

Watch Movement Specification and Drawing

SMALL SECOND

Cal. VL57B

Movement Size

13 1/2'''

Casing Diameter

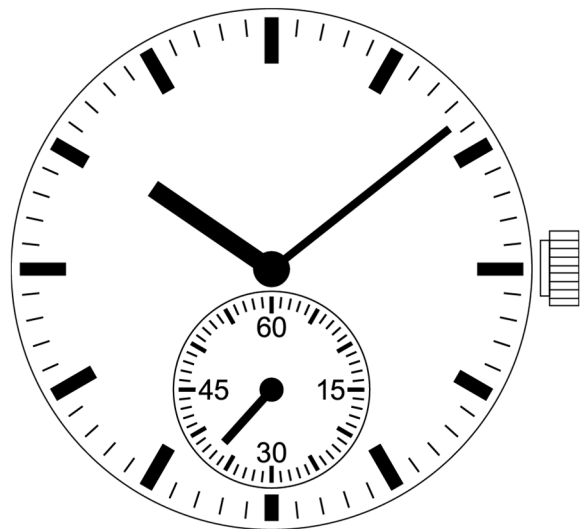
Ø 30.6mm

Height

3.97mm

Battery Life

5 years



Date: 19/Oct./'18

Cal. VL57B

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Analog Quartz 13 1/2" Small second Movement

1. MOVEMENT DIMENSIONS

Outside diameter	ϕ 31.2mm × 28.0mm(3-9H)
Casing diameter	ϕ 30.6mm
Total height	3.97mm (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

2 Hands	Hour / Minute
Small hand	Small second (6H)
Reset switch	
Power depletion warning function (BLD) (Small second hand moves at 2-second intervals)	
Setting mechanism	Crown at normal position : Free Crown pulled out 1st click : time setting / reset

4. FEATURES

Jewels	0 Jewels
Anti-magnetism	Over 1600A/m (Direct current magnetic field)
Maximum unbalance of hands	Hour hand : 0.6 μ N·m Minute hand : 0.9 μ N·m Small second hand : 0.06 μ N·m
Moment of Inertia	Small second hand : less than 0.05 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. 5 years
Driving current consumption	Approx. 0.9 μ A
Operation stopping voltage	1.1V

