

Watch Movement Specification and Drawing

Dual Time Movement

VD33B



Movement Size: **12 ³/₄"**
Diameter: **Φ29.50mm**
Height: **4.57mm**

Items	Ver.	Items	Ver.
Specification	1		
Appearance	1		
Casing	1		
Hand Fitting	2		
Hand Setting Stem	1		
Dial - 1	1		
Dial - 2	1		
Assembly Plan - 1	1		
Assembly Plan - 2	1		
Hands	1		

CAL.VD33B 12 $\frac{3}{4}$ Ligne Quartz Movement

Three Hands with 3 Eyes & Date

Small Dual Time of 12 Hour & 60 Minute, 24 Hour Indicator Hands

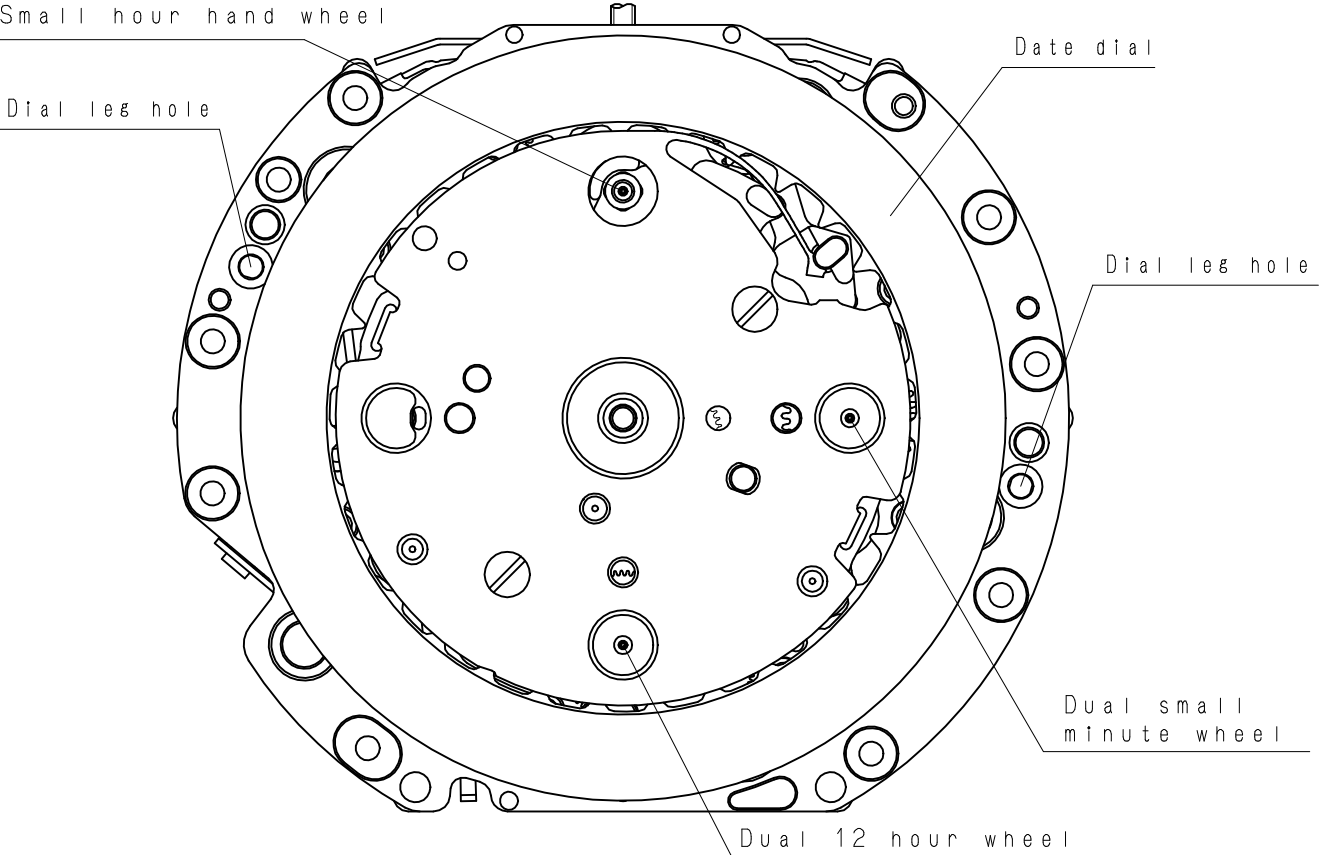
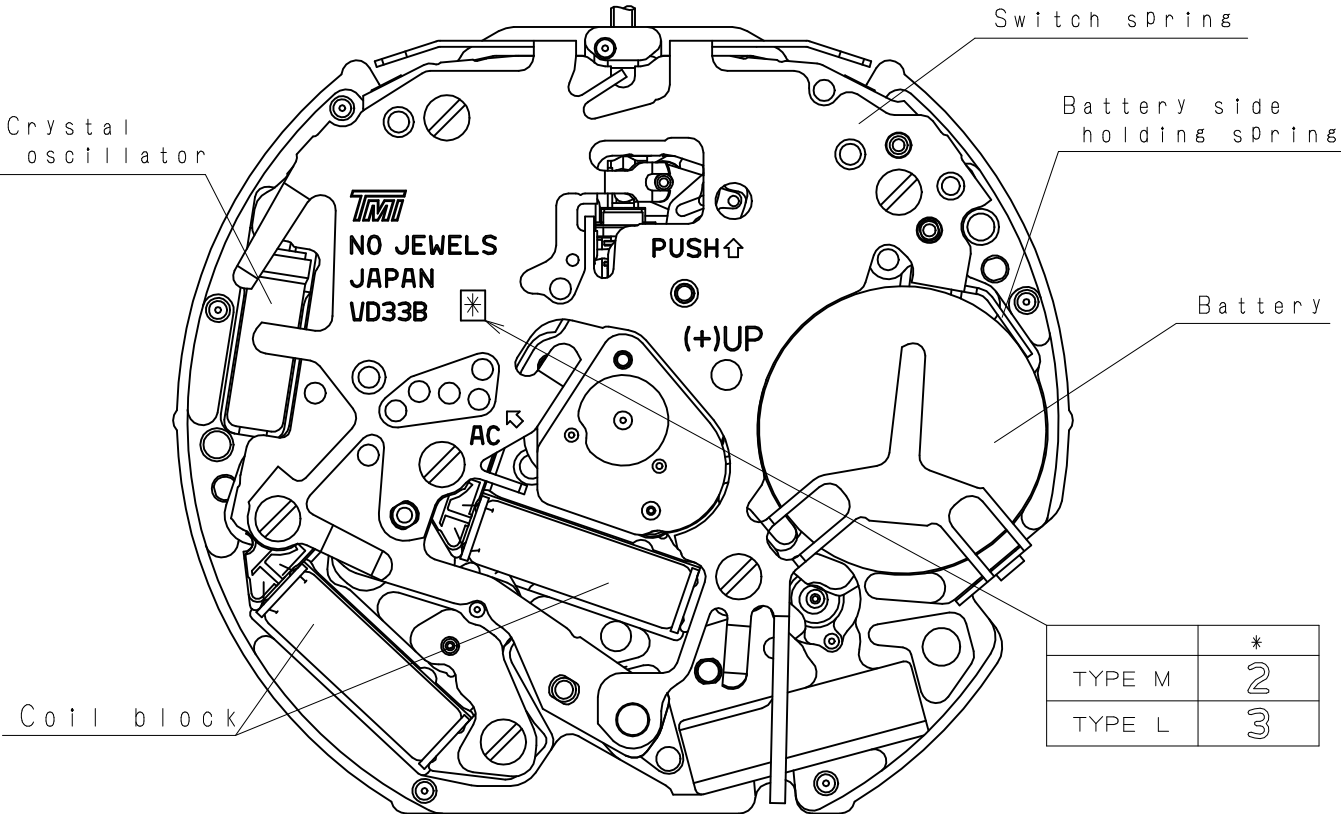
1. FUNCTION

