

Cal. VD59B

ϕ 29.50 mm

H 4.57 mm

Item	Version No.
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Specification - 2	Version 1
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Casing	Version 7
Hand Fitting	Version 5
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MOVEMENT SPECIFICATION - 1

CAL.VD59B 12 3 / 4 Ligne Quartz Movement

Three Hands with 4 Eyes (Minute, Second, 1 / 10 Second Chronograph & Sun and Moon disk)

1. MOVEMENT DIMENSIONS

- Outside diameter ϕ 29.50mm (12H~6H) x 26.00mm (3H~9H)
- Casing diameter ϕ 28.80mm (12H~6H)
- Total height 4.57 mm

2. TIME STANDARD

- Type of quartz oscillator Tuning fork
- Frequency of quartz oscillator 32,768 H Z
- Accuracy Monthly rate: Less than 20 seconds per month at normal temperature range
- Regulation device Nil
- Regulation hands unbalance
 - Second : Less than 0.07 μ N·m (7mg·mm)
 - Minute : Less than 0.60 μ N·m (60mg·mm)
 - Hour : Less than 0.50 μ N·m (50mg·mm)
- Small hands unbalance Less than 0.05 μ N·m (5mg·mm)
- Additional function
 - Stopwatch : up to 1 minute in 1/10 second up to (2 second per round)
 - 60 minutes in 1 second split time
 - Sun & Moon disc (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 3 pieces
- Type Two pole stepping motor
- Step 180° every second

5. JEWEL

0 jewel

6. ANTIMAGNETISM

(direct current magnetic field)

\geq 1600 A / m

7. SHOCK RESISTANCE

On equal level with general quartz movement

8. OPERATING TEMPERATURE RANGE

From - 5 °C to + 50 °C

9. TEST OF ACCURACY

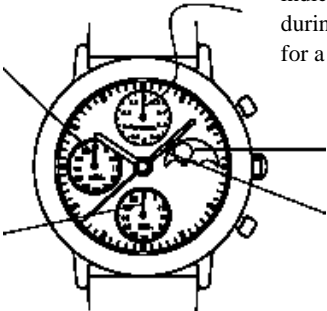

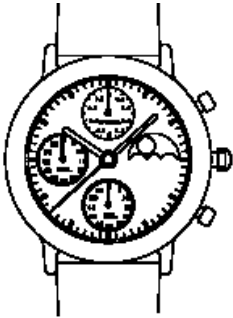
- Equipment to be used
 - SEIKO Quartz Tester QT - 99
 - Greiner Quartz Timer - C
 - Witschi Q-Tester 4000
- Duration of measurement 10 seconds
- Microphone to be used Electromagnetic detection type

10. ATTACHED PARTS

Parts Name	Parts Code
Hand setting stem	0351-1770 (Normal) / 0351-1230 (Long)
Silver oxide battery	3013 - 1410
Sticker	0110 - 3570

