EPSON

Watch Movement Specification and Drawing

## MULTI - FUNCTION

# Cal. VX9PE

**Movement Size**

**12 3/4”’**

**Casing Diameter**

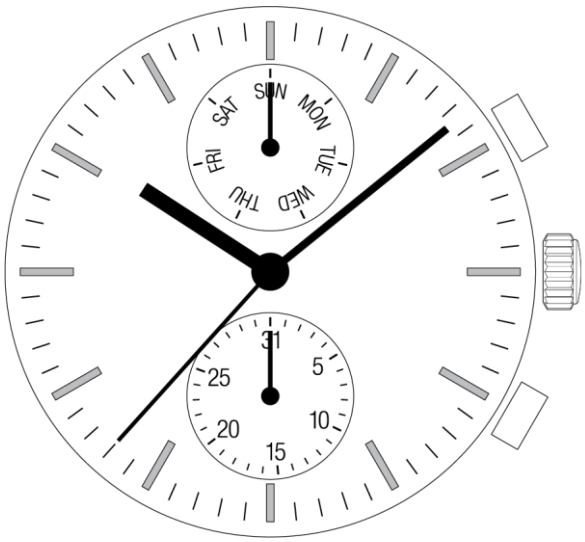
**Ø 28.6mm**

**Height**

**3.99mm**

**Battery Life**

**3 years**



Date: 18/Sep./'20

# Cal. VX9PE

| Cal. VX9PE | Specifications | Date : 18/Sep./'20 |
|---|---|---|
| | | Rev. : 04 |

**Analog Quartz 12 3/4''' Movement / 3 hands (H/M/S) and 2 eyes with Day / Date indicators**

## 1. MOVEMENT DIMENSIONS

| | |
|---|---|
| Outside diameter | ϕ29.50mm × 26.00mm(3-9H) × 29.36mm(12-6H) |
| Casing diameter | ϕ28.60mm × 25.60mm(3-9H) × 28.60mm(12-6H) |
| Total height | 3.99mm (including battery) |

## 2. TIME STANDARD

| | |
|---|---|
| Type of quartz oscillator | Tuning fork |
| Frequency of quartz oscillator | 32,768 Hz |
| Accuracy | ±20 seconds per month (on wrist) |
| Operating temperature range | −5℃ to +50℃ |
| Regulation device | Nil (Pre-adjusted) |

## 3. INDICATOR / FUNCTIONS

| | | |
|---|---|---|
| 3 Hands | Hour / Minute / Second | |
| 2 Small hands | Day(12H) / Date(6H) | |
| Reset switch | | |
| Setting mechanism | Crown at normal position | : Free |
| | Crown pulled out 1st click | : Time setting / Reset |
| | 2H button | : Day change |
| | 4H button | : Date change |

## 4. FEATURES

| | | |
|---|---|---|
| Jewels | 0 Jewels | |
| Anti-magnetism | Over 1600A/m (Direct current magnetic field) | |
| Maximum unbalance of hands | Second hand | : 0.1μN･m |
| | Minute hand | : 0.9μN･m |
| | Hour hand | : 0.9μN･m |
| Moment of Inertia | Day hand | : less than 0.008μg･m² |

## 5. BATTERY

| | |
|---|---|
| Type / Size | Silver oxide battery / ϕ9.5mm × t 2.7mm |
| Recommended battery | SR927SW ( Maxell, Murata, Seizaiken ) |
| Nominal voltage | 1.55 V |
| Battery life | Approx. 3 years |
| Driving current consumption | Approx. 2.1μA |
| Operation stopping voltage | 1.2 V |