6. SEPARATED PARTS (Parts code)

Hand setting stem	0351578 or 0351177
Battery	SR920SW

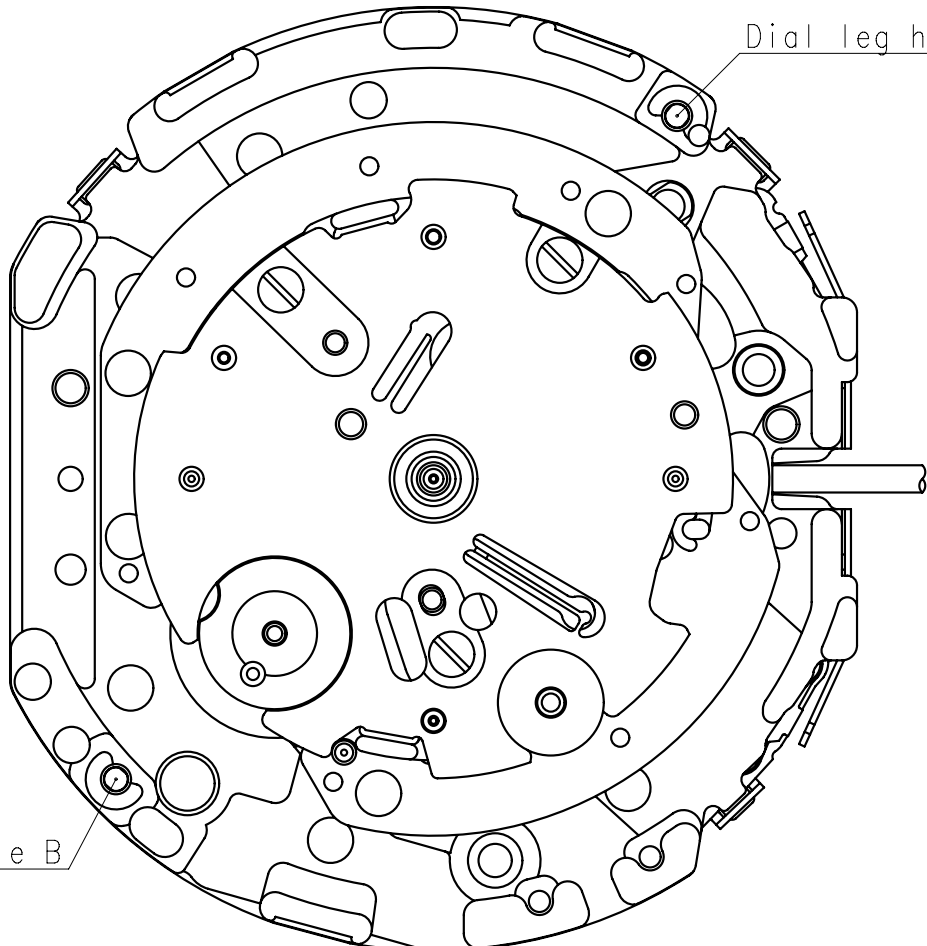
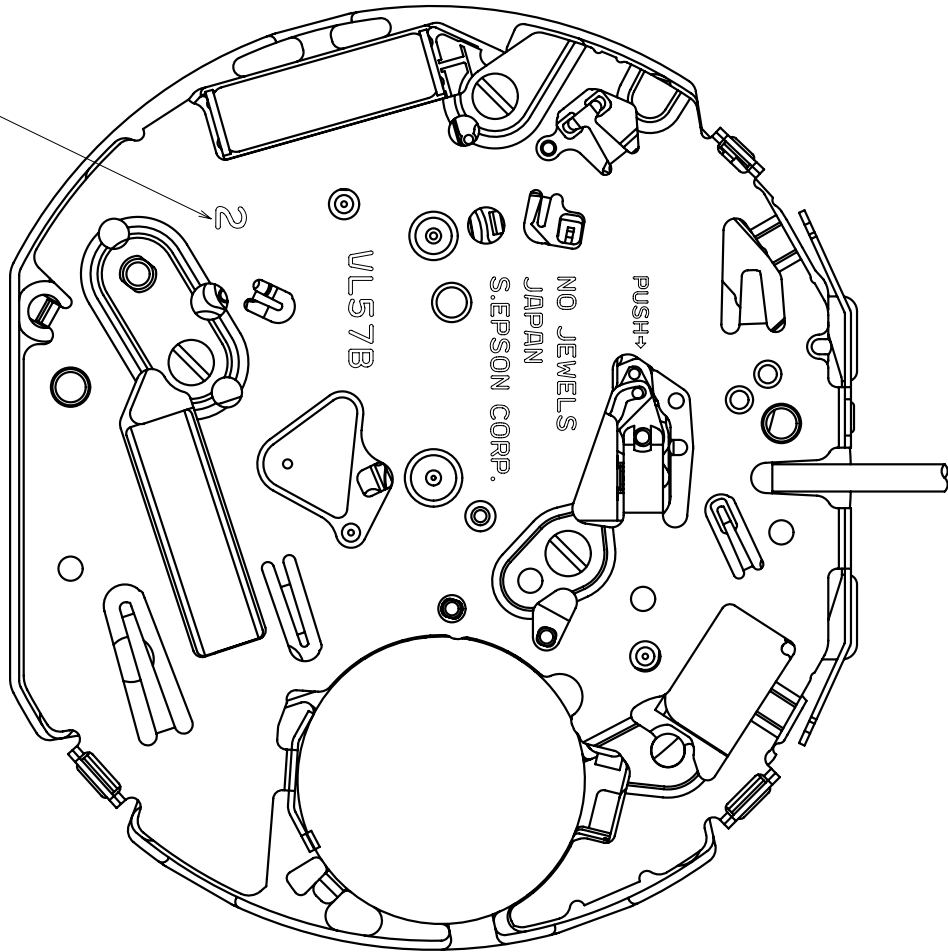
7. TEST OF ACCURACY

