

Watch Movement Specification and Drawing

MULTI - FUNCTION

Cal. VX9JE

Movement Size

12 3/4'''

Casing Diameter

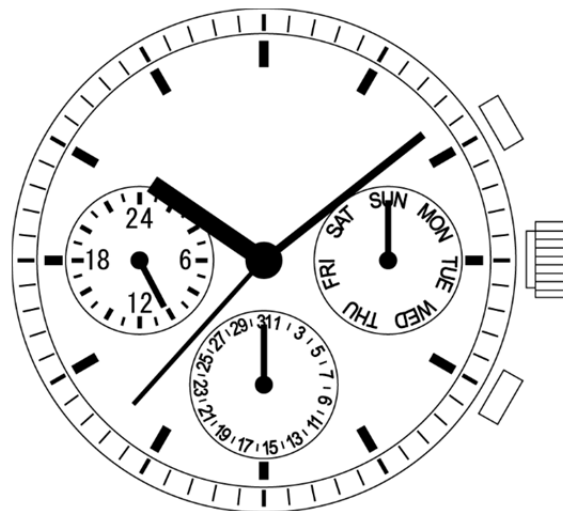
Ø 28.6mm

Height

3.99mm

Battery Life

3 years



Date: 22/Dec./16

Cal. VX9JE

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**Analog Quartz 12 3/4" Movement / 3 hands (H/M/S) and 3 eyes
with Day / Date / 24 Hour indicators**

1. MOVEMENT DIMENSIONS

Outside diameter	$\phi 29.50\text{mm} \times 26.00\text{mm}(3\text{-}9\text{H}) \times 29.36\text{mm}(12\text{-}6\text{H})$
Casing diameter	$\phi 28.60\text{mm} \times 25.60\text{mm}(3\text{-}9\text{H}) \times 28.60\text{mm}(12\text{-}6\text{H})$
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°C to $+50^{\circ}\text{C}$
Regulation device	Nil (Pre-adjusted)

3. INDICATOR / FUNCTIONS

3 Hands	Hour / Minute / Second								
3 Small hands	Day(3H) / Date(6H) / 24 Hour(9H)								
Reset switch									
Setting mechanism	<table> <tr> <td>Crown at normal position</td> <td>: Free</td> </tr> <tr> <td>Crown pulled out 1st click</td> <td>: Time setting / Reset</td> </tr> <tr> <td>2H button</td> <td>: Day change</td> </tr> <tr> <td>4H button</td> <td>: Date change</td> </tr> </table>	Crown at normal position	: Free	Crown pulled out 1st click	: Time setting / Reset	2H button	: Day change	4H button	: Date change
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	<table> <tr> <td>Second hand</td> <td>: $0.1 \mu \text{N}\cdot\text{m}$</td> </tr> <tr> <td>Minute hand</td> <td>: $0.9 \mu \text{N}\cdot\text{m}$</td> </tr> <tr> <td>Hour hand</td> <td>: $0.9 \mu \text{N}\cdot\text{m}$</td> </tr> <tr> <td>Day hand</td> <td>: less than $0.008 \mu \text{g}\cdot\text{m}^2$</td> </tr> </table>	Second hand	: $0.1 \mu \text{N}\cdot\text{m}$	Minute hand	: $0.9 \mu \text{N}\cdot\text{m}$	Hour hand	: $0.9 \mu \text{N}\cdot\text{m}$	Day hand	: less than $0.008 \mu \text{g}\cdot\text{m}^2$
Second hand	: $0.1 \mu \text{N}\cdot\text{m}$								
Minute hand	: $0.9 \mu \text{N}\cdot\text{m}$								
Hour hand	: $0.9 \mu \text{N}\cdot\text{m}$								
Day hand	: less than $0.008 \mu \text{g}\cdot\text{m}^2$								
Moment of Inertia									

5. BATTERY

Type / Size	Silver oxide battery / $\phi 9.5\text{mm} \times t 2.7\text{mm}$
Recommended battery	SR927SW (Maxell, Sony, Seizaiken)
Nominal voltage	1.55 V
Battery life	Approx. 3 years
Driving current consumption	Approx. $2.1 \mu \text{A}$
Operation stopping voltage	1.2 V