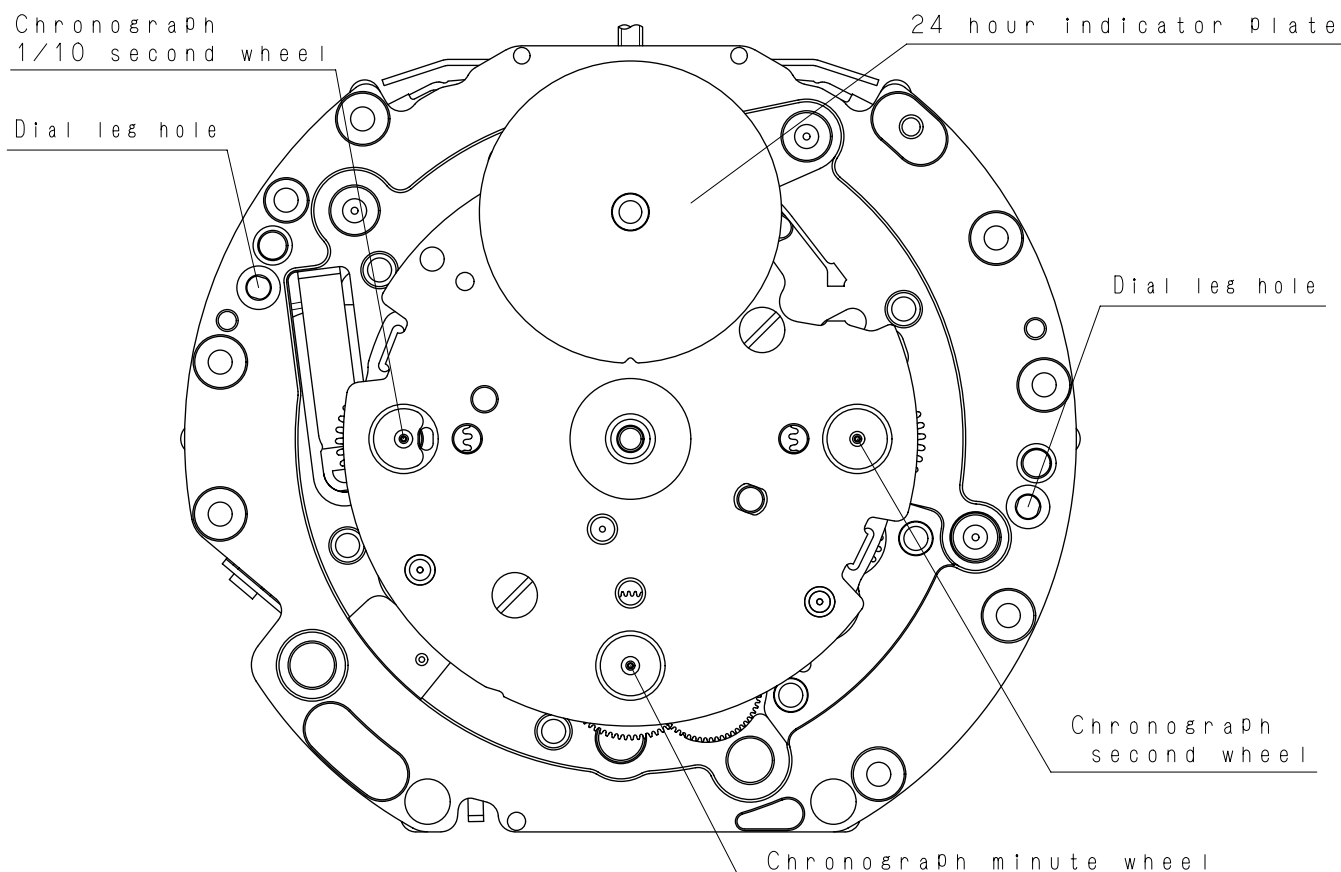
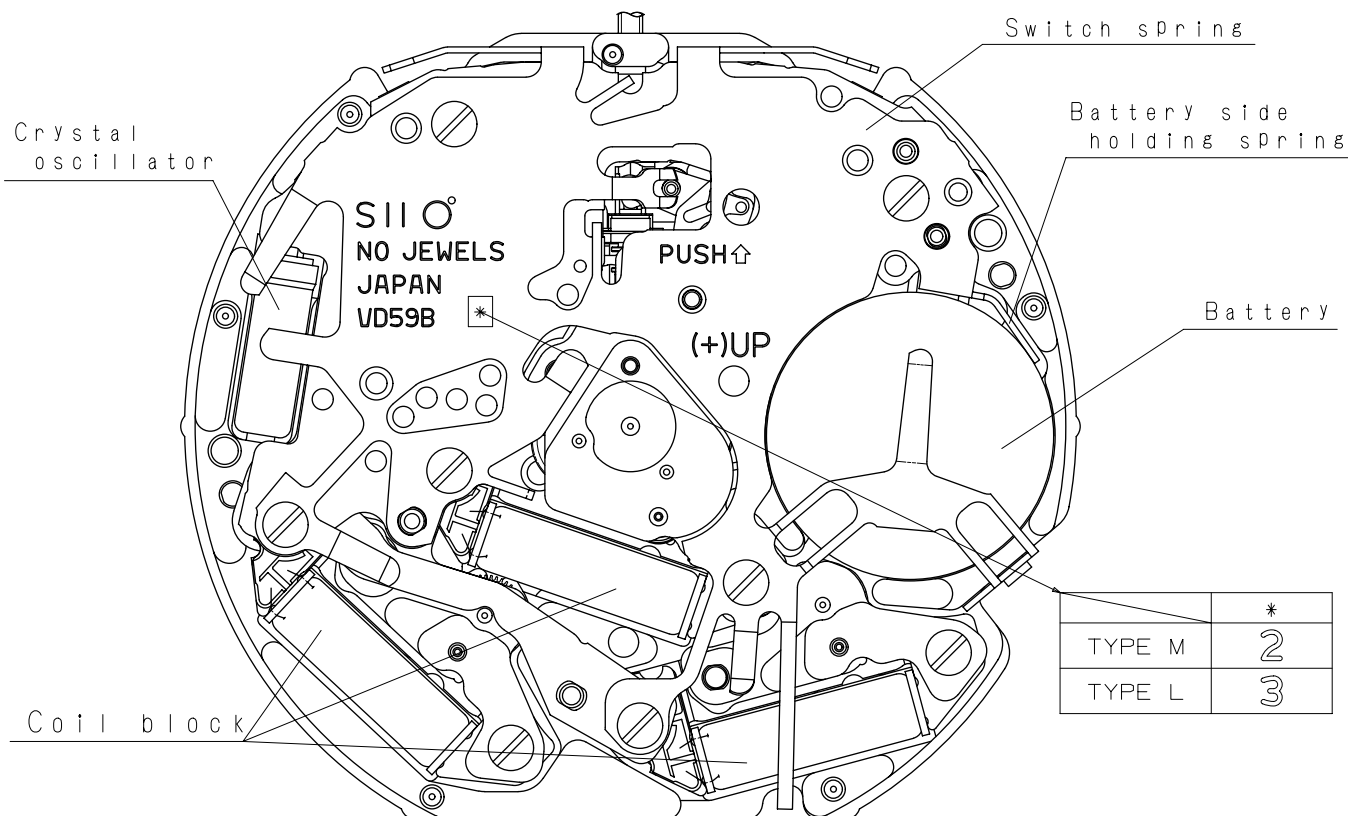
*** All specifications are subject to change without notice.**