## 6. SEPARATED PARTS (Parts code)

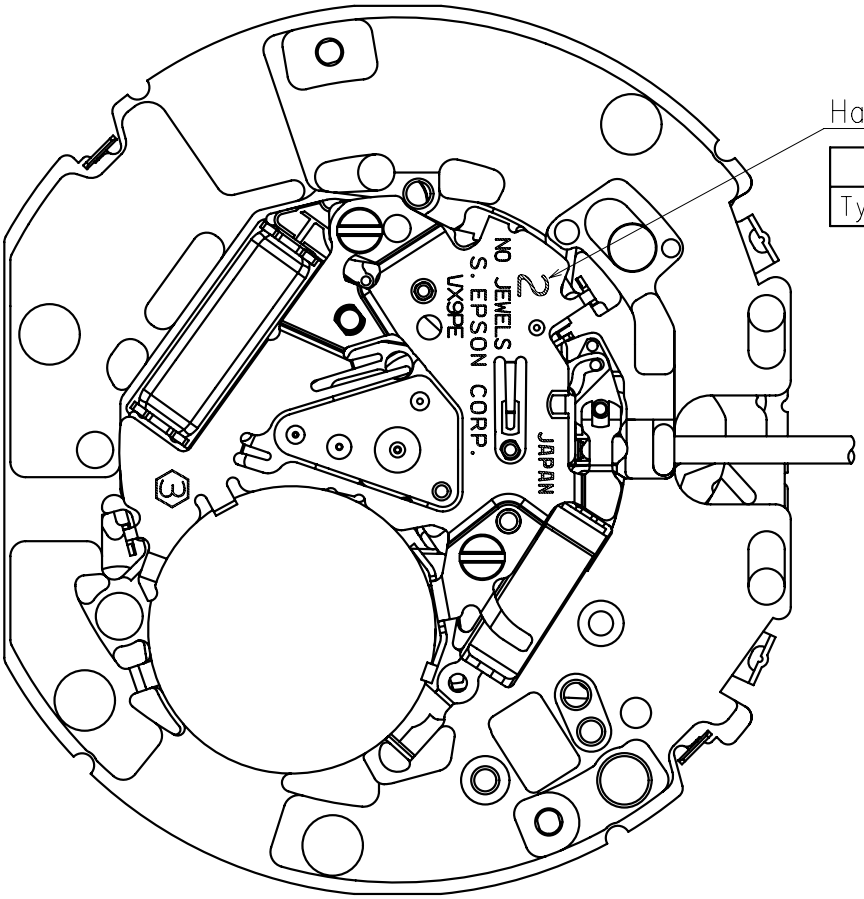
| | |
|---|---|
| Hand setting stem | 0351578 or 0351177 |
| Battery | SR927SW |

