



World Time & Alarm

# Cal. YM26A

$\phi$  27.0 mm  
H 3.7 mm

Items	Rev.	Page
Specifications	00	1
Appearance	00	2
Casing	00	3
Hand fitting	00	4
Hand setting stem	00	5
Magnetic shield plate	00	6
Dial-01	00	7-01
Dial-02	00	7-02
Casing ring-01	00	8-01
Casing ring-02	00	8-02
Attention for assembly	00	9
Attention of casing part structure	00	10
Operation-01	00	11-01
Operation-02	00	11-02
Operation-03	00	11-03

Date: 31/Aug./'12

S.EPSON Products

MOVEMENT SPECIFICATIONS

Date : 31/Aug./12

Rev. : 00

**CAL. YM26A**

Analog Quartz 12" World time & Alarm Movement

**1. MOVEMENT DIMENSIONS**

Outside diameter  $\phi$  27.60mm(12H-6H) × 24.00mm(3H-9H)  
 Casing diameter  $\phi$  27.00mm(12H-6H)  
 Total height 3.70mm (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 hand / Minute hand / City hand (Center)  
 Small hands World time hour and minute hand (12H)  
 Alarm hour and minute hand (6H)  
 Small second hand (9H)  
 Calendar Instant setting device for date calendar  
 Reset switch  
 System-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 : Instant date change  
 Crown pulled out 2nd click : Time setting / Reset  
 : World time setting / Alarm time setting  
 World time 2H button: City set (clockwise)  
 4H button: City set (counterclockwise)

**4. FEATURES**

Jewels 0 Jewels  
 Anti-magnetism Over 1600A/m (Direct current magnetic field)  
 Maximum unbalance of hands Small second hand : 0.03  $\mu$  N·m  
 World time minute hand : 0.03  $\mu$  N·m  
 World time hour hand : 0.025  $\mu$  N·m  
 Alarm minute hand : 0.03  $\mu$  N·m  
 Alarm hour hand : 0.025  $\mu$  N·m  
 City hand : 0.06  $\mu$  N·m  
 Minute hand : 0.70  $\mu$  N·m  
 Moment of inertia City hand : less than 0.2  $\mu$ g·m<sup>2</sup>

**5. BATTERY**

Type / Size Silver oxide battery /  $\phi$  9.5mm × t 2.73mm  
 Recommended battery SR927W  
 Nominal voltage 1.55 V  
 Battery life Approx. 3 years  
 Driving current consumption Approx. 0.80  $\mu$  A  
 Operation stopping voltage 0.9 V

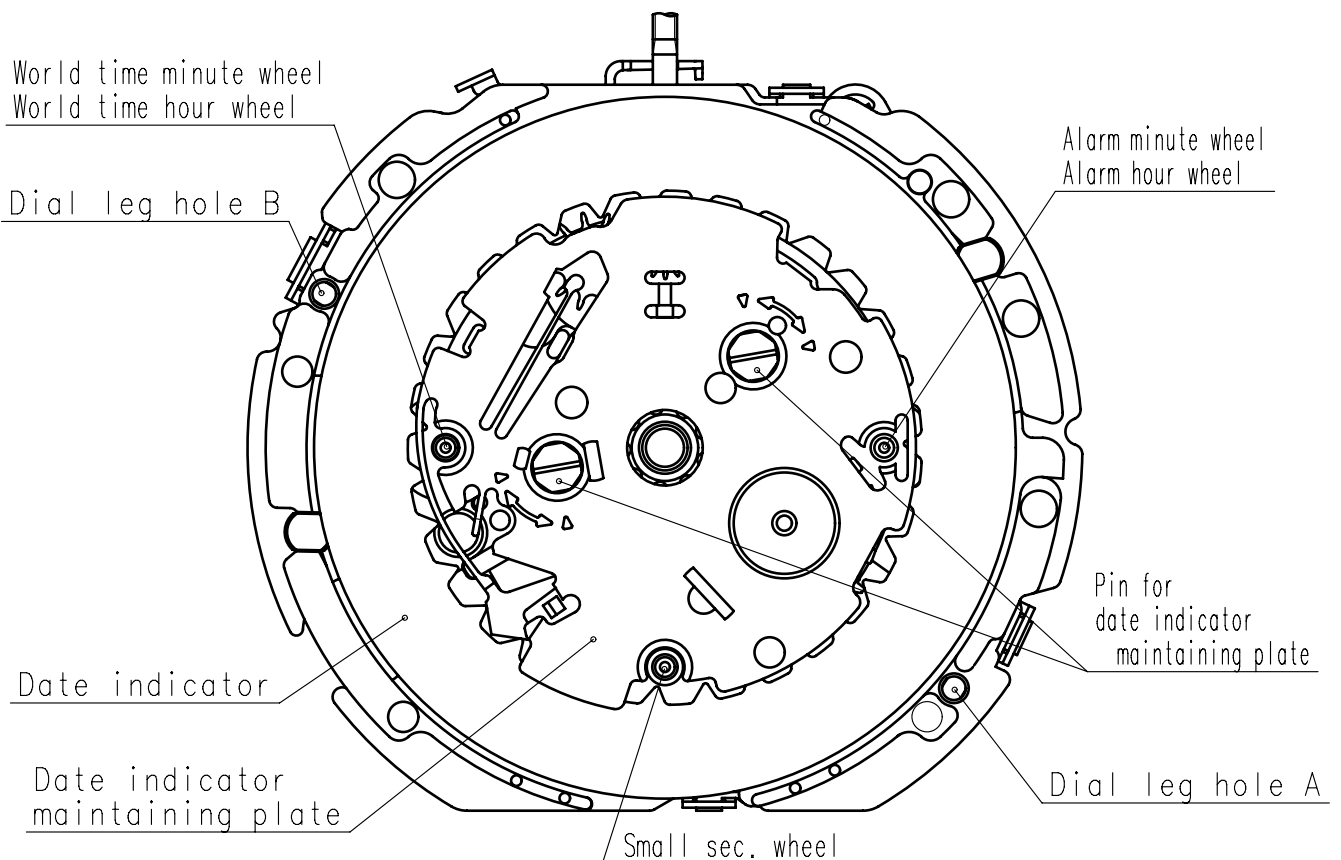
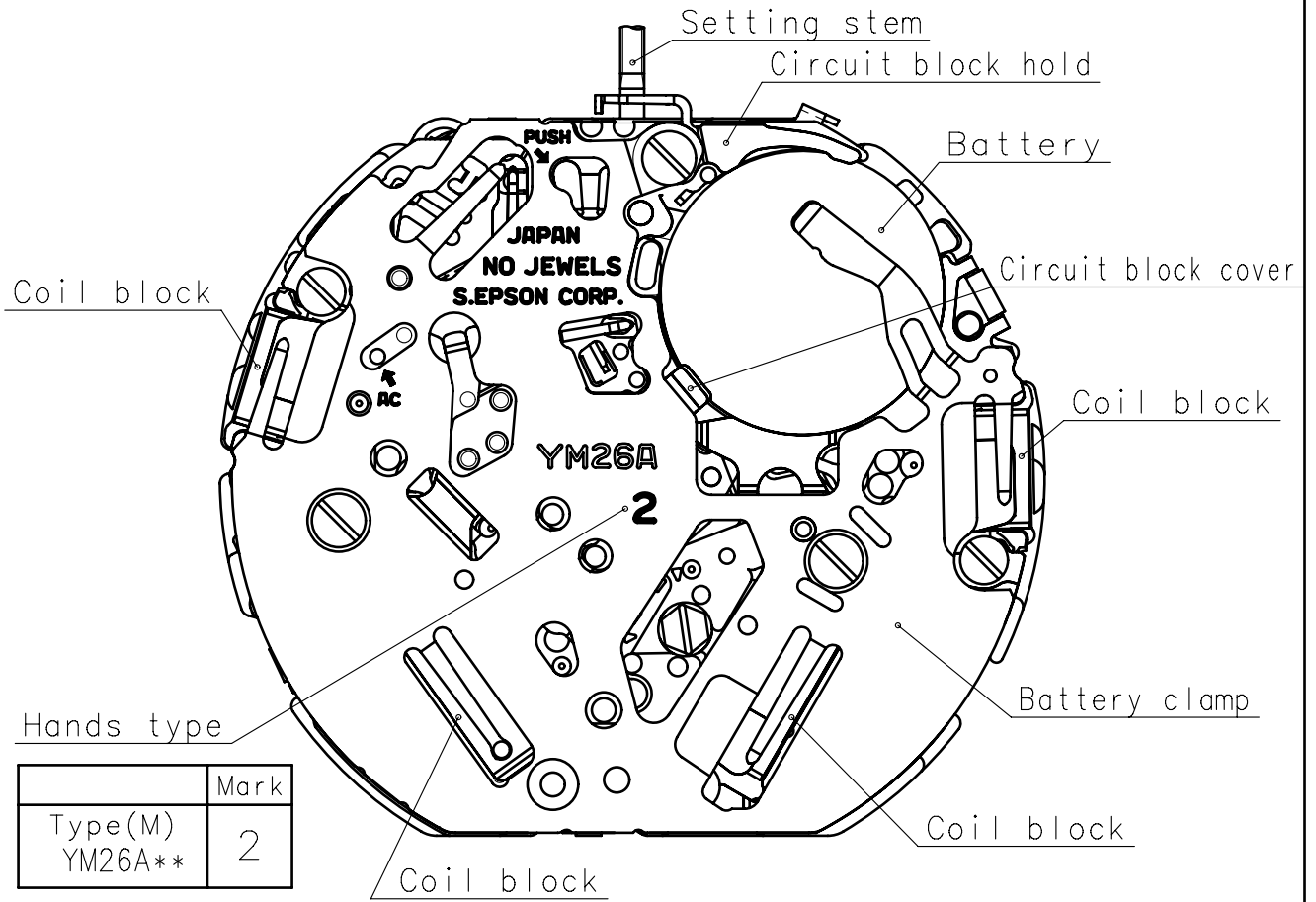
**6. SEPARATED PARTS (Parts code)**

