

Watch Movement Specification and Drawing

SMALL SECOND

# Cal. VL58B

Movement Size

13 1/2'''

Casing Diameter

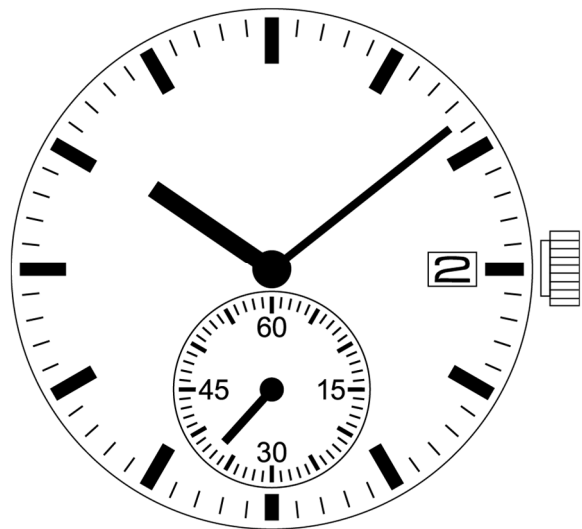
Ø 30.6mm

Height

3.97mm

Battery Life

5 years



Date: 19/Oct./'18

# Cal. VL58B

Items	Rev.	Page
Specifications	00	1
Appearance	00	2
Casing	00	3
Hand fitting	00	4
Hand setting stem	00	5
Dial-01	00	6-01
Dial-02	00	6-02
Casing ring	00	7

**Analog Quartz 13 1/2" Small second Movement with Date**

**1. MOVEMENT DIMENSIONS**

Outside diameter	$\phi$ 31.2mm × 28.0mm(3-9H)
Casing diameter	$\phi$ 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 Hand	Hour / Minute						
Small hand	Small second (6H)						
Calendar	Instant setting device for date calendar						
Reset switch							
Power depletion warning function (BLD) (Small second hand moves at 2-second intervals)							
Setting mechanism	<table style="width: 100%; border-collapse: collapse;"> <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 / reset</td> </tr> </table>	Crown at normal position	: Free	Crown pulled out 1st click	: Instant date change	Crown pulled out 2nd click	: time setting / reset
Crown at normal position	: Free						
Crown pulled out 1st click	: Instant date change						
Crown pulled out 2nd click	: time setting / reset						

**4. FEATURES**

Jewels	0 Jewels						
Anti-magnetism	Over 1600A/m (Direct current magnetic field)						
Maximum unbalance of hands	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Hour hand</td> <td>: 0.6 <math>\mu</math> N·m</td> </tr> <tr> <td>Minute hand</td> <td>: 0.9 <math>\mu</math> N·m</td> </tr> <tr> <td>Small second hand</td> <td>: 0.06 <math>\mu</math> N·m</td> </tr> </table>	Hour hand	: 0.6 $\mu$ N·m	Minute hand	: 0.9 $\mu$ N·m	Small second hand	: 0.06 $\mu$ N·m
Hour hand	: 0.6 $\mu$ N·m						
Minute hand	: 0.9 $\mu$ N·m						
Small second hand	: 0.06 $\mu$ N·m						
Moment of Inertia	Small second hand : less than 0.05 $\mu$ g·m <sup>2</sup>						

**5. BATTERY**

Type / Size	Silver oxide battery / $\phi$ 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 $\mu$ A
Operation stopping voltage	1.1V

