |                                                                      | Aiguilles<br>Zeiger<br>Hands |
|                                                              |                                                                       |                                          |                                             |                             |   | Sous l'aiguille des secondes<br>Unter Sekundenzeiger<br>Under second hand                         | Sous l'aiguille des minutes<br>Unter Minutenzeiger<br>Under minute hand | Sous l'aiguille des heures<br>Unter Stundenzeiger<br>Under hour hand |                              |
| 6                                                            | G                                                                     | E                                        | F                                           | H                           | B | 1.80                                                                                              | 1.55                                                                    | 0.40                                                                 | 0.15                         |
|                                                              |                                                                       |                                          |                                             |                             |   |                                                                                                   |                                                                         |                                                                      |                              |

|                                                        |                                        |                        |  |                                                                                   |                         |    |
|--------------------------------------------------------|----------------------------------------|------------------------|--|-----------------------------------------------------------------------------------|-------------------------|----|
| Sous réserve de toutes modifications                   |                                        | Änderungen vorbehalten |  | All modifications reserved                                                        |                         |    |
| Aiguillages<br>Zeigerwerkhöhen<br>Hand fitting heights |                                        |                        |  | Issued                                                                            | 23 Mai 2011             | dh |
|                                                        |                                        |                        |  | Modified                                                                          | 24 Mai 2011<br>ÄA 11034 | dh |
|                                                        |                                        |                        |  | Released                                                                          | Yes                     |    |
|                                                        |                                        |                        |  | Tolerance                                                                         | µm                      |    |
|                                                        |                                        |                        |  | Scale                                                                             | 20 : 1 (A3H)            |    |
| RONDA                                                  | 507, 509, 517, 519<br>505.24D, 515.24D |                        |  | Sous réserve de modifications<br>Änderungen vorbehalten<br>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



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

| Aiguillage no<br>ZeigerwerkhöheNr.<br>Hand fitting height No | Dépassement<br>Höhe über Zifferblattauf­lage<br>Height over dial seat |                                          |                                             | Longueur<br>Länge<br>Length |      | Epaisseur max. (peinture comprise)<br>Max. Dicke (inkl. Farbe)<br>Max. thickness (paint included) |                                                                         |                                                                      |                              |
|--------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------|---------------------------------------------|-----------------------------|------|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------|
|                                                              | Pignon des secondes<br>Sekundentrieb<br>Second pinion                 | Chaussée<br>Minutenrohr<br>Cannon-pinion | Roue des heures<br>Stundenrad<br>Hour wheel | H                           | B    | Cadran<br>Zifferblatt<br>Dial                                                                     |                                                                         |                                                                      | Aiguilles<br>Zeiger<br>Hands |
|                                                              |                                                                       |                                          |                                             |                             |      | Sous l'aiguille des secondes<br>Unter Sekundenzeiger<br>Under second hand                         | Sous l'aiguille des minutes<br>Unter Minutenzeiger<br>Under minute hand | Sous l'aiguille des heures<br>Unter Stundenzeiger<br>Under hour hand |                              |
| 1                                                            | G                                                                     | E                                        | F                                           | 1.09                        | 1.75 | 0.95                                                                                              | 0.65                                                                    | 0.40                                                                 | 0.15                         |
| 2                                                            | 1.46                                                                  | 1.05                                     | 0.75                                        | 1.44                        | 2.10 | 1.30                                                                                              | 1.00                                                                    | 0.75                                                                 | 0.15                         |

|                  |      | Aig. des secondes<br>Sekundenzeiger<br>Second hand | Aig. des minutes<br>Minutenzeiger<br>Minute hand | Aig. des heures<br>Stundenzeiger<br>Hour hand | Lors de la pose d'aiguilles, le mouvement doit être soutenu.<br>Beim Zeigersetzen muss das Werk abgestützt werden.<br>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

Aenderungen vorbehalten

All modifications reserved

|                                                        |                                        |                                                                                    |          |                         |    |
|--------------------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------|----------|-------------------------|----|
| Aiguillages<br>Zeigerwerkhöhen<br>Hand fitting heights |                                        | Issued                                                                             |          | 10 Mär 1999             | gd |
|                                                        |                                        | Modified                                                                           |          | 20 Apr 2011<br>ÄA 10340 | ps |
|                                                        |                                        | Released                                                                           |          | Yes                     |    |
|                                                        |                                        | Tolerance                                                                          |          | µm                      |    |
|                                                        |                                        | Scale                                                                              |          | 20 : 1 (A3H)            |    |
| RONDA                                                  | 507, 509, 517, 519<br>505.24D, 515.24D | Sous réserve de modifications<br>Aenderungen vorbehalten<br>Modifications reserved |          |                         |    |
|                                                        |                                        | No.                                                                                | 3316.060 | 06                      |    |

\* 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