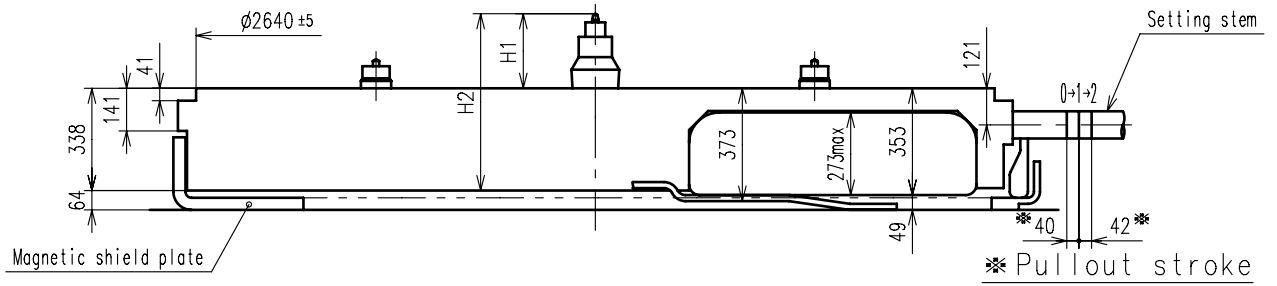
Hand setting stem 0351584 (  $\phi$  90 ) , 0351585 (  $\phi$  90\_Long )  
 Magnetic shield plate 4259509  
 Holding ring for dial 0866650 (standard) 0866789 (special)  
 Battery SR927W  
 A.C. comment seal 0110705  
 Piezoelectric element 4589801

**7. TEST OF ACCURACY**

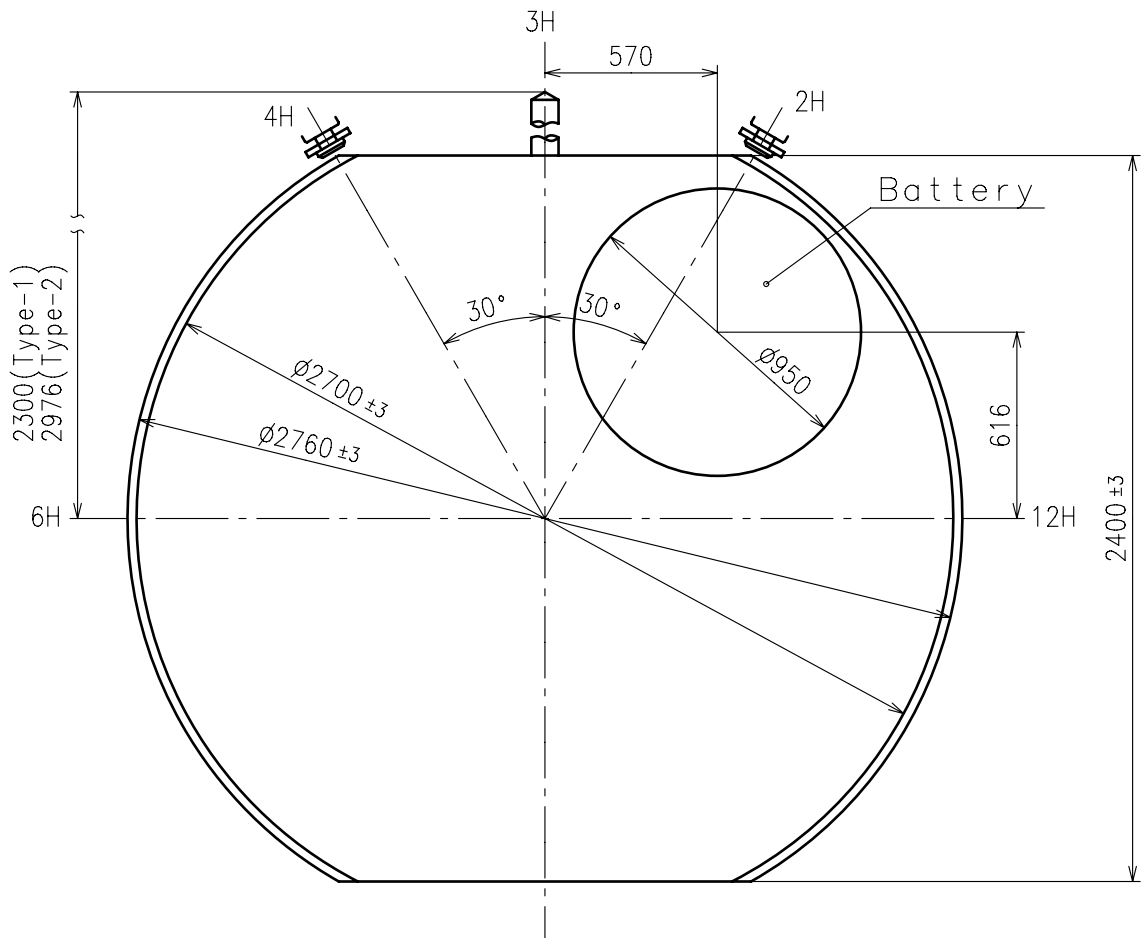
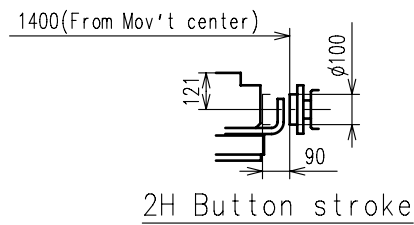
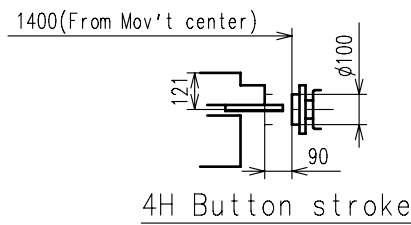
Equipment to be used SEIKO quartz tester QT-99, QT2100  
 Greiner quartz timer-C , Witschi Q-tester 4000  
 Duration of measurement 10 seconds  
 Microphone to be used Electromagnetic detection type

All specifications are subject to change without notice.