**6. SEPARATED PARTS (Parts code)**

Hand setting stem	0351578 or 0351177
Battery	SR920SW

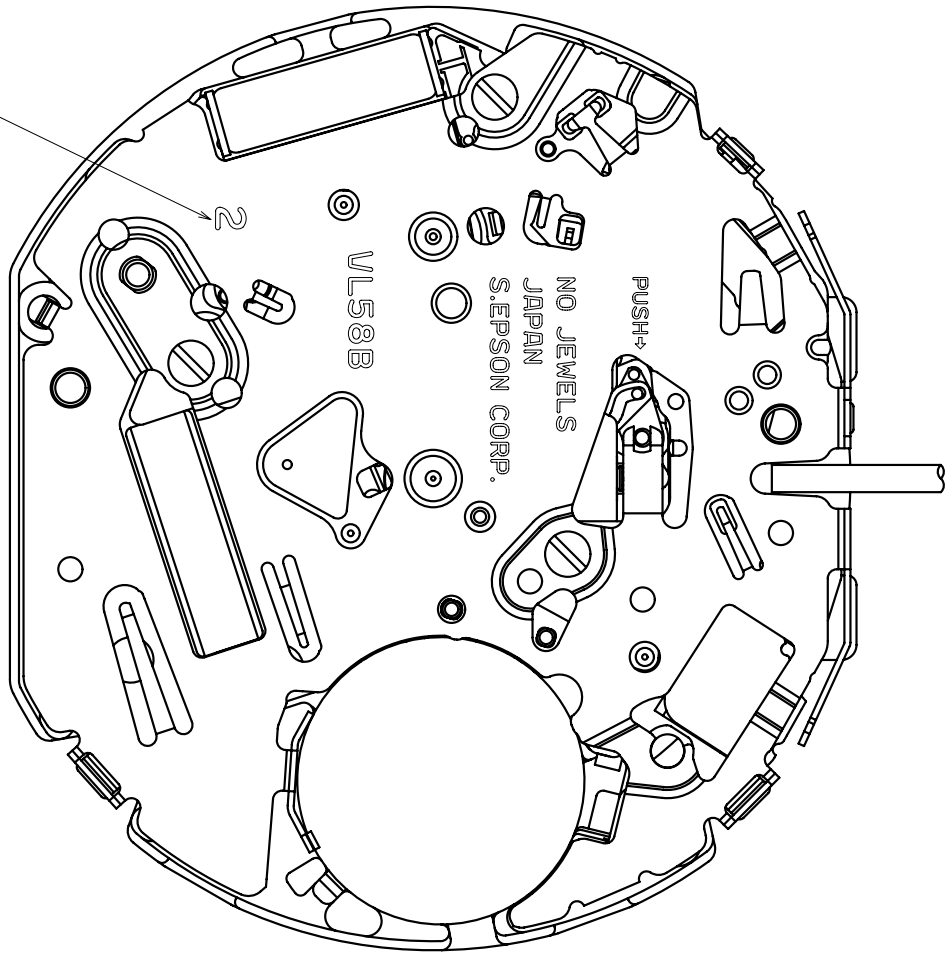
**7. TEST OF ACCURACY**

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

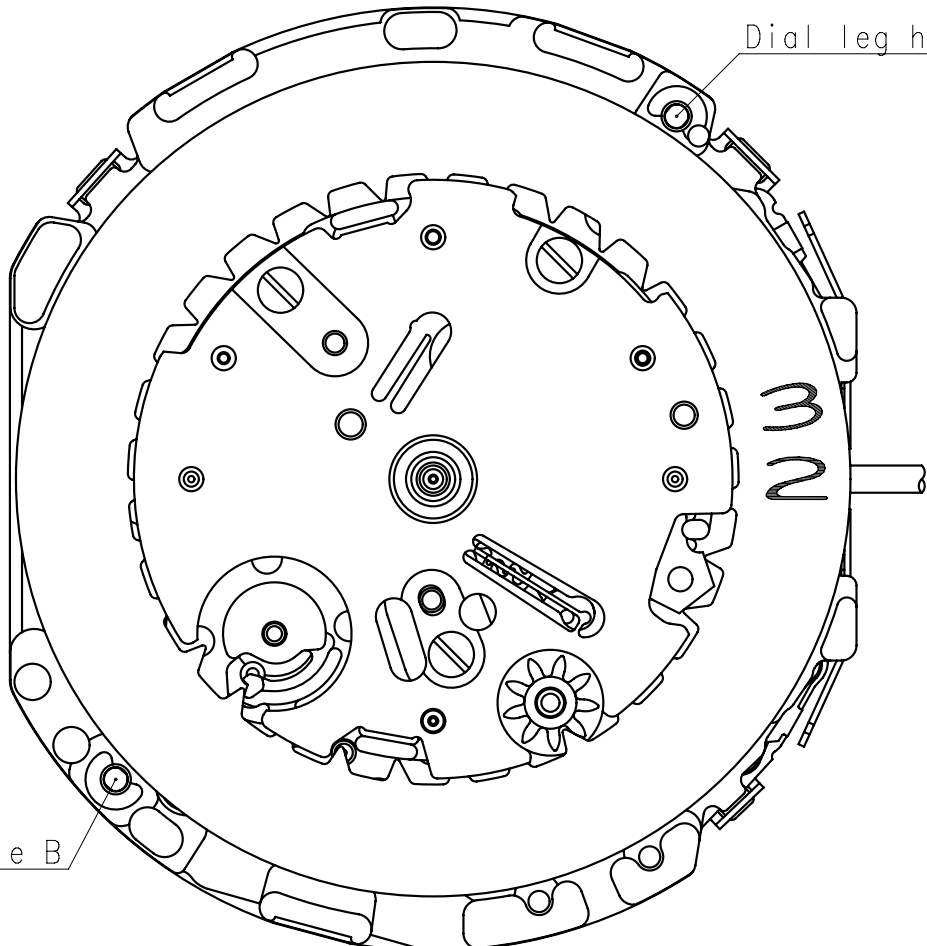
All specifications are subject to change without notice.

