

Watch Movement Specification and Drawing

MULTI - FUNCTION

Cal. VX3TE

Movement Size

10 1/2'''

Casing Diameter

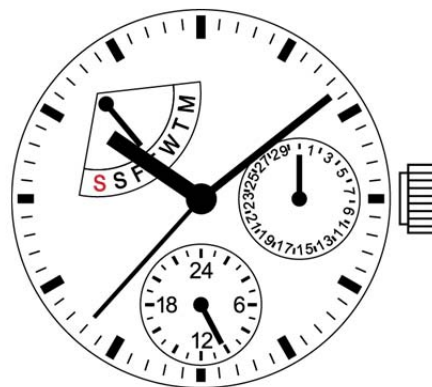
Ø 23.3mm

Height

3.86mm

Battery Life

3 years



Date: 27/Aug./'14

Cal. VX3TE

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**Analog Quartz 10 1/2" Slim Movement / 3 hands (H/M/S) and 3 eyes
with Retrograde day / Date / 24Hour indicators**

1. MOVEMENT DIMENSIONS

Outside diameter	ϕ 24.00mm × 22.25mm(3-9H) × 21.50mm(12-6H)
Casing diameter	ϕ 23.30mm × 21.30mm(3-9H) × 21.50mm(12-6H)
Total height	3.86mm (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°C
Regulation device	Nil (Pre-adjusted)

3. INDICATOR / FUNCTIONS

3 Hands	Hour / Minute / Second						
3 Small hands	Day(10:30) / Date(3H) / 24Hour(6H)						
Reset switch							
Setting mechanism	<table style="width: 100%;"> <tr> <td style="width: 60%;">Crown at normal position</td> <td>: Free</td> </tr> <tr> <td>Crown pulled out 1st click</td> <td>: Instant date change</td> </tr> <tr> <td>Crown pulled out 2nd click</td> <td>: Time setting (Day change) / Reset</td> </tr> </table>	Crown at normal position	: Free	Crown pulled out 1st click	: Instant date change	Crown pulled out 2nd click	: Time setting (Day change) / Reset
Crown at normal position	: Free						
Crown pulled out 1st click	: Instant date change						
Crown pulled out 2nd click	: Time setting (Day change) / Reset						

4. FEATURES

Jewels	0 Jewels								
Anti-magnetism	Over 1600A/m (Direct current magnetic field)								
Maximum unbalance of hands	<table style="width: 100%;"> <tr> <td style="width: 60%;">Second hand</td> <td>: 0.07 μ N·m</td> </tr> <tr> <td>Minute hand</td> <td>: 0.6 μ N·m</td> </tr> <tr> <td>Hour hand</td> <td>: 0.5 μ N·m</td> </tr> <tr> <td>Day hand</td> <td>: 0.035 μ N·m</td> </tr> </table>	Second hand	: 0.07 μ N·m	Minute hand	: 0.6 μ N·m	Hour hand	: 0.5 μ N·m	Day hand	: 0.035 μ N·m
Second hand	: 0.07 μ N·m								
Minute hand	: 0.6 μ N·m								
Hour hand	: 0.5 μ N·m								
Day hand	: 0.035 μ N·m								
Moment of Inertia	Day hand : less than 0.012 μ g·m ²								

5. BATTERY

Type / Size	Silver oxide battery / ϕ 9.5mm × t 2.0mm
Recommended battery	SR920SW (Maxell, Sony, Seizaiken)
Nominal voltage	1.55 V
Battery life	Approx. 3 years
Driving current consumption	Approx. 1.6 μ A
Operation stopping voltage	1.1 V

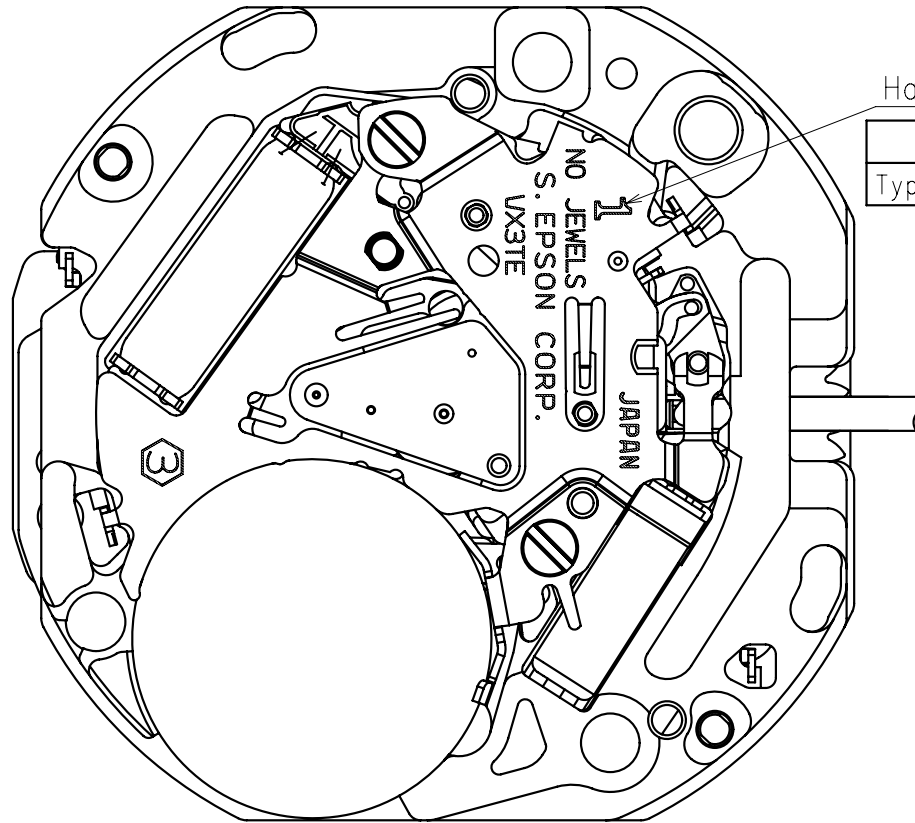
6. SEPARATED PARTS (Parts code)

