

Cal. VD32A

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



MOVEMENT SPECIFICATION - 1

CAL.VD32A 12 3 / 4 Ligne Quartz Movement Three Hands with 2 Eyes (24H Indicator, Dual Time of 24H)

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
 - Dual time of 24H
 - 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

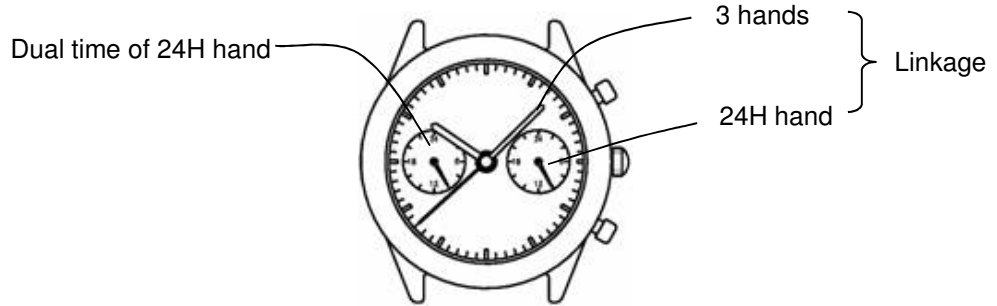
*** All specifications are subject to change without notice.**

Movement Specification - 2

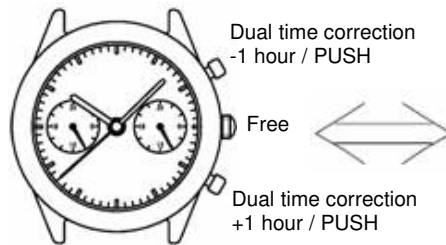
CAL. VD32A

OPERATION

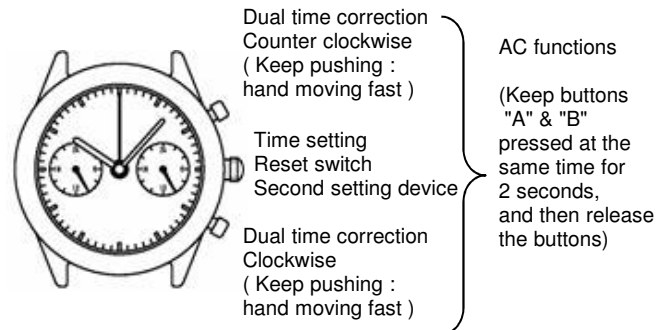
2 step motors (3 hands, dual time of 24 hour)



Normal position



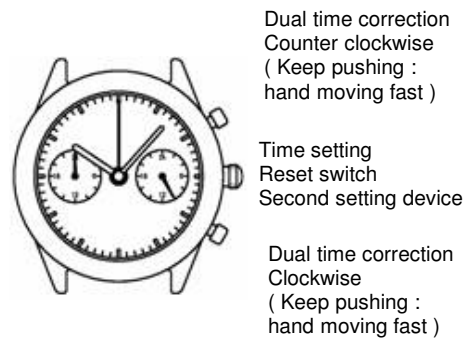
First click position



*Hands demonstration while AC reset :
Dual time of 24 hour hand :
Counter clockwise 3 degree,
Clockwise 3 degree.