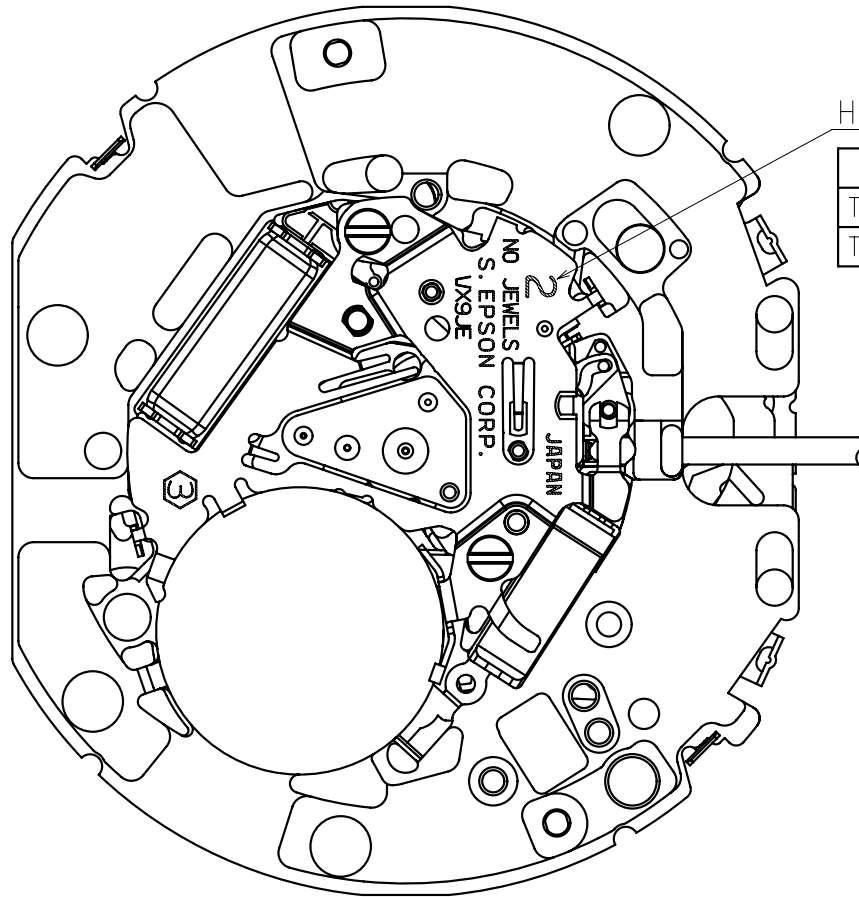
6. SEPARATED PARTS (Parts code)

Hand setting stem	0351578 or 0351177
Battery	SR927SW

7. TEST OF ACCURACY

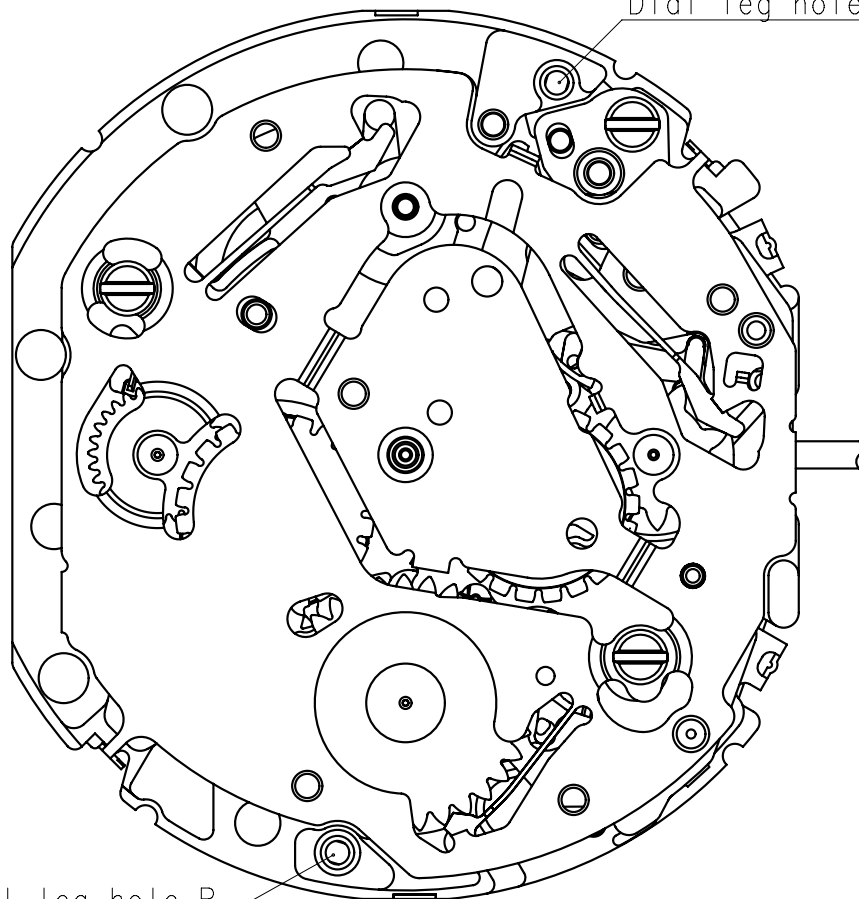
Equipment to be used	SEIKO quartz tester QT-99, Greiner quartz timer-C , Witschi Q-tester 4000
Duration of measurement	10 seconds
Microphone to be used	Electromagnetic detection type

All specifications are subject to change without notice.