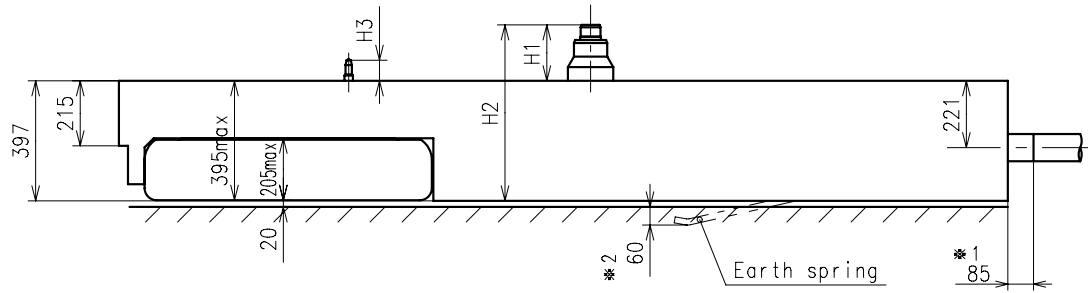
Equipment to be used	SEIKO quartz tester QT-99, Greiner quartz timer-C , Witschi Q-tester 4000
Duration of measurement	10 seconds
Microphone to be used	Electromagnetic detection type

All specifications are subject to change without notice.

