

Cal. VD34A

ϕ 29.50 mm

H 3.97 mm

| Item | Version No. |
|-------------------|-------------|
| Specification - 1 | Version 1 |
| Specification - 2 | Version 1 |
| Appearance | Version 1 |
| Casing | Version 1 |
| Hand Fitting | Version 1 |
| Hand Setting Stem | Version 1 |
| Dial | Version 1 |
| Assembly Plan - 1 | Version 1 |
| Assembly Plan - 2 | Version 1 |
| Hands | Version 1 |
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MOVEMENT SPECIFICATION - 1

CAL.VD34A 12 3 / 4 Ligne Quartz Movement Three Hands with 3 Eyes (24H Indicator, Regulator Dual Time of 12H & 60M)

1. MOVEMENT DIMENSIONS

- Outside diameter ϕ 29.50mm (12H~6H) x 26.00mm (3H~9H)
- Casing diameter ϕ 28.80mm (12H~6H)
- Total height 3.97 mm

2. TIME STANDARD

- Type of quartz oscillator Tuning fork
- Frequency of quartz oscillator 32,768 Hz
- Accuracy Monthly rate: Less than 20 seconds per month at normal temperature range
- Regulation device Nil
- Regulation hands unbalance
 - Hour hand : Less than 0.50 μ N·m (50mg·mm)
 - Minute hand : Less than 0.60 μ N·m (60mg·mm)
 - Second hand : Less than 0.07 μ N·m (7mg·mm)
 - Dual time hand : Less than 0.05 μ N·m (5mg·mm)
 - 24H indicator hand : Less than 0.07 μ N·m (7mg·mm)
- The moment of inertia
 - 24H indicator hand (Disc hand) : Less than 0.40 μ g·m² (400mg·mm²)
- Additional function
 - Regulator dual time (12 hours, 60 minutes)
 - 24H indicator (synchronized regular hour-hand)

3. BATTERY

- Type Silver oxide battery
- Size ϕ 9.5 x t 2.0 (mm)
- Battery life Approx. 2 years
- Recommended battery SR920SW (SEIZAIKEN)

4. STEPPING MOTOR

- Number of units 2 pieces
- Type Two pole stepping motor
- Step 180° every second

5. JEWEL

0 jewel

6. ANTIMAGNETISM

(direct current magnetic field)

\geq 1600 A / m (Will not affected by general household appliance)

7. SHOCK RESISTANCE

On equal level with general quartz movement

8. OPERATING TEMPERATURE RANGE

From - 5 °C to + 50 °C

9. 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

10. ATTACHED PARTS

| Parts Name | Parts Code |
|----------------------|----------------------|
| Hand setting stem | 0351 - 1780 (Normal) |
| Silver oxide battery | 3013 - 14G0 |
| Sticker | 0110 - 3400 |

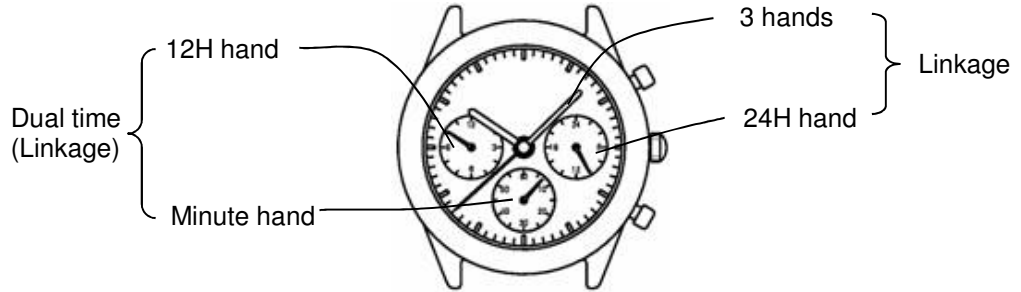
*** All specifications are subject to change without notice.**

Movement Specification - 2

CAL. VD34A

OPERATION

2 step motors (3 hands, dual time of 12 hours)



Normal position



Dual time correction
-1 hour / PUSH

Free

Dual time correction
+1 hour / PUSH



First click position



Dual time correction
Counter clockwise
(Keep pushing :
hand moving fast)

Time setting
Reset switch
Second setting device

Dual time correction
Clockwise
(Keep pushing :
hand moving fast)

AC functions
(Keep buttons
"A" & "B"
pressed at the
same time for
2 seconds,
and then release
the buttons)

*Hands demonstration while AC reset :
Dual time minute hands :
Counter clockwise 1 / 2 cycle,
Clockwise 1 / 2 cycle.

First click position

Dual time zero position reset mode
(AC finished = Reset relieved)