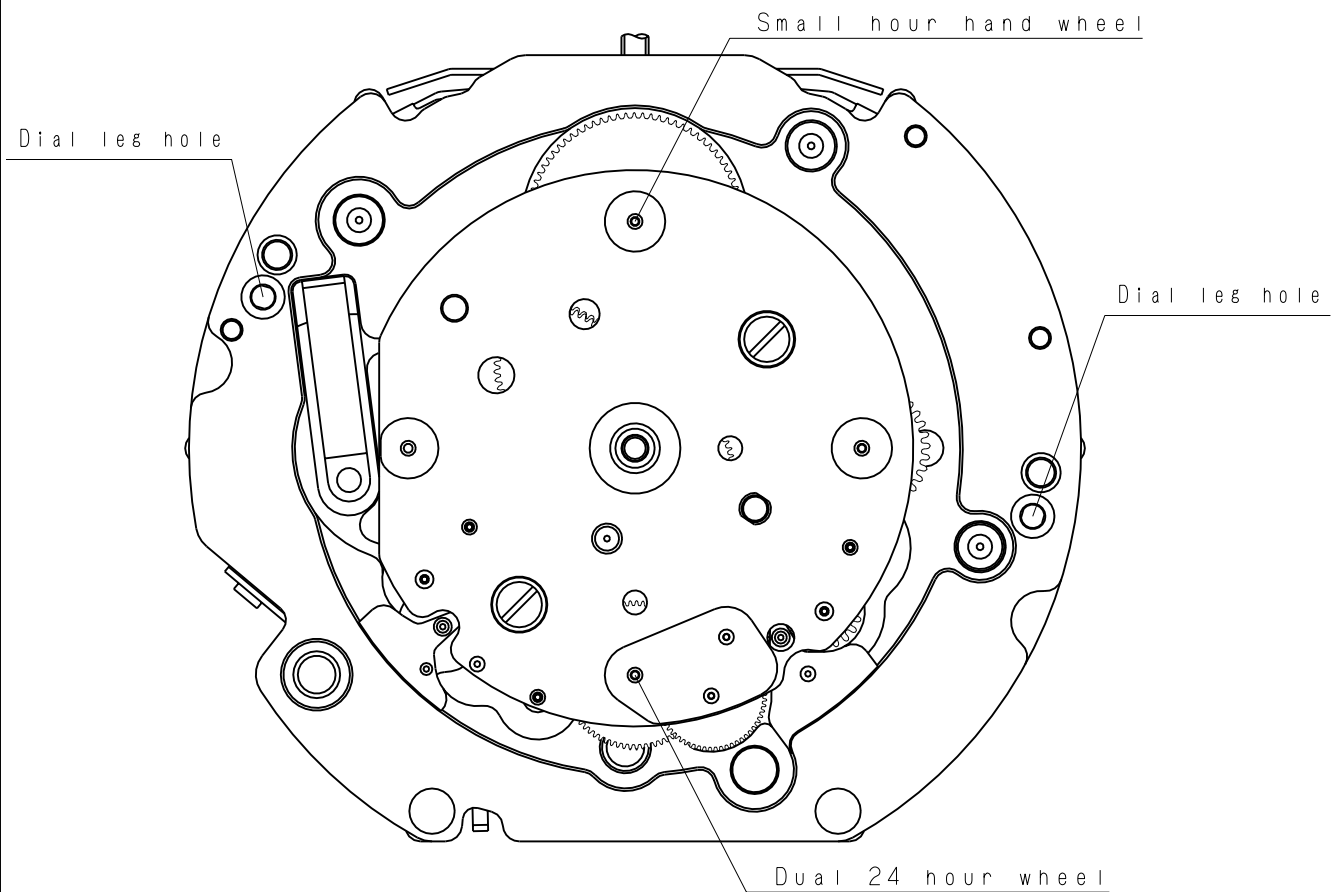
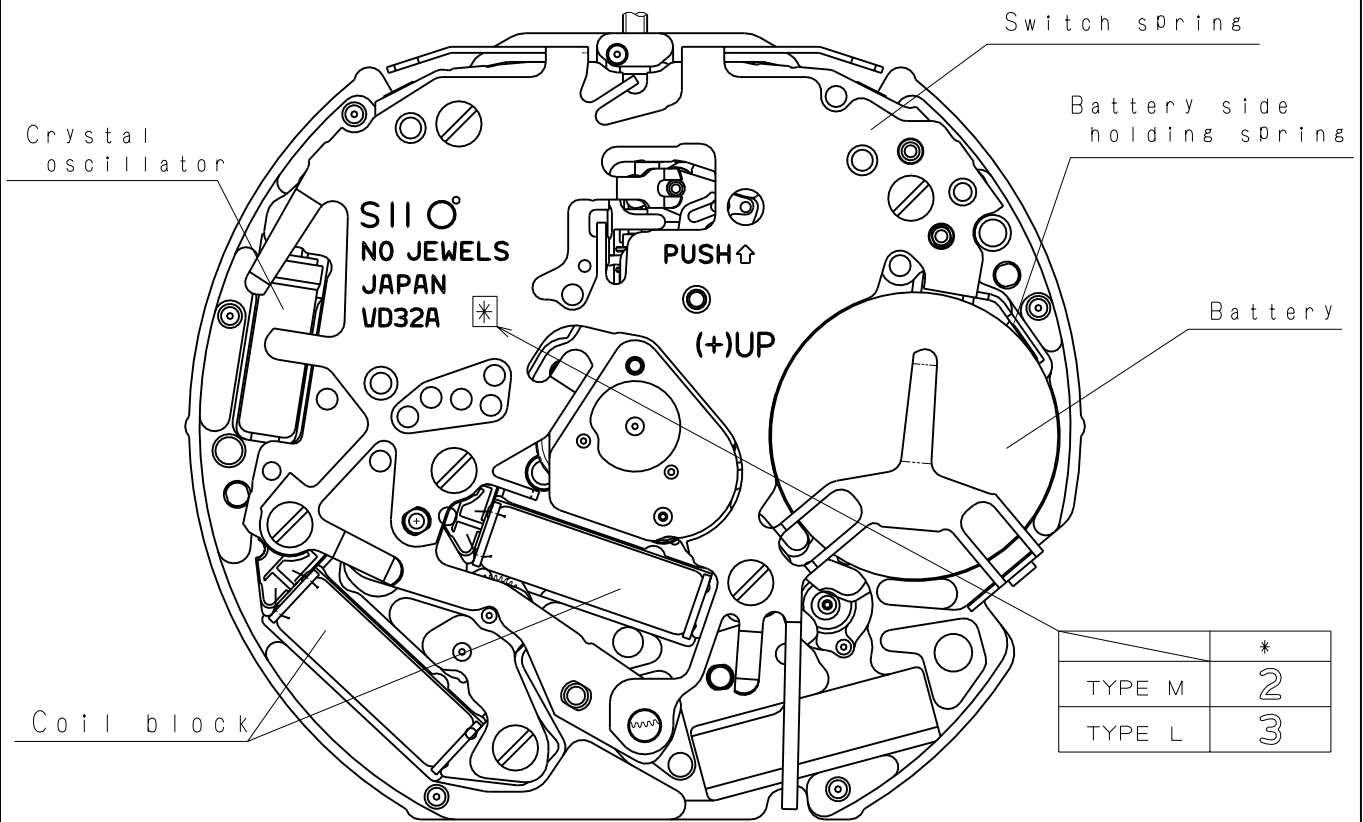
First click position