Hands type

	Mark
Type M	2
Type L	3

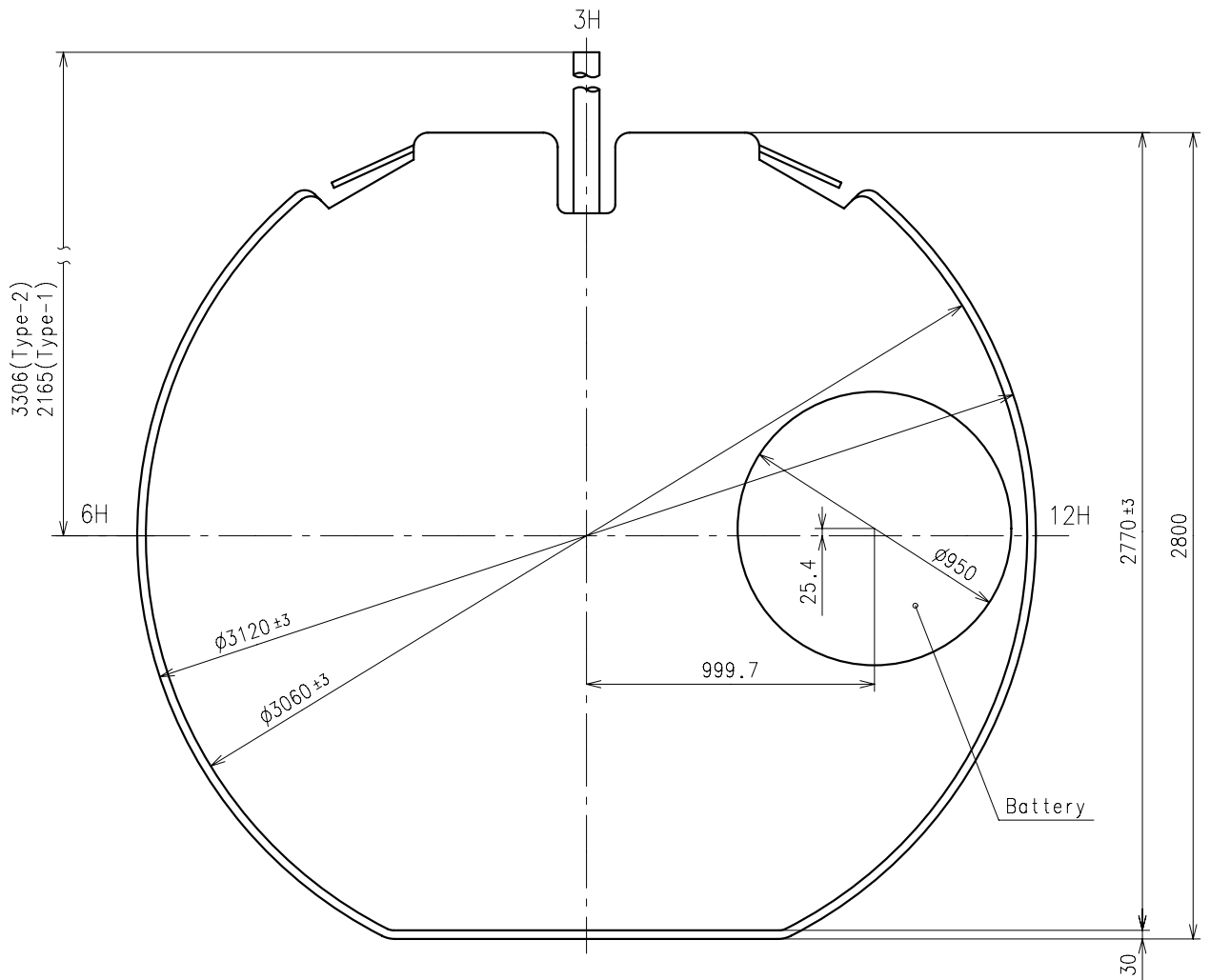




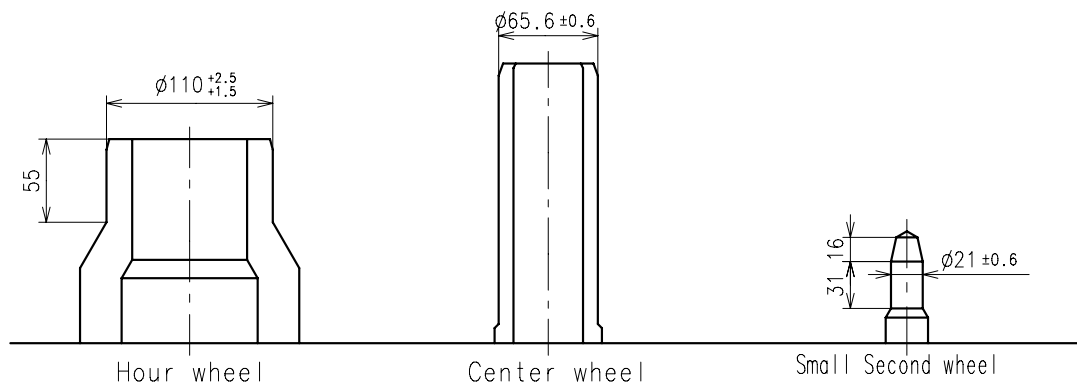
Center post		Type M (2) VL57B**	Type L (3) VL57B**
Maximum height from dial support	H1	185	255
Total height including movement	H2	582	652
Maximum height from dial support	H3	70	135

*1: Pullout stroke

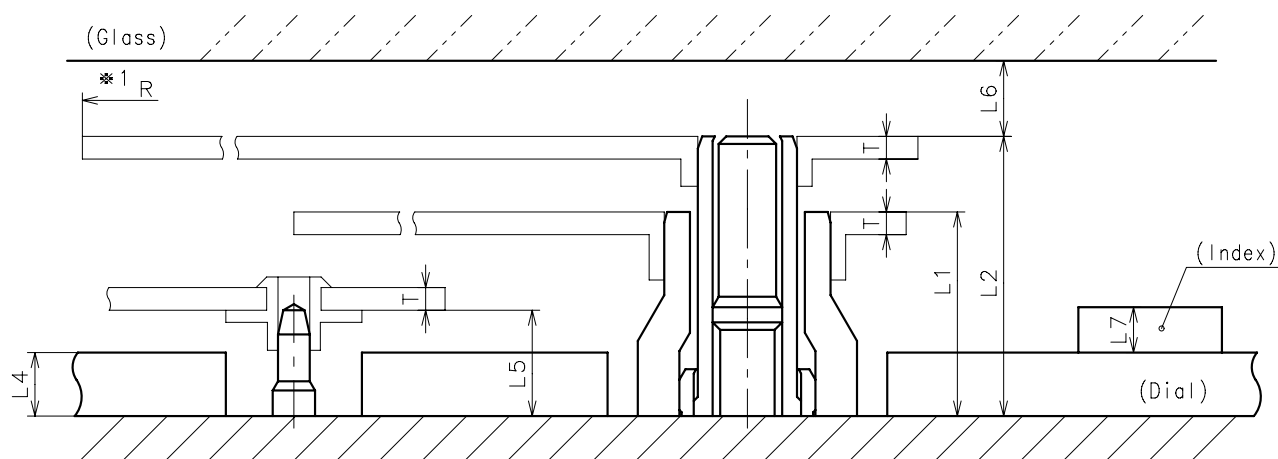
*2: The earth spring is absolutely placed in contact with the case back.