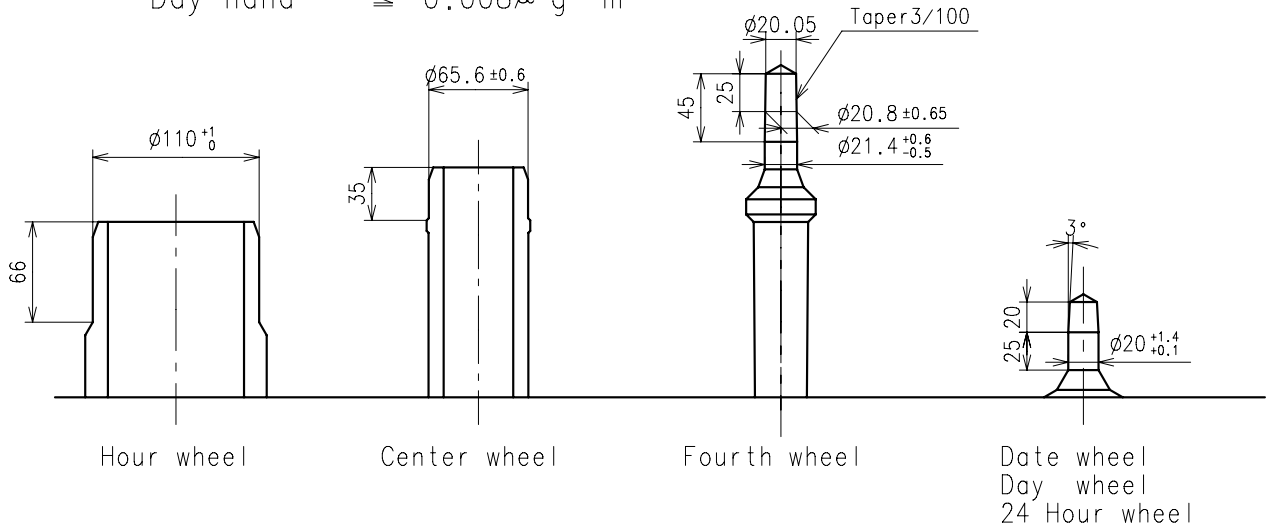


Hands type

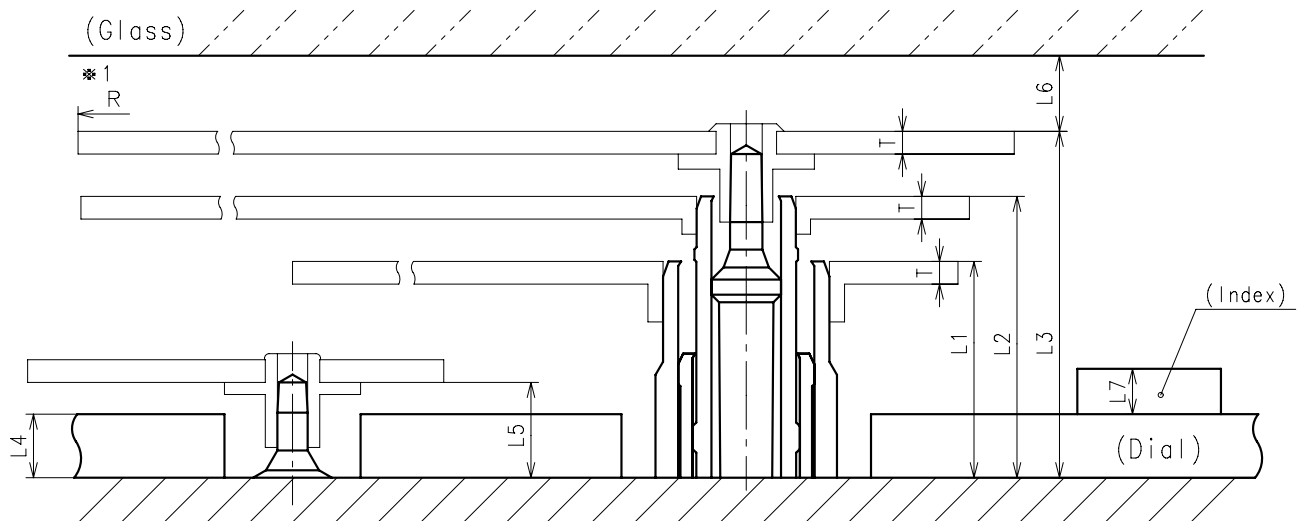
	Mark
Type M	2
Type L	3



- ※ Unbalance
 - Hour hand $\leq 0.9\mu \text{ N} \cdot \text{m}$ ($90\mu \text{ g} \cdot \text{m}$)
 - Minute hand $\leq 0.9\mu \text{ N} \cdot \text{m}$ ($90\mu \text{ g} \cdot \text{m}$)
 - Second hand $\leq 0.1\mu \text{ N} \cdot \text{m}$ ($10\mu \text{ g} \cdot \text{m}$)
- ※ Moment of inertia
 - Day hand $\leq 0.008\mu \text{ g} \cdot \text{m}^2$