Hands type

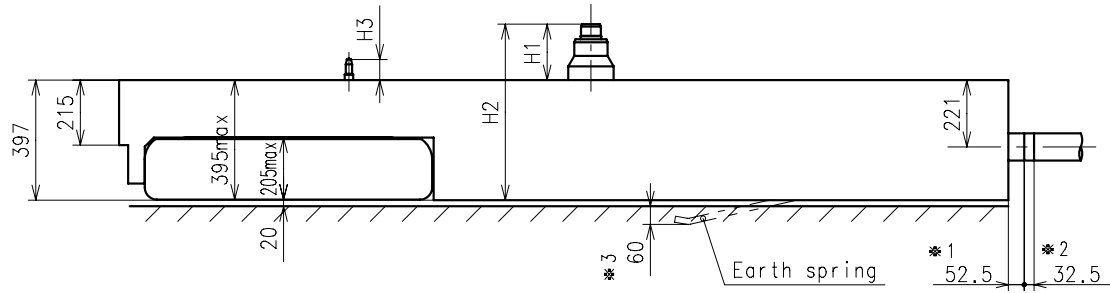
	Mark
Type M	2
Type L	3



Dial leg hole A



Dial leg hole B

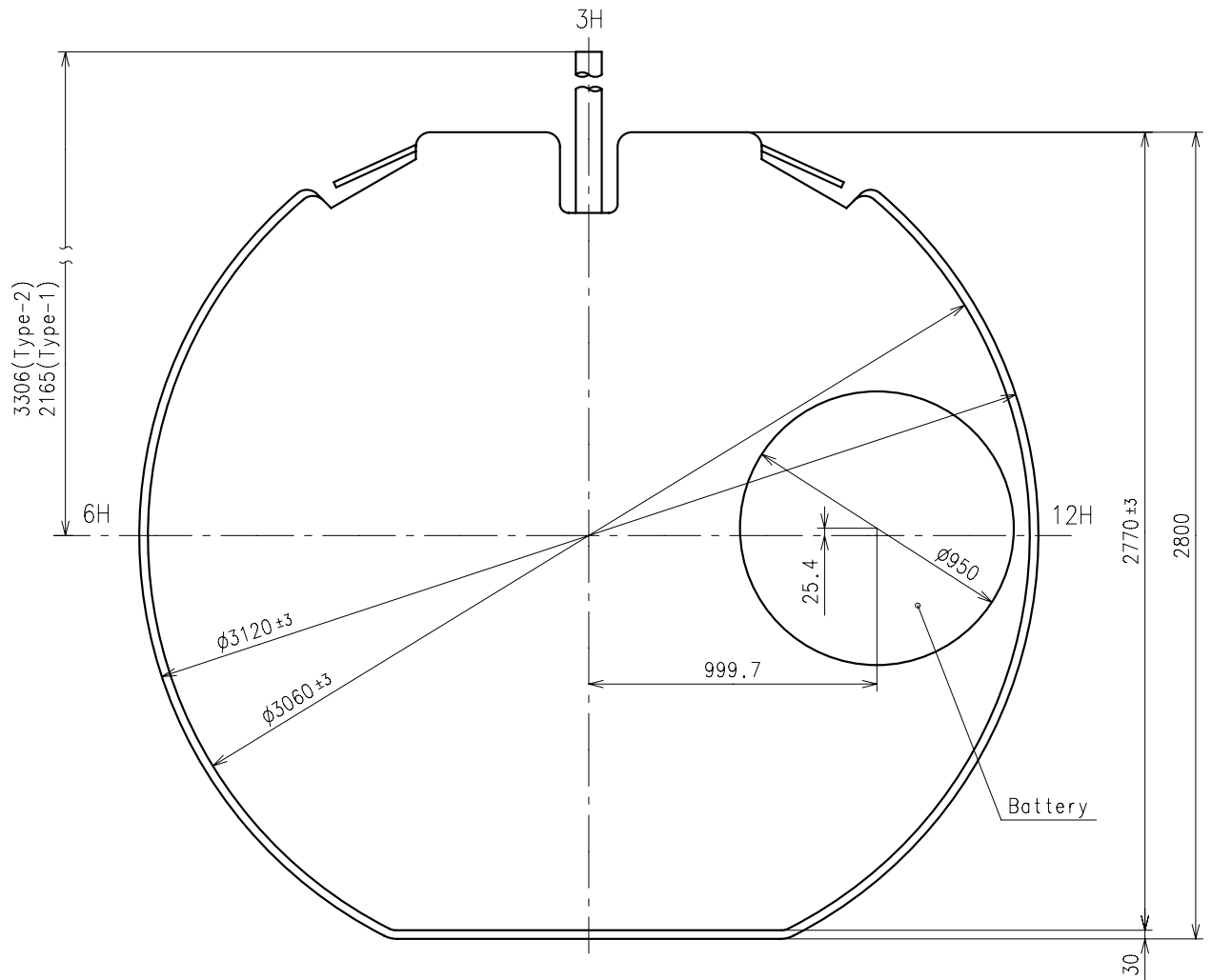


Center post		Type M (2) VL58B**	Type L (3) VL58B**
Maximum height from dial support	H1	185	255
Total height including movement	H2	582	652