Center post		Type M (2) YM26A**
Maximum height from dial support	H1	246.5
Total height incl. movement	H2	584.5



※ Unbalance

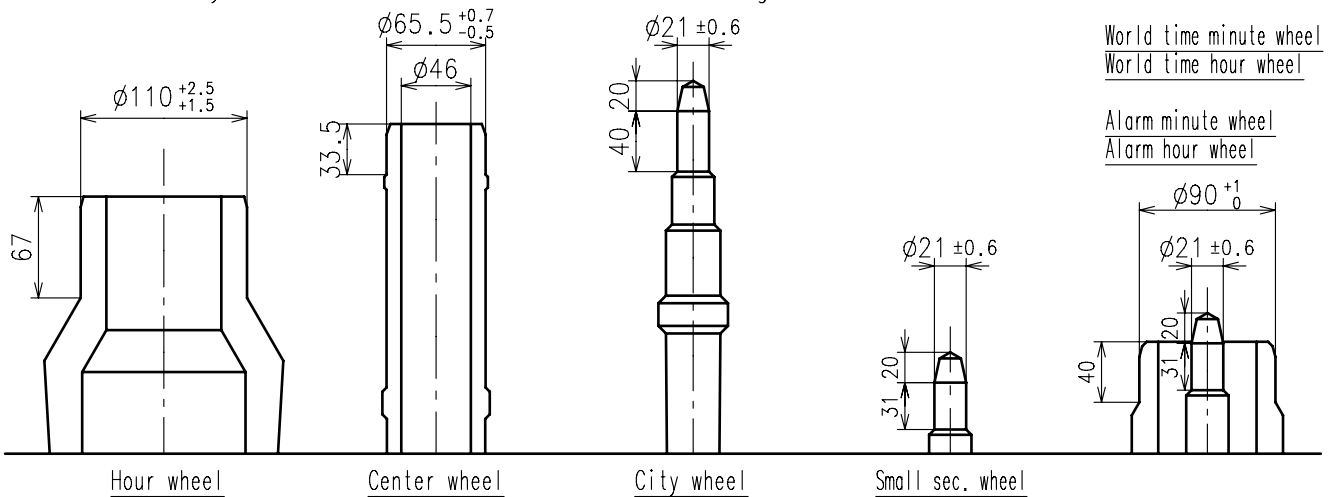
- Small sec. hand
- World time minute hand
- World time hour hand
- Alarm minute hand
- Alarm hour hand
- City hand
- Minute hand

※ Moment of inertia

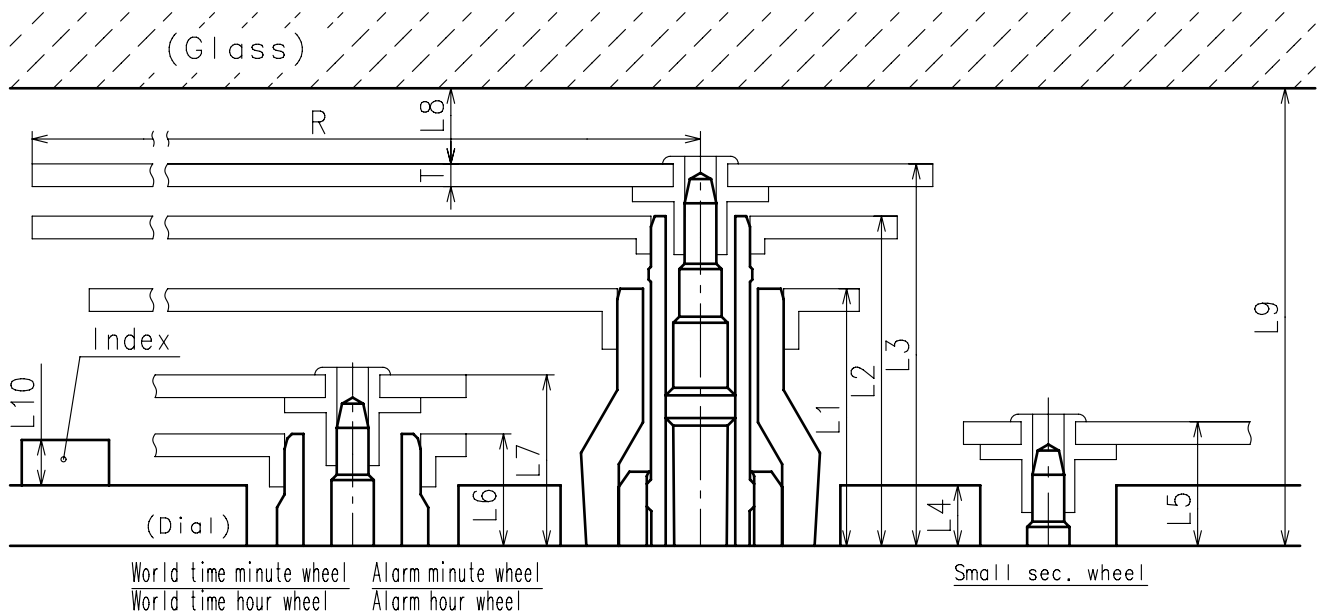
- City hand

≦ 0.03	μ N · m	( 3	μ g · m)
≦ 0.03	μ N · m	( 3	μ g · m)
≦ 0.025	μ N · m	( 2.5	μ g · m)
≦ 0.03	μ N · m	( 3	μ g · m)
≦ 0.025	μ N · m	( 2.5	μ g · m)
≦ 0.06	μ N · m	( 6	μ g · m)
≦ 0.70	μ N · m	( 70	μ g · m)

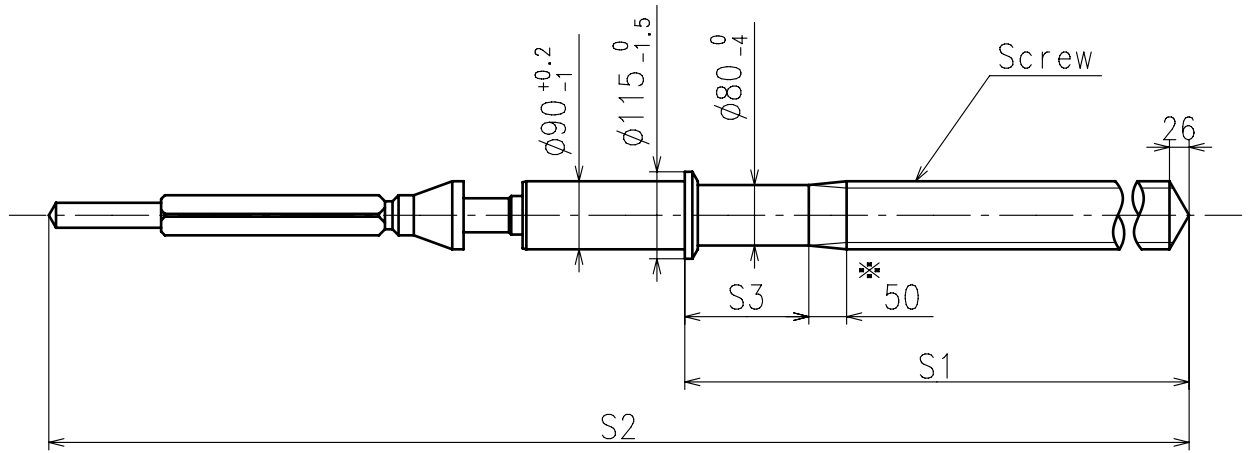
≦ 0.2 μ g · m<sup>2</sup>



	Parts No.							
	Hour wheel	Center wheel	City wheel	Small sec. wheel	World time minute wheel	World time hour wheel	Alarm minute wheel	Alarm hour wheel
Type M (2) YM26A**	0271588	0221583	0888582	0240580	0270582	0278581	0270582	0271583



	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	T	R
Type M (2) YM26A**	170	218	252.5	40	77	74	113	MIN: 50	MIN: 302.5	MAX: 50	15	MAX: 1250