- | | |
|------------------------------|--|
| · Jewel | 0 jewel |
| · Accuracy | Less than ± 20 seconds / month (Normal temperature range) |
| · Battery life | Approx. 3 years |
| · Regulation hands unbalance | Hour hand : Less than $0.60 \mu\text{N}\cdot\text{m}$ (60 mg $\cdot\text{mm}$)
Minute hand : Less than $0.90 \mu\text{N}\cdot\text{m}$ (90 mg $\cdot\text{mm}$)
Second hand : Less than $0.09 \mu\text{N}\cdot\text{m}$ (9 mg $\cdot\text{mm}$)
Small dual time hands : Less than $0.05 \mu\text{N}\cdot\text{m}$ (5 mg $\cdot\text{mm}$)
Small 24 hour indicator hand : Less than $0.07 \mu\text{N}\cdot\text{m}$ (7 mg $\cdot\text{mm}$) |
| · The moment of inertia | Small 24 hour indicator hand (Disc hand) : Less than 400 mg $\cdot\text{mm}^2$ |
| · Additional function | Date display with quick date correction
Regulator dual time (12 hour, 60 minute)
24 hour indicator (Synchronized regular hour hand) |

2. USE AND TEST CONDITION

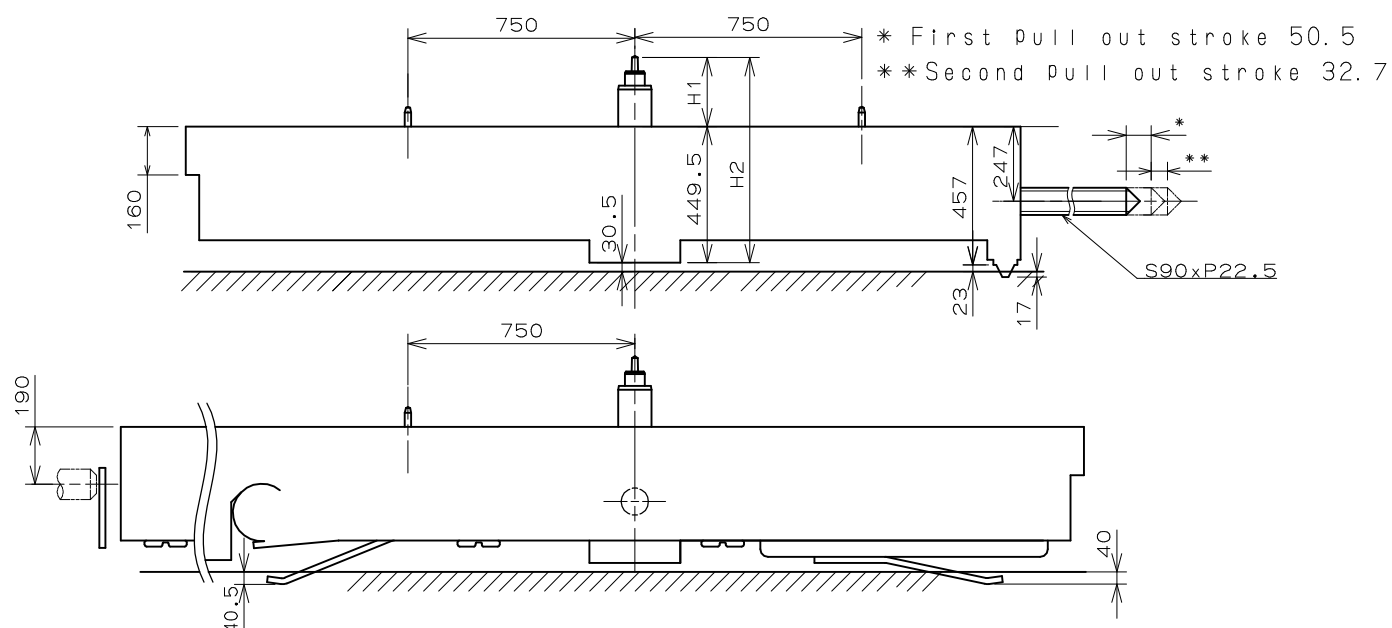
- | | | |
|-------------------------------|---------------------------|------------------------------------|
| · Battery | SR920SW | (Recommended battery is SEIZAIKEN) |
| · Operation temperature range | From - 5 °C to + 50 °C | |
| · Antimagnetic | $\geq 1600 \text{ A / m}$ | (Direct current magnetic field) |
| · Test of accuracy | 10 seconds | (Duration of measurement) |