- * Unbalance
 - Hour hand $\leq 0.6\mu\text{N}\cdot\text{m}$ ($60\mu\text{g}\cdot\text{m}$)
 - Minute hand $\leq 0.9\mu\text{N}\cdot\text{m}$ ($90\mu\text{g}\cdot\text{m}$)
 - Small Second hand $\leq 0.06\mu\text{N}\cdot\text{m}$ ($6\mu\text{g}\cdot\text{m}$)
- * Moment of inertia
 - Small Second hand $\leq 0.05\mu\text{g}\cdot\text{m}^2$

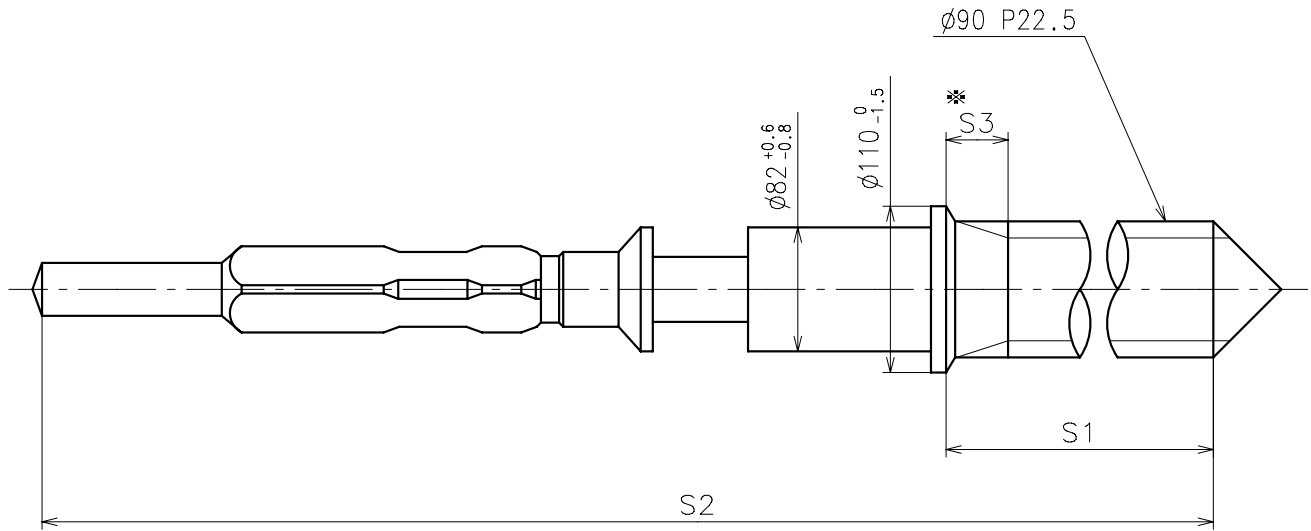


	Parts No.		
	Hour wheel	Center wheel	Small Second wheel
Type M (2) VL57B*	0271661	0221662	0888510
Type L (3) VL57B**	0271662	0221663	0888511



	L1	L2	L4	L5	L6	L7	T	*1 R
Type M (2) VL57B**	135	185	40	70	MIN: 50	MAX: 50	15	MAX: 1500
Type L (3) VL57B**	205	255	105	135	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.