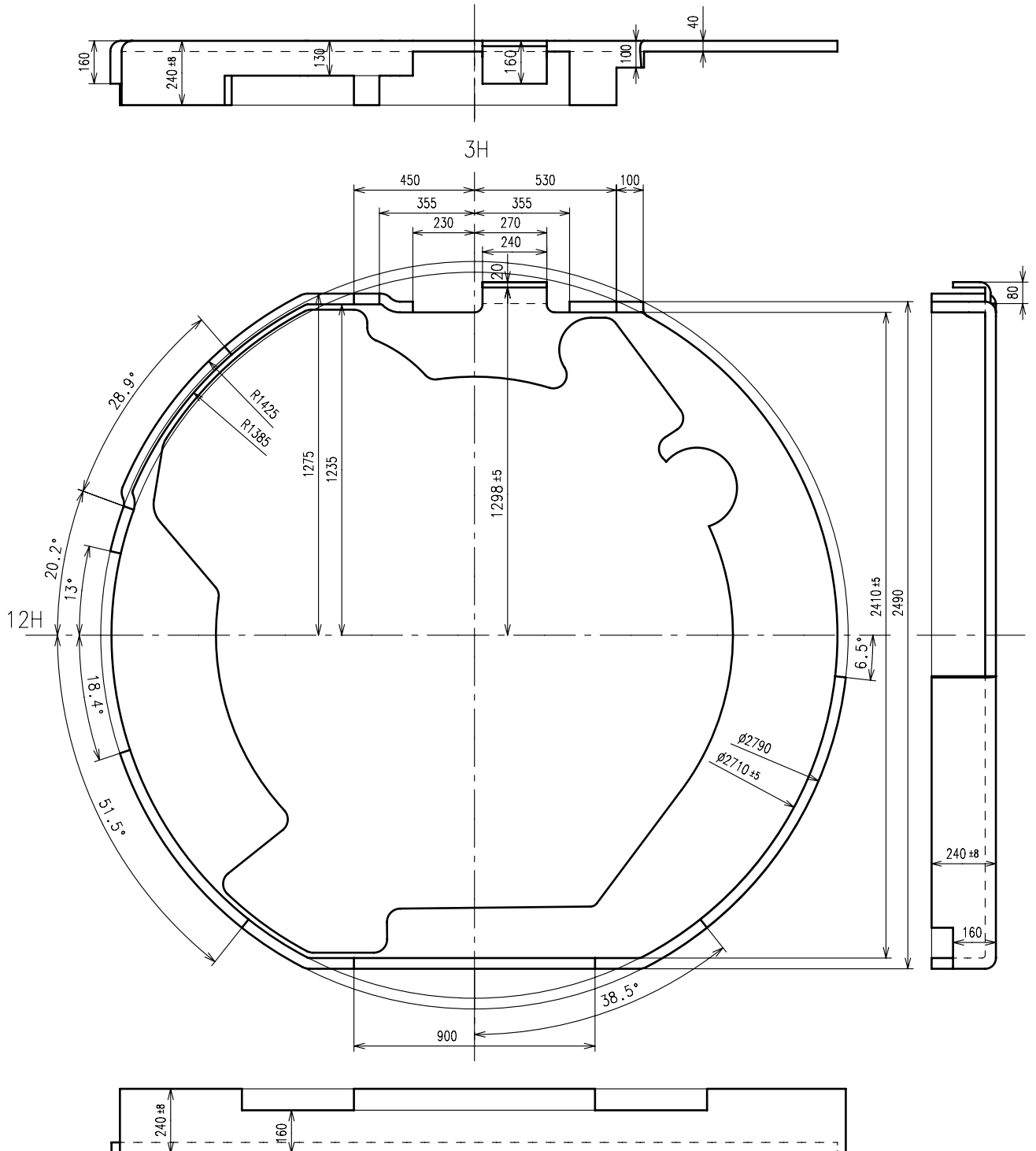
※ Not threaded

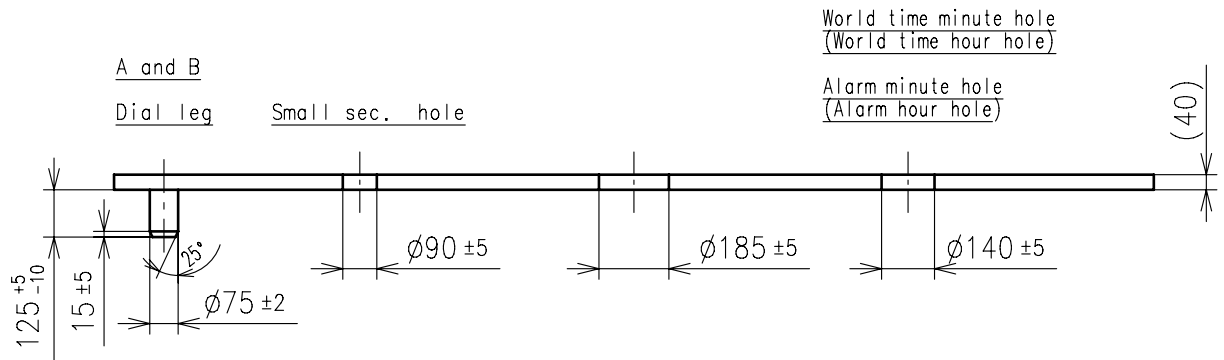
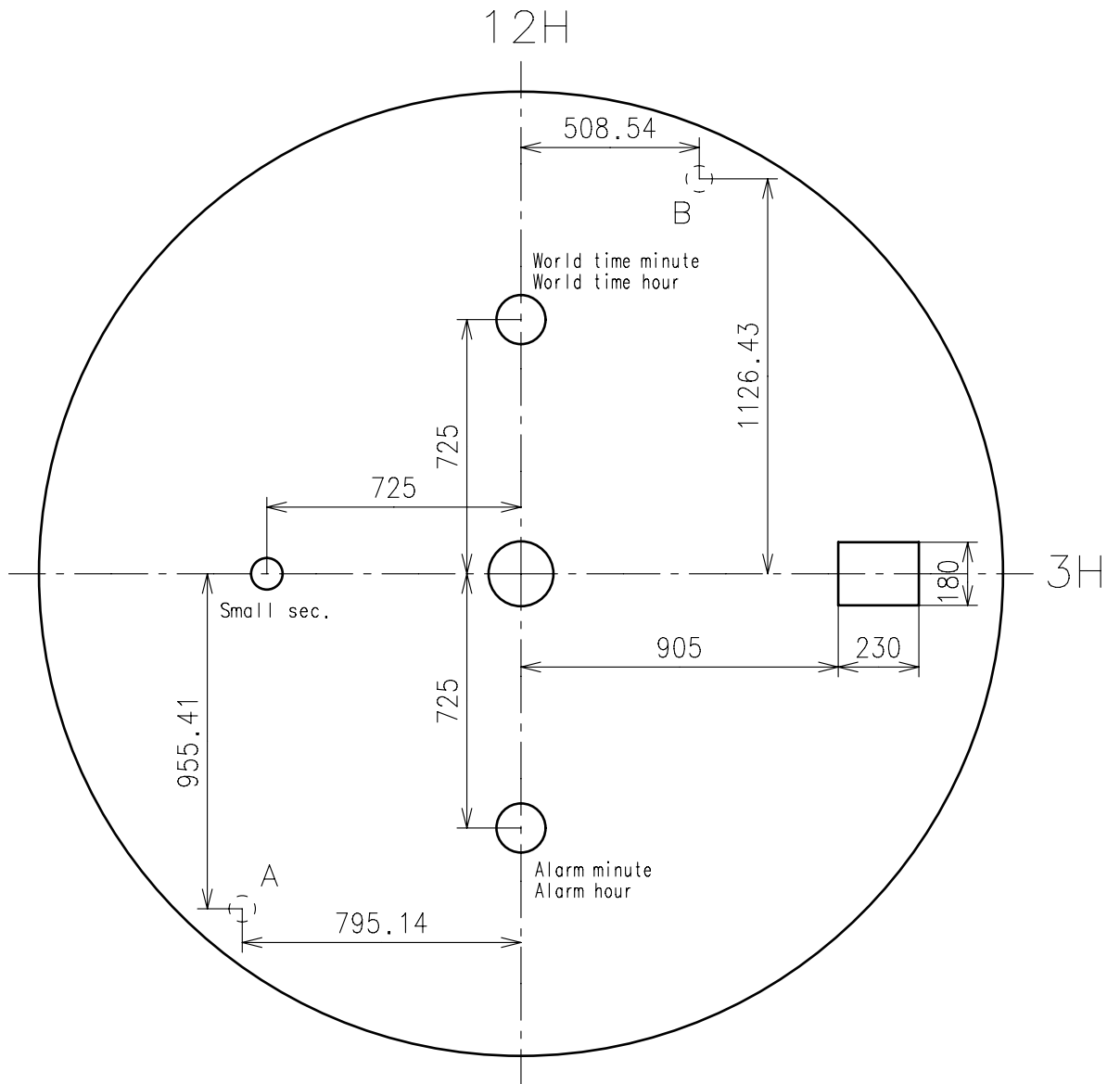
	Part No.	Screw	S1	S2	S3
Type-1 (Standard)	0351584	$\phi 90-22.5$	1164	2005.5	164
Type-2 (Long)	0351585	$\phi 90-22.5$	1840	2681.5	750