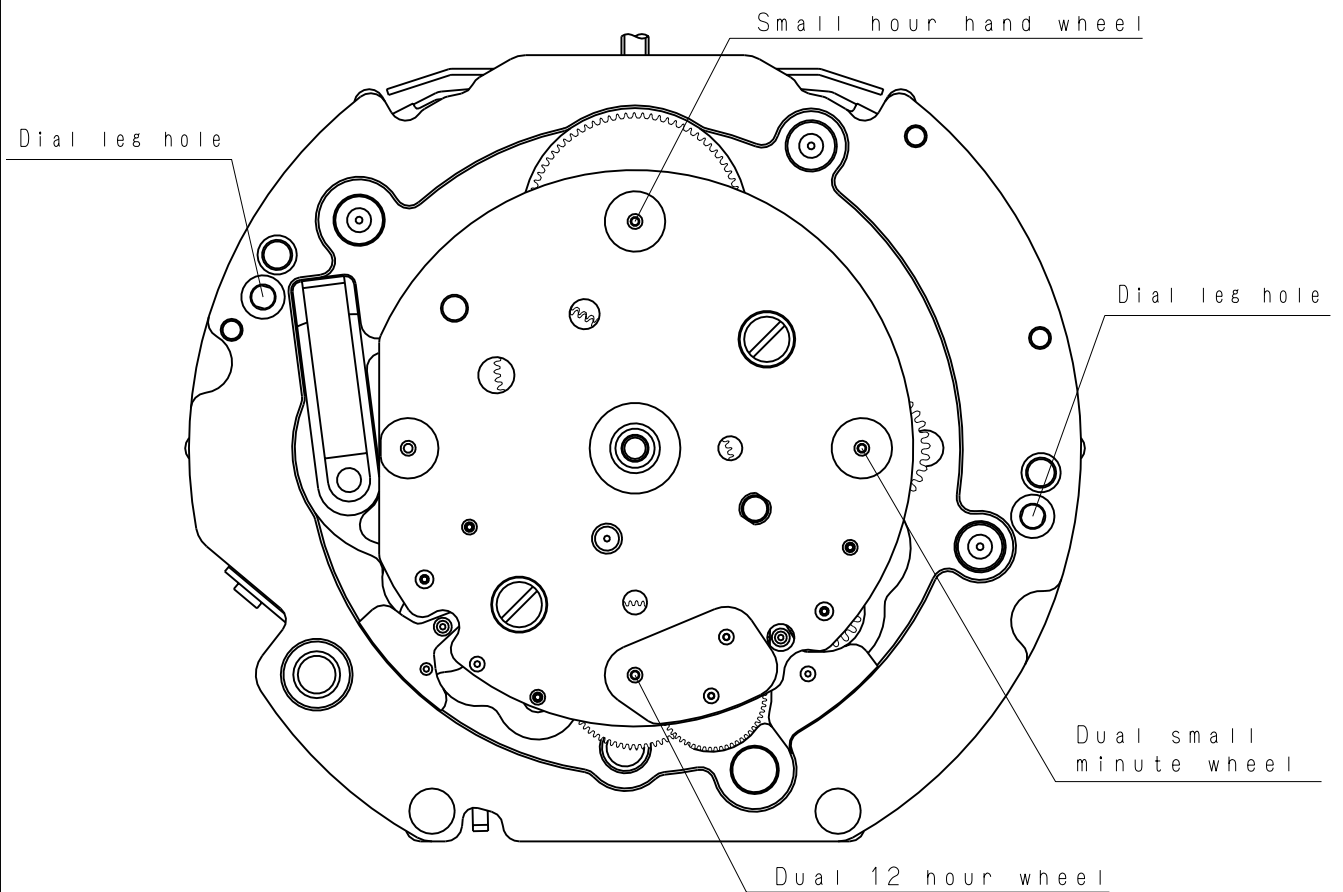
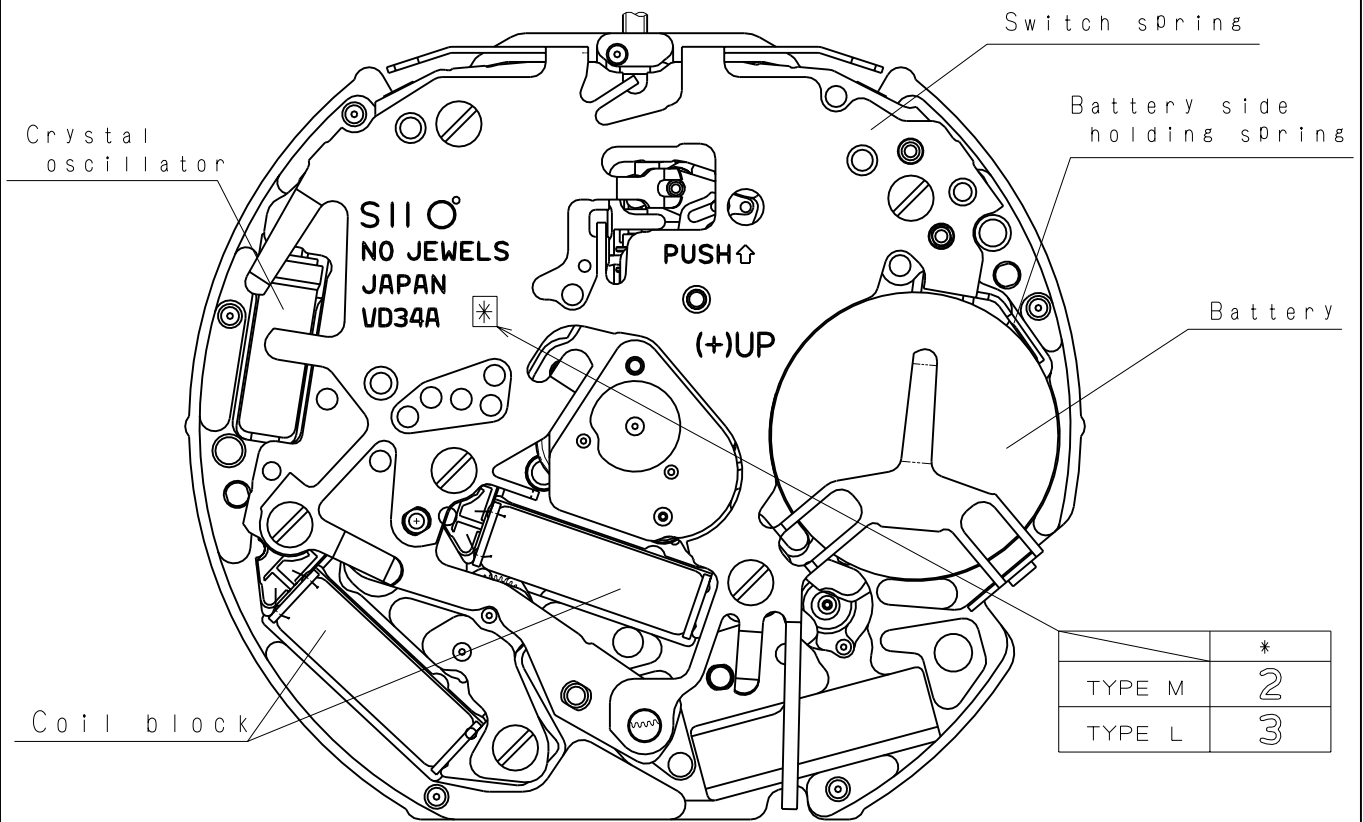
Dual time correction
Counter clockwise
(Keep pushing :
hand moving fast)

Time setting
Reset switch
Second setting device

Dual time correction
Clockwise
(Keep pushing :
hand moving fast)

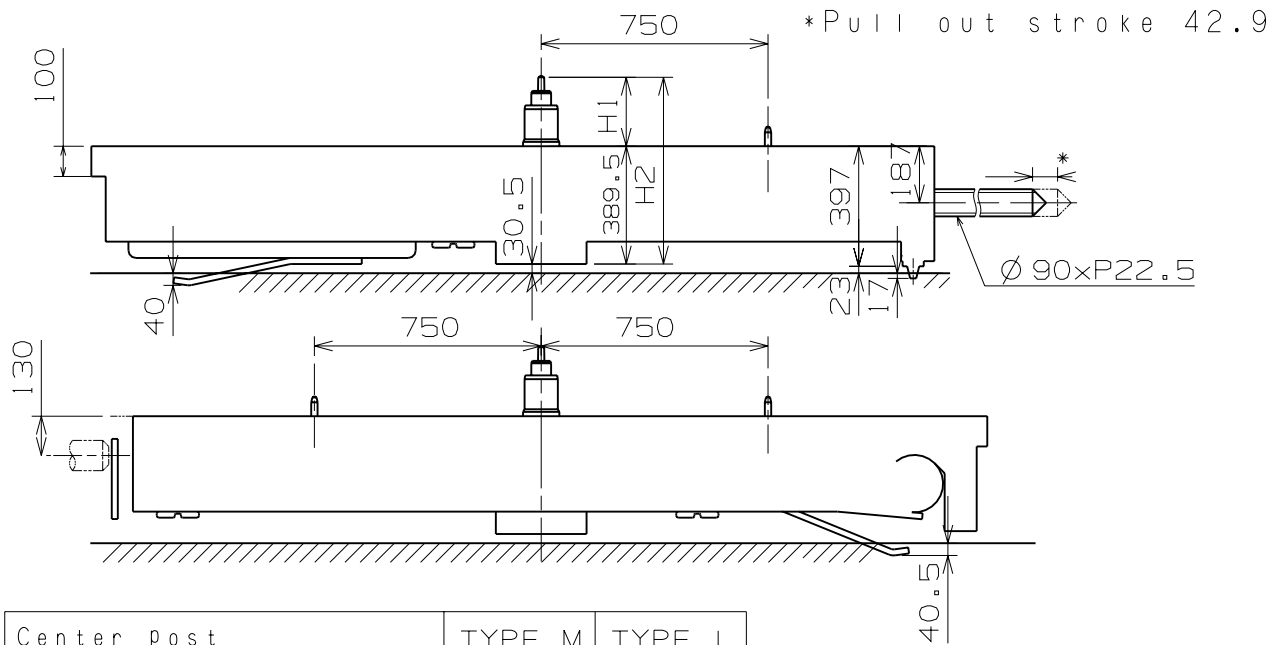
*After the Dual time hands reset to the [12:00] position,
push the crown back to normal position.