Movement Specification - 2

	CAL. VD59B	
OPERATION	3 step motors (3 hands with Sun & Moon, 1 / 10 sec. chrono. maximum to 60 minutes)	
	<p>linkage {</p> <p>stopwatch minute hand</p> <p>stopwatch second hand</p>  <p>Sun & Moon</p> <p>3 hands</p> <p>Press button A, stopwatch 1/10 sec.hand indicates 1/10 unit of measurement time during stopwatch 1/10 second hand moves for a first minute.</p>	
	Normal position	 <p>START STOP</p> <p>FREE</p> <p>SPLIT RESET</p>
	<p>1st click</p> <p>adjusting minute, hour & chrono. hands</p>  <p>ADJUSTING THE STOPWATCH 1/10 SEC. HAND POSITION (CLOCKWISE)</p> <p>TIMING SETTING RESET SWITCH SECOND SETTING DEVICE</p> <p>ADJUSTING THE STOPWATCH SEC. & MIN. HAND POSITION (CLOCKWISE)</p> <p>AC FUNCTIONS</p> <p>(KEEP BUTTONS "A" AND "B" PRESSED AT THE SAME TIME FOR 2 SECONDS, AND THEN, RELEASE THE BUTTONS)</p>	
<p>* Stopwatch 1/10 second hand moves for a first minute.</p> <p>* Pull the crown to 2nd click to adjust the stopwatch hand position.</p> <p>* AC functions is available if stopwatch hand position is disorderly.</p> <p>* When using AC functions, stopwatch hand moves back and returned to where it was (second hand moves 1/2 circle counterclockwise and 1/2 circle clockwise, 1/10 second hand moves 1 circle clockwise)</p>		Version 1