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



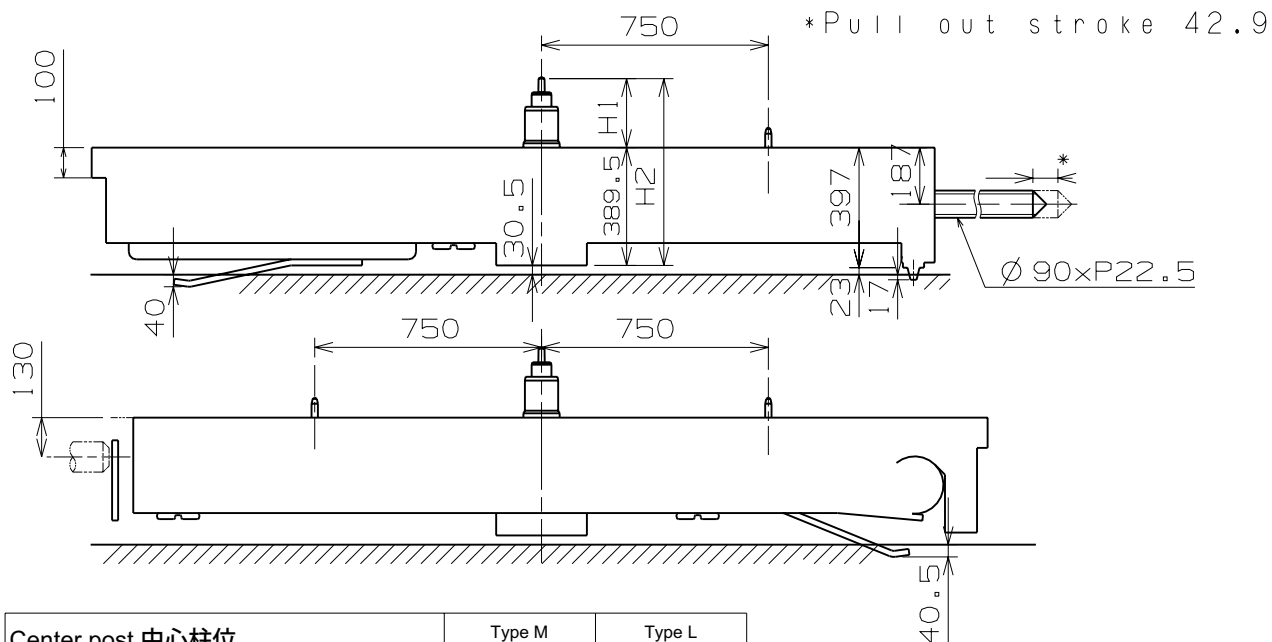
*After the Dual time hand reset to the [0:00] position,
push the crown back to normal position.