Hand setting stem	0351177 or 0351578
Battery	SR920SW

7. TEST OF ACCURACY

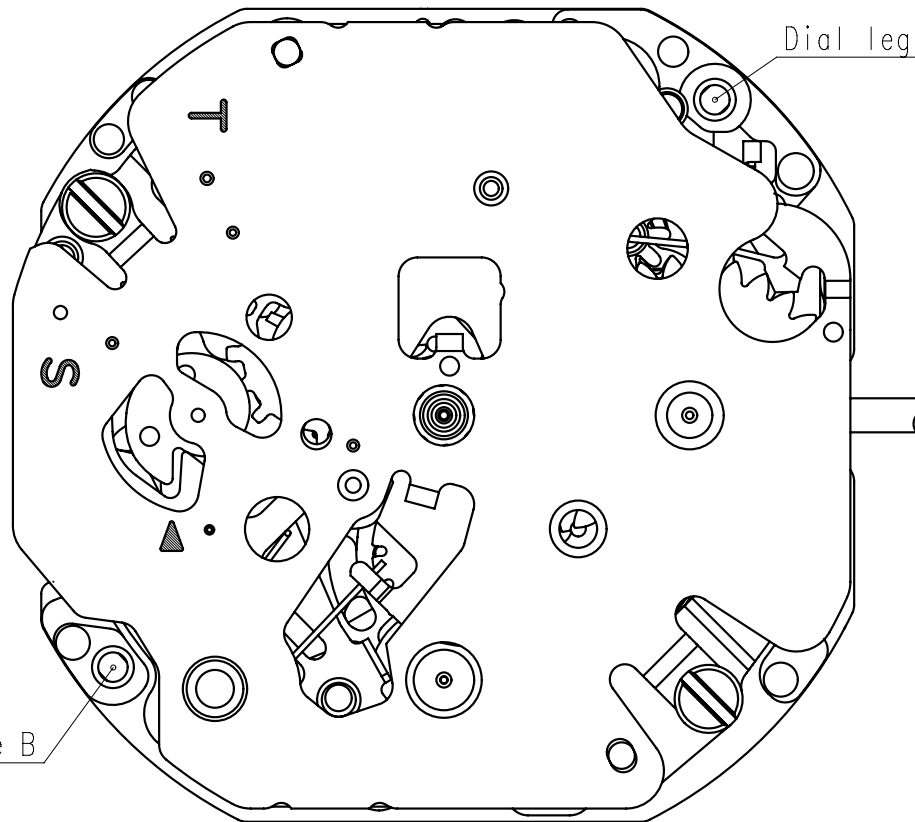
Equipment to be used	SEIKO quartz tester QT-99, Greiner quartz timer-C , Witschi Q-tester 4000
Duration of measurement	10 seconds
Microphone to be used	Electromagnetic detection type

All specifications are subject to change without notice.