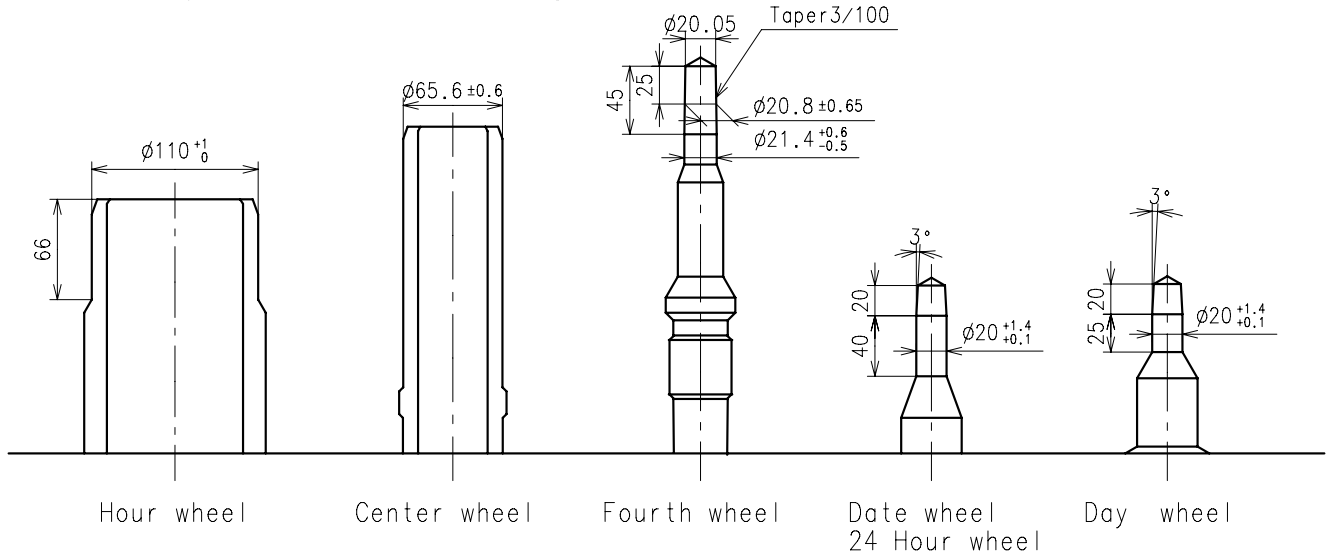
	Parts No.					
	Hour wheel	Center wheel	Fourth wheel	Date wheel	Day wheel	24 Hour wheel
Type M (2) VX9JE**	0271658	0221602	0241559	0970503	1002546	1002559



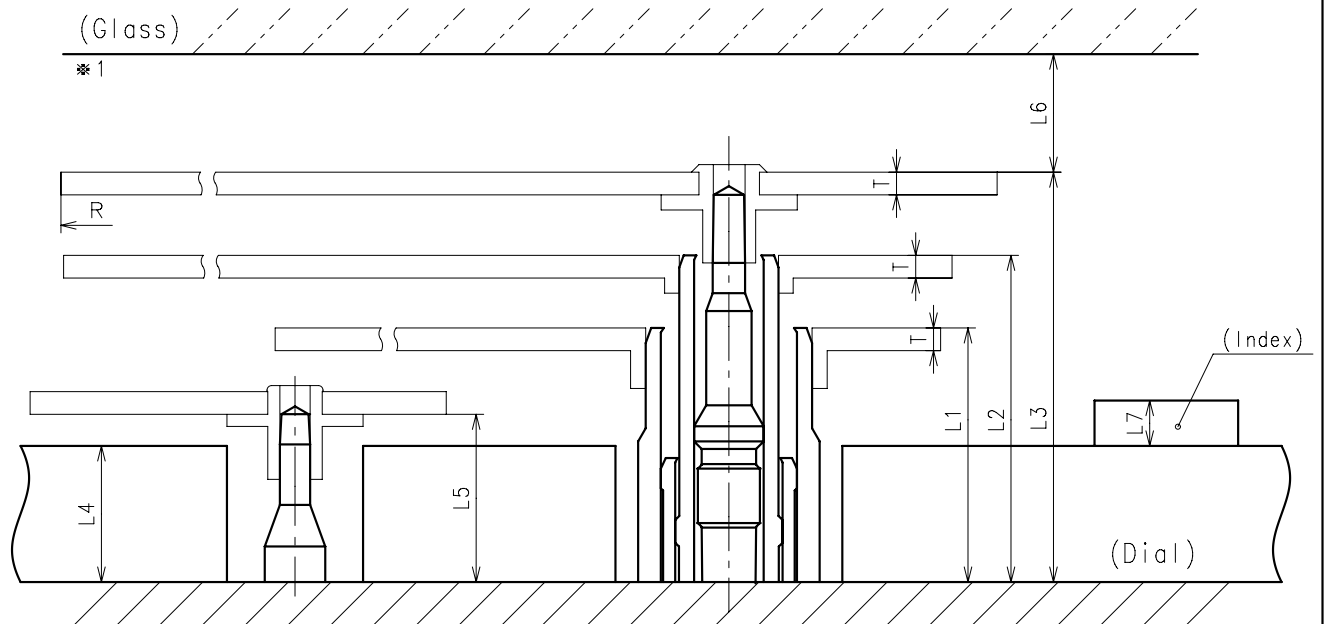
	L1	L2	L3	L4	L5	L6	L7	T	*1 R
Type M (2) VX9JE**	143	186	229	40	63	MIN: 50	MAX: 50	15	MAX: 1250