Material : Steel

Hardness : Vickers  $600 \pm 50$

Part No. : 4259509





A and B

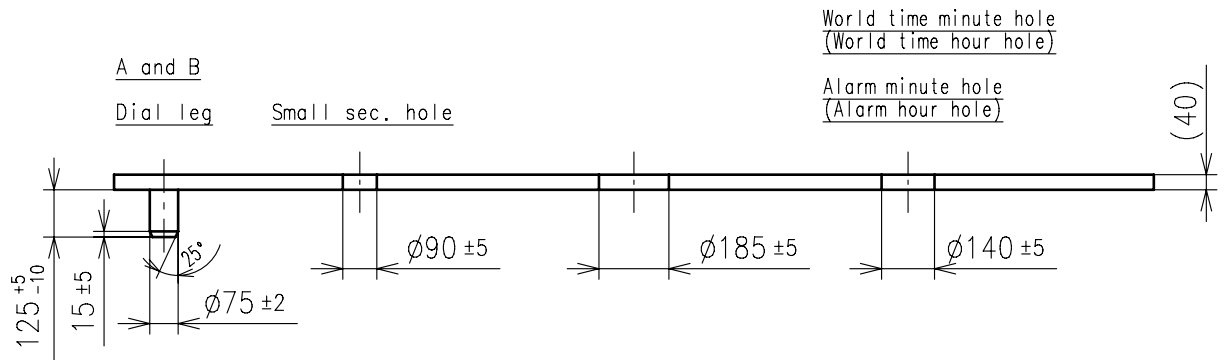
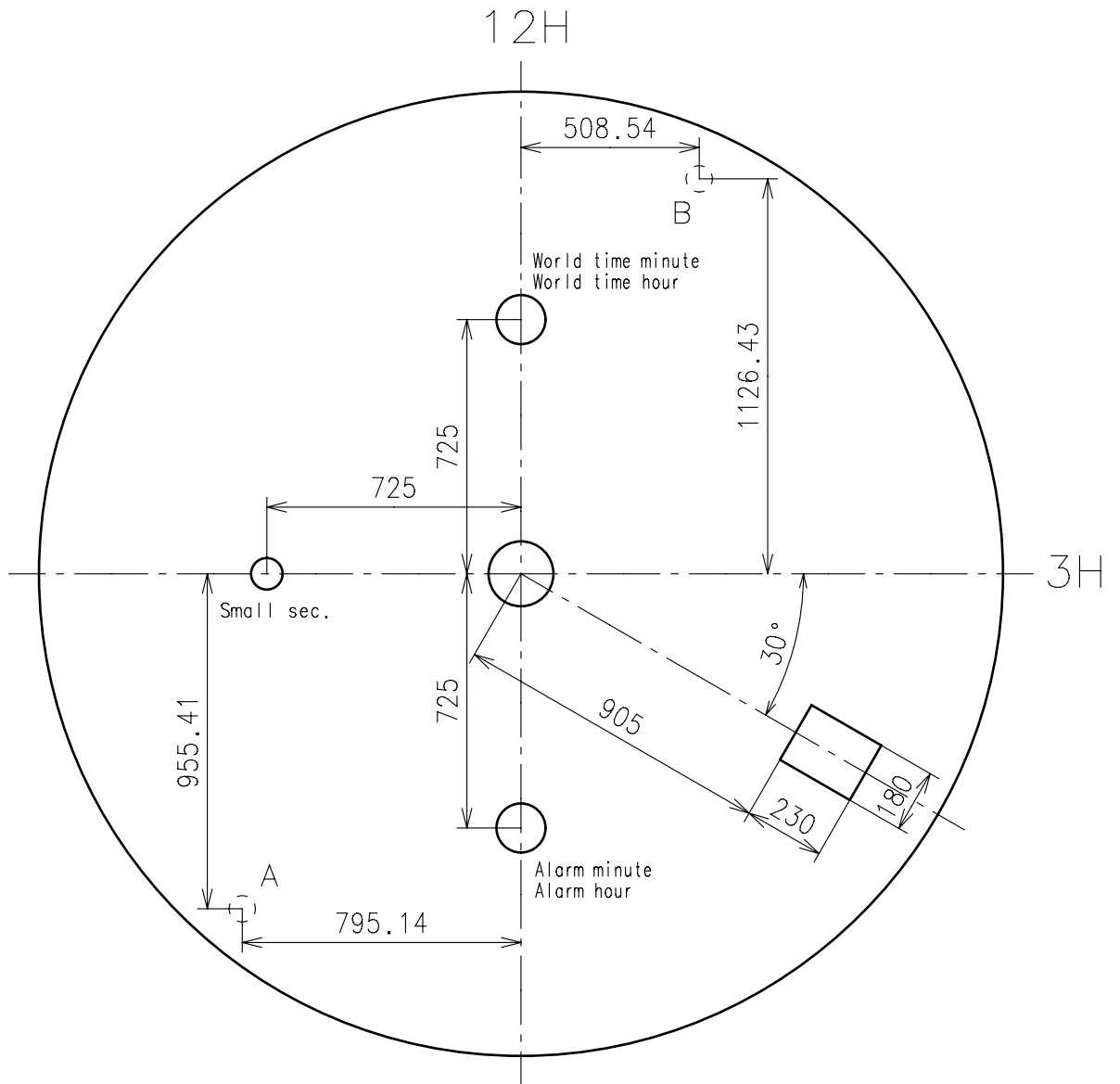
Dial leg

Small sec. hole

World time minute hole  
(World time hour hole)

Alarm minute hole  
(Alarm hour hole)





A and B

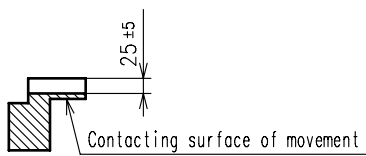
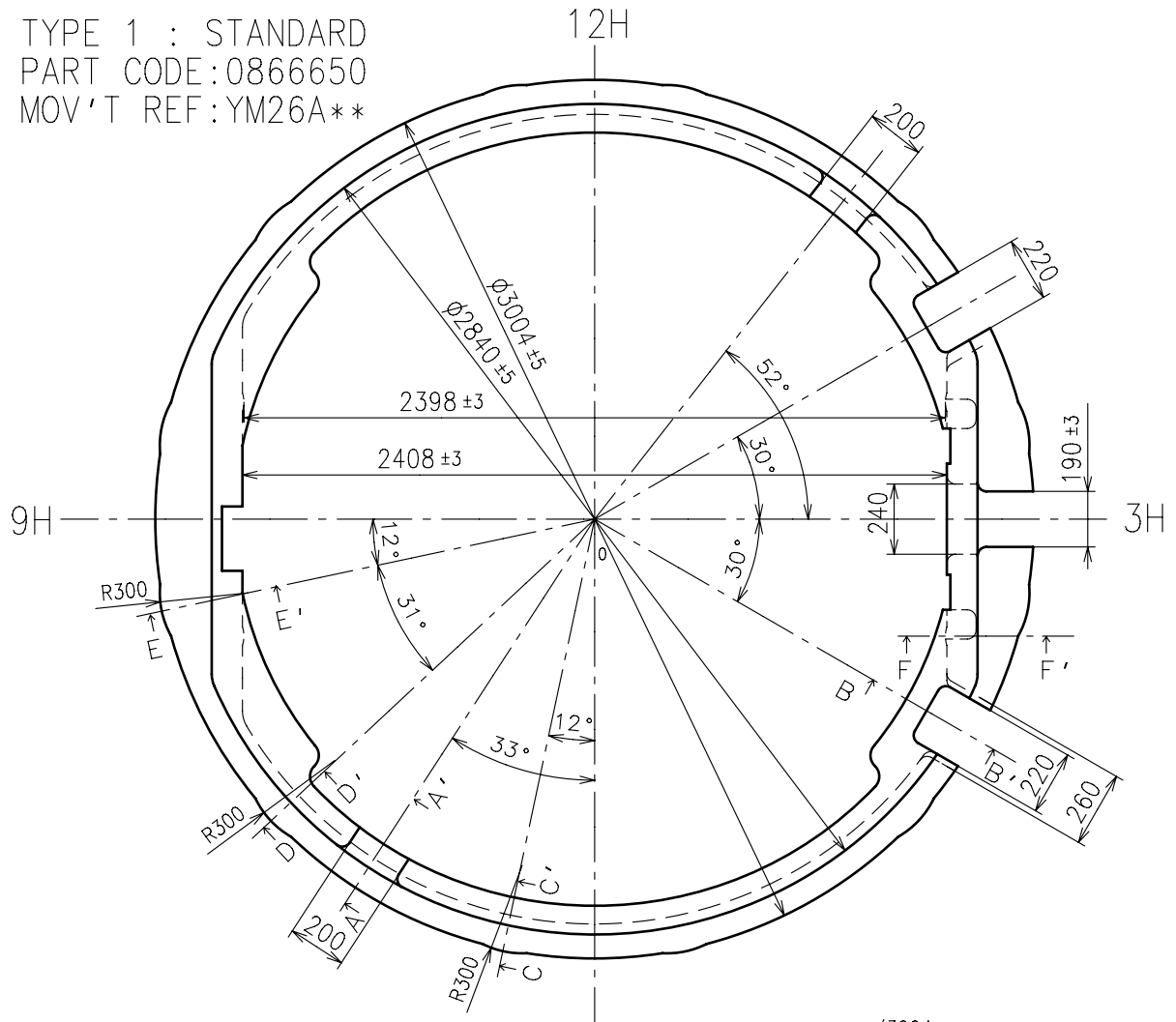
Dial leg