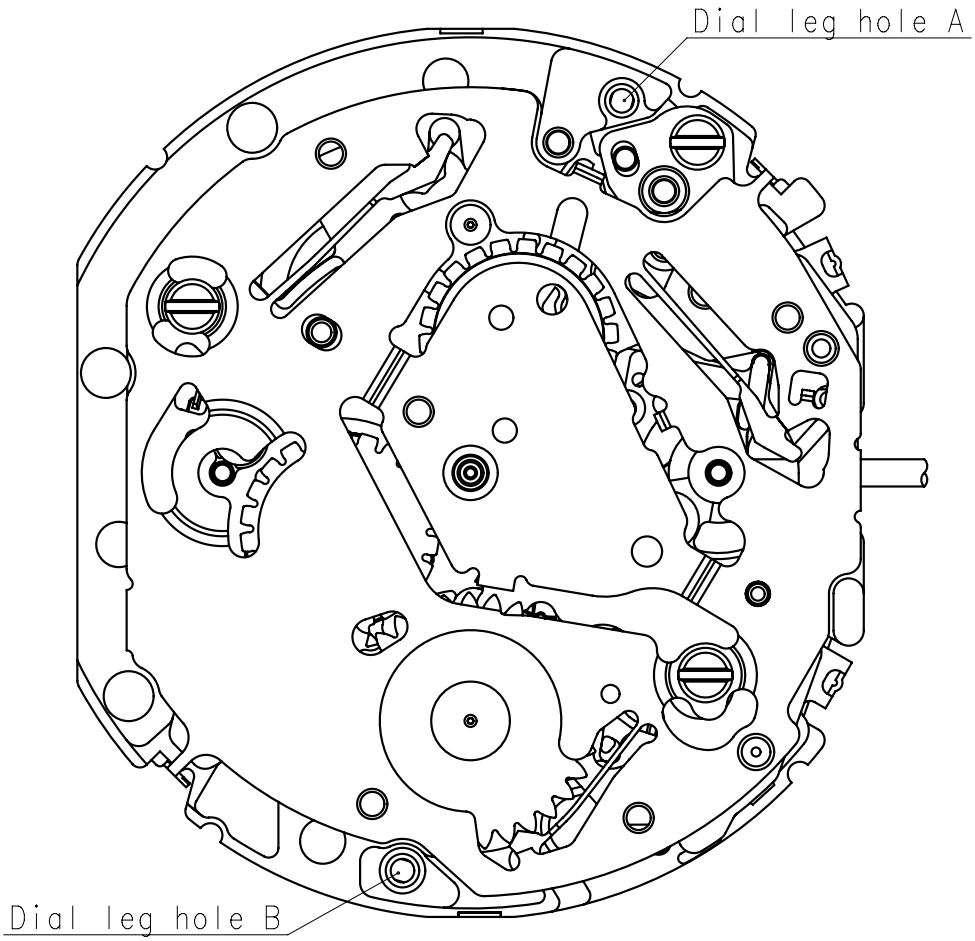
## 7. TEST OF ACCURACY

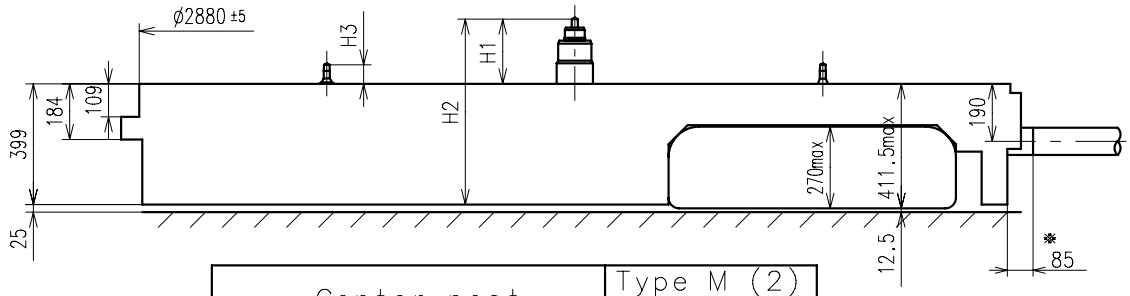
| | |
|---|---|
| Equipment to be used | SEIKO quartz tester QT-99, |
| | Greiner quartz timer-C , Witschi Q-tester 4000 |
| Duration of measurement | 10 seconds |
| Microphone to be used | Electromagnetic detection type |

All specifications are subject to change without notice.

| Cal. VX9PE | Appearance | Date:15/Feb./'16 |
|---|---|---|
| | | Rev.:03 |

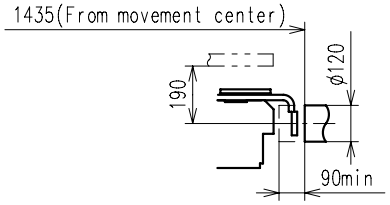


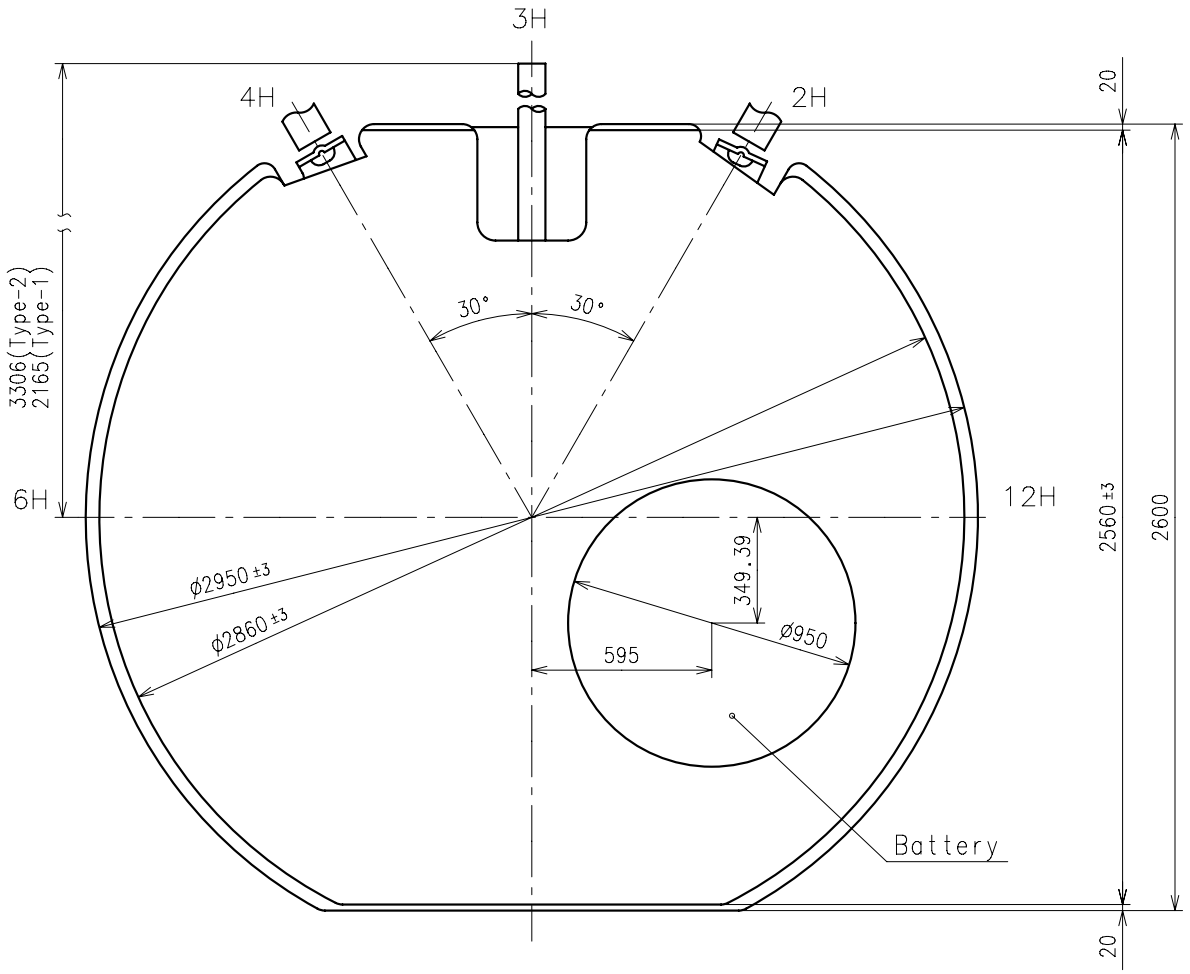



| Center post | | Type M (2) VX9PE** |
|---|---|---|
| Maximum height from dial support | H1 | 214 |
| Total height including movement | H2 | 613 |
| Maximum height from dial support | H3 | 63 |