*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.

- ※ Unbalance
 - Hour hand $\leq 0.9\mu \text{ N} \cdot \text{m}$ ($90\mu \text{ g} \cdot \text{m}$)
 - Minute hand $\leq 0.9\mu \text{ N} \cdot \text{m}$ ($90\mu \text{ g} \cdot \text{m}$)
 - Second hand $\leq 0.1\mu \text{ N} \cdot \text{m}$ ($10\mu \text{ g} \cdot \text{m}$)
- ※ Moment of inertia
 - Day hand $\leq 0.008\mu \text{ g} \cdot \text{m}^2$

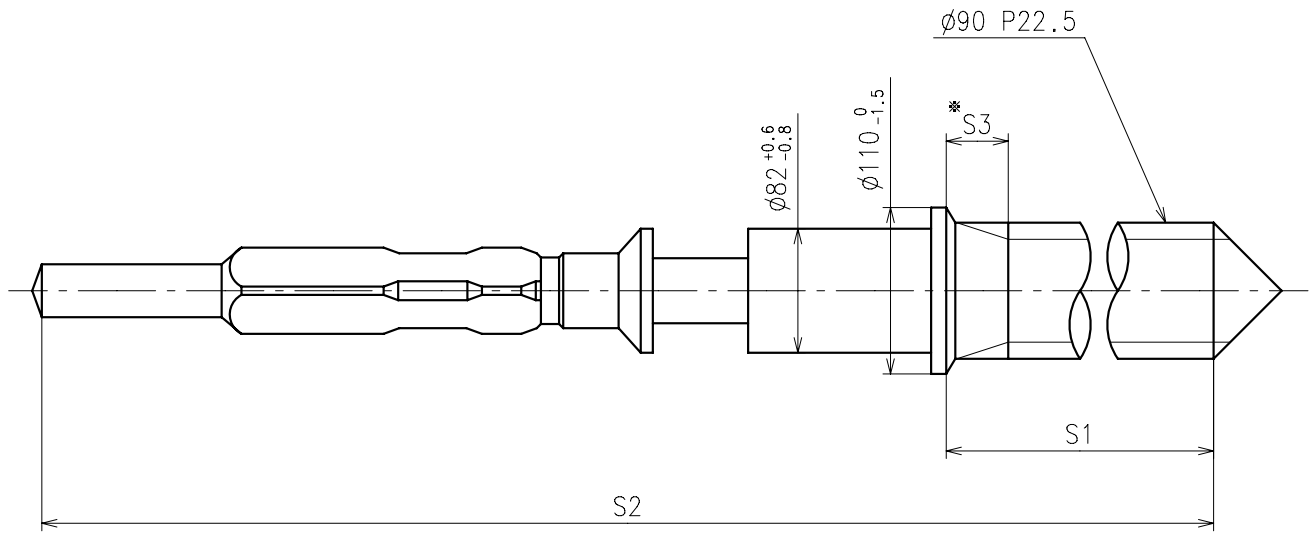


	Parts No.					
	Hour wheel	Center wheel	Fourth wheel	Date wheel	Day wheel	24 Hour wheel
Type L (3) VX9JE**	0271684	0221662	0241592	0970504	1002547	1002565



	L1	L2	L3	L4	L5	L6	L7	T	*1 R
Type L (3) VX9JE**	168	216	271	90	111	MIN: 50	MAX: 50	15	MAX: 1500

*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.