Version 1



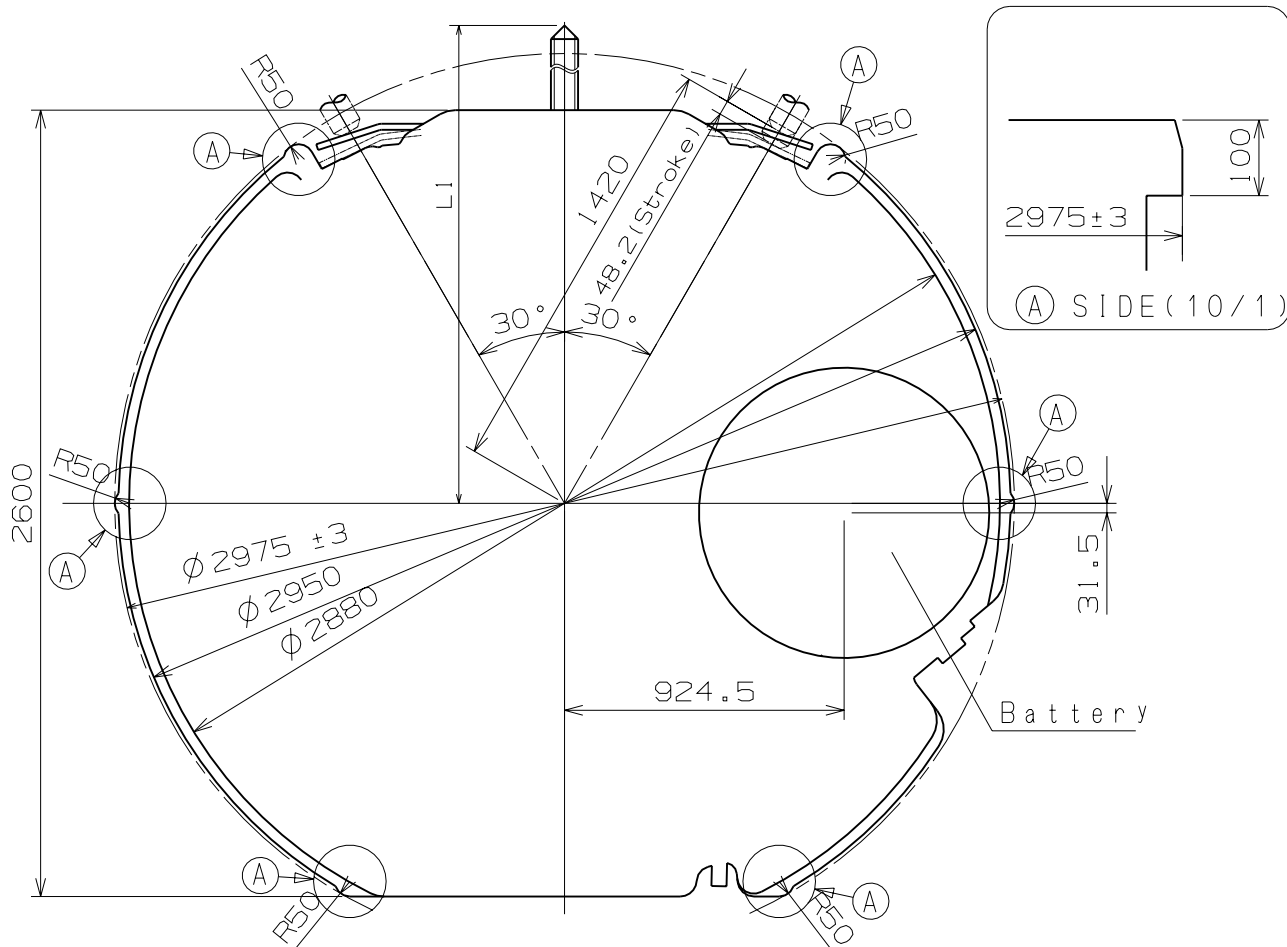
Scale : 4/1
Unit : 1=1/100mm

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

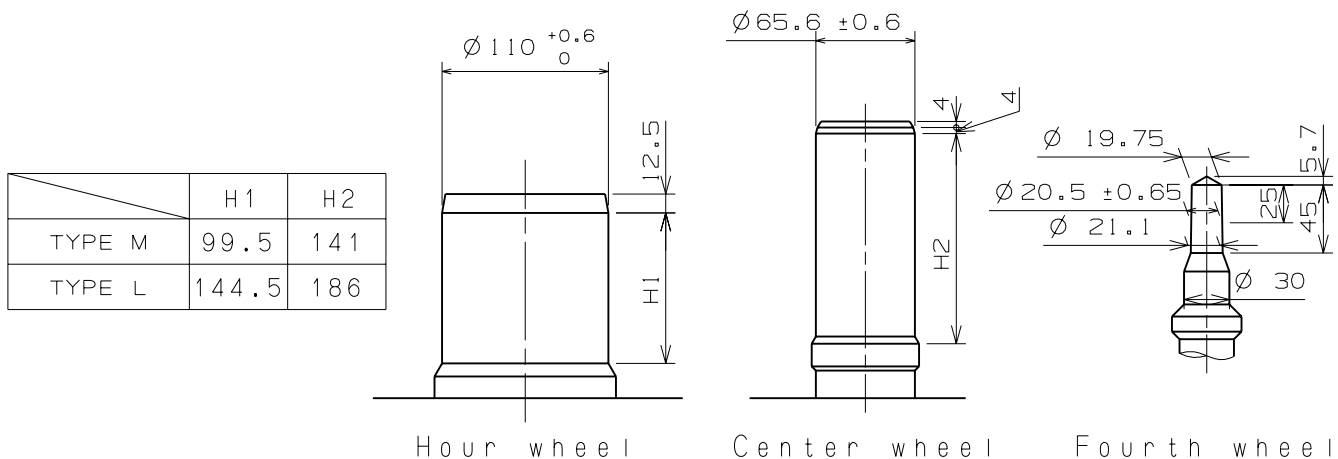
Version : 1

※Unbalance

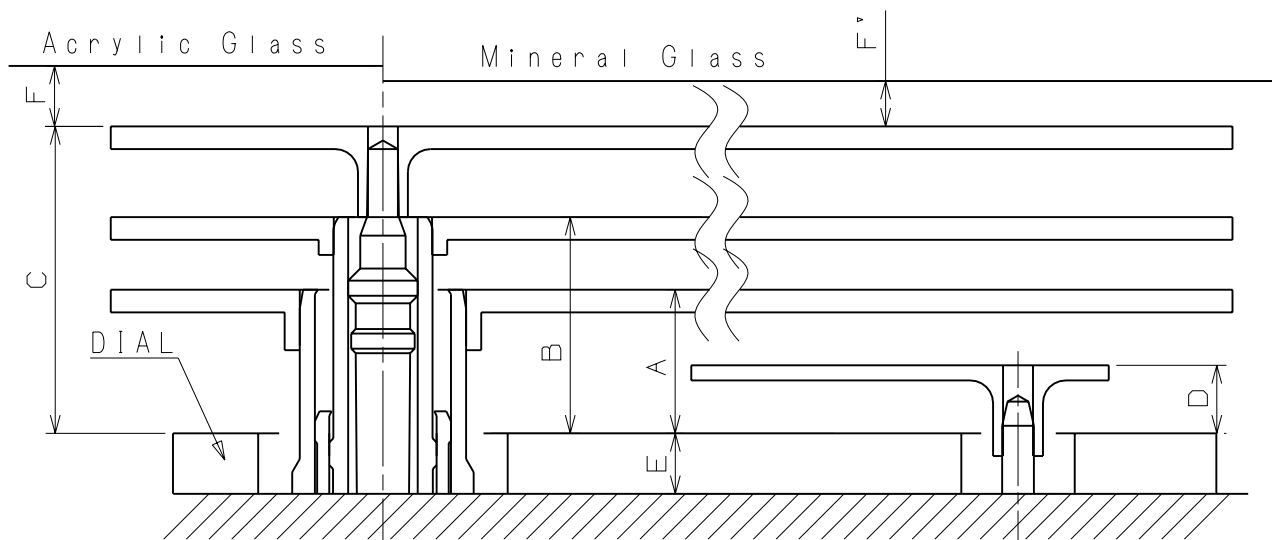
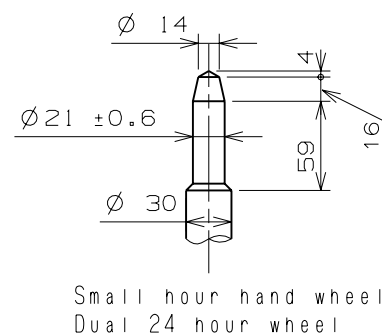
- Hour hand $\leq 0.5 \mu\text{N} \cdot \text{m} (50\text{mg} \cdot \text{mm})$
- Minute hand $\leq 0.6 \mu\text{N} \cdot \text{m} (60\text{mg} \cdot \text{mm})$
- Second hand $\leq 0.07 \mu\text{N} \cdot \text{m} (7\text{mg} \cdot \text{mm})$
- Dual time hand $\leq 0.05 \mu\text{N} \cdot \text{m} (5\text{mg} \cdot \text{mm})$
- 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 24 hour wheel	0902 0070	0902 0030