※:Pullout stroke



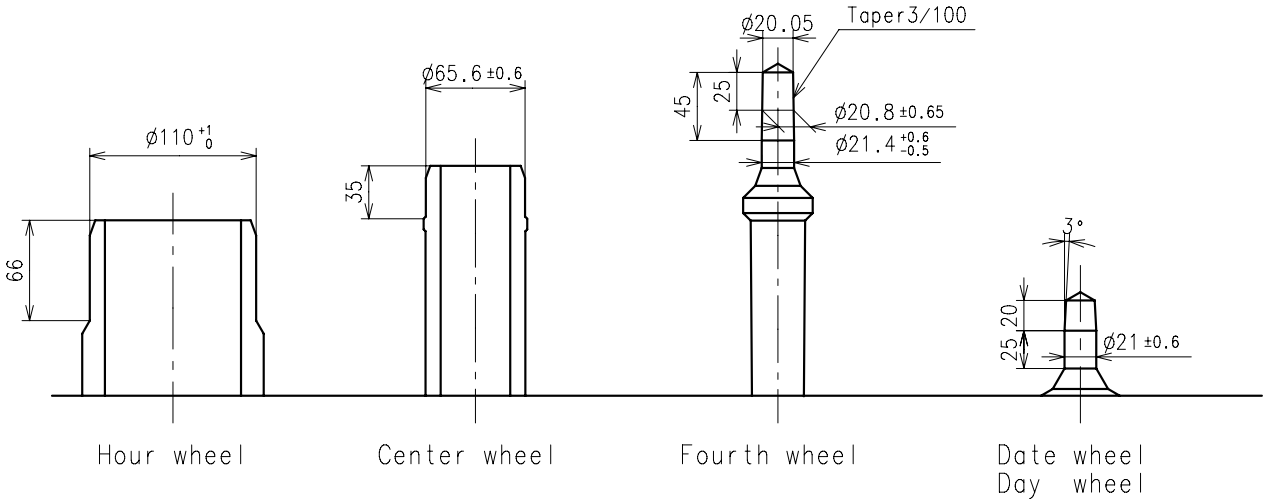

Button stroke



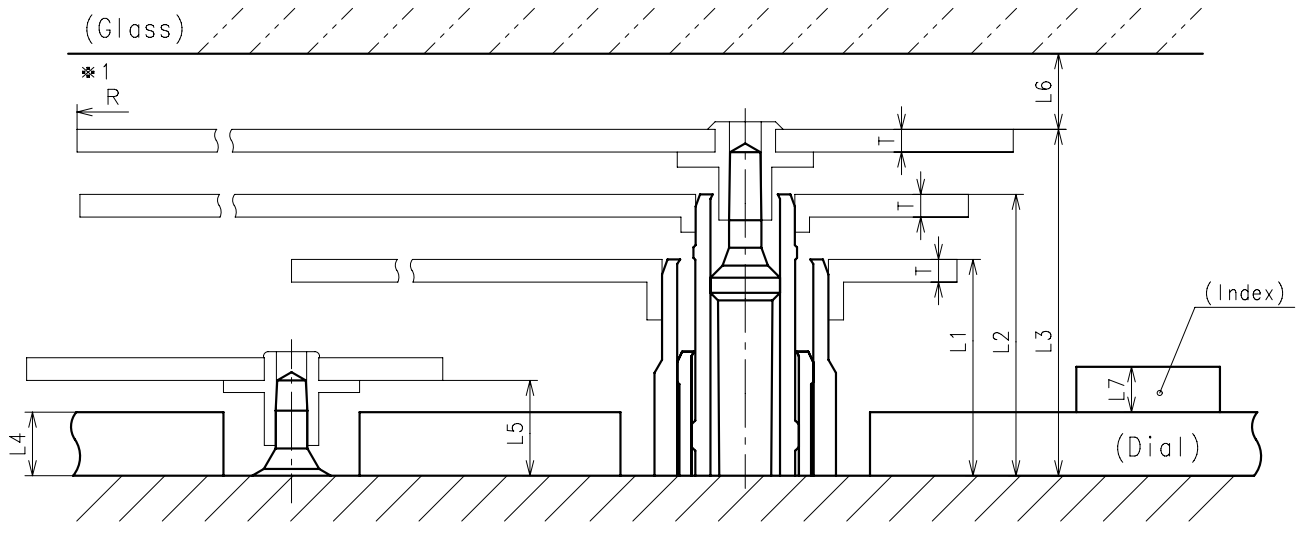
| Cal. VX9PE | Hand fitting | Date:11/Jan./'19 |
|---|---|---|
| | | Rev.:04 |