Version 1



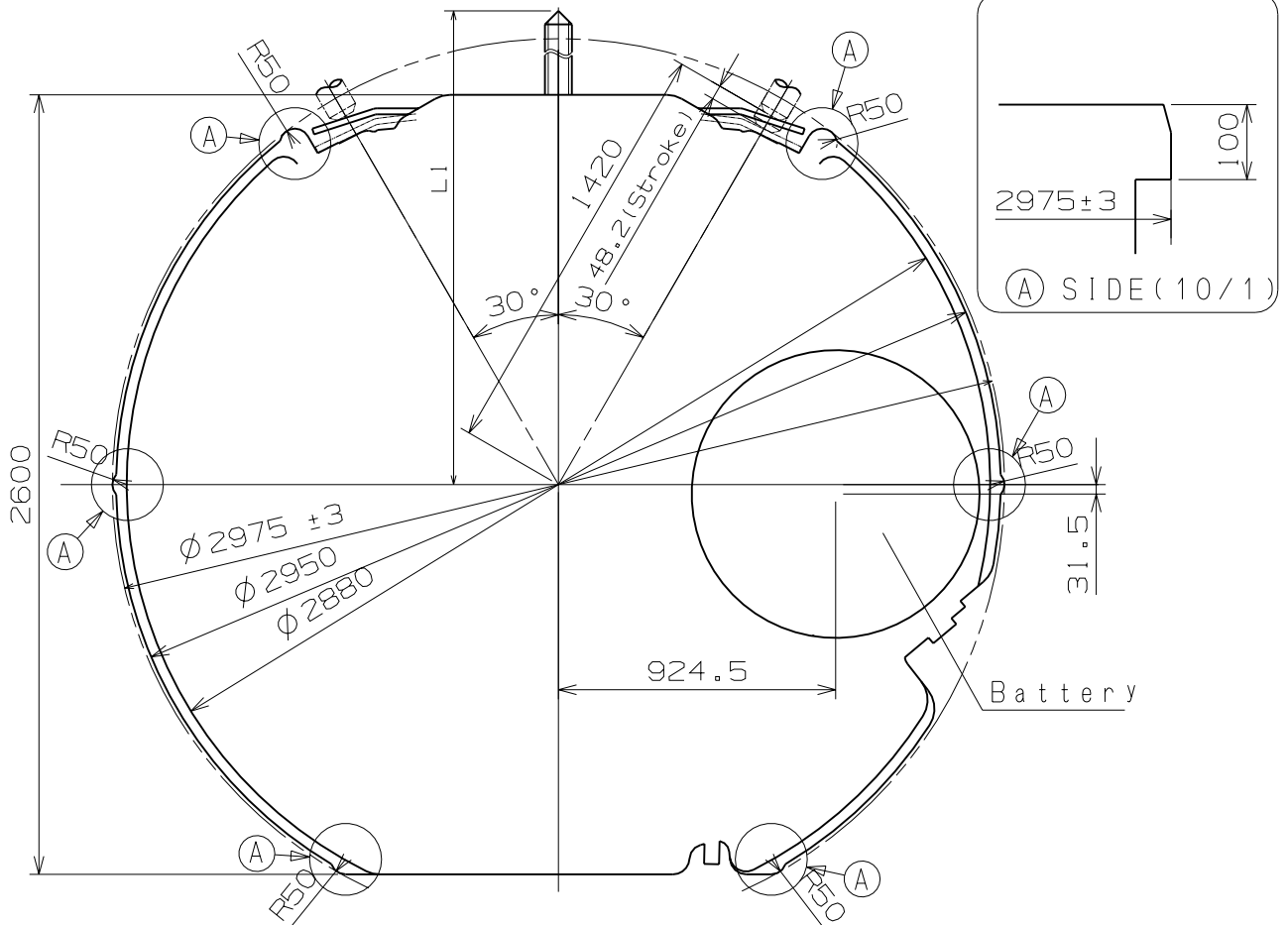
Scale : 4/1
Unit : 1=1/100mm

Version:1



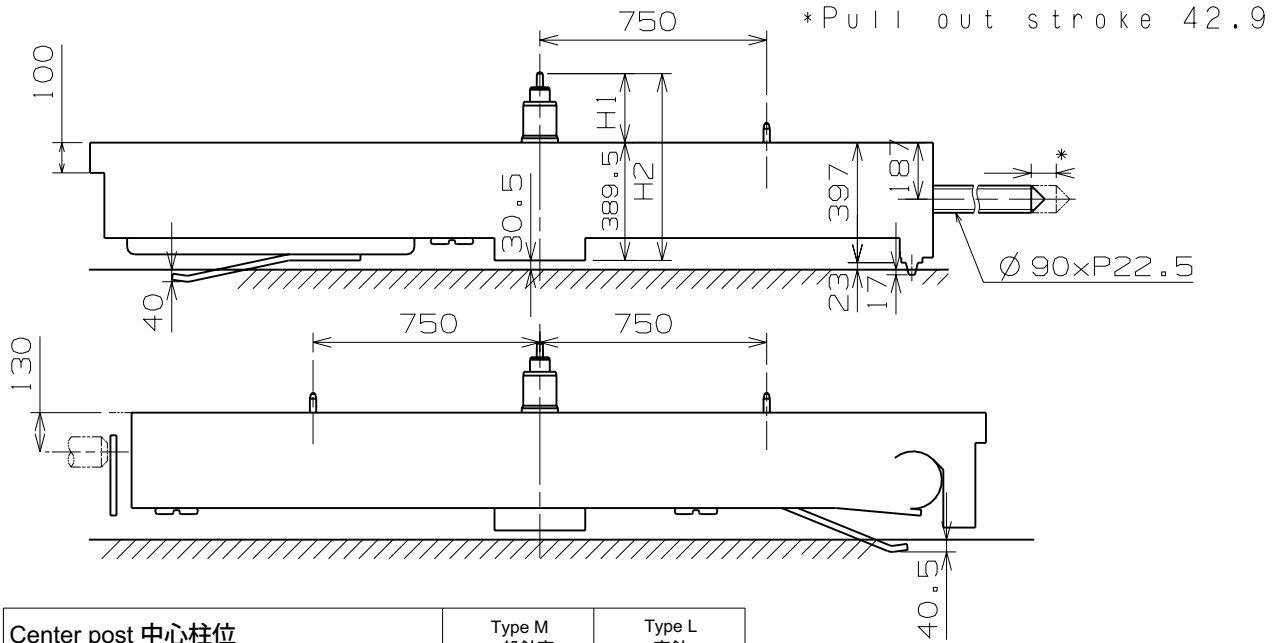
| Center Post | | TYPE M | TYPE L |
|--|----|--------|--------|
| Maximum height from main plate surface | H1 | 228 | 273 |
| Total height incl. movement | H2 | 617.5 | 662.5 |

| | |
|-------------------|--------|
| Hand Setting Stem | TYPE A |
| L1 | 2365 |