Maximum height from dial support	H3	70	135

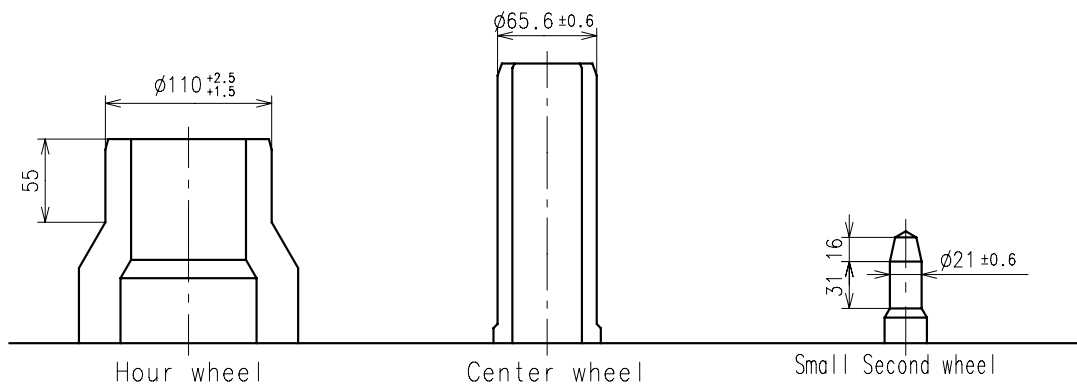
\*1: First pullout stroke

\*2: Second pullout stroke

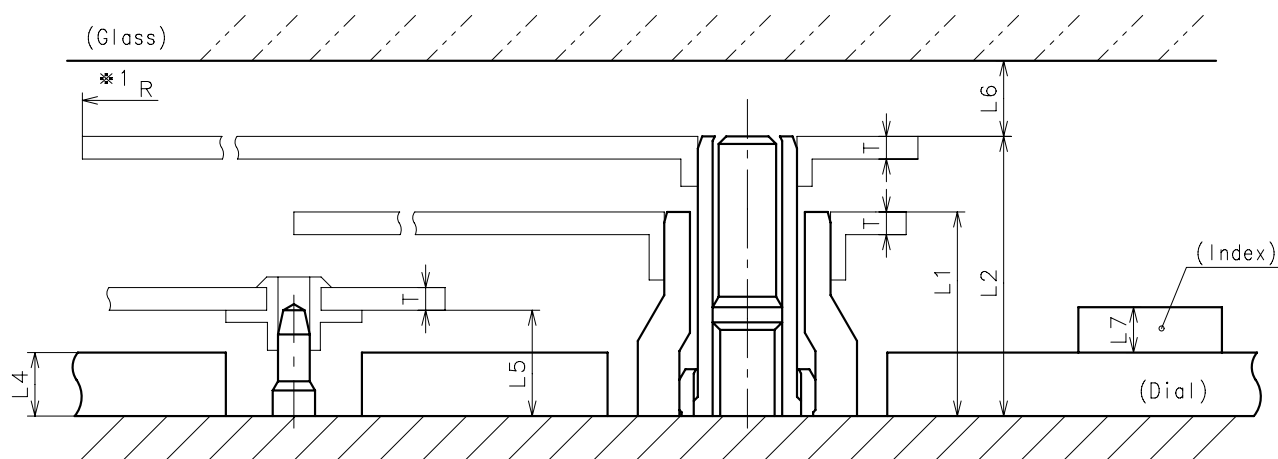
\*3: The earth spring is absolutely placed in contact with the case back.