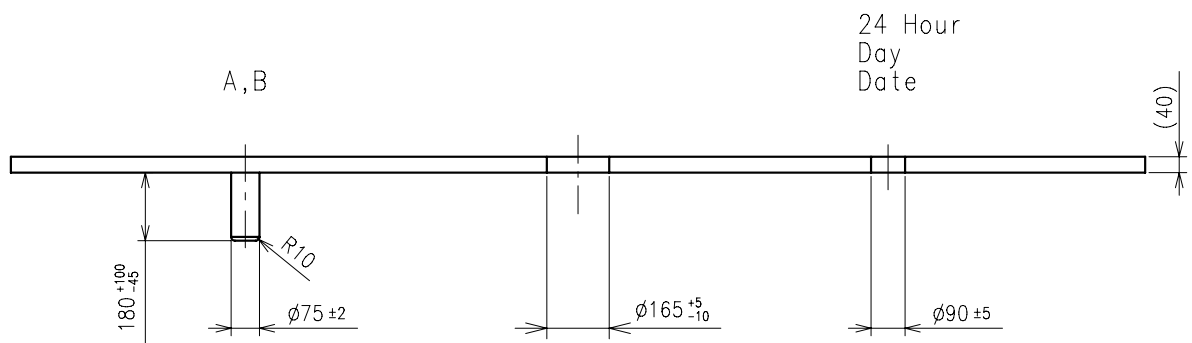
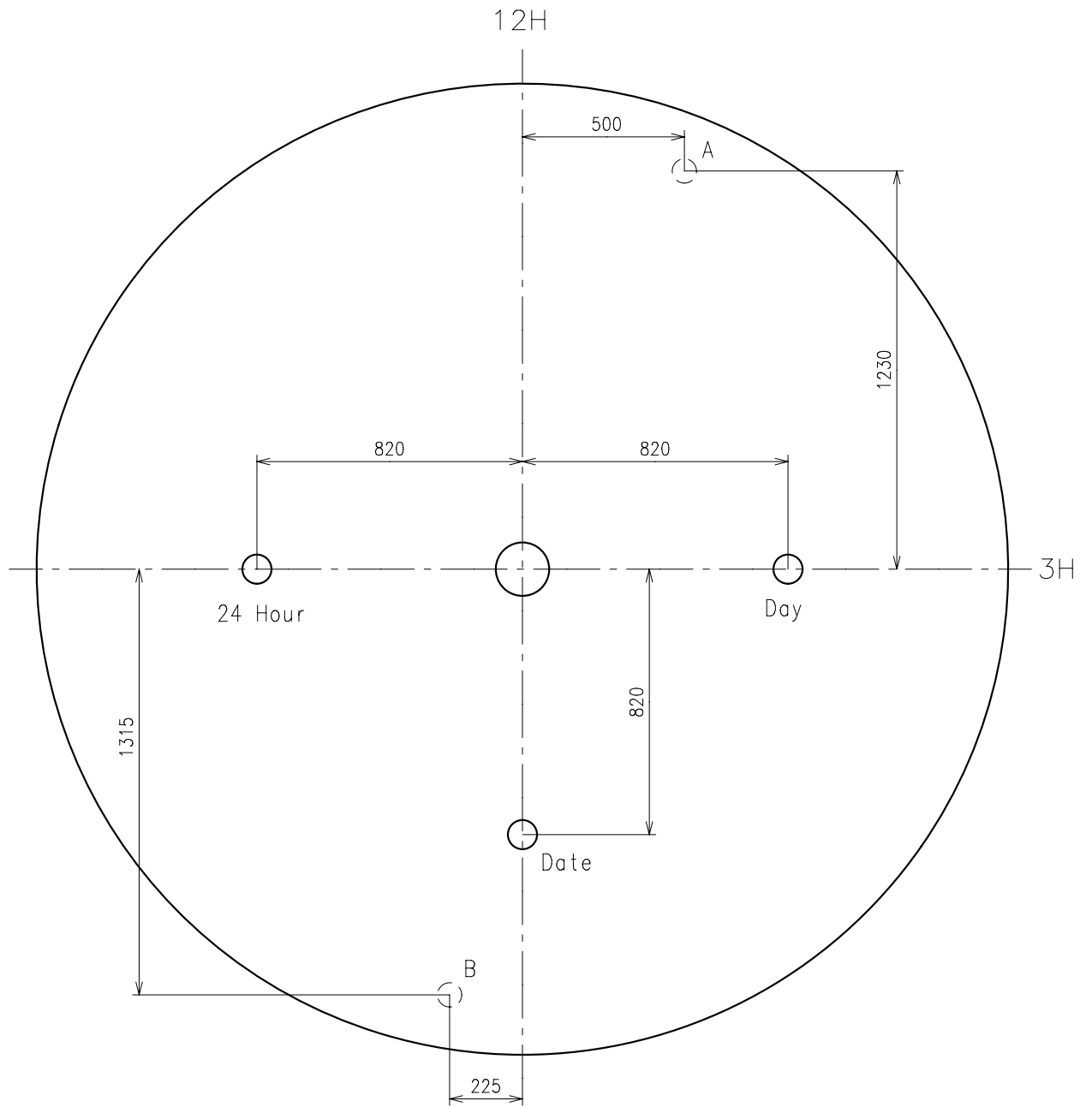