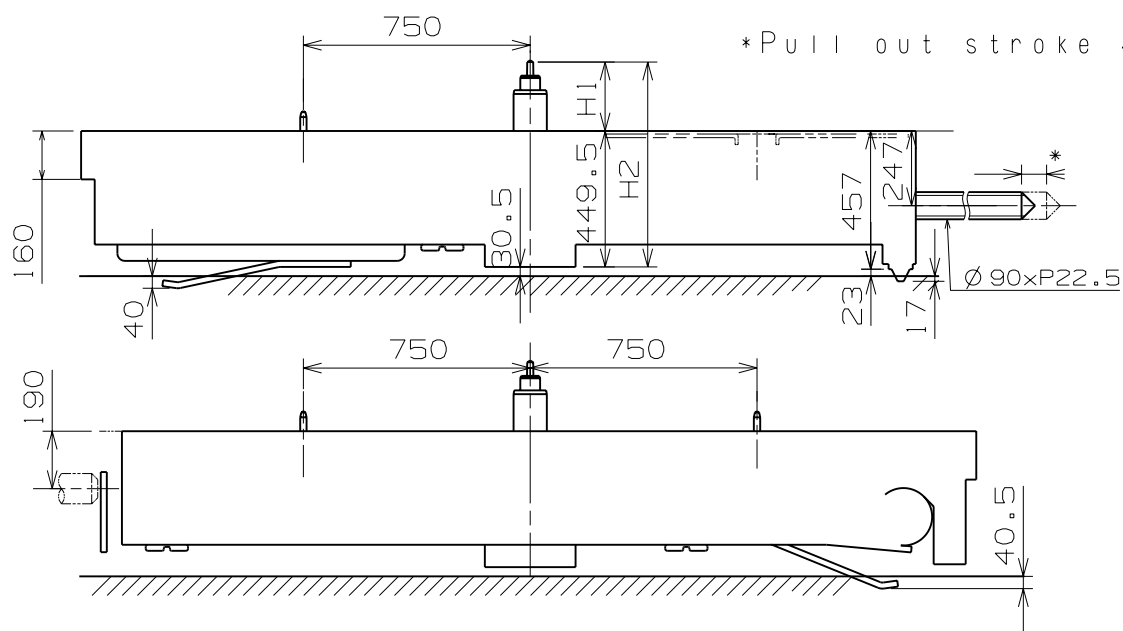
Appearance

Cal. VD59B



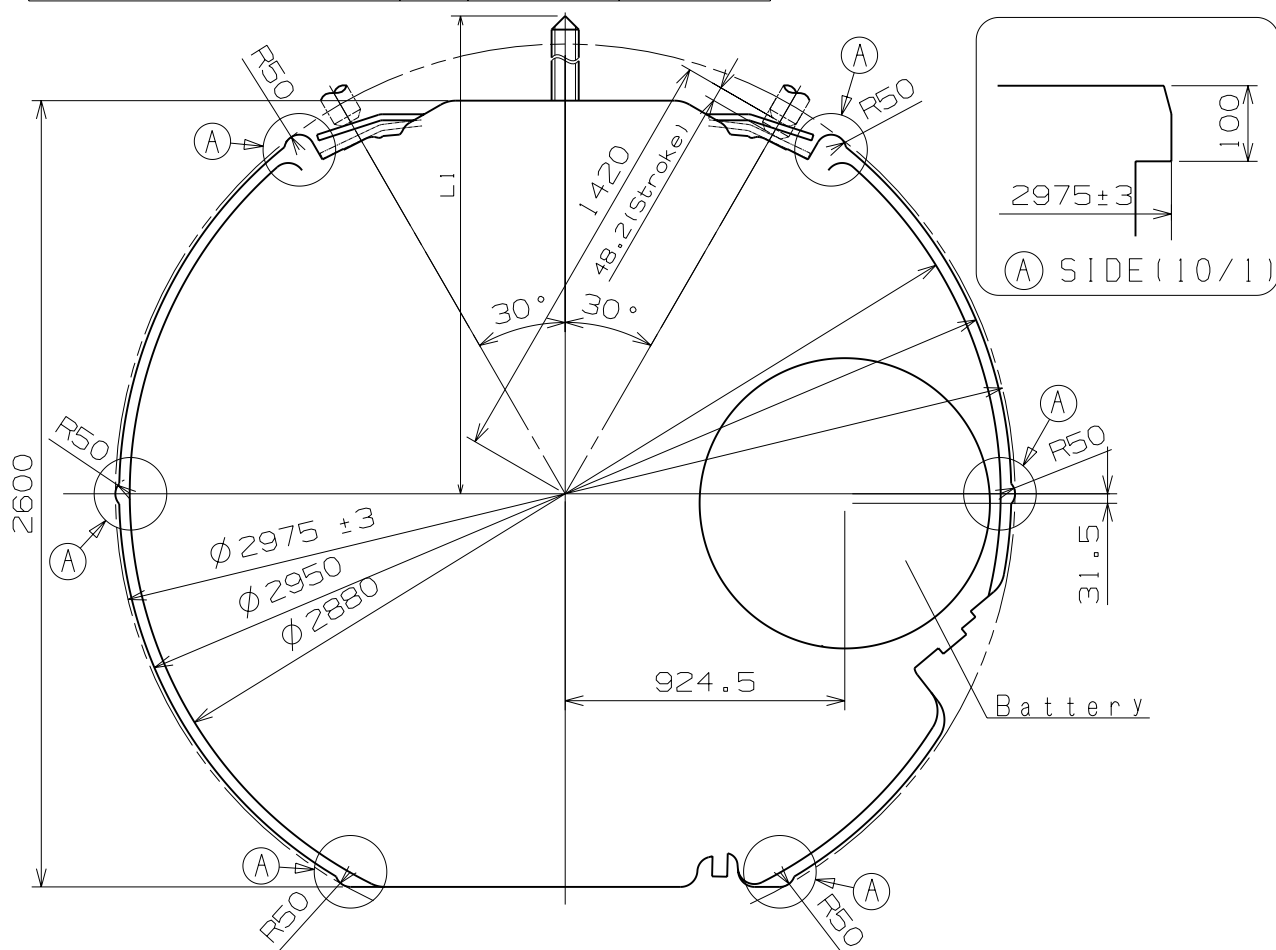
Scale : 4/1
Unit : 1=1/100mm

Version:6



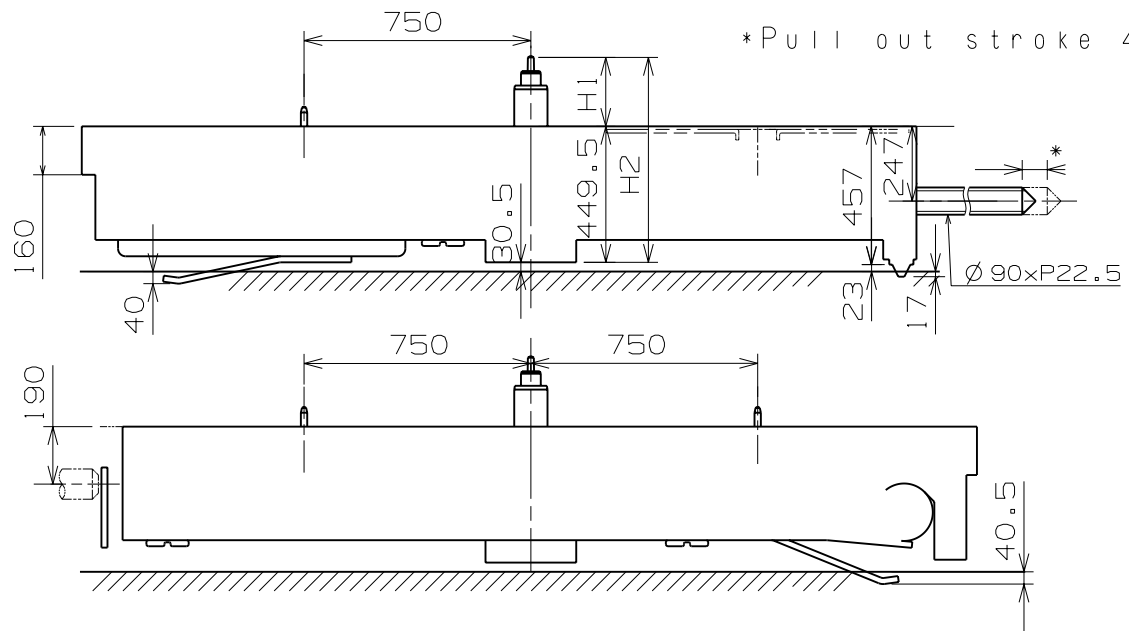
Center Post		TYPE M	TYPE L
Maximum height from main plate surface	H1	228	273
Total height incl. movement	H2	677.5	722.5