	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

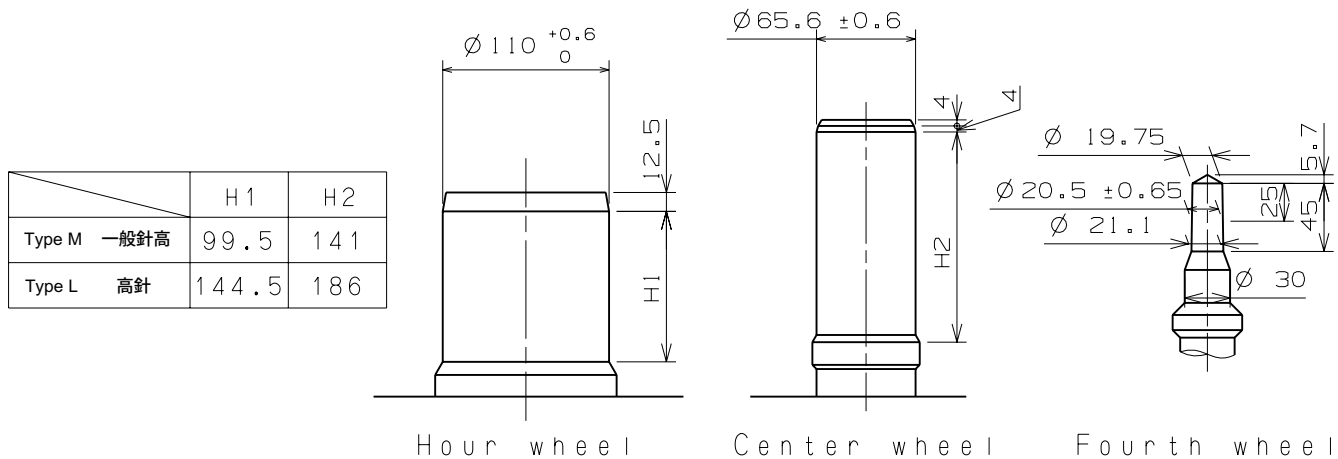
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※Unbalance

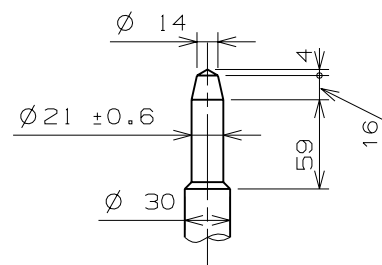
- Hour hand $\leq 0.5 \mu\text{N} \cdot \text{m} (50\text{mg} \cdot \text{mm})$
- Minute hand $\leq 0.6 \mu\text{N} \cdot \text{m} (60\text{mg} \cdot \text{mm})$
- Second hand $\leq 0.07 \mu\text{N} \cdot \text{m} (7\text{mg} \cdot \text{mm})$
- Dual time hand $\leq 0.05 \mu\text{N} \cdot \text{m} (5\text{mg}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