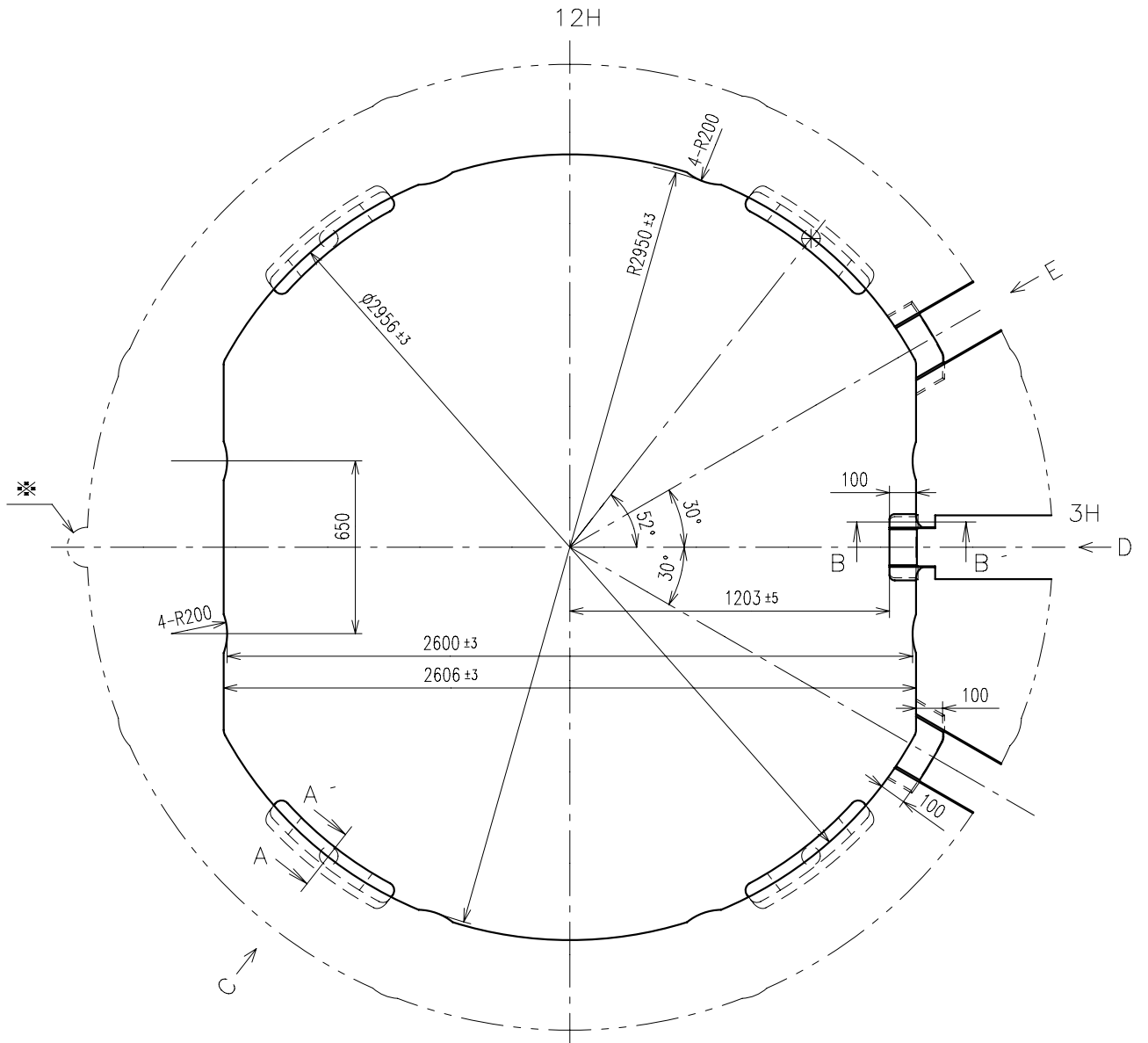
※ Not threaded

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

Material : Steel

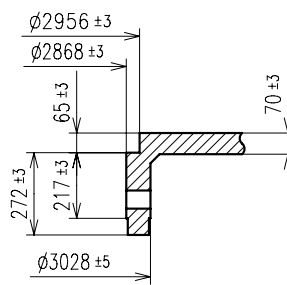
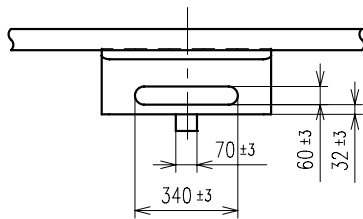
Hardness : Vickers 600±50



