

CAL. 6641/6642 6651/6652



CAL. 6641/6642



CAL. 6651/6652

CALIBER 6641

Automatic, with rotor sweep second 25 jewels Round movement, $11\frac{1}{2}$ '''

Lever escapement

28,800 vibrations per hour

CALIBER 6642

Automatic, with rotor sweep second 17 jewels

CALIBER 6651

Automatic, with rotor sweep second instantaneous calendar 25 jewels

CALIBER 6652

Automatic, with rotor sweep second instantaneous calendar 17 jewels

1) Presentation

These optimalized high-frequency movements of the second generation are of robust, modern design and insure remarkable stability of rate. Thanks to the use of well-tried technical procedures in accordance with the severest LONGINES quality standards, constructional simplicity is combined with func-

tional reliability. Particular importance has been attached to the aesthetic quality of the product. A slender profile and reduced thickness permit the creation of elegant models that meet the most exacting requirements.

2) General characteristics

2.1 Casing

Diameter 25.60 mm Height cal. 6641/6642 4.30 mm Stainless, self-lubricated

cal. 6651/6652 4.80 mm 2.5 <u>Power reserve</u>

Sufficient for 42 hours' operation

2.2 Balance

Annular, screwless, protected by shock-absorbers

2.6 Rate-adjustment

2.4 Mainspring

Spirofin system

2.3 Hairspring

Non-magnetic, self-compensating

3) Technical description and instructions

3.1 Motor organ

The barrel cover is marked "Ne pas ouvrir - Do not open". The mainspring of stainless alloy is self-lubricated and practically unbreakable; it needs no attention and should not be removed from the barrel.

In the event of damage, the motor organ should be replaced with a genuine factory—made complete barrel (ref. No. 6641 – 180/1).

The barrel arbor turns in two berylliumbronze bushes, which are extremely resistant to wear. Regular movement of the second hand is insured by a friction spring, also of beryllium bronze, which presses lightly on the end of the second pinion.

3.2 Transmission organ

The train is composed of four jeweled runners. The third wheel drives the sweep-second pinion, which turns in two beryllium-bronze bushes; these are driven in at each end of the center pinion.

3.3 Escapement

The escapement is of the standard lever type. The steel escape wheel has 21 teeth.

3.4 Regulating organ

The screwless monometal balance, which is coupled with a self-compensating hair-spring that is insensitive to variations of temperature and ordinary magnetic fields, insures an excellent rate in actual wear.

The balance pivots are protected from shocks by a shock-absorber device. The rate is adjusted by means of the Spirofin system. See section 5.

3.5 Manual winding and hand-setting mechanism

The winding- and hand-setting functions are performed by a mechanism of the standard type. The winding-stem can be extracted or re-inserted by simply pressing the setting-lever axle.

3.6 Table of concordance of components

| Number | 6641 | 6642 | 6651 | 6652 | Name |
|--------|------|------|------|------|--------------------------------------|
| 100 | VV | VV | | | 71 |
| 100 | XX | XX | 3737 | 3737 | Plate |
| 100 | 3737 | **** | XX | XX | Plate |
| 105 | XX | XX | XX | XX | Barrel bridge |
| 110 | XX | XX | XX | XX | Train-wheel bridge |
| 121/3 | XX | XX | XX | XX | Balance cock |
| 125 | XX | XX | XX | XX | Pallet cock |
| 166 | XX | XX | XX | XX | Casing-clamp (L.2.00) |
| 166 | XX | XX | XX | XX | Casing-clamp (L.2.50) |
| 166/1 | XX | XX | XX | XX | Casing-clamp |
| 180/1 | XX | XX | XX | XX | Barrel, complete (with mainspring) |
| 206 | XX | XX | XX | XX | Center wheel |
| 210 | XX | XX | XX | XX | Third wheel |
| 220 | XX | XX | XX | XX | Fourth wheel |
| 245 | XX | XX | | | Cannon pinion |
| 245 | | | XX | XX | Cannon pinion |
| 255 | XX | XX | | | Hour wheel |
| 260 | XX | XX | XX | XX | Minute wheel |
| 275 | XX | XX | | | Sweep-second pinion |
| 275 | | | XX | XX | Sweep-second pinion |
| 307 | XX | XX | XX | XX | Regulator device, complete (Spirofin |
| 370 | XX | XX | XX | XX | Kif, jeweled, upper |
| 371 | XX | XX | XX | XX | Kif, jeweled, lower |
| 401 | XX | XX | XX | XX | Winding-stem |
| 404 | XX | XX | XX | XX | Stem for water-resistant case |
| 407 | XX | XX | XX | XX | Clutch wheel |
| 410 | XX | XX | XX | XX | Winding-pinion |
| 415 | XX | XX | XX | XX | Ratchet wheel |
| 420 | XX | XX | XX | XX | Crown wheel |
| 423 | XX | XX | XX | XX | Crown-wheel core |
| 424 | XX | XX | XX | XX | Supplementary crown wheel |
| 425 | XX | XX | XX | XX | Click |
| 430 | XX | XX | XX | XX | |
| 435 | | | | | Click spring |
| | XX | XX | XX | XX | Yoke (clutch lever) |
| 440 | XX | XX | XX | XX | Yoke spring (set spring) |
| 443 | XX | XX | XX | XX | Setting-lever (detent) |
| 445 | XX | XX | XX | XX | Setting-lever spring (set bridge) |