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



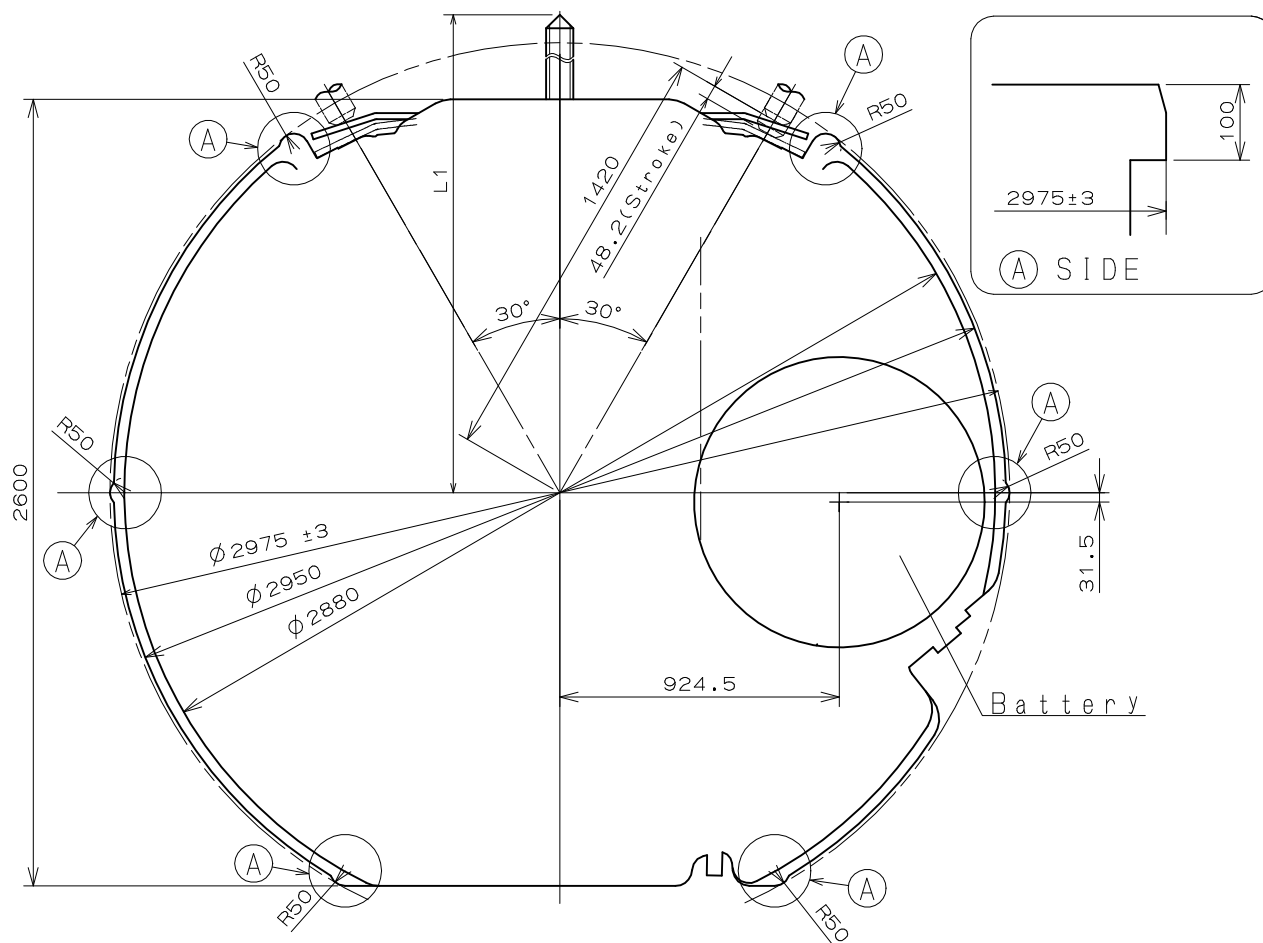
Casing

VD33B



Center post 中心柱位		TYPE M 一般針高	TYPE L 高針
Maximum height from main plate surface 與機芯平面的最大高度	H 1	228	273
Total height incl. movement 機芯總高度	H 2	677.5	722.5