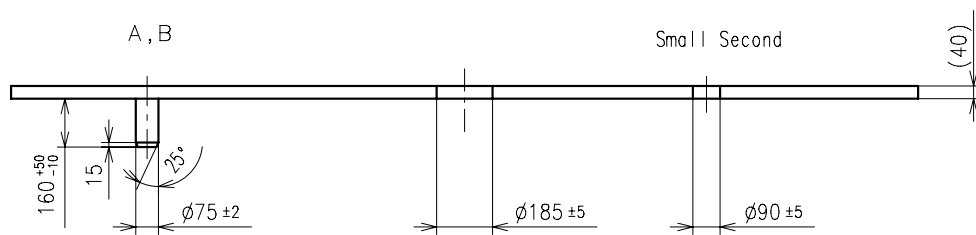
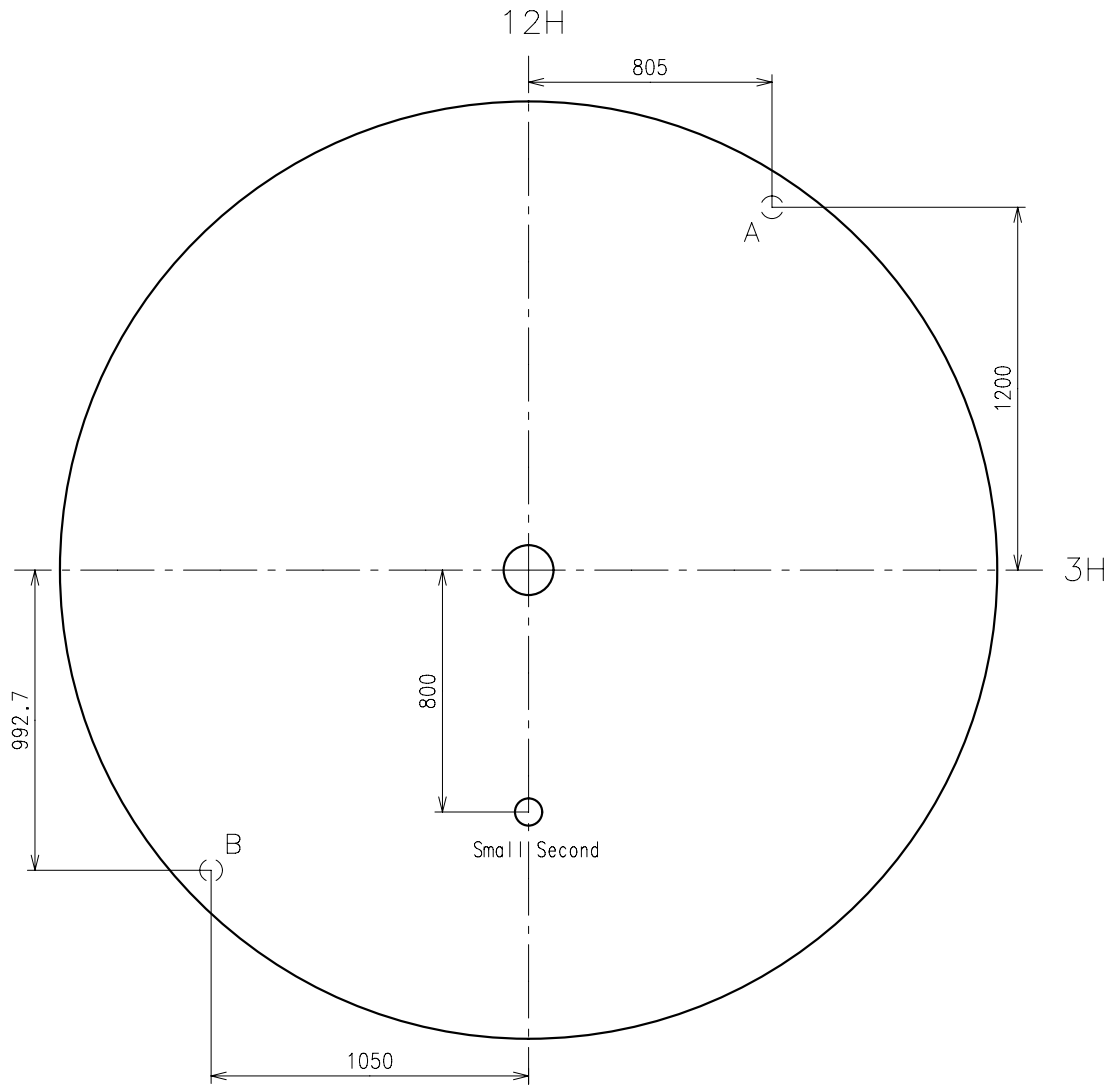