| 450 | q | XX | XX | XX | XX |
|--------|---|------|------|------|------------------|
| 452 | | XX | XX | XX | XX |
| 454 | | XX | XX | XX | XX |
| 471 | | XX | XX | XX | XX |
| 479 | | XX | XX | XX | XX |
| 498 | | XX | XX | XX | XX |
| 705 | | XX | XX | XX | XX |
| 710 | | XX | XX | XX | XX |
| 721 | | XX | XX | XX | XX |
| 963 | | XX | XX | XX | XX |
| 1141 | | XX | ΑΛ | XX | 222 |
| | | ΛΛ | XX | AA | XX |
| 1141 | | VV | AA | | $\Lambda\Lambda$ |
| 1142 | | XX | VV | | |
| 1142 | | | XX | VV | |
| 1142 | | | - | XX | VV |
| 1142 | | 7777 | 7577 | 3737 | XX |
| 1143 | | XX | XX | XX | XX |
| 1481 | | XX | XX | XX | XX |
| 1482 | | XX | XX | XX | XX |
| 1499 | | XX | XX | XX | XX |
| 1515 | | XX | XX | XX | XX |
| 1535/1 | | XX | XX | XX | XX |
| 1561 | | XX | XX | XX | XX |
| 1562 | | XX | XX | XX | XX |
| 2535 | | | | XX | XX |
| 2543 | | | | XX | XX |
| 2557/1 | | | | XX | XX |
| 2558 | | | | XX | XX |
| 2575 | | | | XX | XX |
| 2576 | | | | XX | XX |
| 2628 | | | - | XX | XX |
| 2632/1 | | - | | XX | XX |
| | | - | - | XX | XX |
| 2633 | | - | | | |
| 2649 | | 3737 | 3737 | XX | XX |
| 5105 | | XX | XX | XX | XX |
| 5110 | | XX | XX | XX | XX |
| 5121/3 | | XX | XX | XX | XX |
| 5125 | | XX | XX | XX | XX |
| 5166 | | XX | XX | XX | XX |
| 5415 | | XX | XX | XX | XX |
| 5423 | | XX | XX | XX | XX |
| 5425 | | XX | XX | XX | XX |
| 5445 | | XX | XX | XX | XX |
| 5454 | | XX | XX | XX | XX |
| 5471 | | XX | XX | XX | XX |
| 5479 | | XX | XX | XX | XX |
| 5738 | | XX | XX | XX | XX |
| 5750 | | XX | XX | XX | XX |
| 51141 | | XX | XX | XX | XX |
| 51142 | | XX | XX | XX | XX |
| 51142 | | XX | XX | XX | XX |
| 51142 | | XX | XX | XX | XX |
| | | AA | AA | XX | XX |
| 52535 | | | + | XX | XX |
| 52543 | | | | AA | $\Lambda\Lambda$ |

Ratchet-winding wheel Swing lever for ratchet-winding wheel Friction spring for sweep-second pinion Pressure spring for setting-lever Friction washer Escape wheel Jeweled pallet fork and staff Balance with flat hairspring, regulated Stem for water-resistant crown Lower bridge for automatic device Lower bridge for automatic device Upper bridge for automatic device Oscillating weight Reduction gear Driving-gear for ratchet wheel Reverser connecting-wheel Connecting-wheel for auxiliary reverser Reversing-gear, mounted Centering-ring for oscillating weight Pressure spring for centering-ring osc. weight Date-indicator guard Intermediate date wheel Date-indicator, transferred Double-toothing hour wheel Date-jumper spring Date jumper Unlocking-yoke cam Unlocking-yoke for date-indic., mounted Unlocking-yoke spring Pusher for date-indicator Barrel-bridge screw Train-bridge screw Balance-cock screw Pallet-cock screw ·Casing-clamp screw Ratchet-wheel screw Screw for crown-wheel core Click screw Screw for setting-lever spring Screw for swing-lever for ratchet-winding wheel Screw for fric. spring for sweep-sec.pin. Screw for pressure spring for setting-lever Hairspring-stud screw Dial screw Screw for lower bridge of automat. device Screw for upper bridge of automat. dev. (L.1.55) Screw for upper bridge of automat. dev. (L.2.80 Oscillating-weight screw Screw for date indicator guard Screw for intermediate date wheel

Setting-wheel