Hand Setting Stem	TYPE A	TYPE B
L 1	2285	2861



Unit : 1=1/100mm

Version : 1

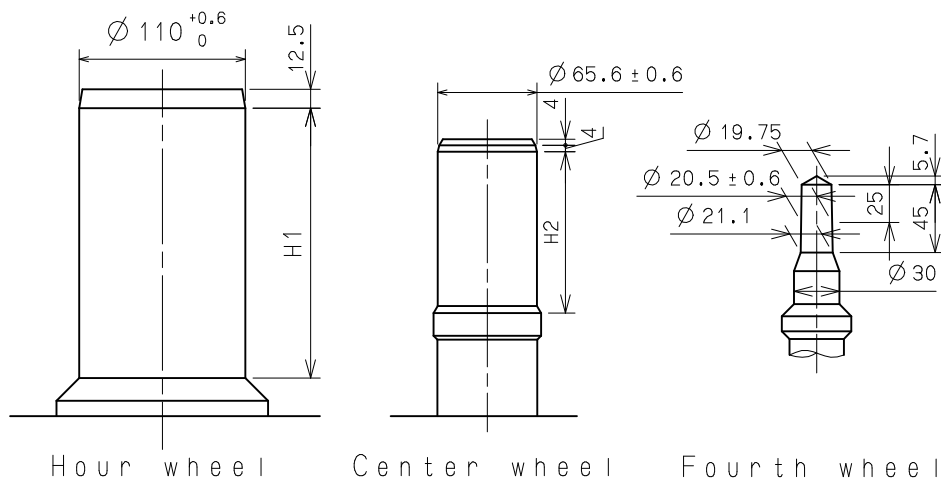
※Unbalance

· Hour hand	$\leq 0.6 \mu\text{N} \cdot \text{m} (60\text{mg} \cdot \text{mm})$
· Minute hand	$\leq 0.9 \mu\text{N} \cdot \text{m} (90\text{mg} \cdot \text{mm})$
· Second hand	$\leq 0.09 \mu\text{N} \cdot \text{m} (9\text{mg} \cdot \text{mm})$
· Dual time hand	$\leq 0.05 \mu\text{N} \cdot \text{m} (5\text{mg} \cdot \text{mm})$
· Small hour hand	$\leq 0.07 \mu\text{N} \cdot \text{m} (7\text{mg} \cdot \text{mm})$

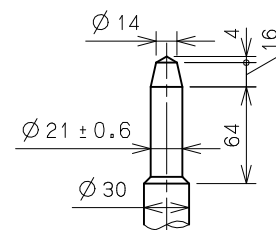
※Movement of inertia

· Small hour indicator	$\leq 0.4 \mu\text{g} \cdot \text{m}^2 (400\text{mg} \cdot \text{mm}^2) (\text{Disc hand available})$
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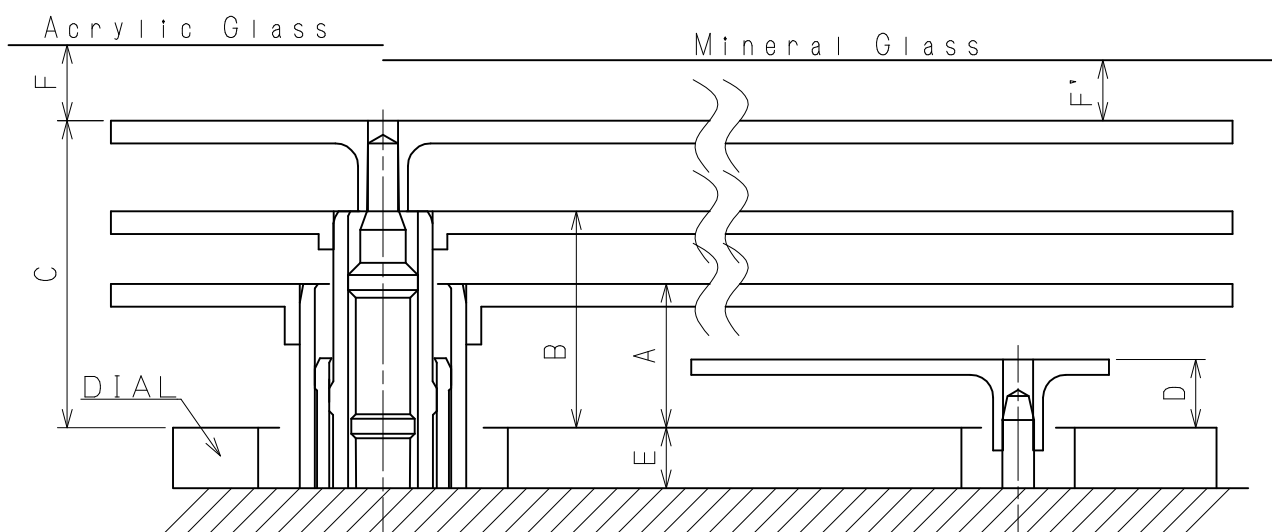
	H1	H2
TYPE M 一般針高	178.5	109
TYPE L 高針	223.5	154