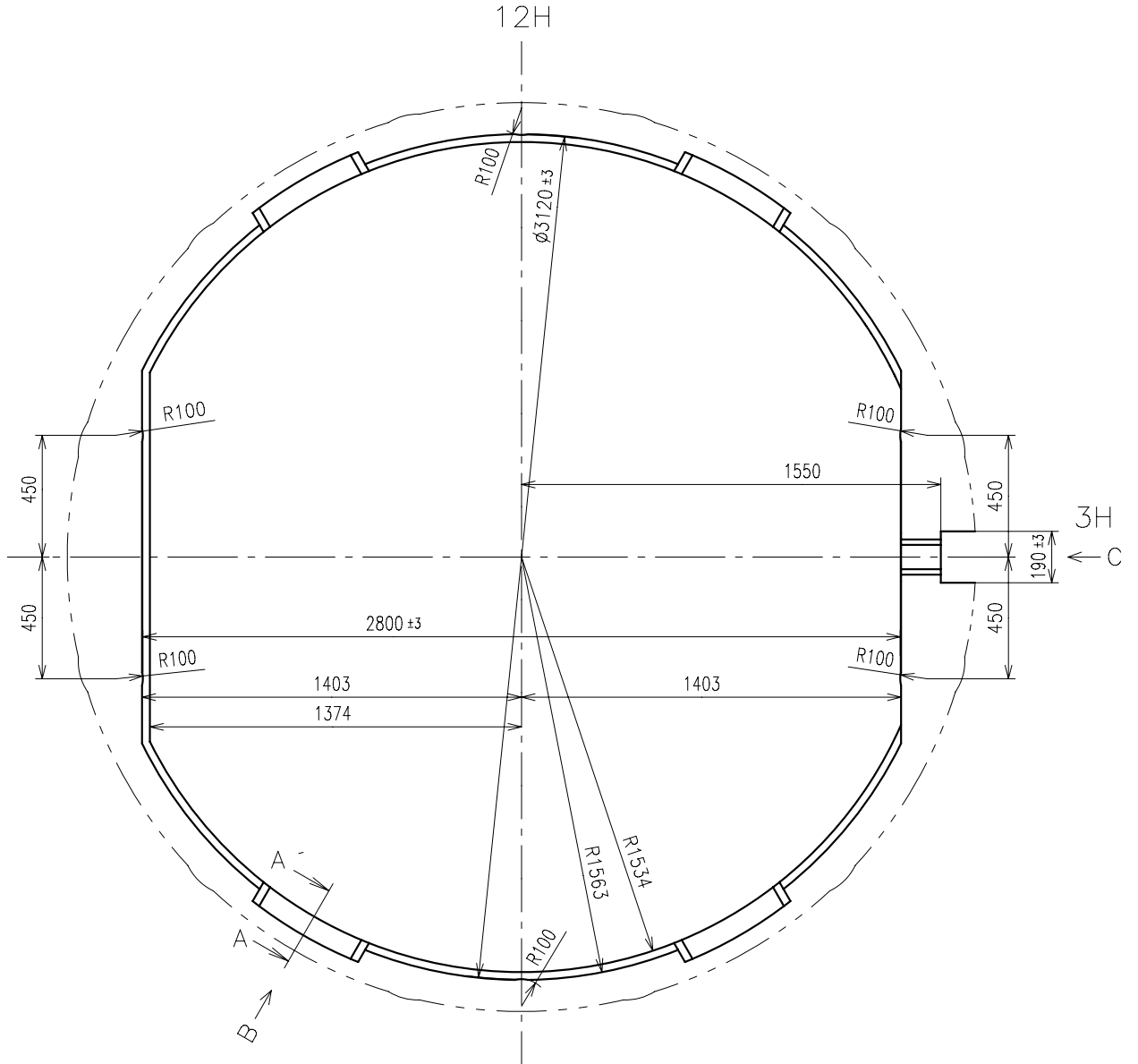
※ Not threaded

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

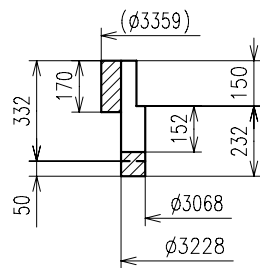
Material : Steel

Hardness : Vickers 600±50

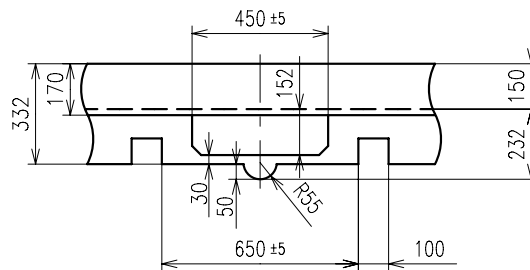




A-A' section



B view



C view