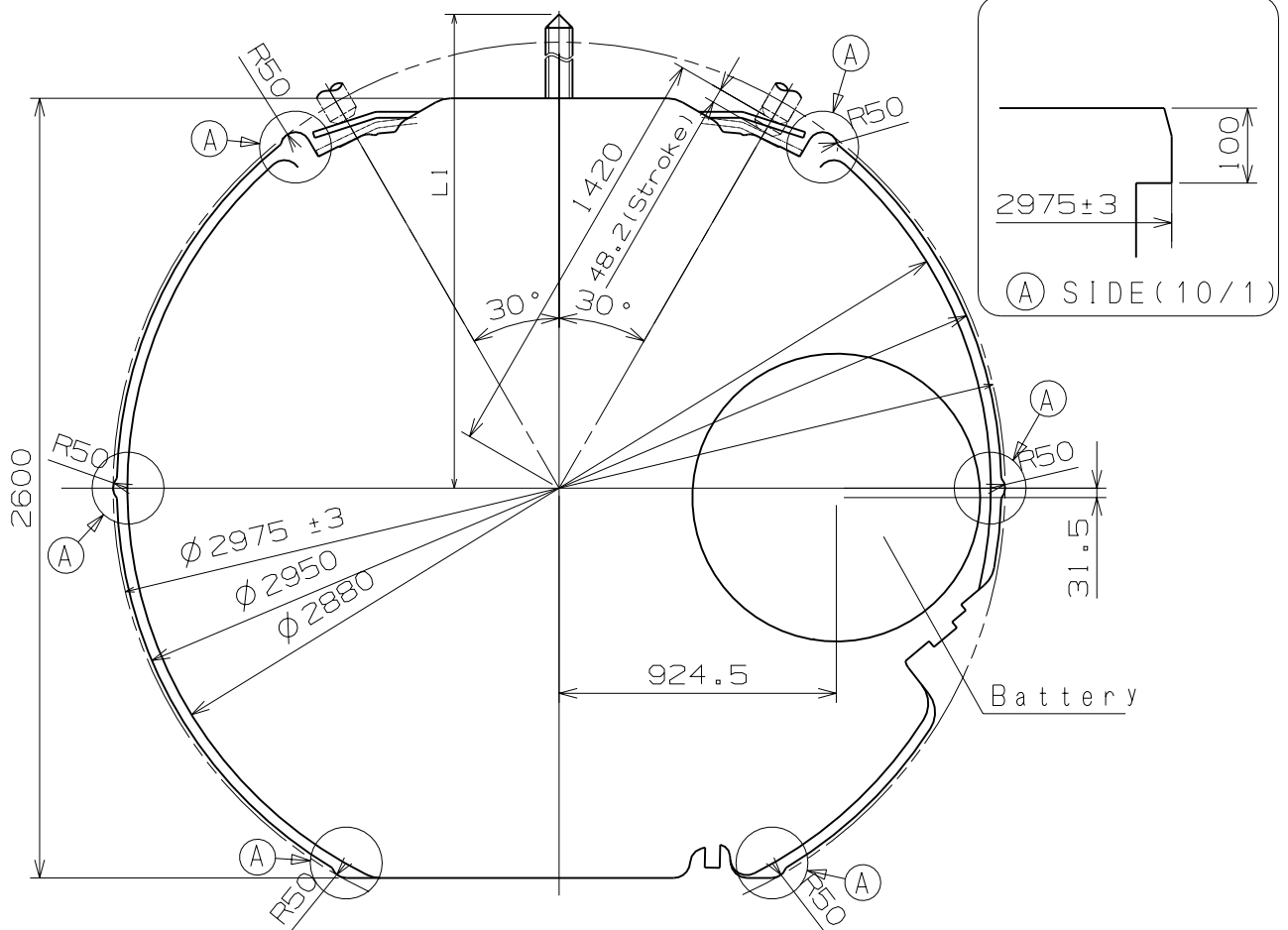
Scale : 4/1
Unit : 1=1/100mm

Version:1



| Center post 中心柱位 | | Type M 一般針高 | Type L 高針 |
|--|----|----------------|--------------|
| Maximum height from main plate surface 與機芯平面之最大高度 | H1 | 228 | 273 |
| Total height incl. movement 機芯總高度 | H2 | 617.5 | 662.5 |

| | |
|-------------------|--------|
| Hand Setting Stem | TYPE A |
| L1 | 2365 |