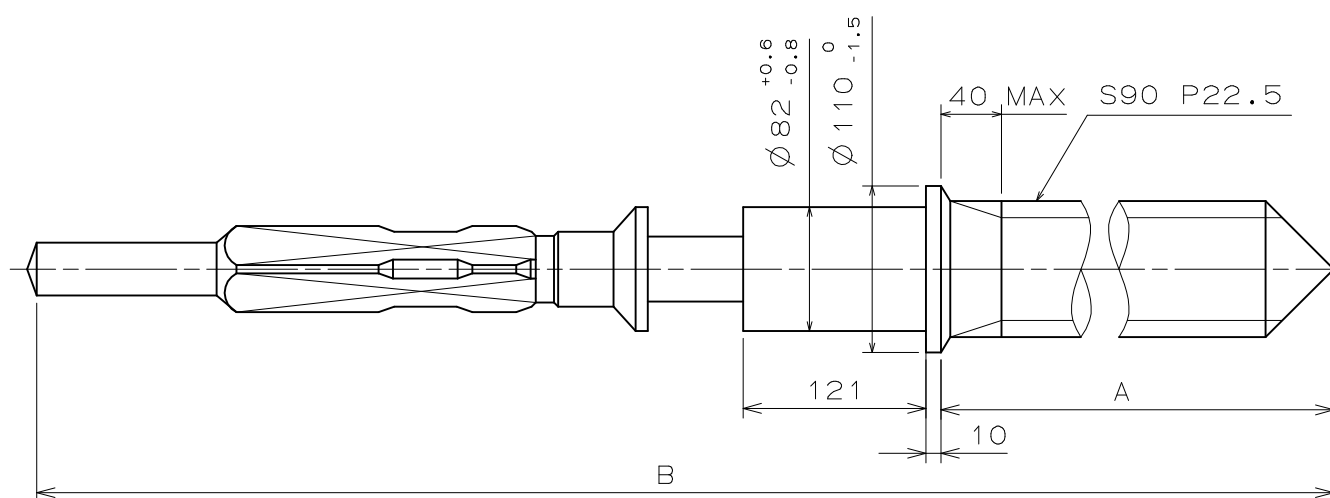
Part name		Part No.	
		TYPE M 一般針高	TYPE L 高針
Hour wheel	時針輪	0271 407	0273 037
Center wheel	分針輪	0221 203	0221 202
Fourth wheel	秒針輪	0241 178	0241 489
Dual 12 hour wheel	兩地時間12小時針輪	0902 016	0902 004
Dual small minute wheel	兩地時間小分針輪	0888 014	0888 011
Small hour hand wheel	小時針輪	0157 006	0157 007



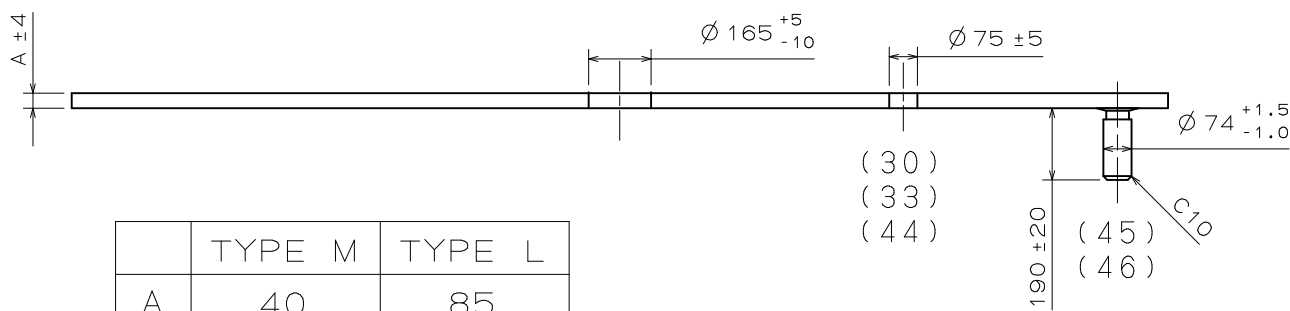
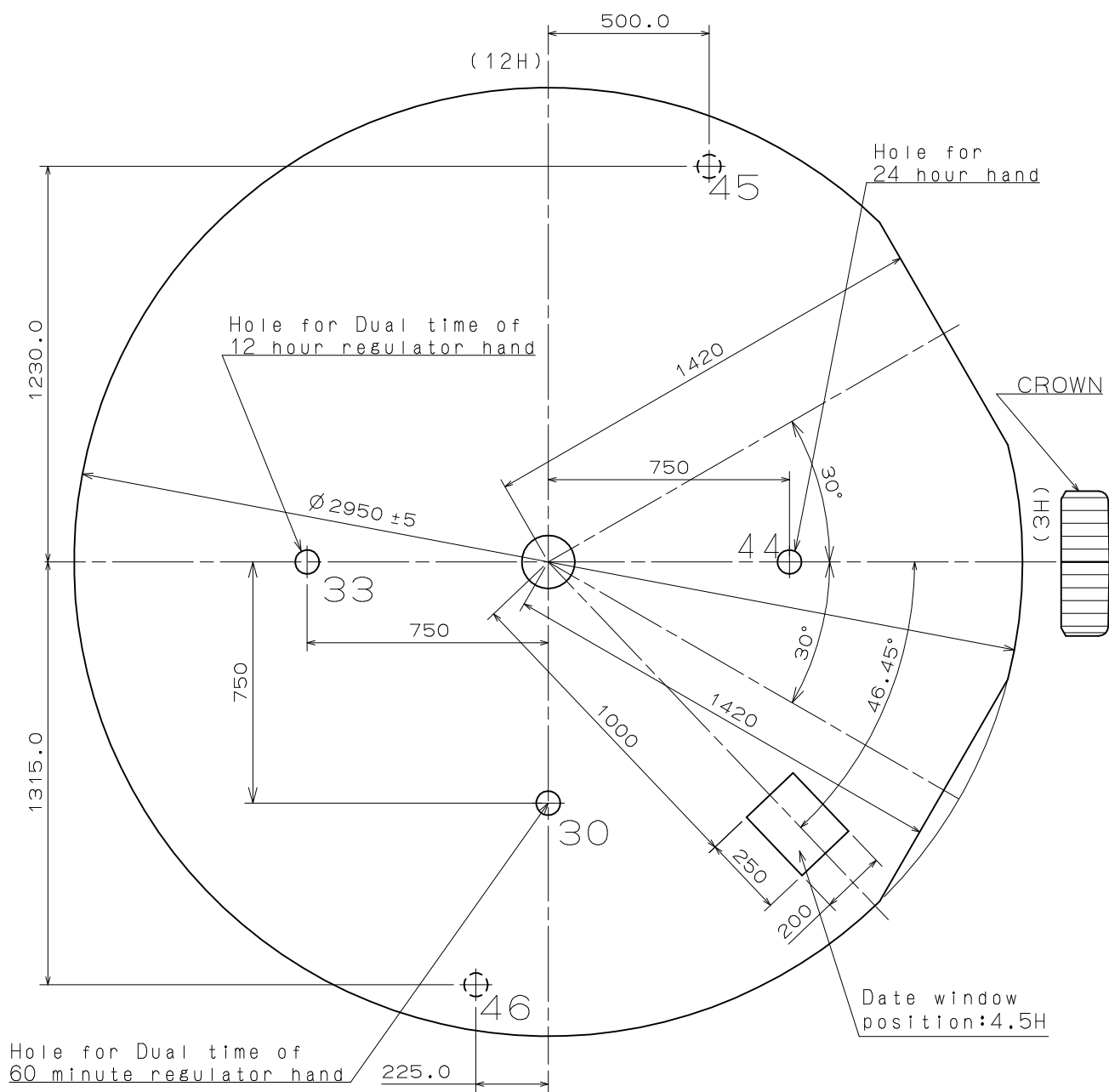
Dual small minute wheel
Dual 12 hour wheel
Small hour hand wheel