- \* 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  $\leq 0.05\mu\text{g}\cdot\text{m}^2$

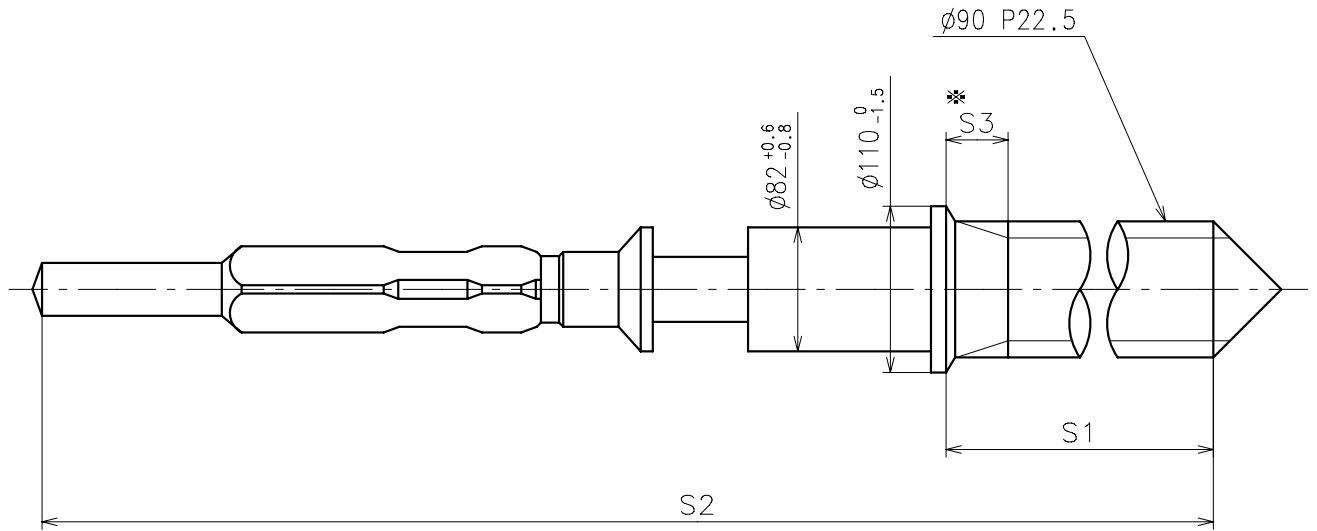


	Parts No.		
	Hour wheel	Center wheel	Small Second wheel
Type M (2) VL58B**	0271661	0221662	0888510
Type L (3) VL58B**	0271662	0221663	0888511



	L1	L2	L4	L5	L6	L7	T	*1R
Type M (2) VL58B**	135	185	40	70	MIN: 50	MAX: 50	15	MAX: 1500
Type L (3) VL58B**	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.