Small sec. hole

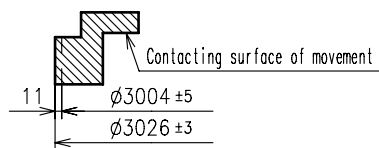
World time minute hole  
(World time hour hole)

Alarm minute hole  
(Alarm hour hole)

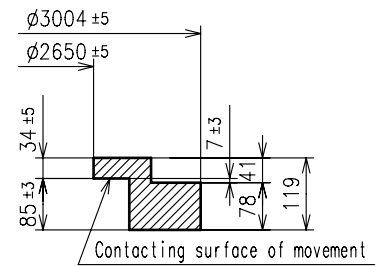
TYPE 1 : STANDARD  
PART CODE: 0866650  
MOV'T REF: YM26A\*\*



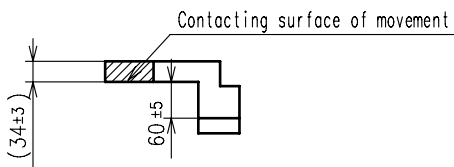
A-A' section



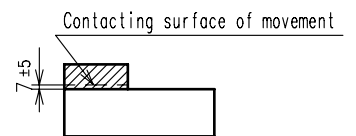
D-D' section  
E-E' section



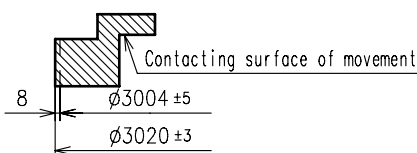
0-12H section



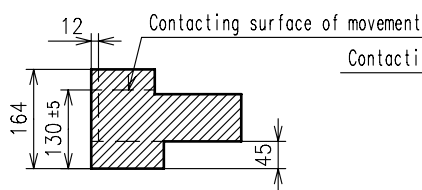
B-B' section



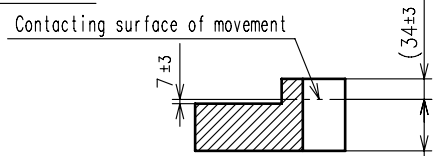
0-3H section



C-C' section

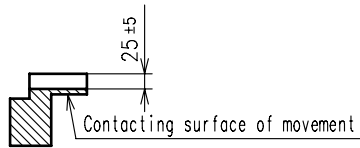
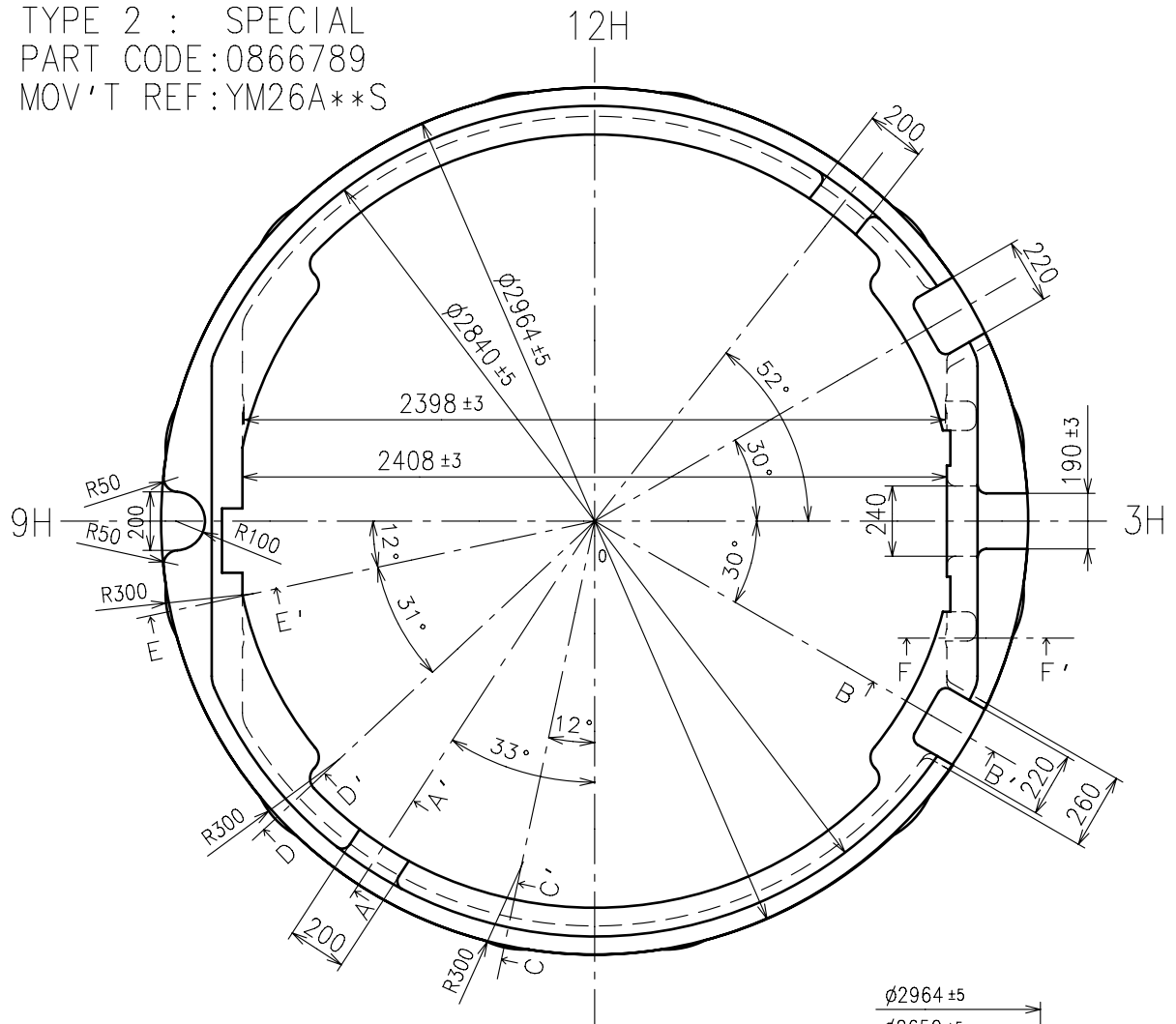


F-F' section

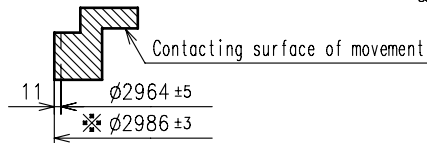


0-9H section

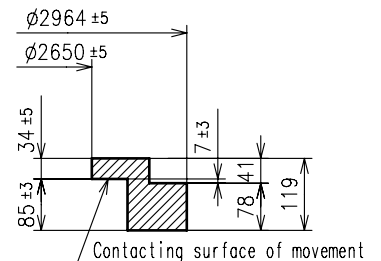
TYPE 2 : SPECIAL  
PART CODE: 0866789  
MOV'T REF: YM26A\*\*S