Hand Setting Stem	TYPE A	TYPE B
L1	2285	2861



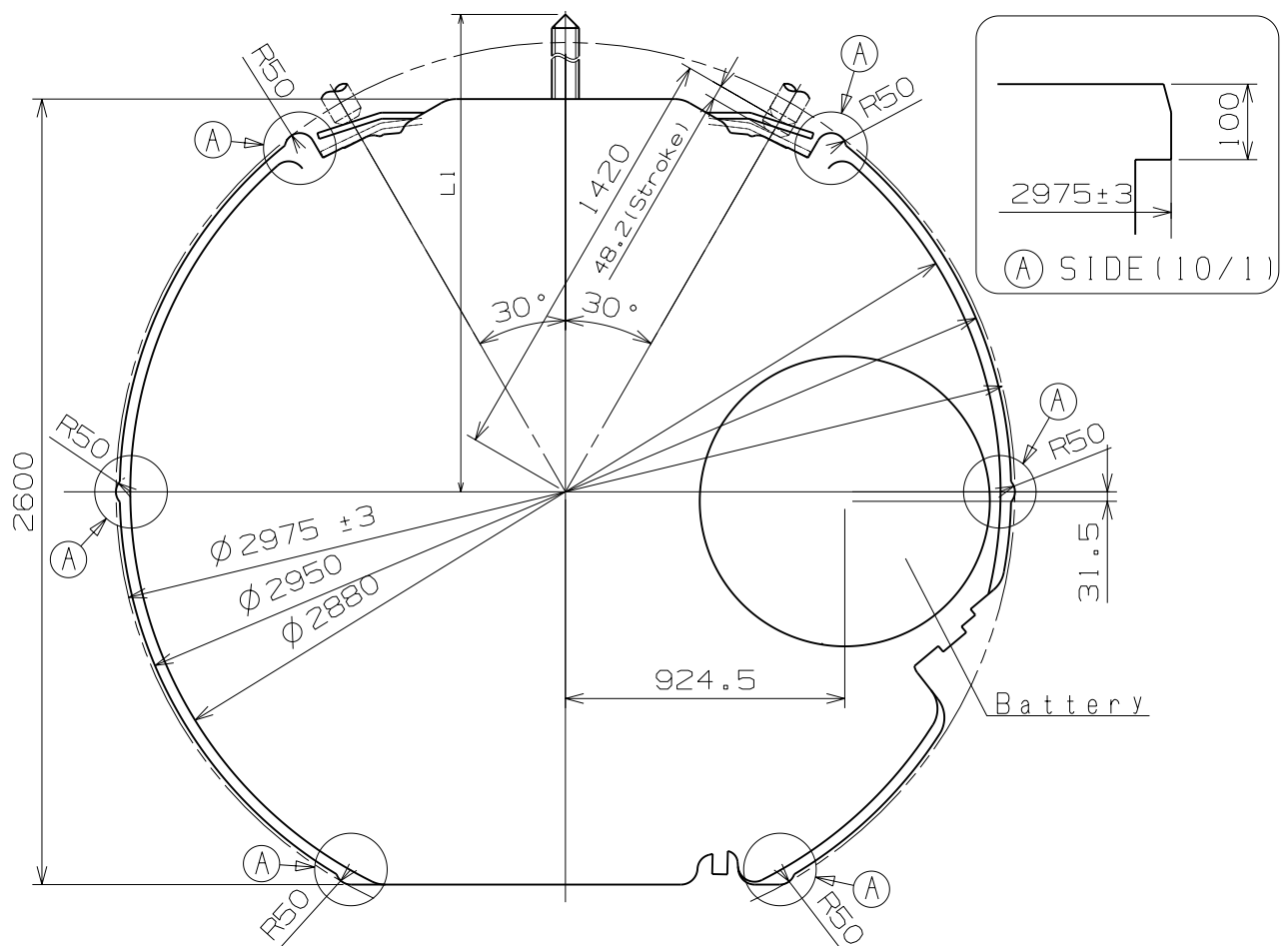
Scale : 4/1
Unit : 1=1/100mm

Version:7



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	677.5	722.5