※Movement of inertia

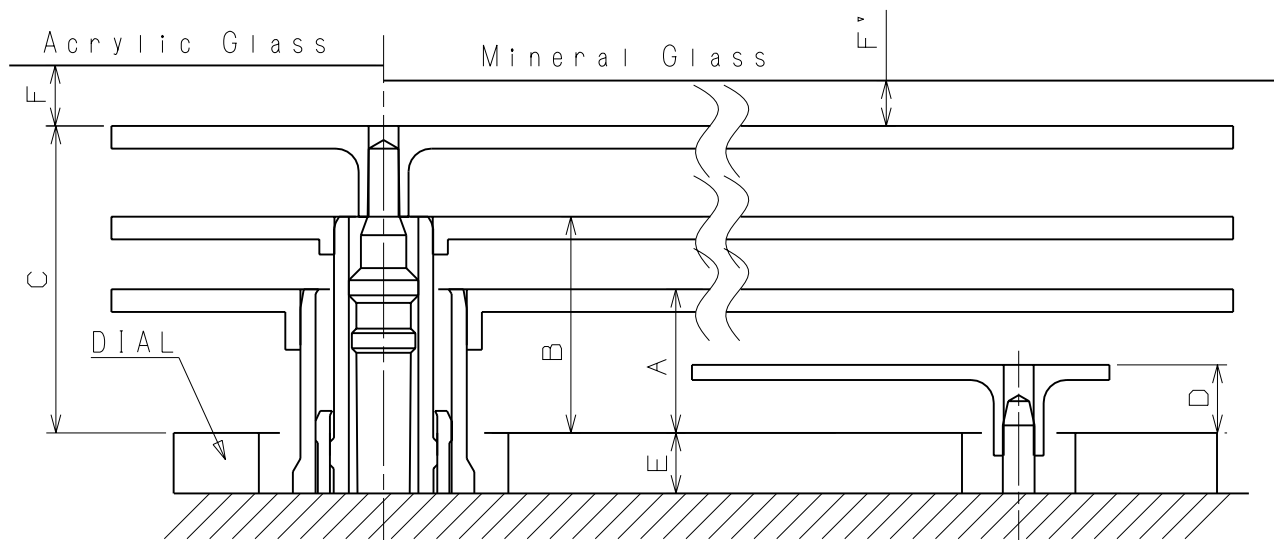
- Small hour indicator $\leq 0.4 \mu\text{g} \cdot \text{m}^2 (400\text{mg} \cdot \text{mm}^2)$ (Disc hand available)



Part name	Part No.	
	Type M 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 24 hour wheel 兩地時間24小時針輪	0902 0070	0902 0030



Small hour hand wheel
Dual 24 hour wheel

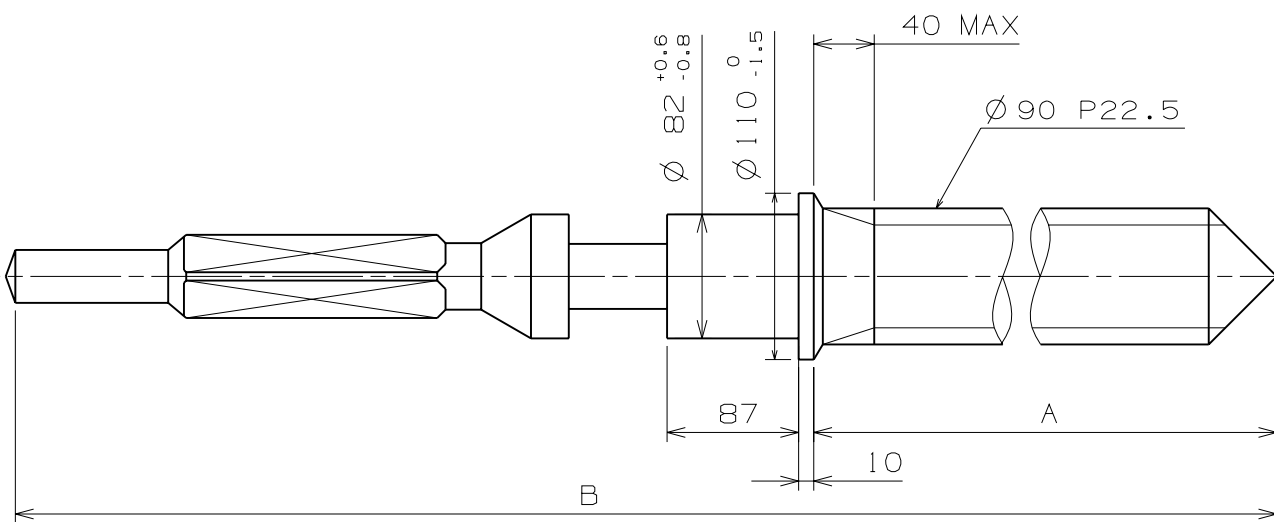


	A	B	C	D	E	F	F'
Type M 一般針高	95	143	203	45	40	50	40
Type L 高針	95	143	203	45	85	50	40