※Unbalance
- Hour hand ≦ 0.9μ N・m (90μ g・m)
- Minute hand ≦ 0.9μ N・m (90μ g・m)
- Second hand ≦ 0.1μ N・m (10μ g・m)

※Moment of inertia
- Day hand ≦ 0.008μ g・m²



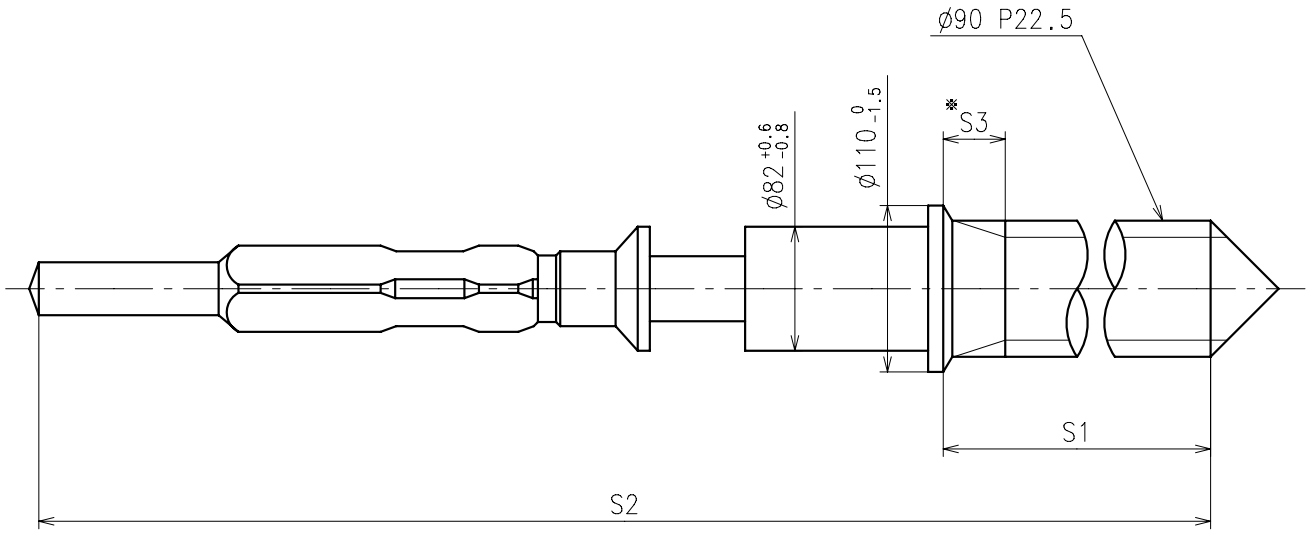

| | Parts No. | | | | |
|---|---|---|---|---|---|
| | Hour wheel | Center wheel | Fourth wheel | Date wheel | Day wheel |
| Type M (2) VX9PE** | 0271658 | 0221602 | 0241559 | 0970503 | 1002546 |




| | L1 | L2 | L3 | L4 | L5 | L6 | L7 | T | ※1 R |
|---|---|---|---|---|---|---|---|---|---|
| Type M (2) VX9PE** | 143 | 186 | 229 | 40 | 63 | MIN: 50 | MAX: 50 | 15 | MAX: 1250 |

※1:It is the size taken into consideration for hands attachment.
Please observe some standard value specified in unbalance and moment of inertia when using long hands.

| Cal. VX9PE | Hand setting stem | Date:24/Jul./'15 |
|---|---|---|
| | | Rev.:03 |