	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



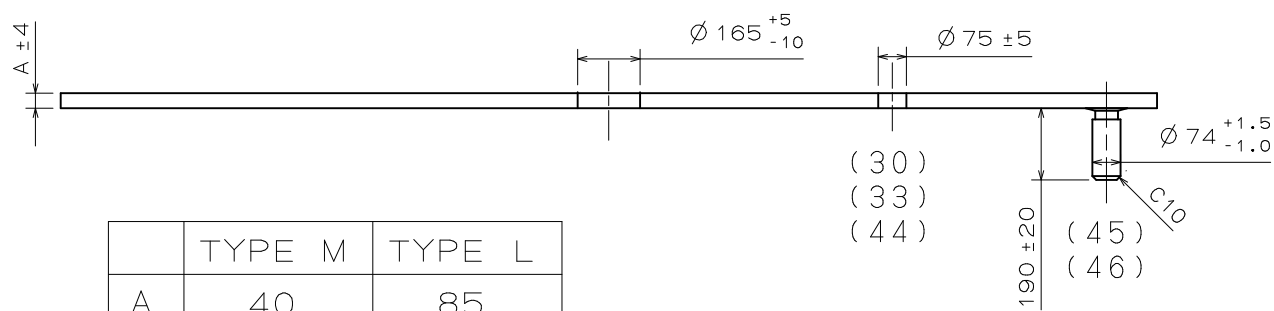
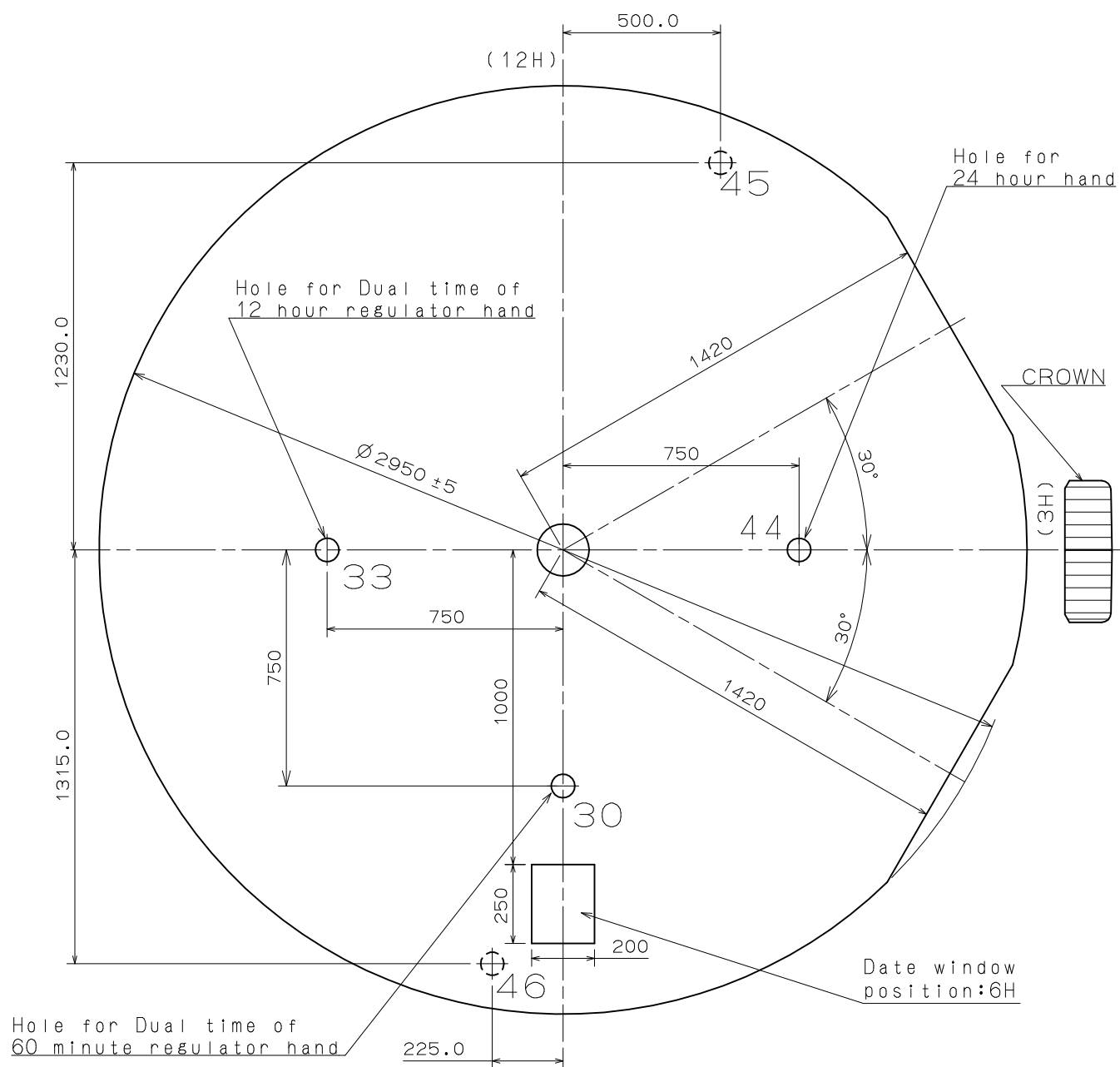
	Part No.	A	B
TYPE A	0351 177	1371	1969
TYPE B	0351 122	1947	2545