Scale : 20/1

Unit : 1=1/100mm

Version:1

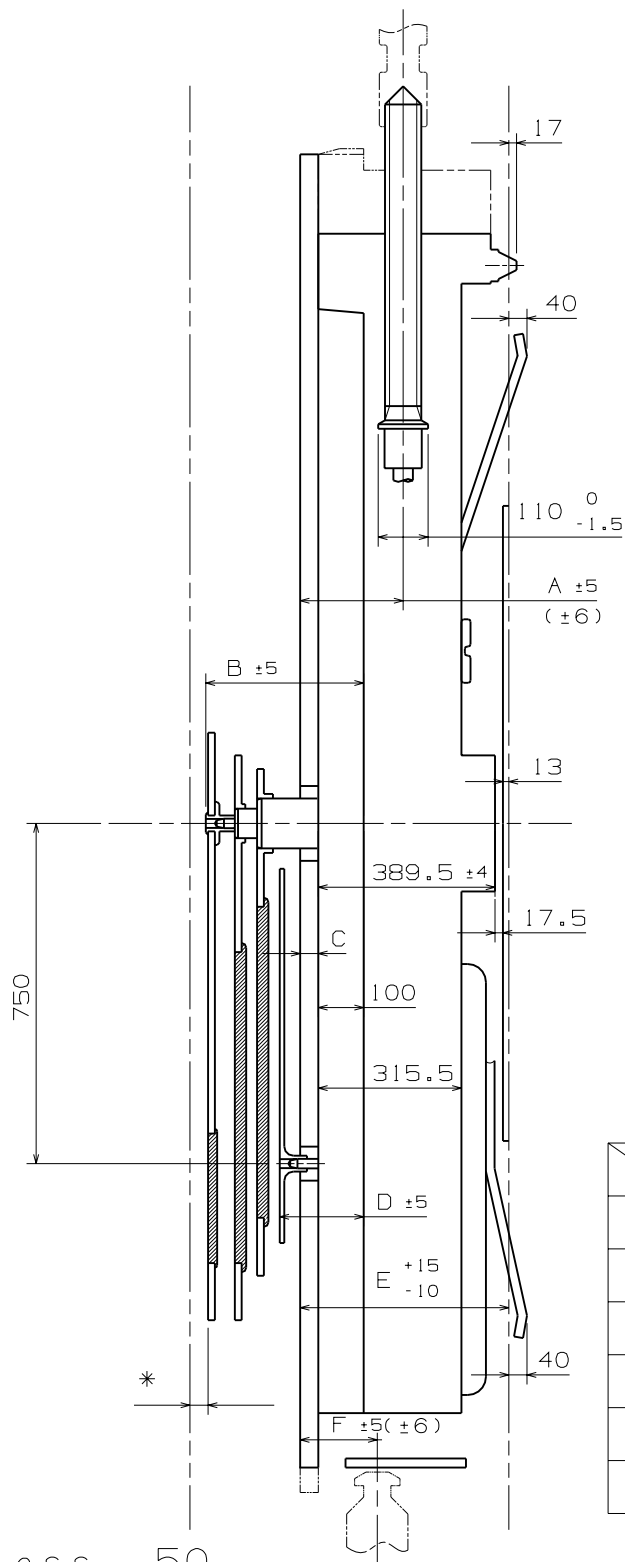


	Part. No.	A	B
TYPE A	0351 1780	1508	2036

Scale : 20/1

Unit : 1=1/100mm

Version:1

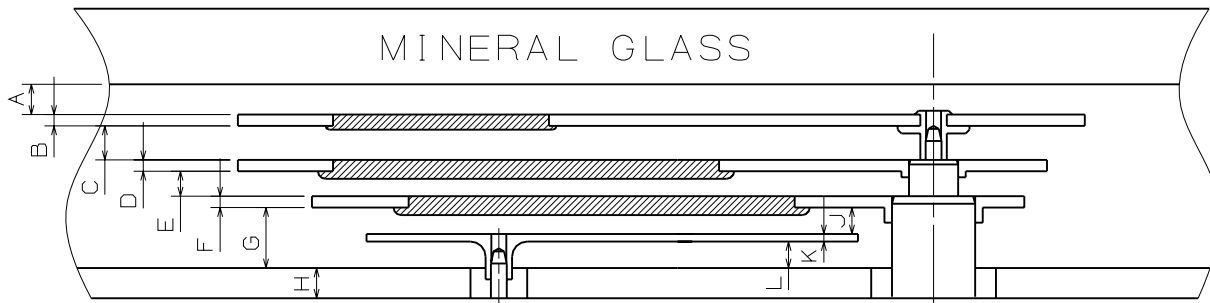
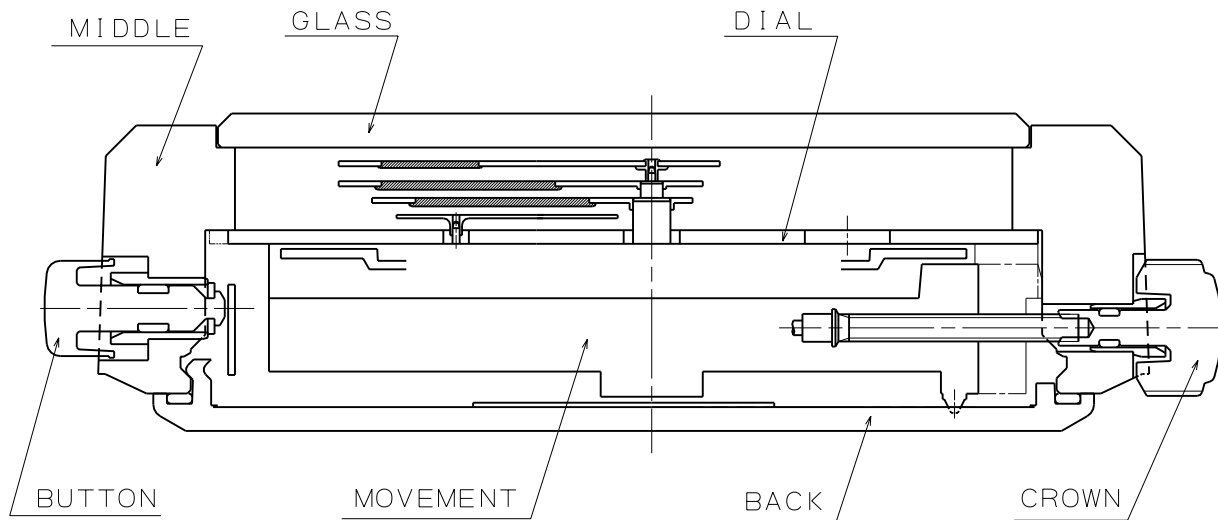