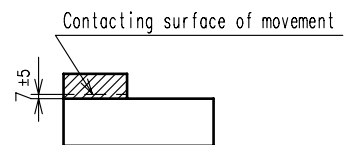
A-A' section



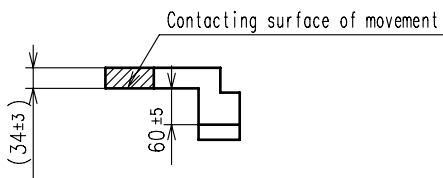
D-D' section  
E-E' section



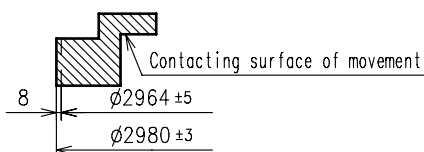
0-12H section



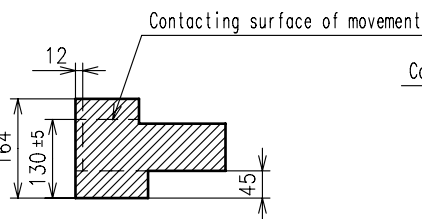
0-3H section



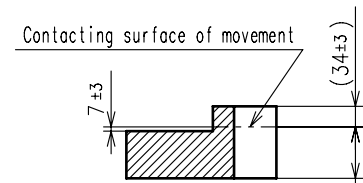
B-B' section



C-C' section



F-F' section

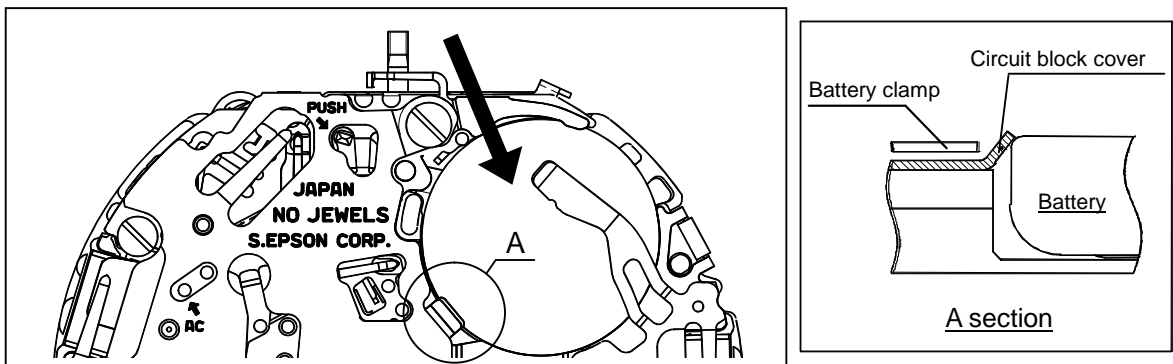


0-9H section

\* "DIAMETER OF INSIDE CASE IS SAME AS YM5 SERIES"

## 1.How to change the battery

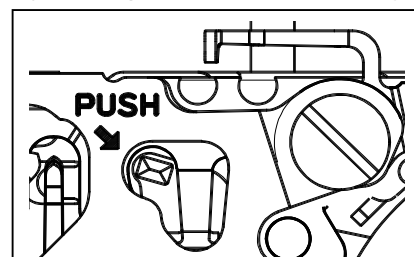
- Please use the exclusive battery to keep the stable performance for a long time.
- Please set the battery with the minus part toward the inside of the watch.
- When you assemble or change the battery, it is recommended to pull out three battery clamp screws first, and then take out the battery clamp in order not to add the damage to the movement part.
- When you assemble the battery without taking out the battery clamp, please refer to the picture in below and set the battery from the [→] direction.
- Regarding the [A] part of the following chart, it is recommended that the battery must be under the circuit holder.
- It is necessary to do system-reset. After assembling the battery, please short the circuit pattern “AC” and the battery clamp for more than 2 seconds.
- Please set the world time hour / minute , Alarm hour / minute hand at “0” position.



## 2.How to pull out the stem

- Please pull out the crown at 1<sup>st</sup> click and then pull out the stem while you are pressing the hollow part of the setting lever by tweezers. If the stem is not at 1<sup>st</sup> position, it is impossible to be pulled out.

(Crown pulled out at 1<sup>st</sup> click)



## 3.Attention to set each hand

- Hand moves at one-second interval. Please set the each hand at correct position according to the scale of the dial in order not to make a mistake.
- Please do not turn the hour hand forcibly.

## 4.How to take off the hand

- When you take off the hand, please use the fork-shaped exclusive tools.
- Please do not take off the dial when any hands are assembled.

## 5.How to test the accuracy

- Measure the timing with Quartz Tester in 10 seconds gate.

# YM26A Attention of casing part structure

Date: 31/Aug./'12

Rev.: 00

## 1. Minute hand

- In order not to push the minute hand too much, the second wheel have a safety stopper structure. However, please pay attention for the friction between hour hand and minute hand.

## 2. Casing ring

- Please use the exclusive casing ring to fix the movement tightly inside of the case, and to stabilize the button switching stroke. As to the shape and tolerance, please refer to the [Casing ring] page instruction.

## 3. Case

- Please use the metal case to prevent movement from being mal-functioned by static electricity.

## 4. Hour wheel

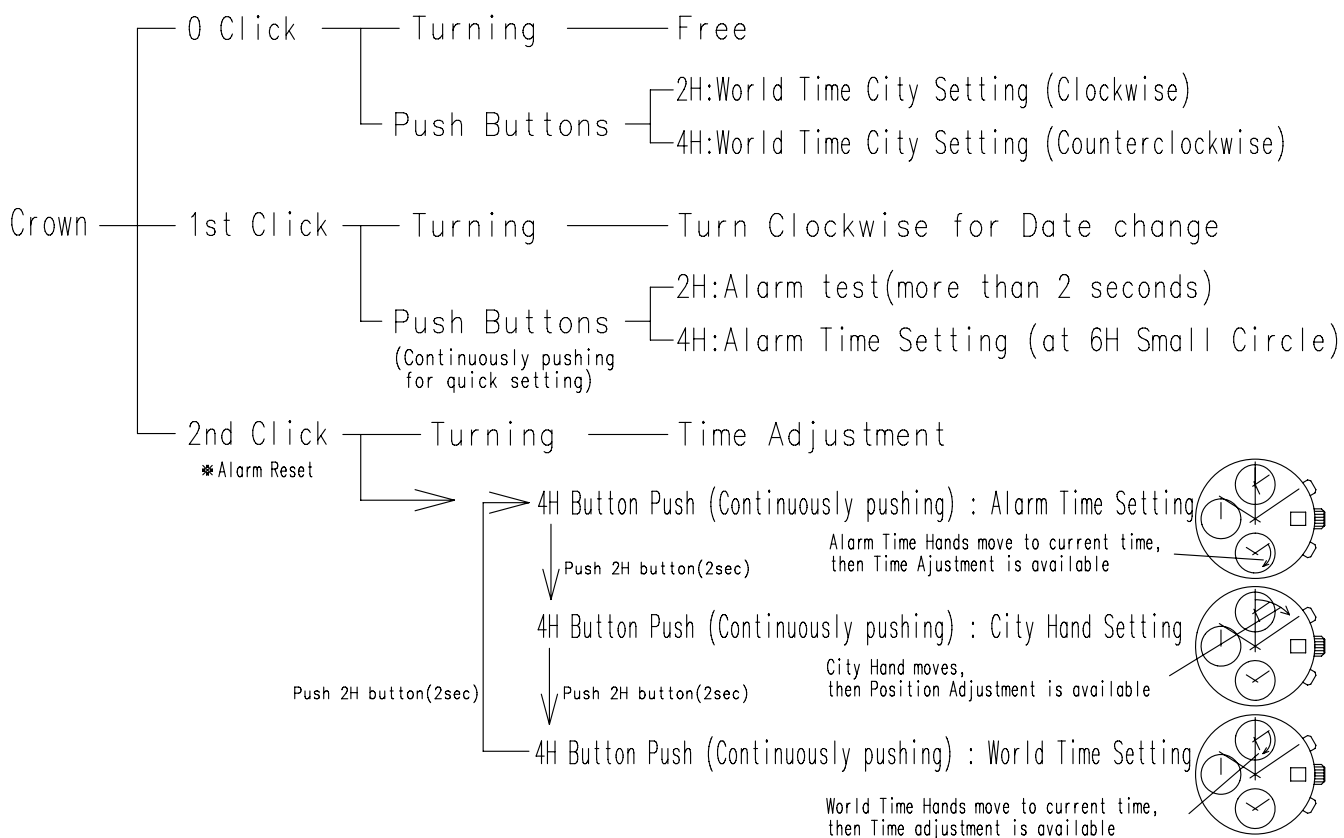
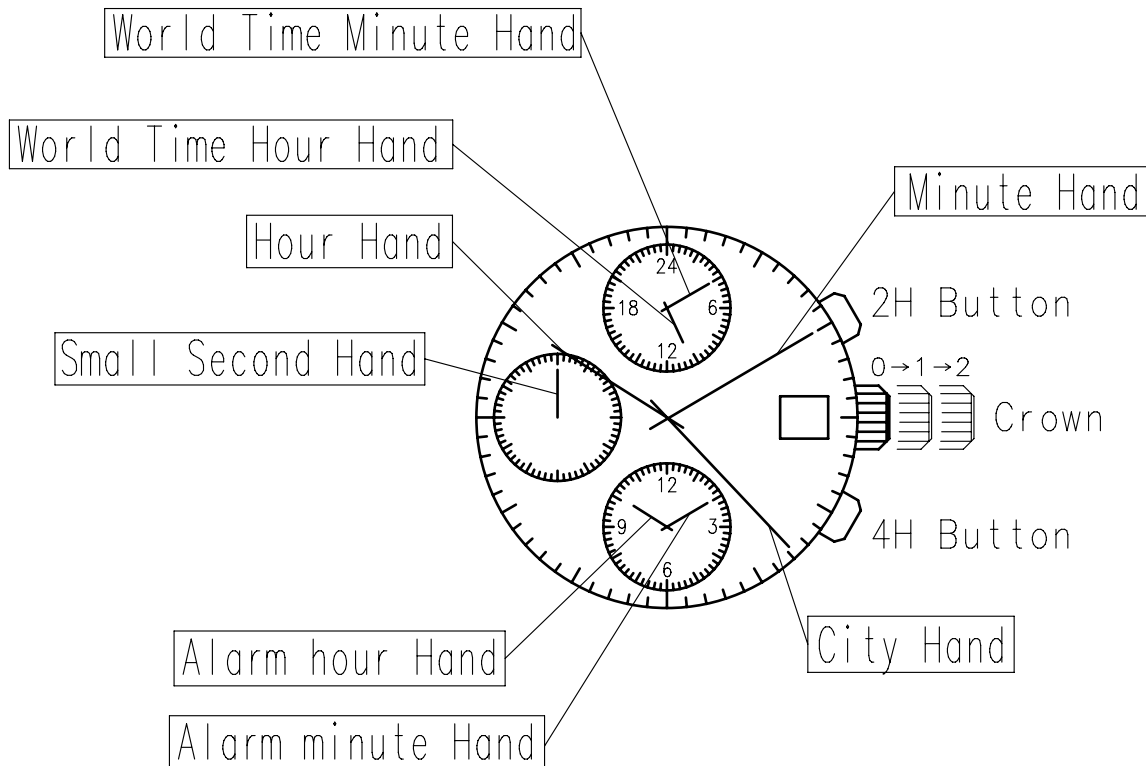
- The hour wheel is made by plastic. If you re-assemble the hour hand repeatedly, it may reduce the hand fixing torque. To keep the enough fixing torque, please do not change the hour hand more than 5 times.