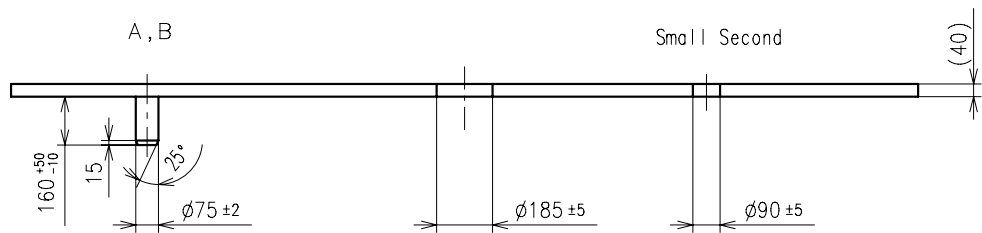
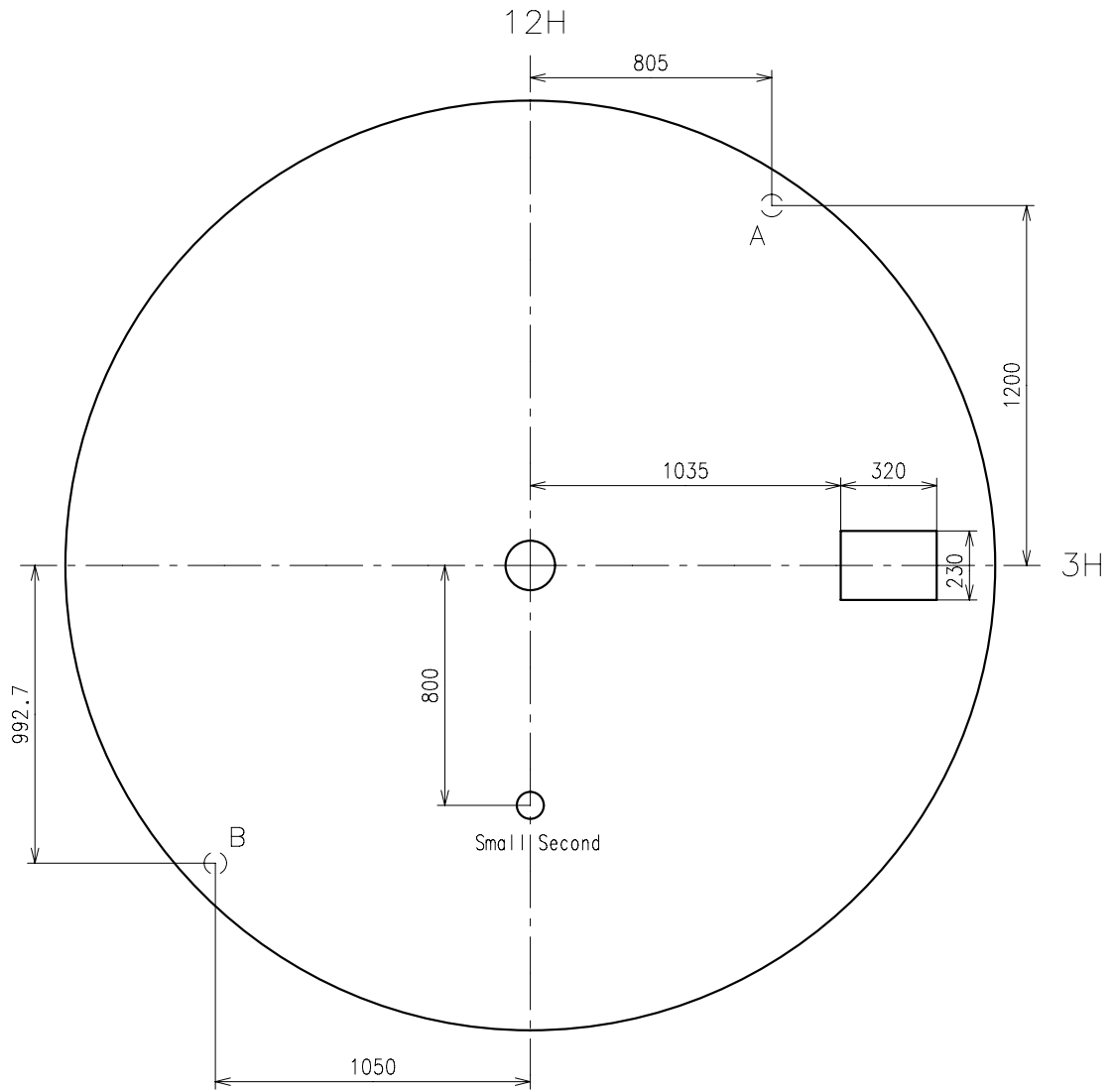