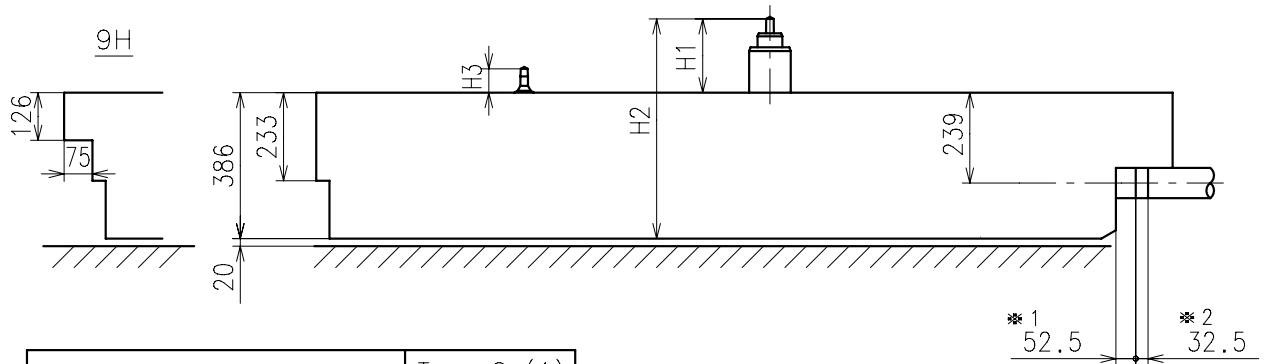
Hands type

	Mark
Type S (1)	1



Dial leg hole B

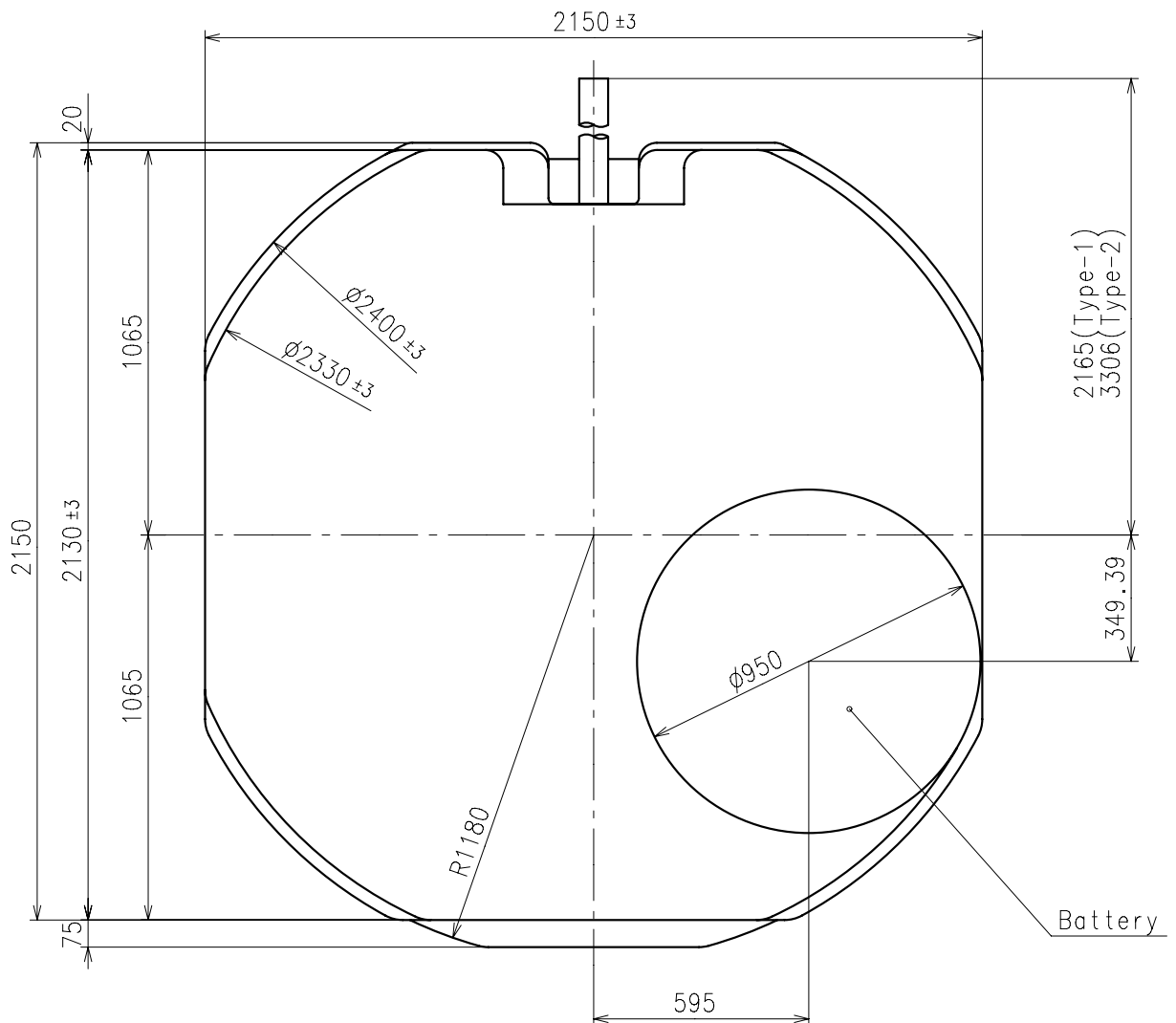
Dial leg hole A



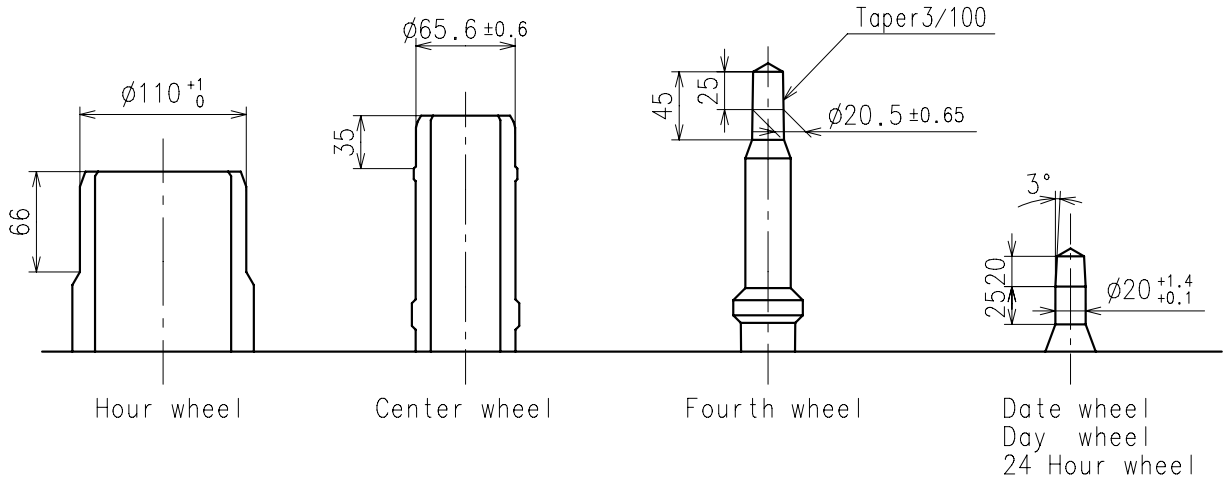
Center post		Type S (1) VX3T1E
Maximum height from dial support	H1	185
Total height including movement	H2	571
Maximum height from dial support	H3	63

*1:First pullout stroke

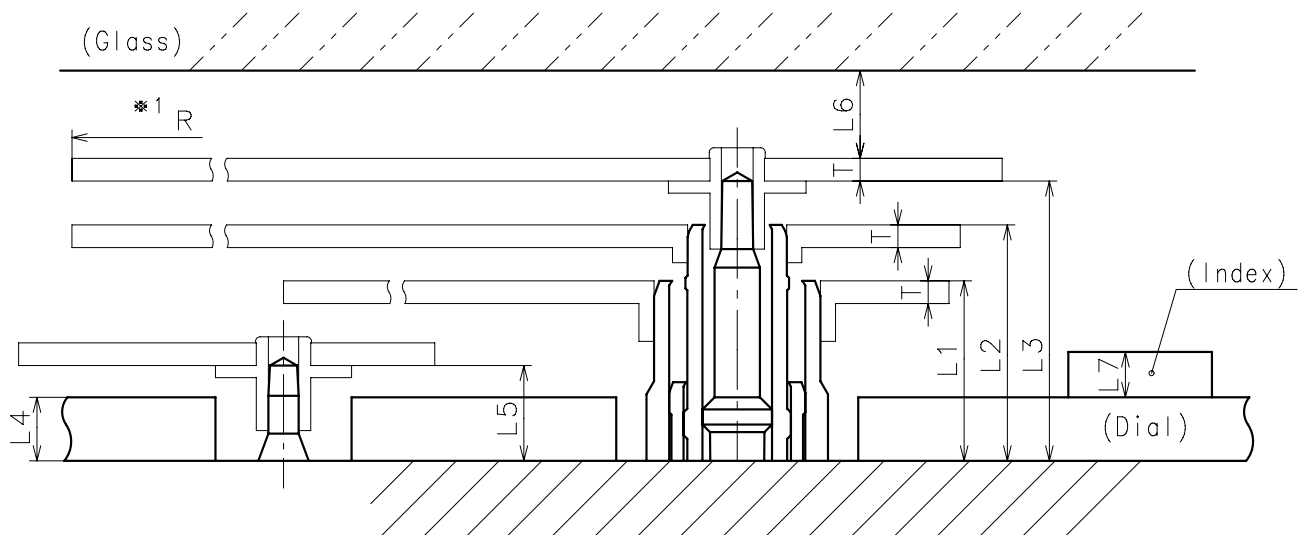
*2:Second pullout stroke



- ※ Unbalance
 - Hour hand $\leq 0.5\mu\text{ N}\cdot\text{m}$ ($50\mu\text{ g}\cdot\text{m}$)
 - Minute hand $\leq 0.6\mu\text{ N}\cdot\text{m}$ ($60\mu\text{ g}\cdot\text{m}$)
 - Second hand $\leq 0.07\mu\text{ N}\cdot\text{m}$ ($7\mu\text{ g}\cdot\text{m}$)
 - Day hand $\leq 0.035\mu\text{ N}\cdot\text{m}$ ($3.5\mu\text{ g}\cdot\text{m}$)
- ※ Moment of inertia
 - Day hand $\leq 0.012\mu\text{ g}\cdot\text{m}^2$