## 5. Magnetic shield plate

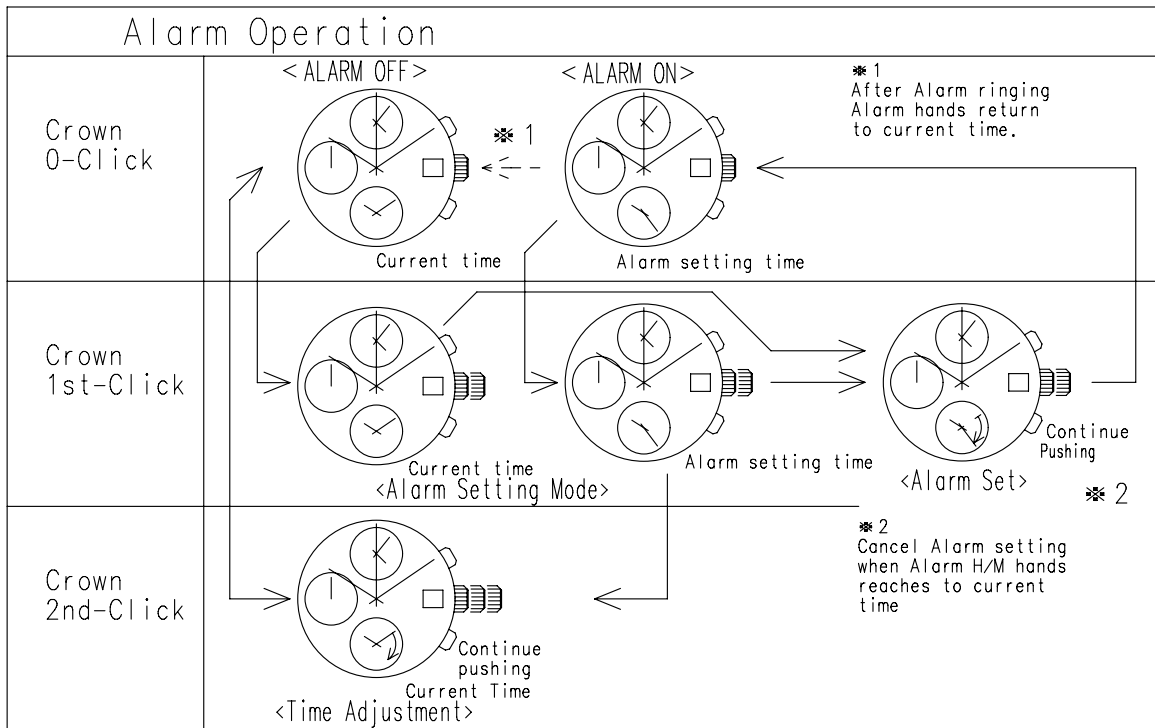
- Please set the Anti-magnetic plate B above the movement (battery clamp) before assembling the Case back. So as to don't mistake assembling direction, please refer to the [Magnetic shield plate] page instruction.

## 6.A.C. comment seal

- Please attach the A.C. comment seal to the center of the Case back.



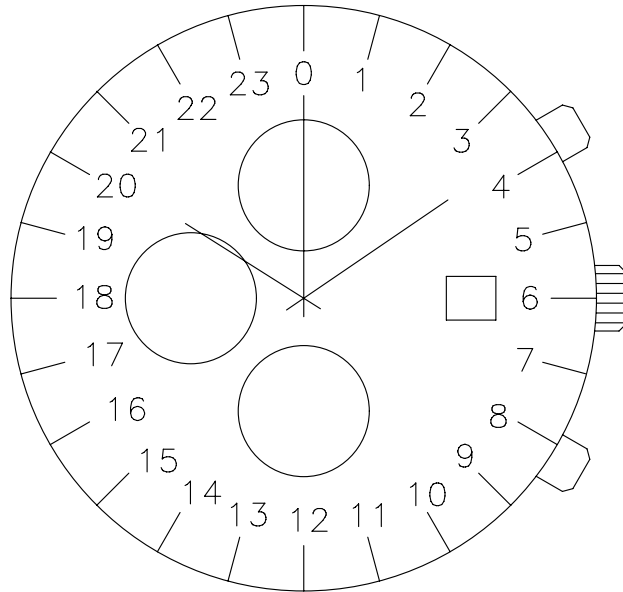
At 2nd click position, system-reset is possible by pushing the 2H button and 4H button for more than 2 seconds simultaneously.



### World time city display

The number of world time city : 24[city]

Division : 15[°]



### View city (clock wise )

Display position	City representatives
0	GMT/LONDON
1	PARIS / ROME
2	CAIRO
3	MOSCOW
4	DUBAI
5	KARACHI
6	DHAKA
7	BANGKOK
8	BEIJING
9	TOKYO
10	SYDNEY
11	NOUMEA
12	WELLINGTON
13	MIDWAY
14	HONOLULU
15	ANCHORAGE
16	LOSANGELES
17	DENVER
18	CHIKAGO
19	NEWYORK
20	SANTIAGO
21	RIODEJANEIRO
22	↑ DST (summer time)
23	AZORES