Scale : 4/1
Unit : 1=1/100mm

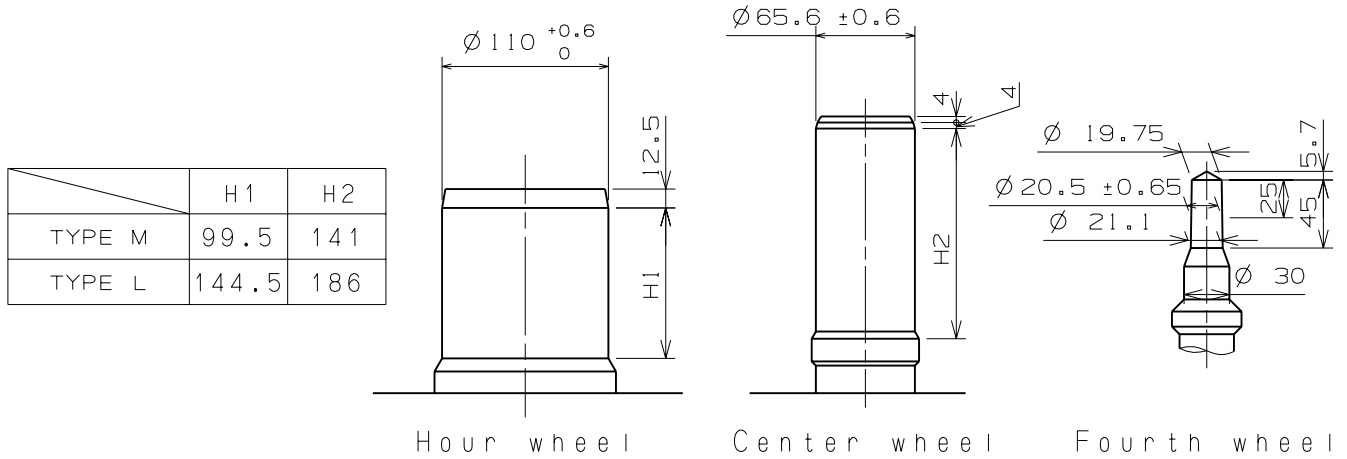
Version:1

※Unbalance

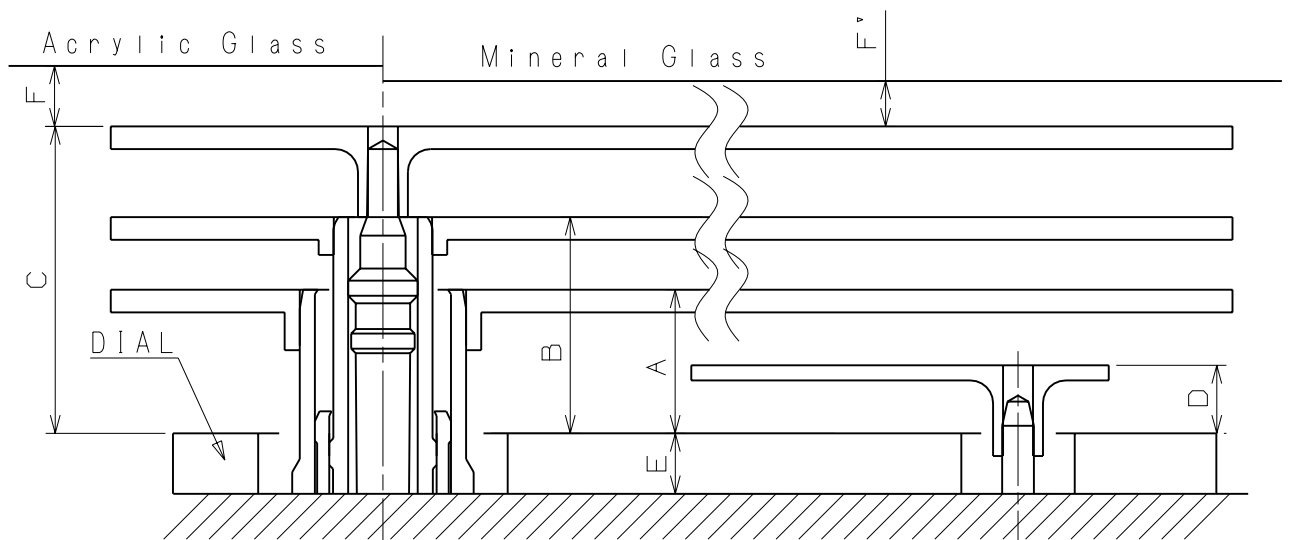
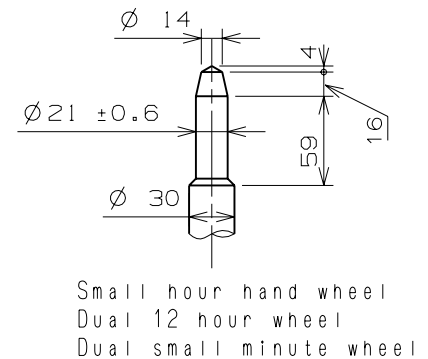
- Hour hand $\leq 0.5 \mu\text{N} \cdot \text{m} (50\text{mg} \cdot \text{mm})$
- Minute hand $\leq 0.6 \mu\text{N} \cdot \text{m} (60\text{mg} \cdot \text{mm})$
- Second hand $\leq 0.07 \mu\text{N} \cdot \text{m} (7\text{mg} \cdot \text{mm})$
- Dual time hand $\leq 0.05 \mu\text{N} \cdot \text{m} (5\text{mg} \cdot \text{mm})$
- Small hour hand $\leq 0.07 \mu\text{N} \cdot \text{m} (7\text{mg} \cdot \text{mm})$

※Movement of inertia

- Small hour indicator $\leq 0.4 \mu\text{g} \cdot \text{m}^2 (400\text{mg} \cdot \text{mm}^2)$ (Disc hand available)



| Part name | Part No. | |
|-------------------------|-----------|-----------|
| | TYPE M | TYPE L |
| Hour wheel | 0271 4060 | 0273 0360 |
| Center wheel | 0221 1560 | 0221 0770 |
| Fourth wheel | 0241 1770 | 0241 4800 |
| Small hour hand wheel | 0157 0110 | 0150 0350 |
| Dual 12 hour wheel | 0902 0070 | 0902 0030 |
| Dual small minute wheel | 0888 0080 | 0888 0100 |



| | A | B | C | D | E | F | F' |
|--------|----|-----|-----|----|----|----|----|
| TYPE M | 95 | 143 | 203 | 45 | 40 | 50 | 40 |
| TYPE L | 95 | 143 | 203 | 45 | 85 | 50 | 40 |

Scale : 20/1

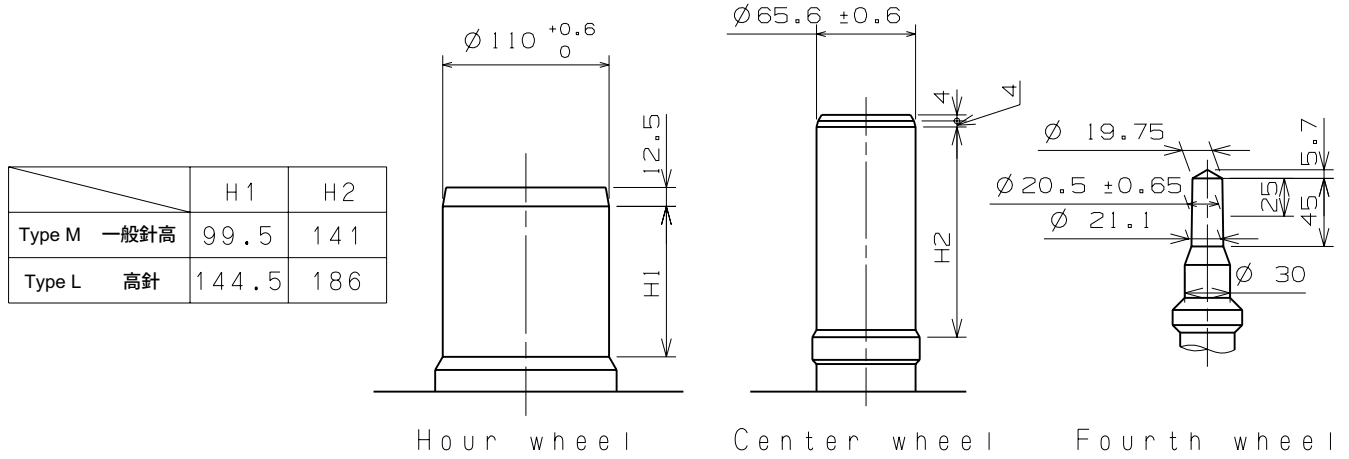
Unit : 1=1/100mm

Version : 1

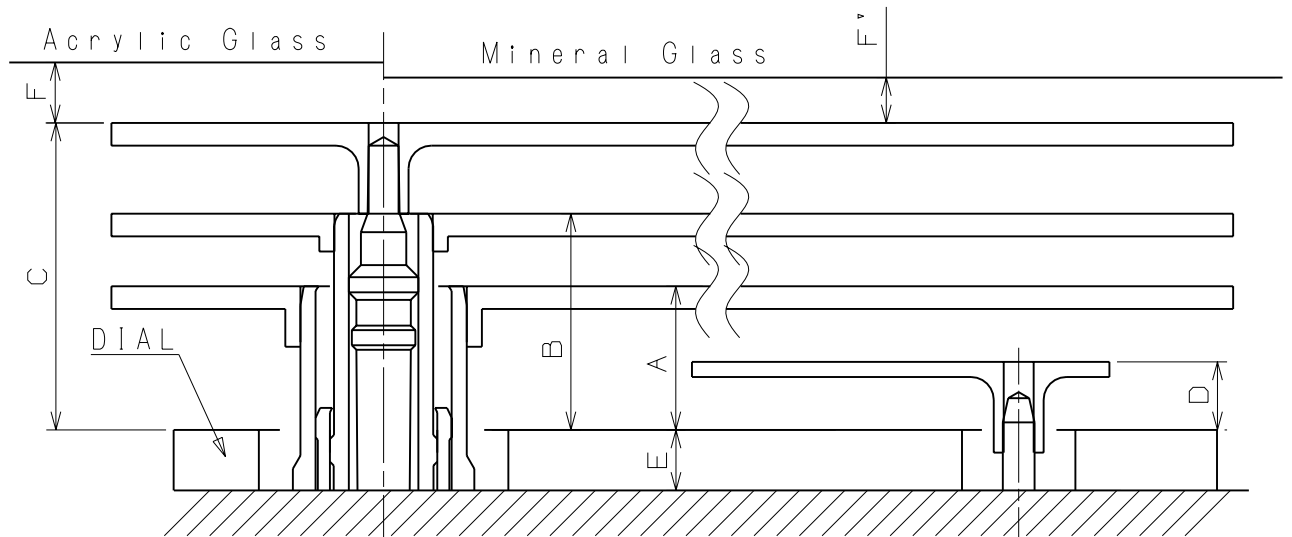
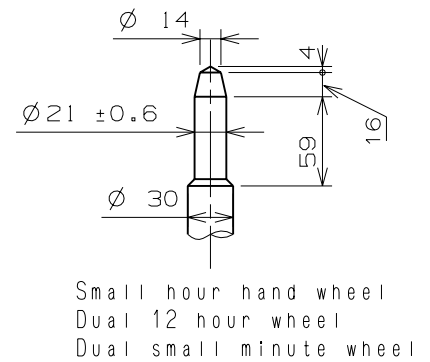
Hand fitting