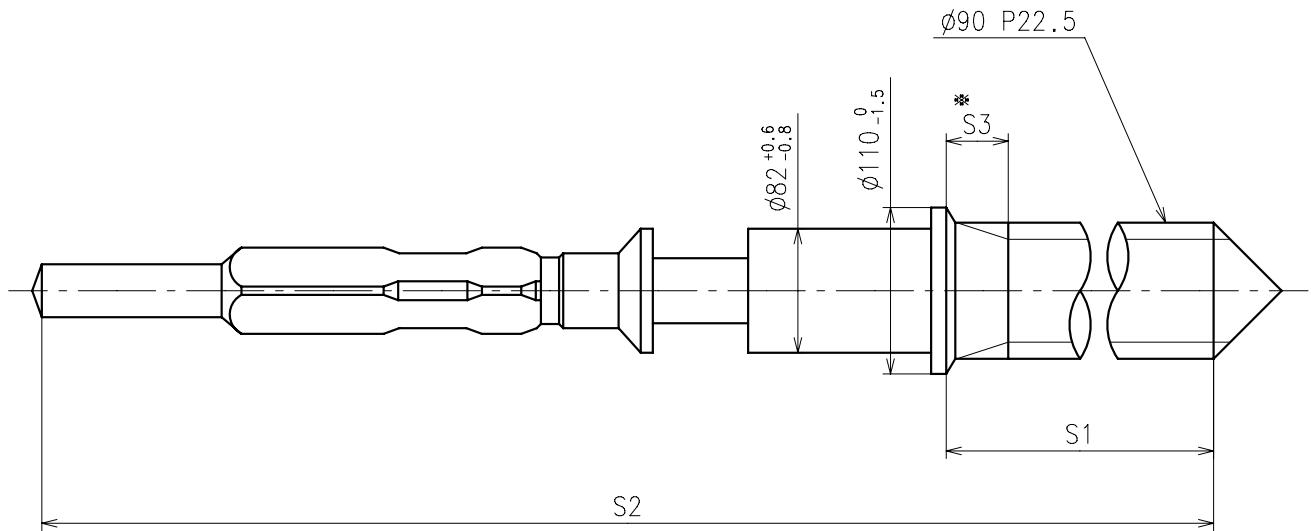


	Parts No.					
	Hour wheel	Center wheel	Fourth wheel	Date wheel	Day wheel	24 Hour wheel
Type S (1) VX3TE1	0271566	0221587	0241529	0970500	1002513	1002512



	L1	L2	L3	L4	L5	L6	L7	T	*1 R
Type S (1) VX3TE1	119	156	185	40	63	MIN: 50	MAX: 30	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.