※ Not threaded

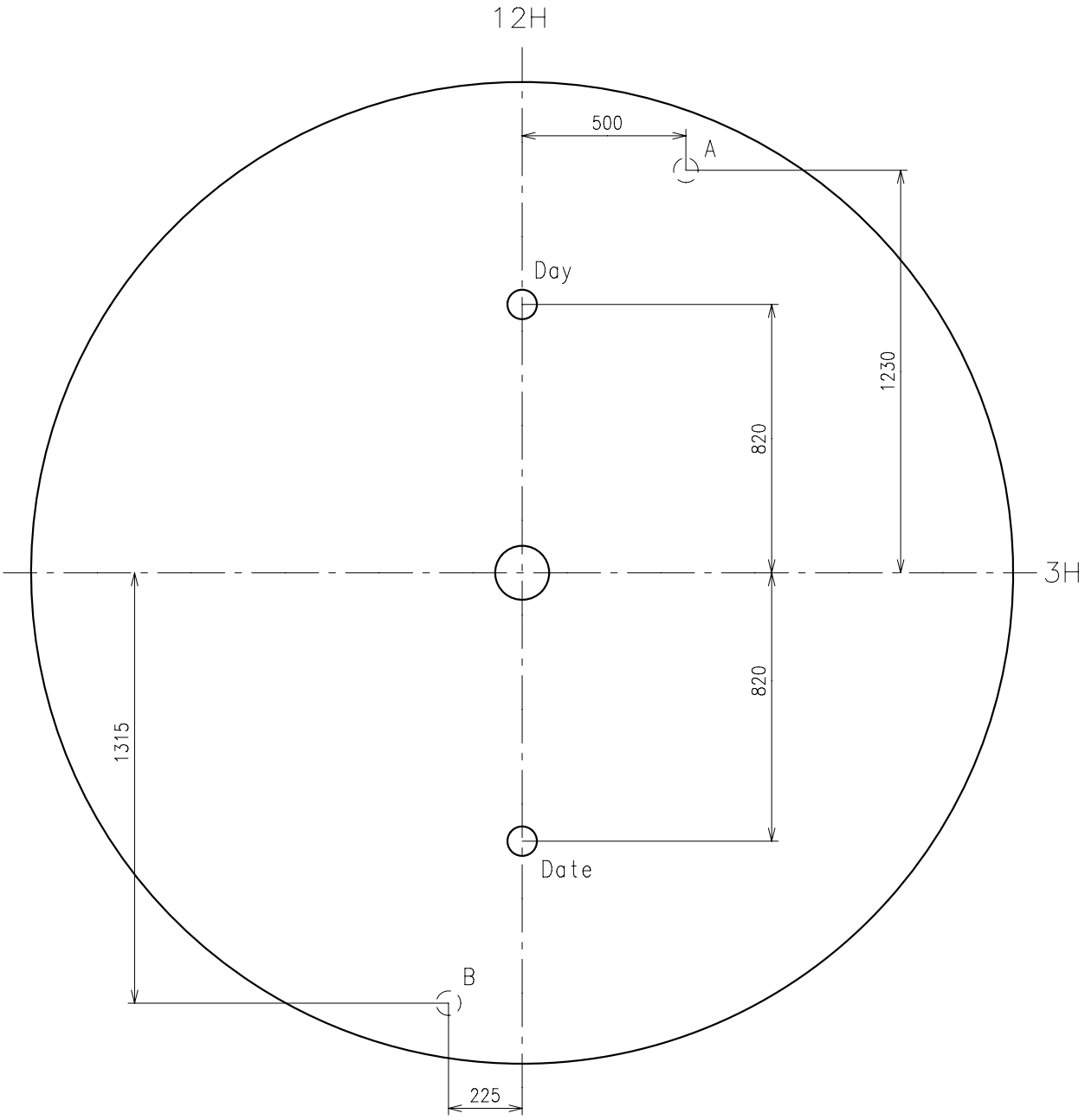
| | Part No. | S1 | S2 | ※ S3 |
|---|---|---|---|---|
| Type-1 | 0351177 | 1366 | 1964 | 60 |
| Type-2 (Standard) | 0351578 | 2507 | 3105 | 650 |