※ Not threaded

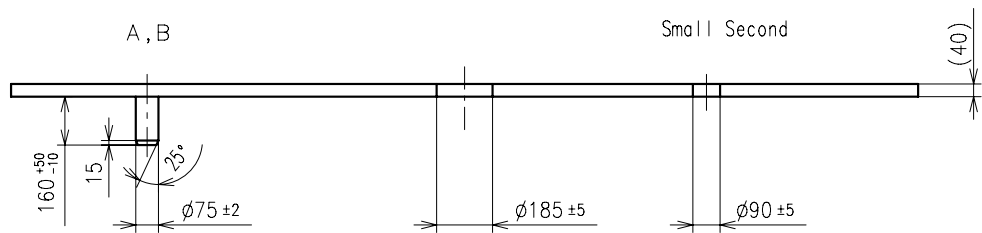
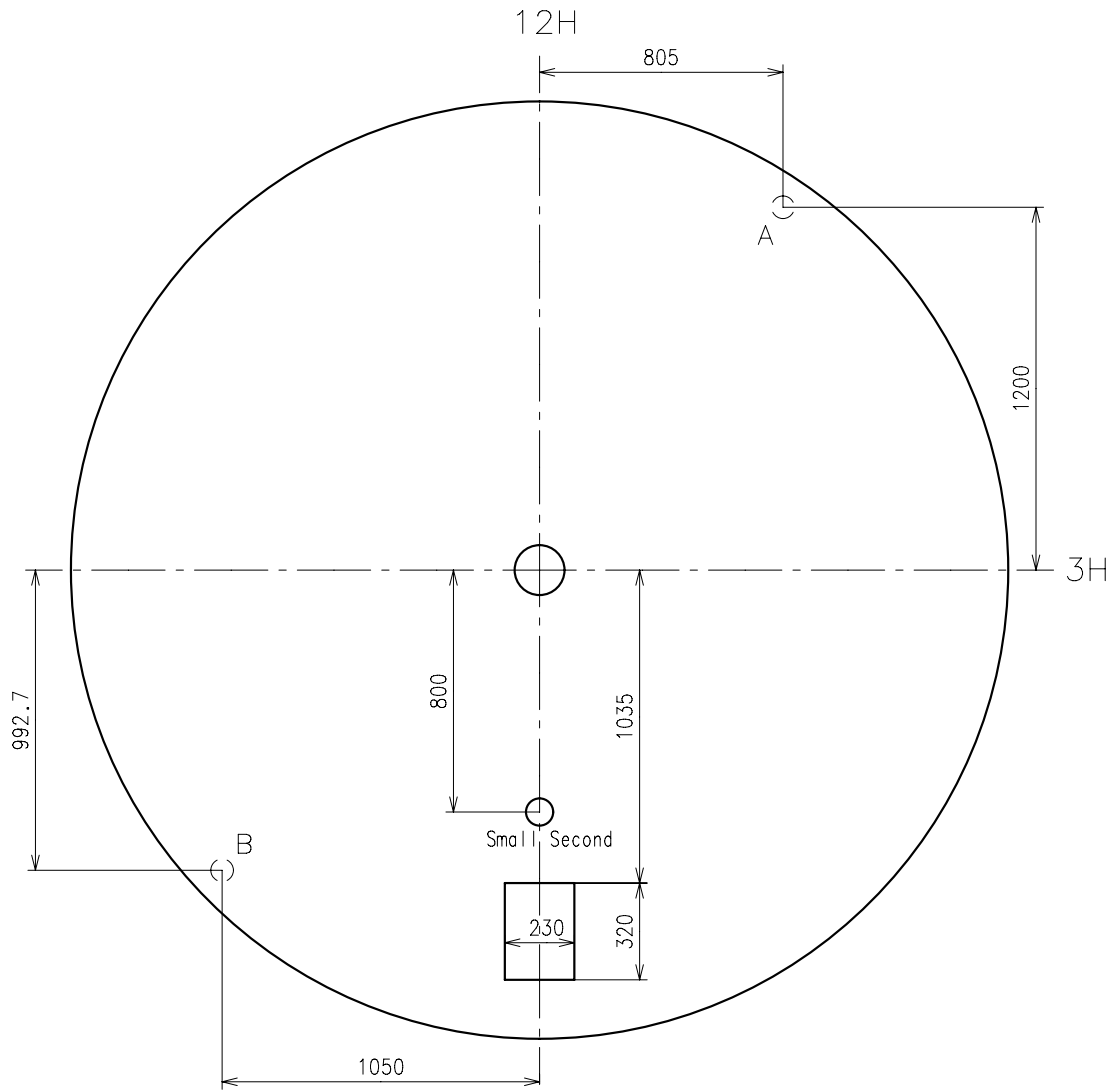
	Part No.	S1	S2	※ S3
Type-1	0351177	1366	1964	60
Type-2 (Standard)	0351578	2507	3105	650