Cal. VD34A

- *Unbalance
 - Hour hand $\leq 0.5 \mu\text{N}\cdot\text{m}$ (50mg·mm)
 - Minute hand $\leq 0.6 \mu\text{N}\cdot\text{m}$ (60mg·mm)
 - Second hand $\leq 0.07 \mu\text{N}\cdot\text{m}$ (7mg·mm)
 - Dual time hand $\leq 0.05 \mu\text{N}\cdot\text{m}$ (5mg·mm)
 - Small hour hand $\leq 0.07 \mu\text{N}\cdot\text{m}$ (7mg·mm)
- *Movement of inertia
 - Small hour indicator $\leq 0.4 \mu\text{g}\cdot\text{m}^2$ (400mg·mm²) (Disc hand available)



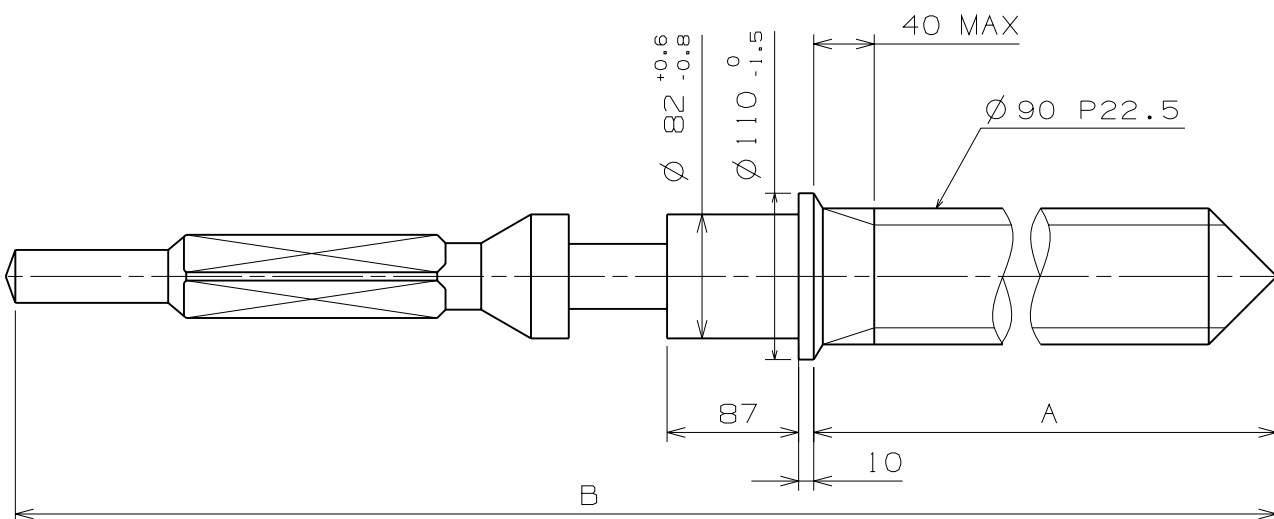
| Part name | Part No. | |
|----------------------------------|-------------|-----------|
| | Type M 一般針高 | Type L 高針 |
| Hour wheel 時針輪 | 0271 4060 | 0273 0360 |
| Center wheel 分針輪 | 0221 1560 | 0221 0770 |
| Fourth wheel 秒針輪 | 0241 1770 | 0241 4800 |
| Small hour hand wheel 小時針輪 | 0157 0110 | 0150 0350 |
| Dual 12 hour wheel 兩地時間12小時時針輪 | 0902 0070 | 0902 0030 |
| Dual small minute wheel 兩地時間小分針輪 | 0888 0080 | 0888 0100 |



| | A | B | C | D | E | F | F' |
|-------------|----|-----|-----|----|----|----|----|
| Type M 一般針高 | 95 | 143 | 203 | 45 | 40 | 50 | 40 |
| Type L 高針 | 95 | 143 | 203 | 45 | 85 | 50 | 40 |