	TYPE M	TYPE L
A	40	85

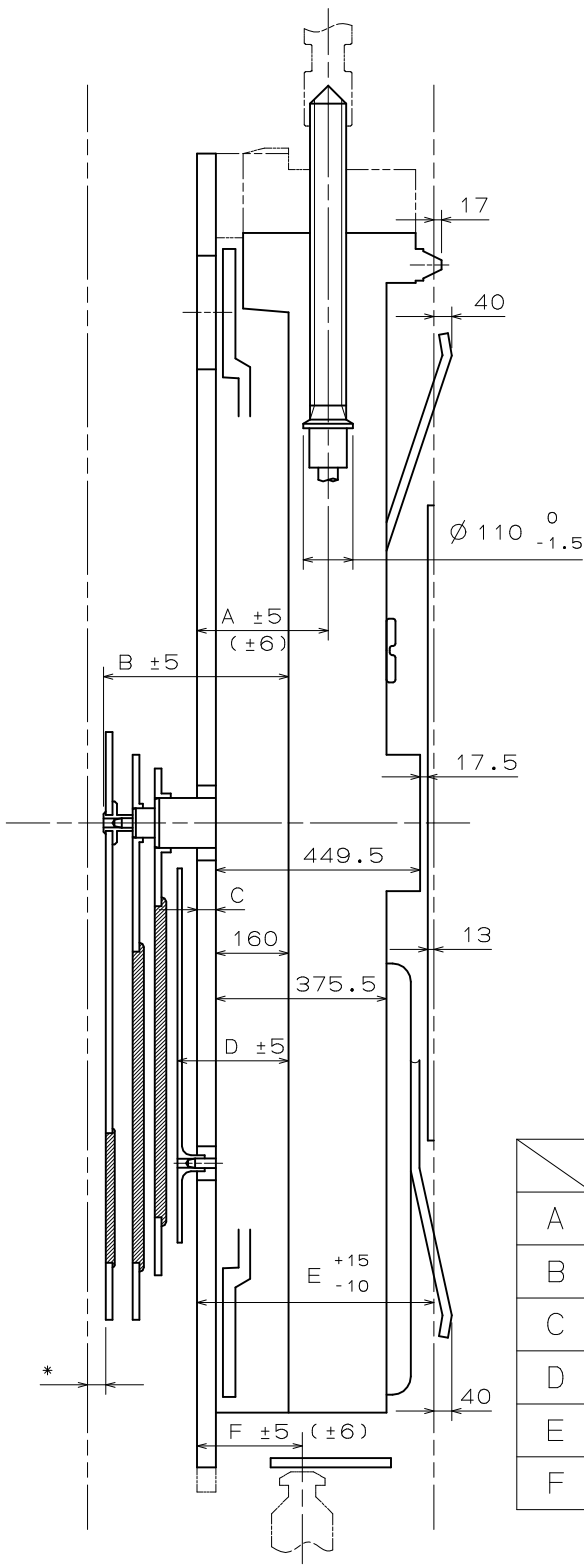
Unit : 1=1/100mm

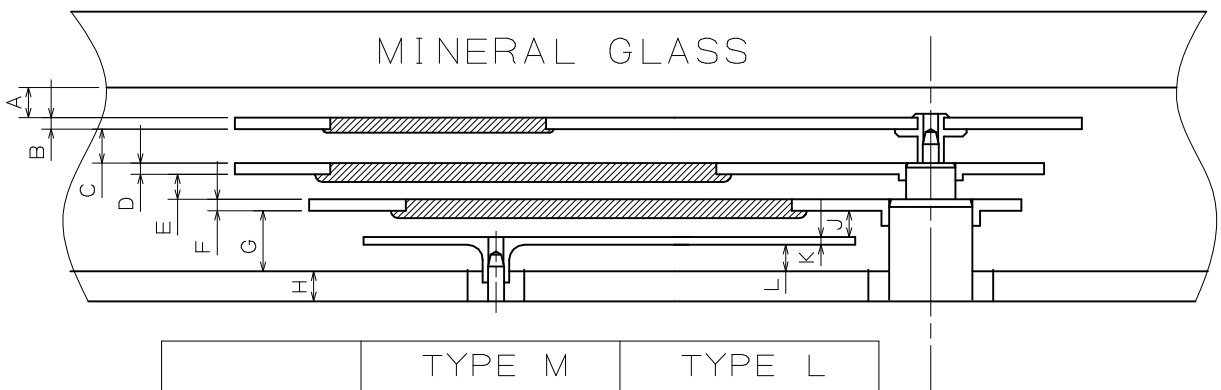
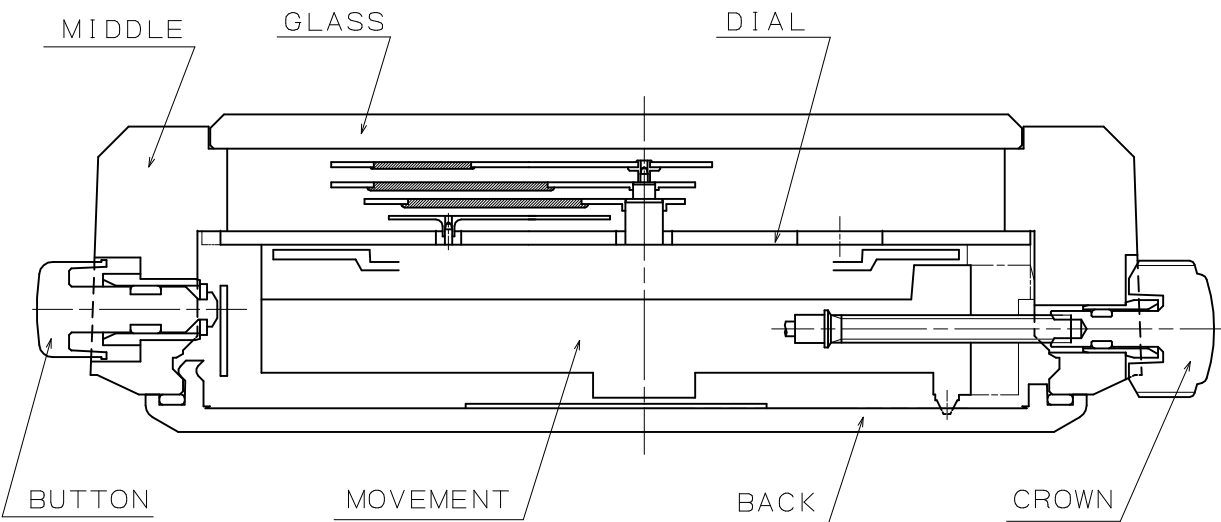
Version : 1



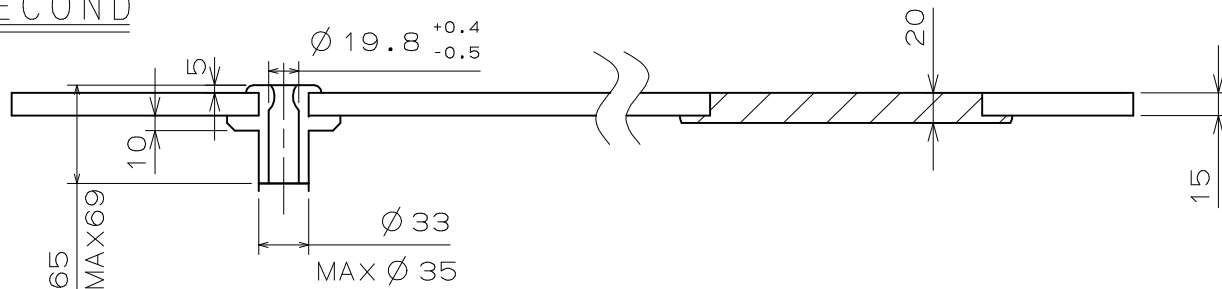