Hand Setting Stem	TYPE A	TYPE B
L1	2285	2861



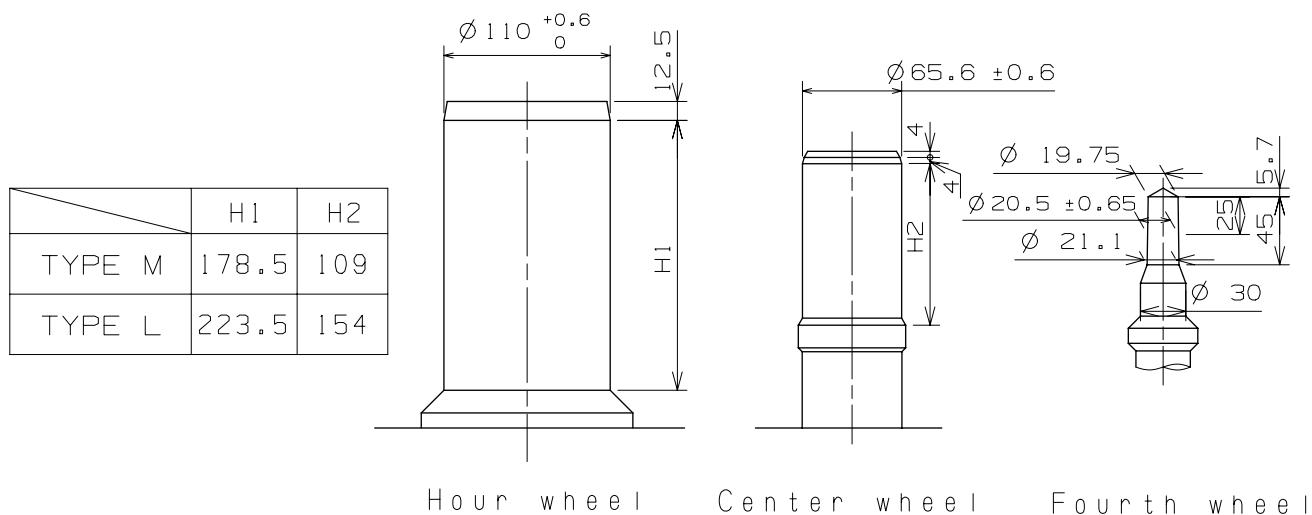
Scale : 4/1
Unit : 1=1/100mm

Version:7

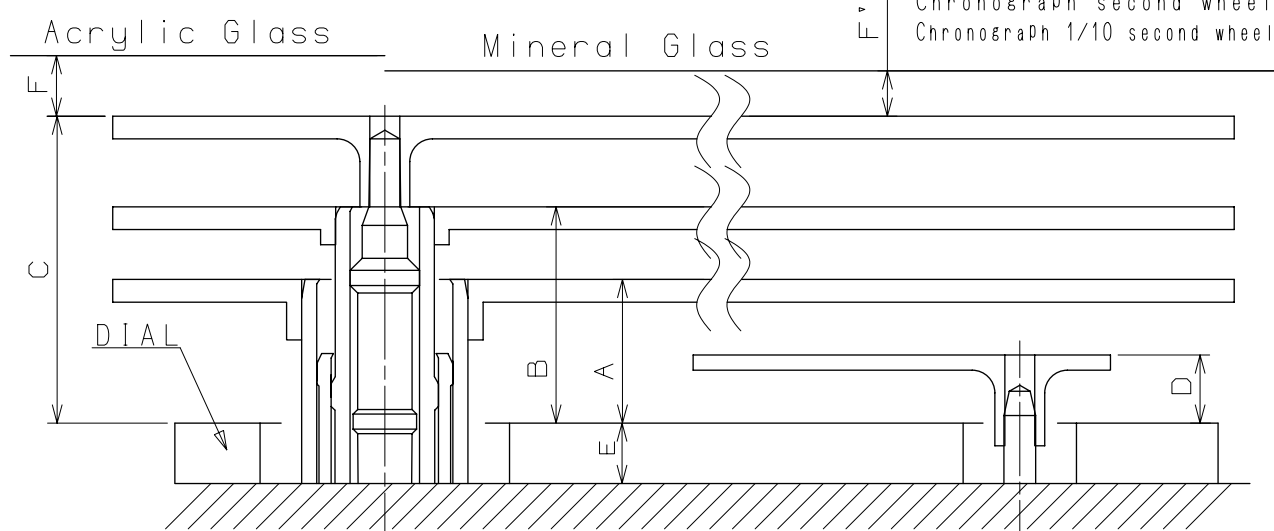
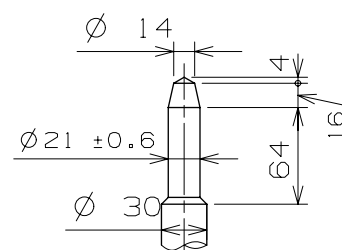
Hand fitting