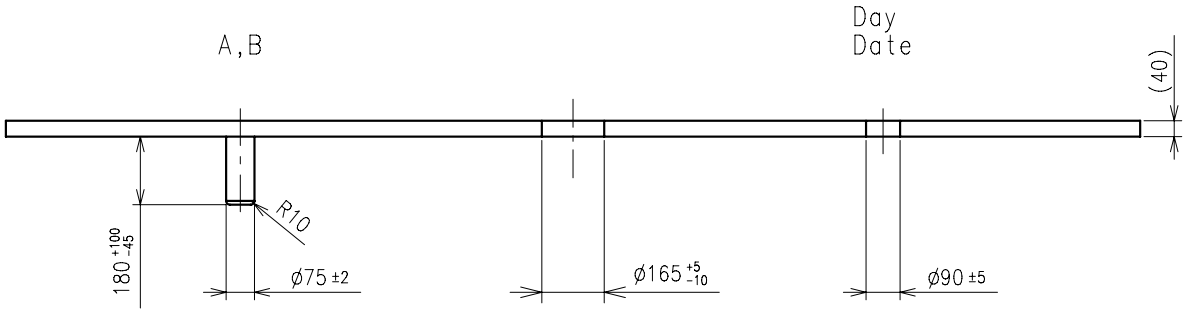
Material : Steel

Hardness : Vickers 600±50

Unit : 1=1/100mm

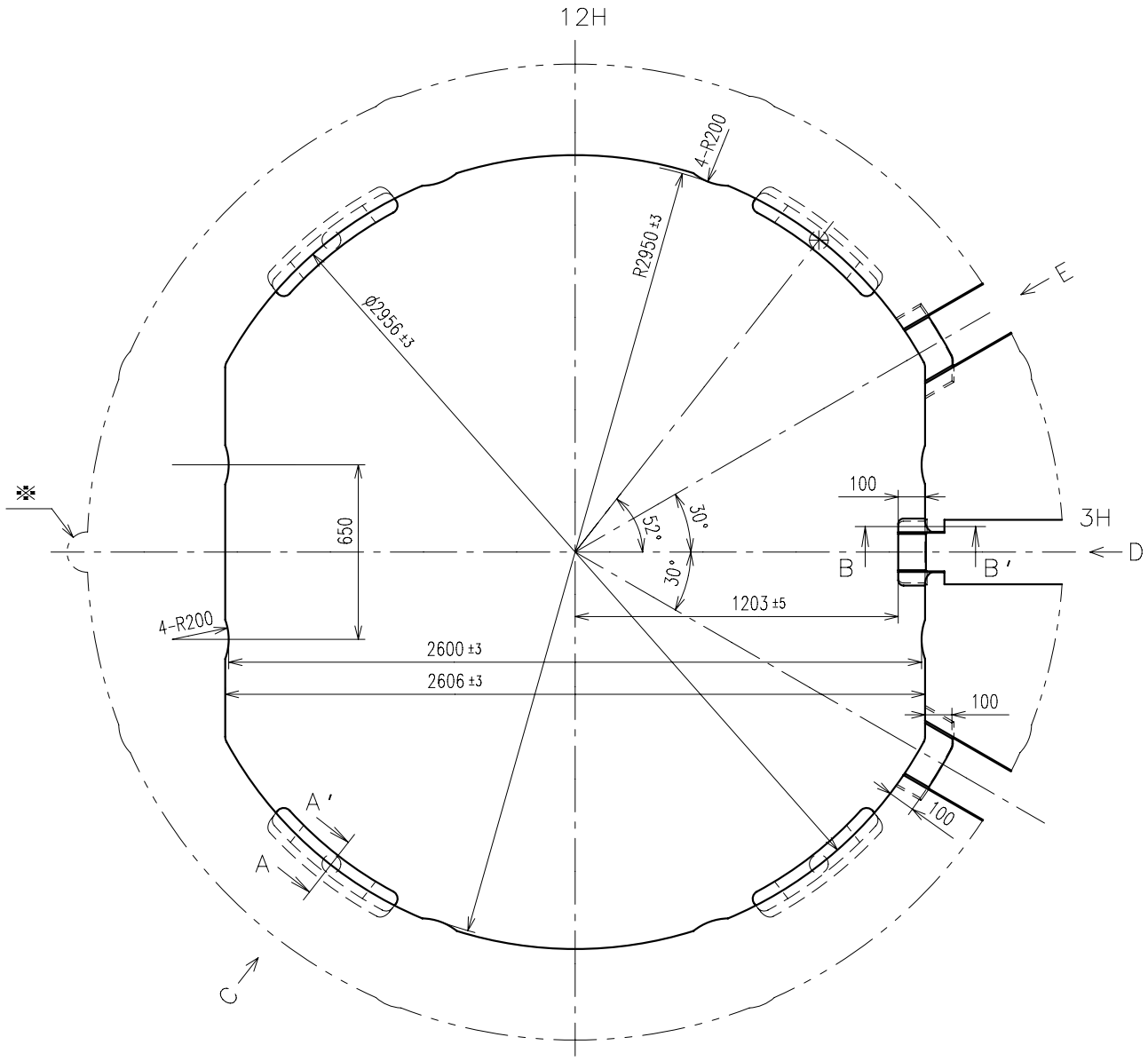
| Cal. VX9PE | Dial | Date:30/Apr./'14 |
|---|---|---|
| | | Rev.:01 |



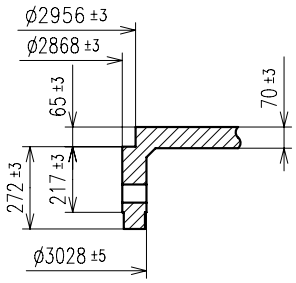




Unit : 1=1/100mm

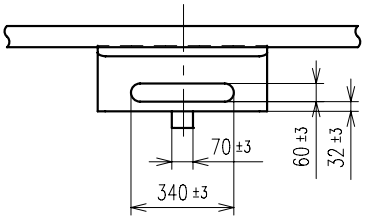
| Cal. VX9PE | Casing ring | Date:30/Apr./'14 |
|---|---|---|
| | | Rev.:02 |