	TYPE M	TYPE L
A	227	272
B	343	388
C	40	85
D	185	230
E	460	505
F	170	215

*Acrylic Glass 50
*Mineral Glass 40

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

Version : 1

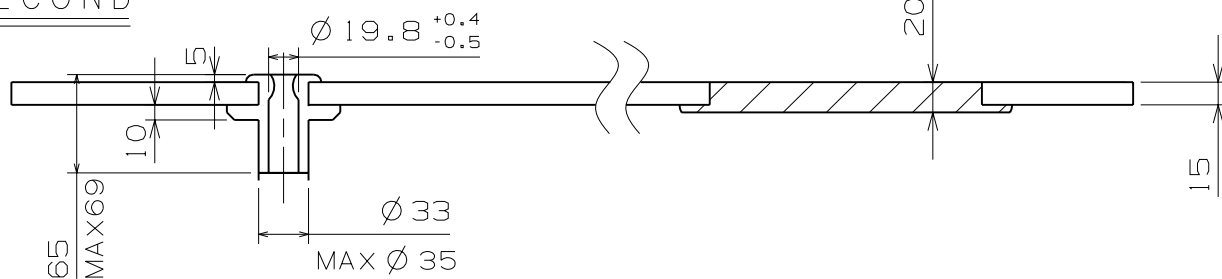


	TYPE M	TYPE L
A	40	40
B	15	15
C	45	45
D	15	15
E	33	33
F	15	15
G	80	80
H	40	85
J	35	35
K	10	10
L	35	35

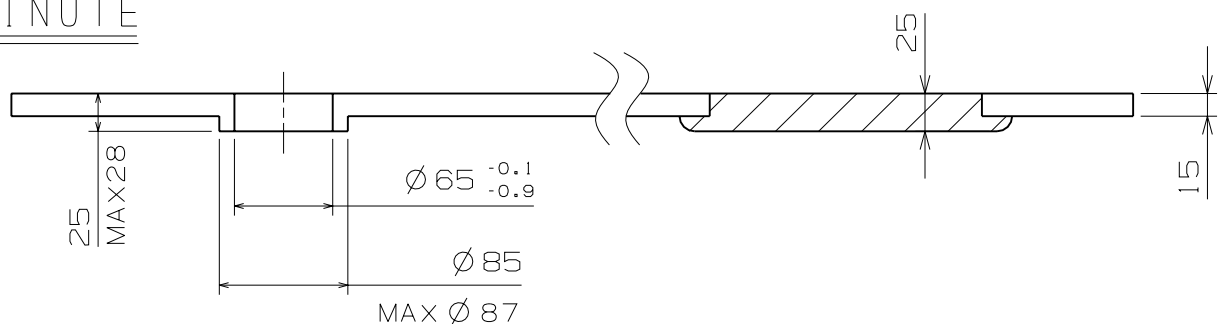
Scale : \neq
Unit : 1=1/100mm

Version : 1

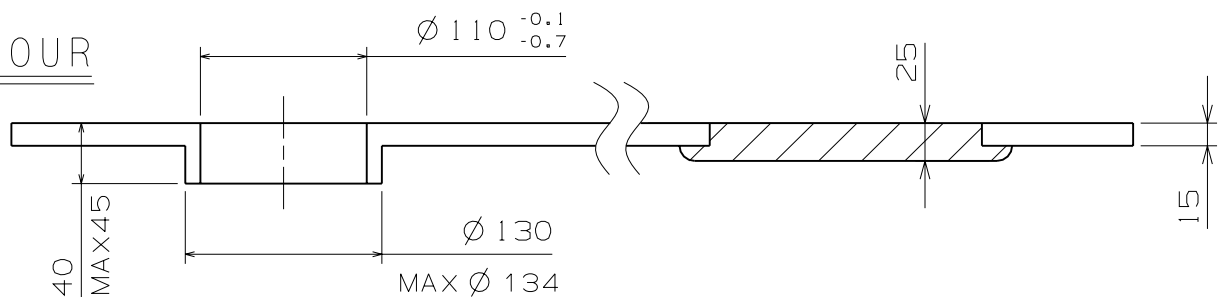
SECOND



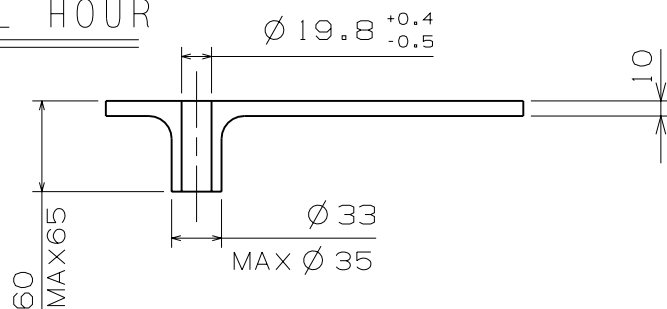
MINUTE



HOUR



DUAL TIME SMALL HOUR



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

Version : 1