Scale : 20/1
Unit : 1=1/100mm

Version:1

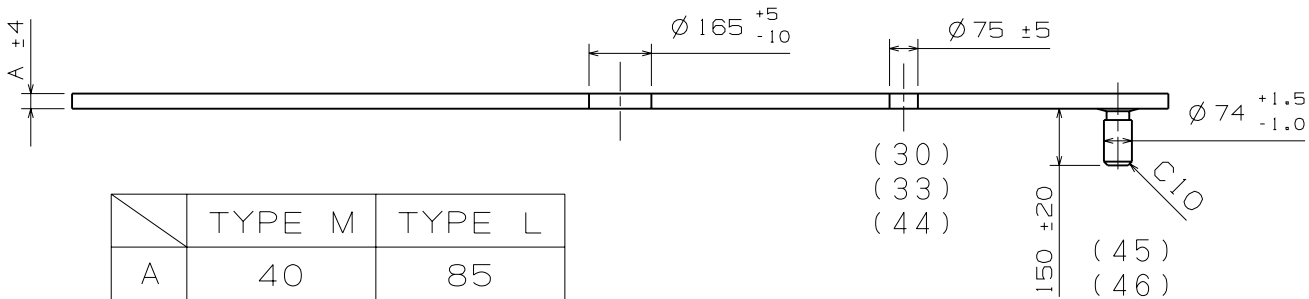
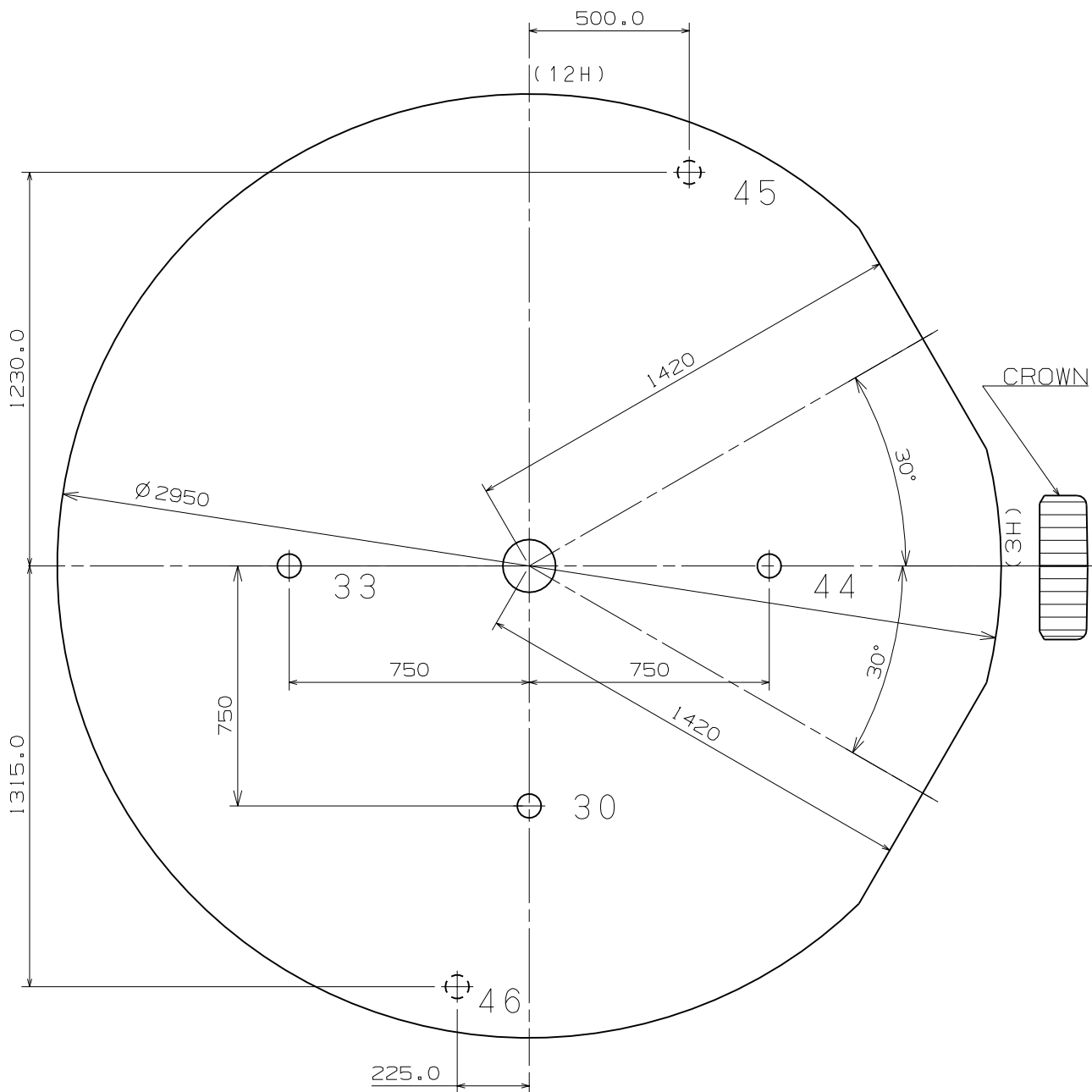


| | Part. No. | A | B |
|--------|-----------|------|------|
| TYPE A | 0351 1780 | 1508 | 2036 |