Cal. VD59B

- *Hour hand unbalance $\leq 0.5 \mu\text{N}\cdot\text{m}$ 以下(50mg·mm)
- *Minute hand unbalance $\leq 0.6 \mu\text{N}\cdot\text{m}$ 以下(60mg·mm)
- *Second hand unbalance $\leq 0.07 \mu\text{N}\cdot\text{m}$ 以下(7mg·mm)
- *Chronograph hand unbalance $\leq 0.05 \mu\text{N}\cdot\text{m}$ 以下(5mg·mm)



Part name	Part No.	
	TYPE M	TYPE L
Hour wheel	0271 4070	0273 0370
Center wheel	0221 1570	0221 0780
Fourth wheel	0241 1780	0241 4890
Chronograph minute wheel	0902 0080	0902 0040
Chronograph second wheel	0888 0090	0888 0110
Chronograph 1/10 second wheel	0888 0090	0888 0110



	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

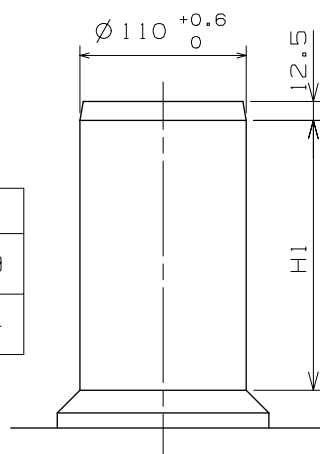
Version:5

Hand fitting

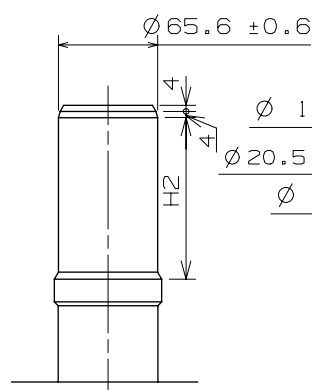
Cal. VD59B

- *Hour hand unbalance $\leq 0.5 \mu\text{N}\cdot\text{m}$ 以下(50mg·mm)
- *Minute hand unbalance $\leq 0.6 \mu\text{N}\cdot\text{m}$ 以下(60mg·mm)
- *Second hand unbalance $\leq 0.07 \mu\text{N}\cdot\text{m}$ 以下(7mg·mm)
- *Chronograph hand unbalance $\leq 0.05 \mu\text{N}\cdot\text{m}$ 以下(5mg·mm)

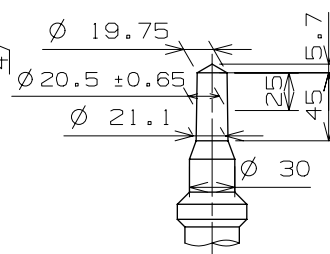
	H1	H2
TYPE M 一般針高	178.5	109
TYPE L 高針	223.5	154