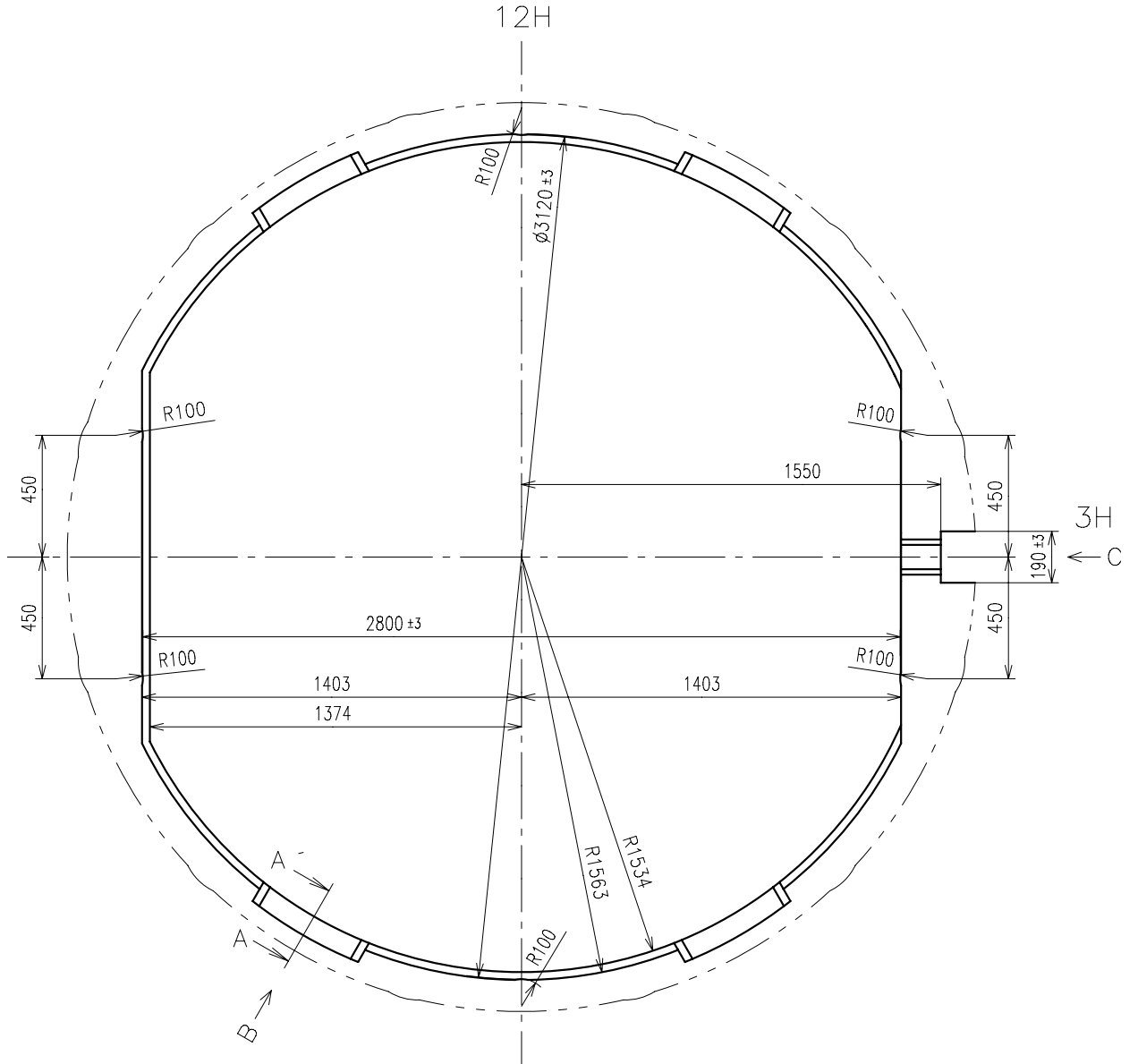
Material : Steel

Hardness : Vickers 600±50

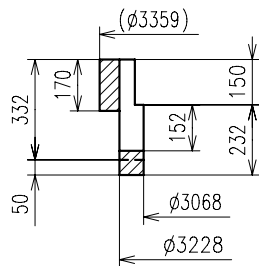




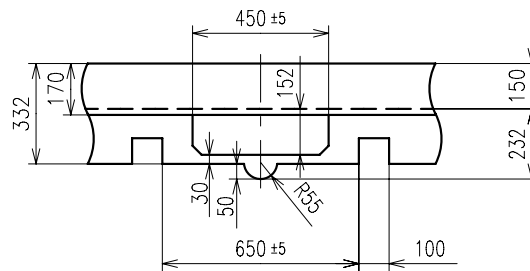




A-A' section



B view



C view