Scale : 20/1

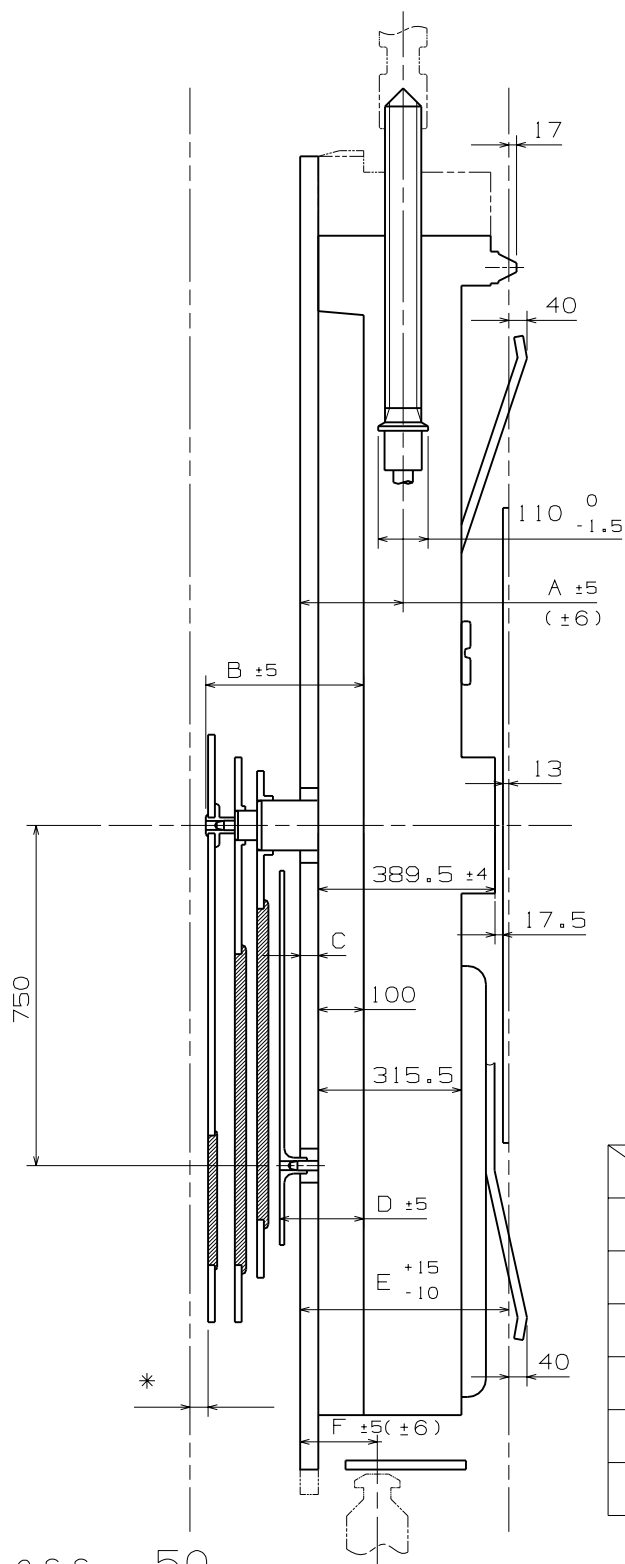
Unit : 1=1/100mm

Version:1



Scale : 5/1
Unit : 1=1/100mm

Version:1

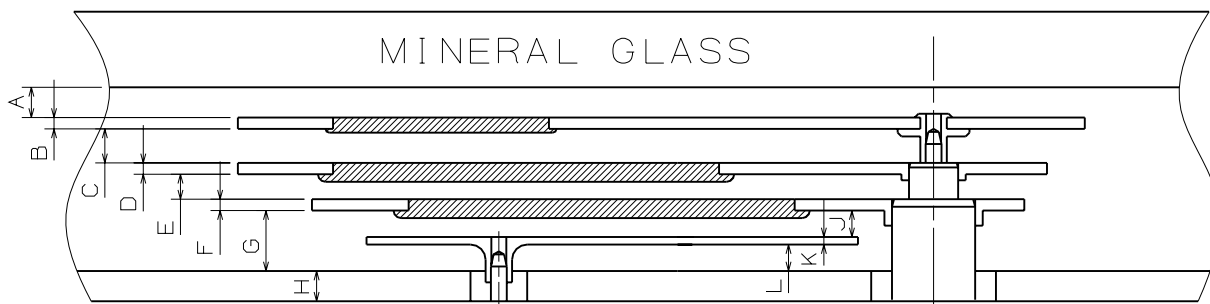
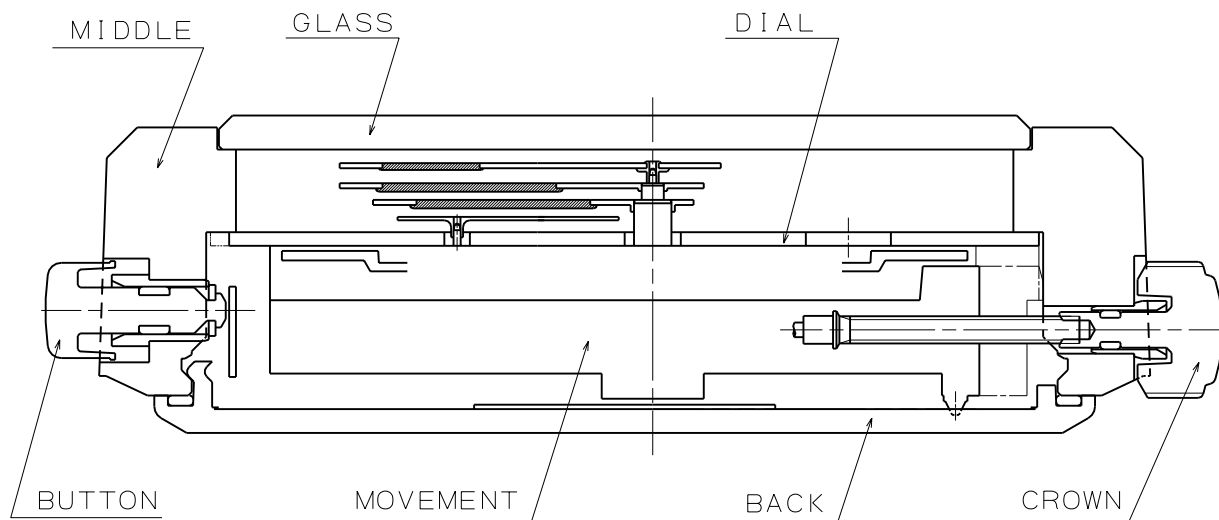


| | TYPE M | TYPE L |
|---|--------|--------|
| A | 227 | 272 |
| B | 343 | 388 |
| C | 40 | 85 |
| D | 185 | 230 |
| E | 460 | 505 |
| F | 170 | 215 |

*Acrylic Glass 50
*Mineral Glass 40

Scale : \neq
Unit : 1=1/100mm

Version : 1

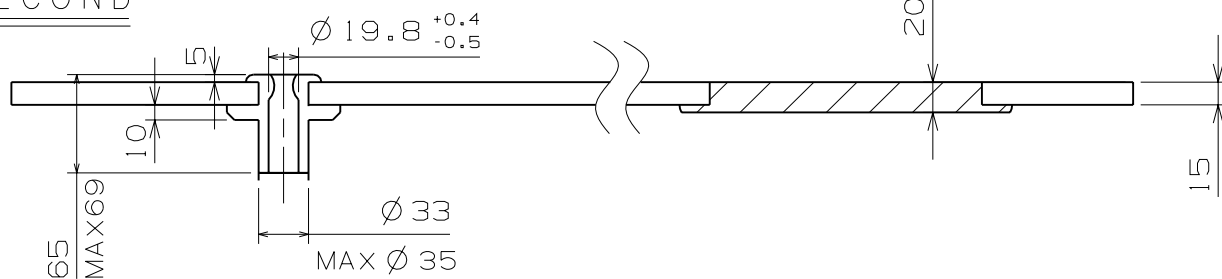


| | TYPE M | TYPE L |
|---|--------|--------|
| A | 40 | 40 |
| B | 15 | 15 |
| C | 45 | 45 |
| D | 15 | 15 |
| E | 33 | 33 |
| F | 15 | 15 |
| G | 80 | 80 |
| H | 40 | 85 |
| J | 35 | 35 |
| K | 10 | 10 |
| L | 35 | 35 |

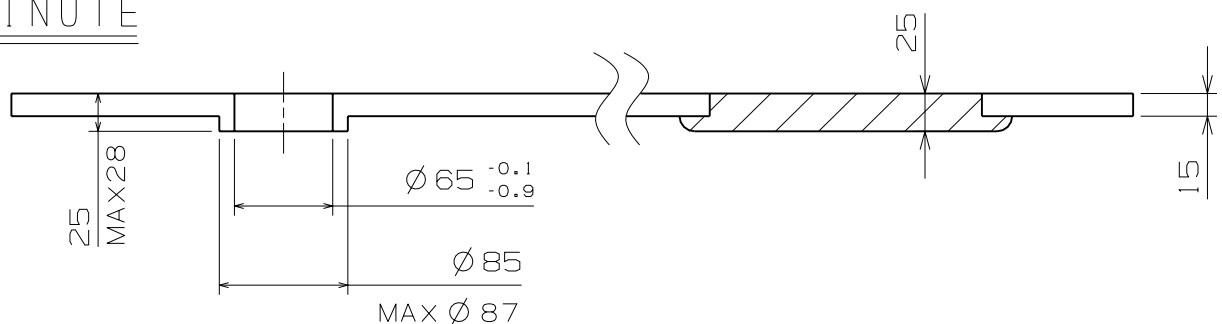
Scale : \neq
Unit : 1=1/100mm

Version : 1

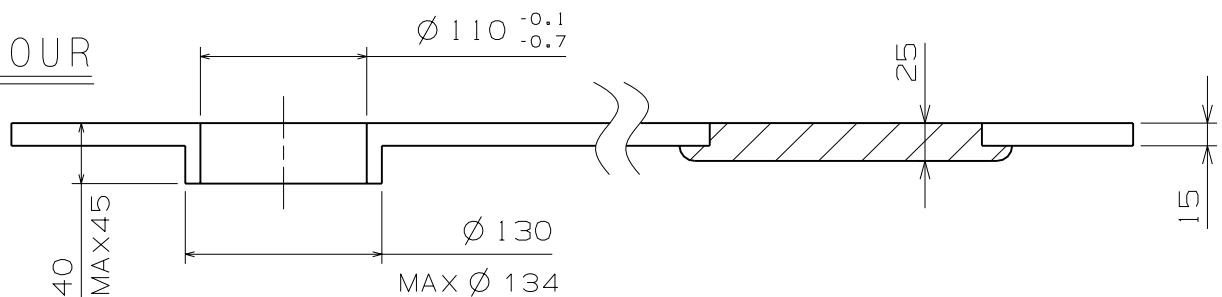
SECOND



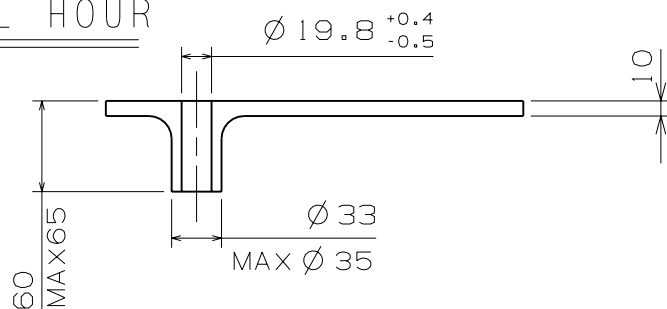
MINUTE



HOUR



DUAL TIME SMALL HOUR



Scale : 20/1
Unit : 1=1/100mm

Version:1