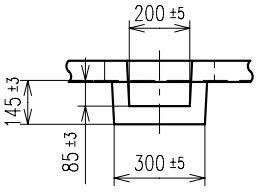

A-A' section



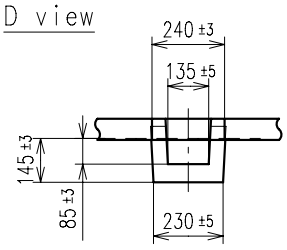

C view



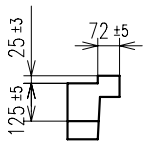

E view




D view

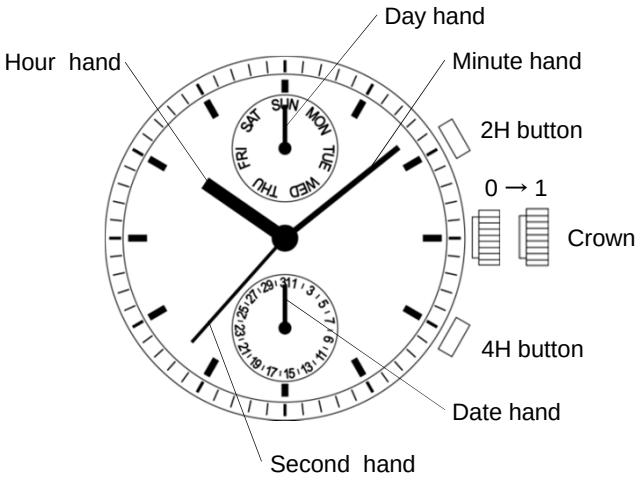



B-B' section




※ The shape is an example of rotary regulation.
Please refer to the [Attention on assembly] page.

Unit : 1=1/100mm




| | Crown position | |
|---|---|---|
| | 0 click | 1st click |
| Crown | Free | Time setting |
| 2H button | Day change | |
| 4H button | Date change | |

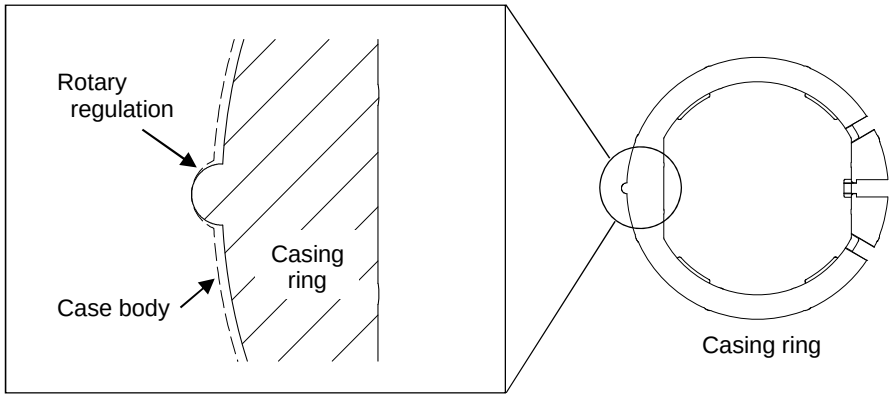
* Do not set the day and date between 9:00 PM and 4:00 AM.
  Otherwise, the day and date may not change properly.

## 1. Casing

・Please use the casing part with rotary regulation to fix the movement tightly inside of the case, and to stabilize position of the button and the movement.

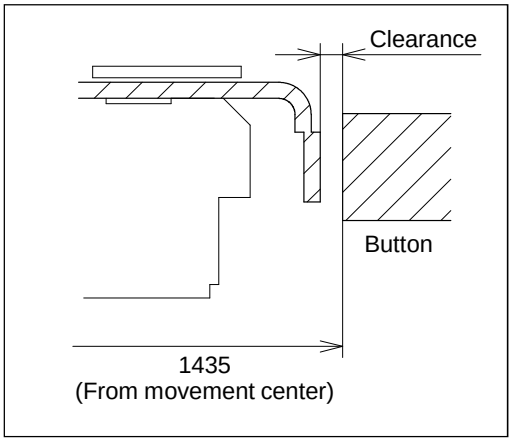
・An example of rotary regulation is shown below.

※The aim of rotary regulation is less than ±1.5deg.




## 2. Button

・Please keep the clearance between the movement and the tip of button to prevent the interference in assembling and enable to be cased smoothly.

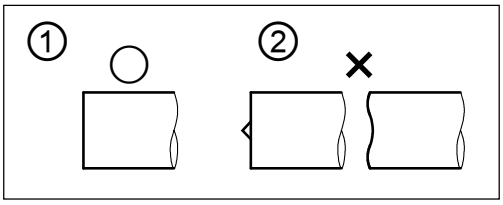



・To keep the clearance,it is recommended to use button spring.

・Button Requirement

① Flat and smooth button is preferable.

② Irregular or sharp shape is not recommended.




## 3. Attention of handling movement

・Press the button in a correct direction or horizontal angle (below "○").