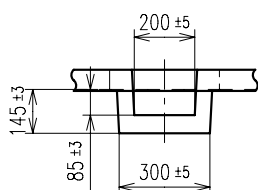


A-A' section

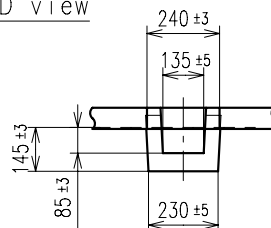
C view



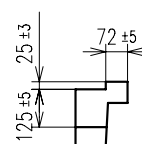
E view



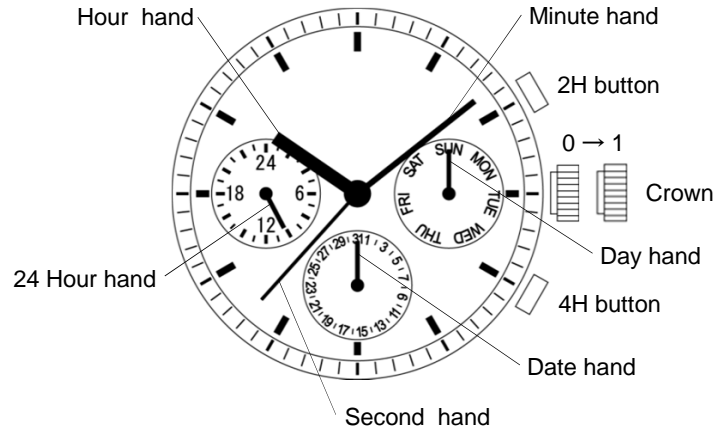
D view



B-B' section



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



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

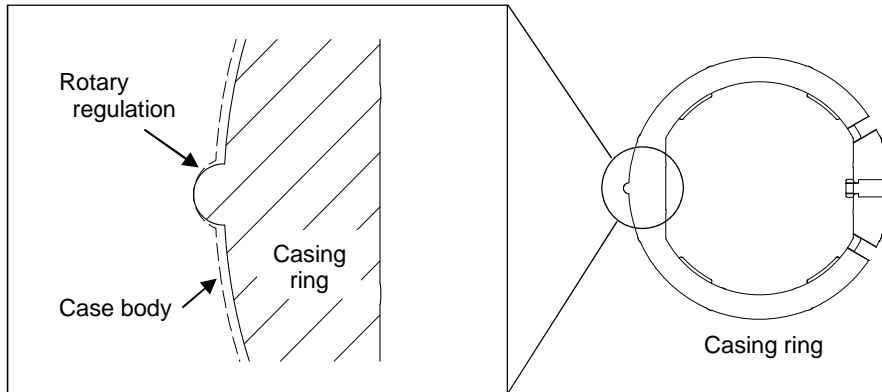
* Do not set the day and date between 9:00 PM and 4:00 AM.
Otherwise, the day and date may not change properly.

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.

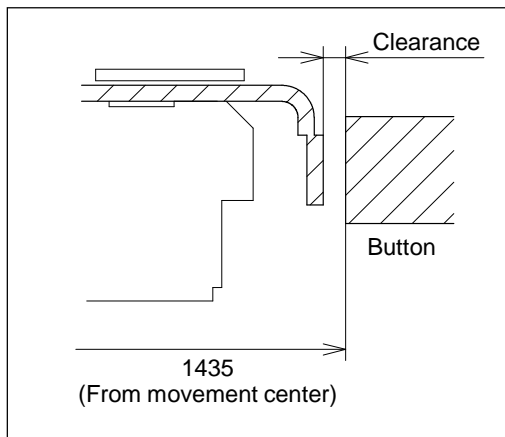
•An example of rotary regulation is shown below.

※The aim of rotary regulation is less than $\pm 1.5\text{deg}$.



2. Button

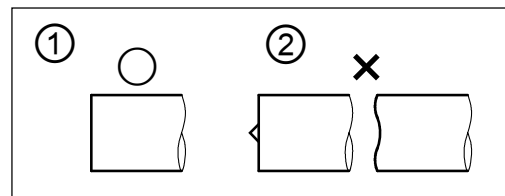
•Please keep the clearance between the movement and the tip of button to prevent the interference in assembling and enable to be cased smoothly.



•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 "O").