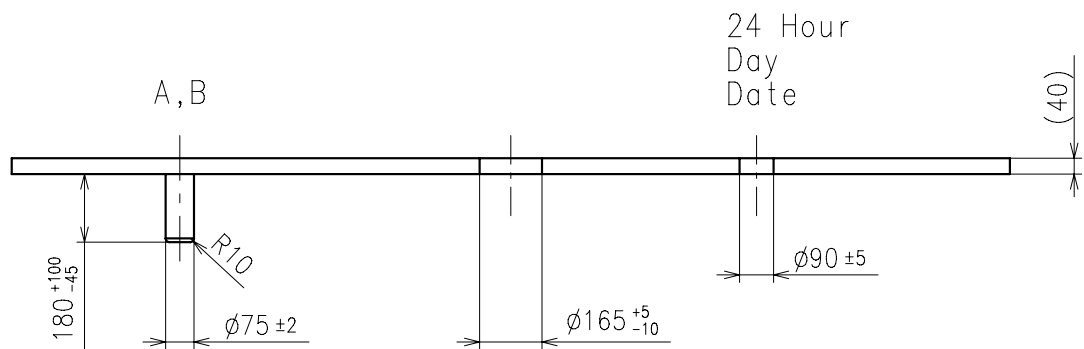
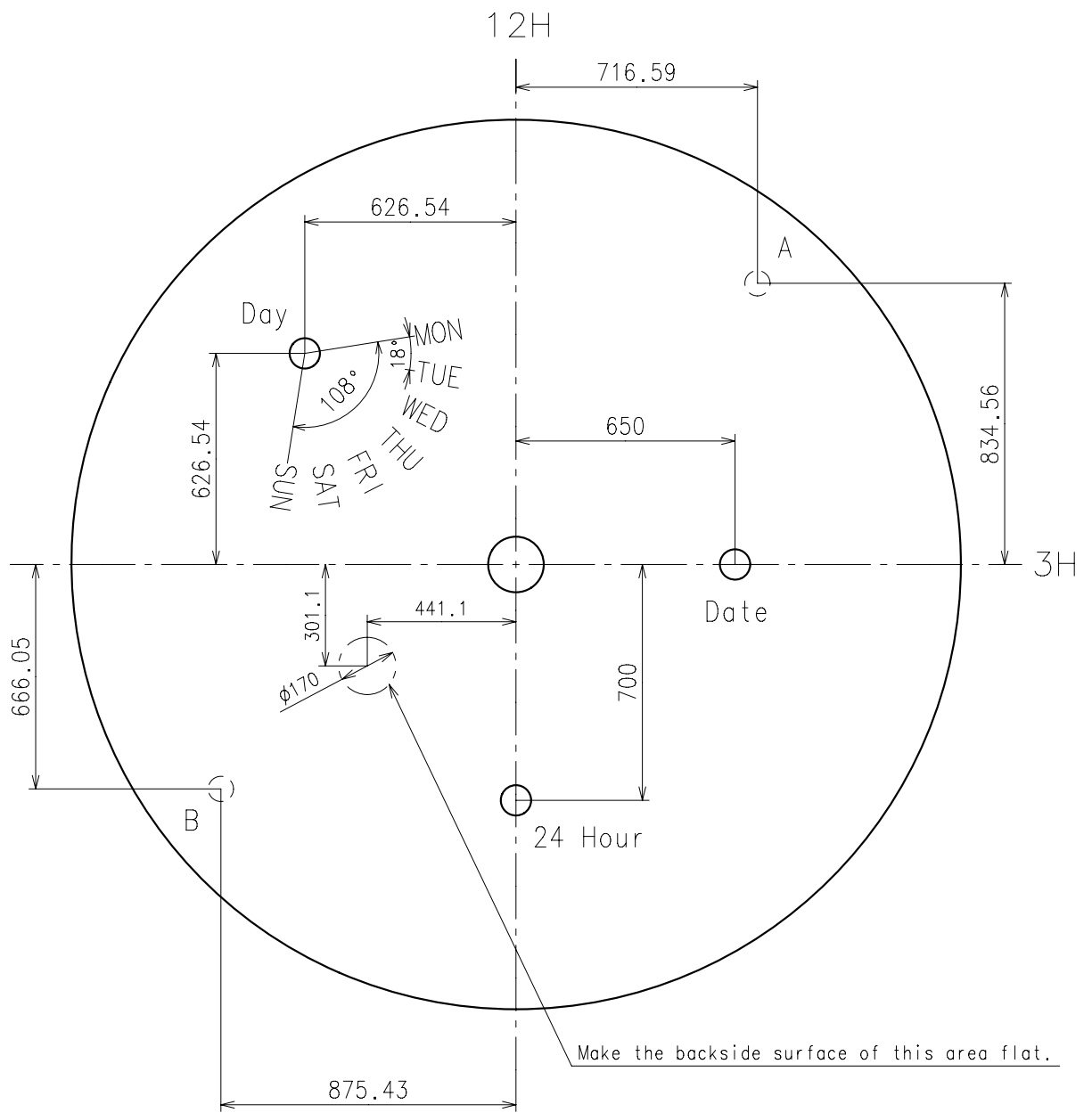