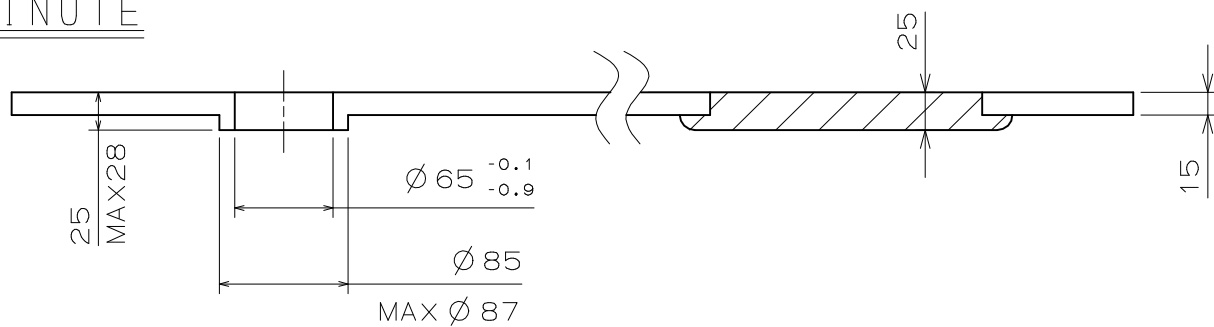
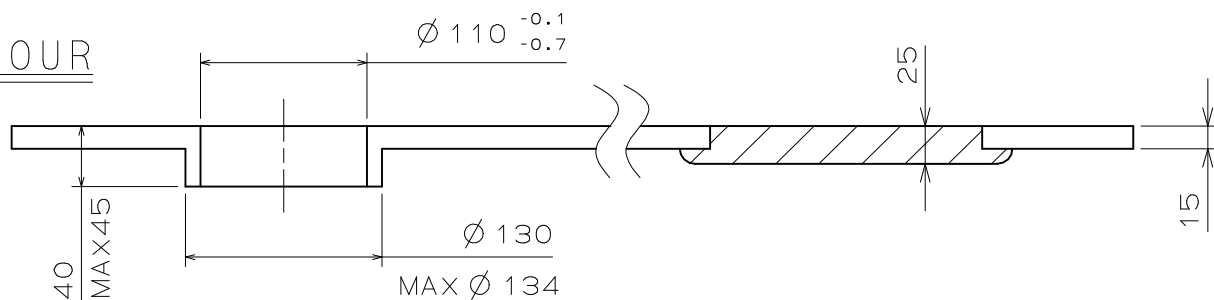
Unit : 1=1/100mm

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

SECONDMINUTEhourDUAL TIME
SMALL HOUR