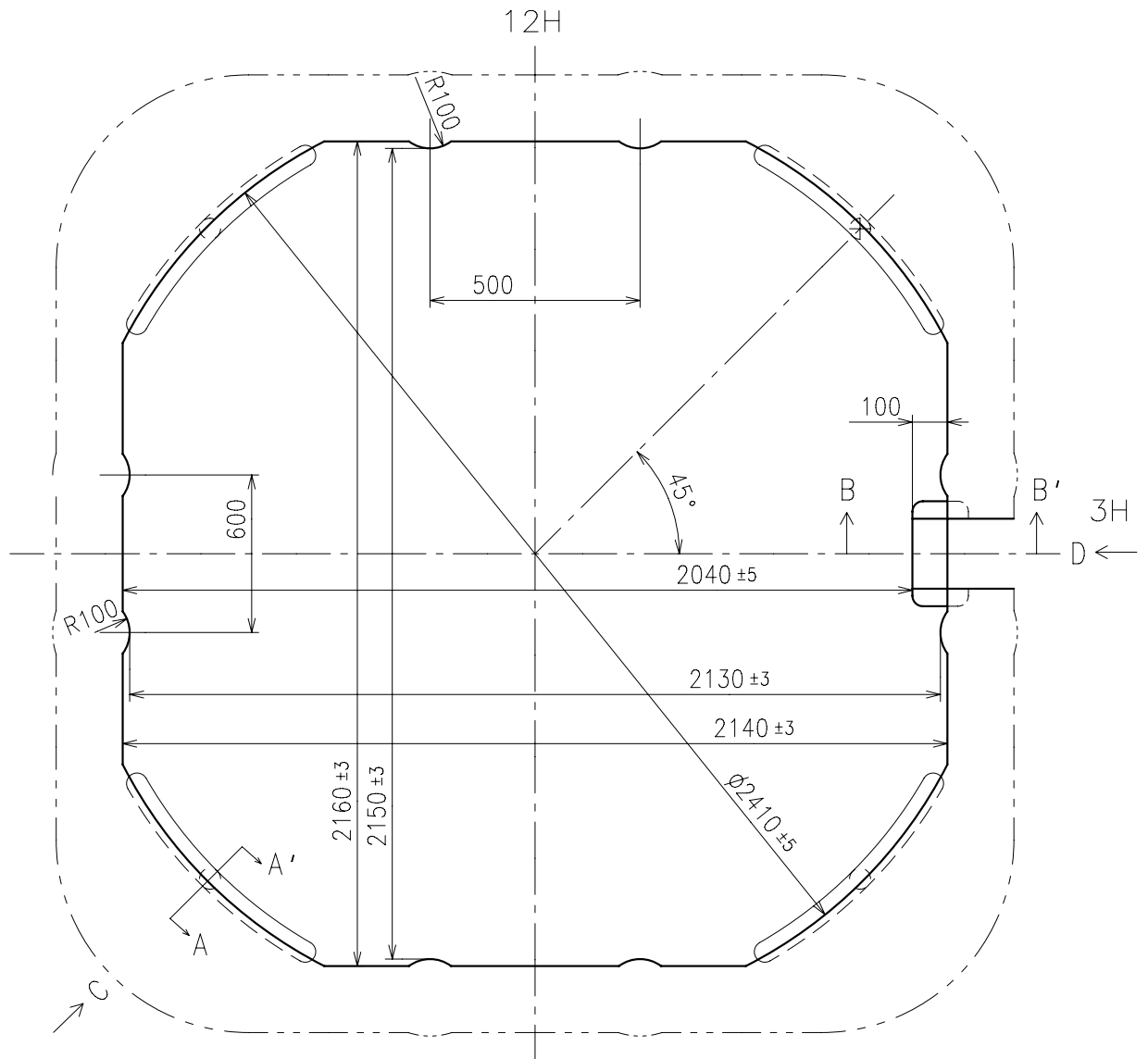
※ Not threaded

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

Material : Steel

Hardness : Vickers 600±50



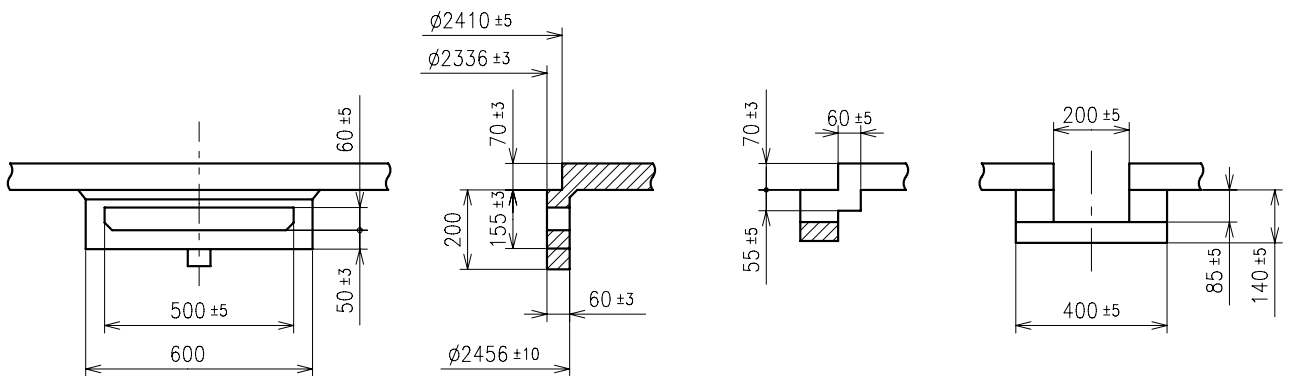


C view

A-A' section

B-B' section

D view



1.Hand setting process

Step 1) Movement

Please be sure to check the protrusion part of the intermediate day wheel cam faces to ▲ mark.
If it doesn't faces to the ▲ mark, please adjust the position by the following operation.

- (1) Please pull out the stem at 2nd click.
- (2) Turn the stem until the protrusion part of the intermediate day wheel cam faces to ▲ mark.
(Refer to the Fig.[1] in below.)
- (3) Please turn the stem again and hold when the date wheel has turned and date has changed.

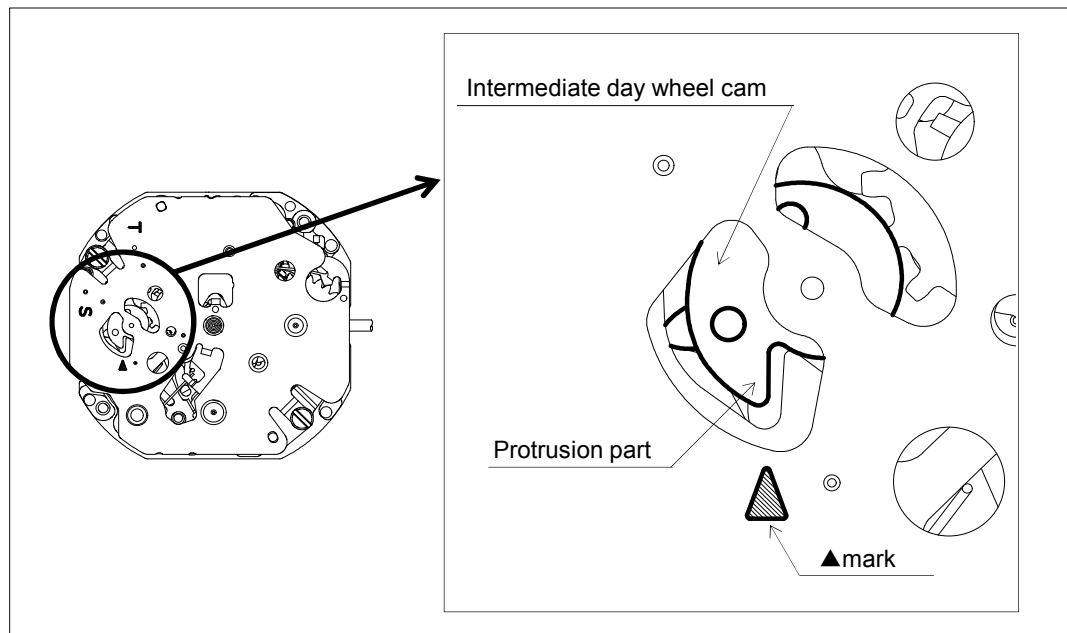


Fig.[1]

Step 2) Dial and hand setting

- (1) Please assemble the dial and set the hour, minute and second hand at 12:00 position and 24 Hour hand at 24:00 position.
- (2) Please set the day hand at 1st day position. (Refer to the Fig.[2] in below.)

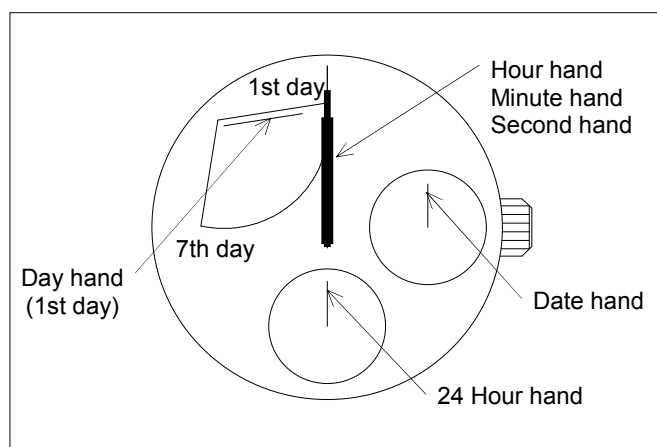


Fig.[2]

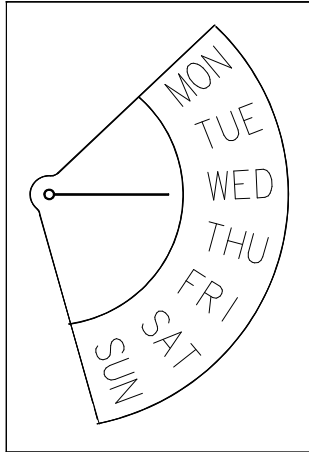
1.Day indication on dial

The start position of day hand can set on any position in 360 degree.

Any day can be set at the start position.

Refer to the [Dial] page for the details of day indication.

It is recommended not to design the scale of the day indication on dial.

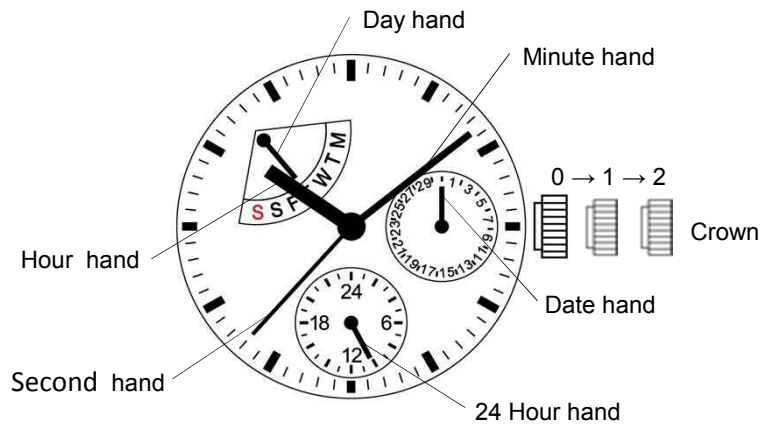


Recommend

2.Attention about day hand

Please pay attention to the following points to prevent from losing day hand by strong impact against the watch.

- (1) Keep day hand unbalance mentioned in [Hand fitting] page.
- (2) Don't use the hand repeatedly.



		Crown position		
		0 click	1st click	2nd click
Crown	Free		Turn counterclockwise for date change	Time setting (Day change)