Hour wheel

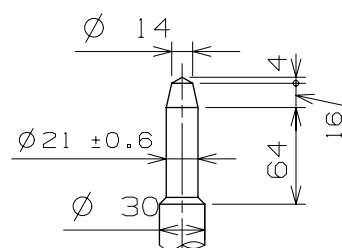


Center wheel

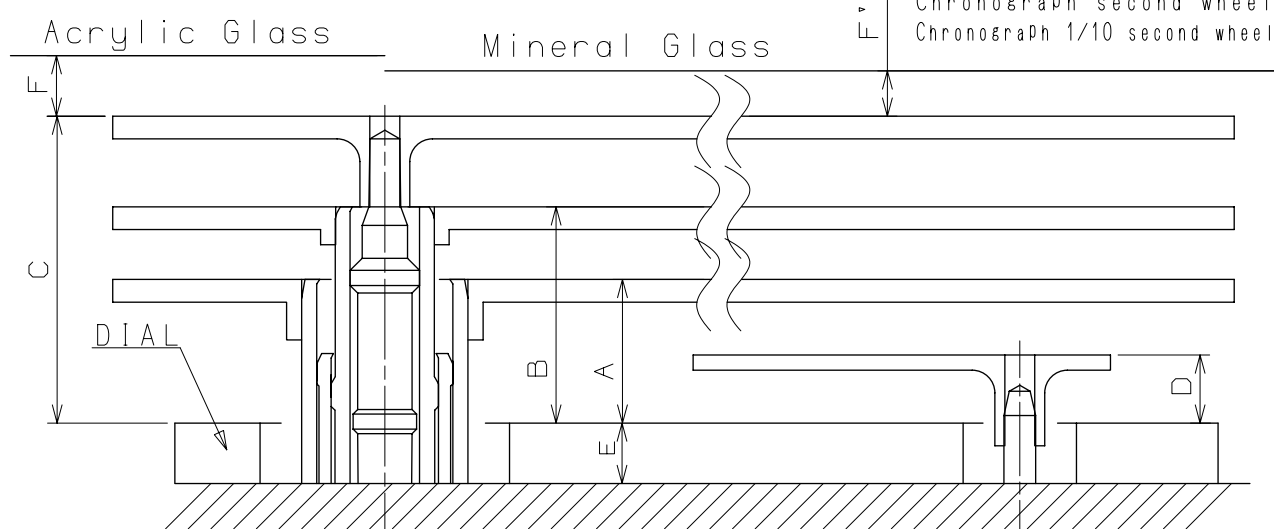


Fourth wheel

Part name	Part No.	
	TYPE M 一般針高	TYPE L 高針
Hour wheel 時針輪	0271 4070	0273 0370
Center wheel 分針輪	0221 1570	0221 0780
Fourth wheel 秒針輪	0241 1780	0241 4890
Chronograph minute wheel 計時分輪	0902 0080	0902 0040
Chronograph second wheel 計時秒輪	0888 0090	0888 0110
Chronograph 1/10second wheel 計時1/10秒輪	0888 0090	0888 0110



Chronograph minute wheel
Chronograph second wheel
Chronograph 1/10 second wheel

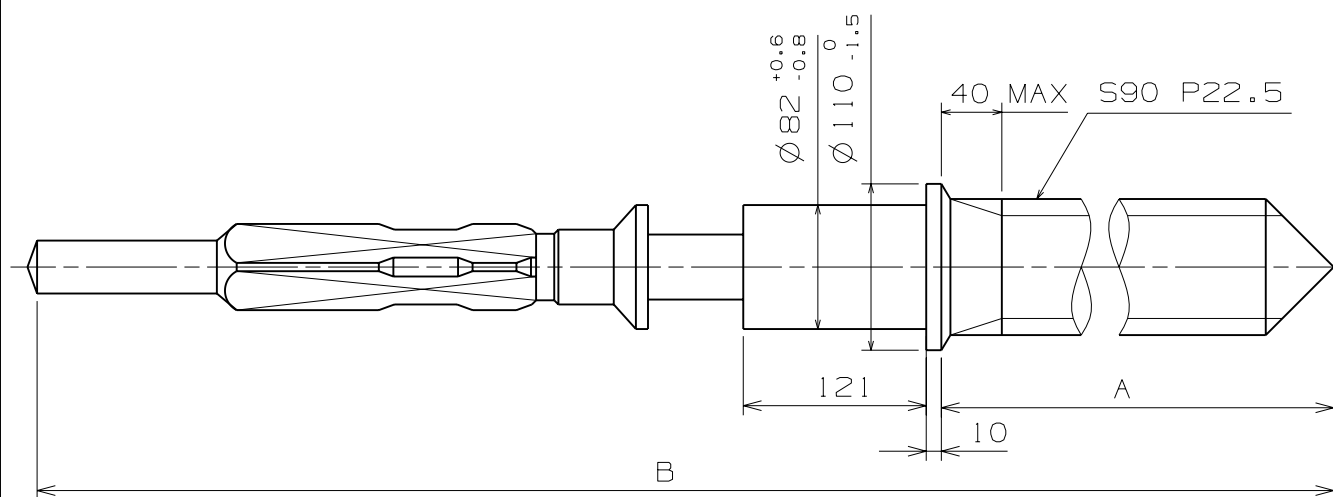


	A	B	C	D	E	F	F'
TYPE M 一般針高	95	143	203	45	40	50	40
TYPE L 高針	95	143	203	45	85	50	40

Scale : 20/1

Unit : 1=1/100mm

Version:5

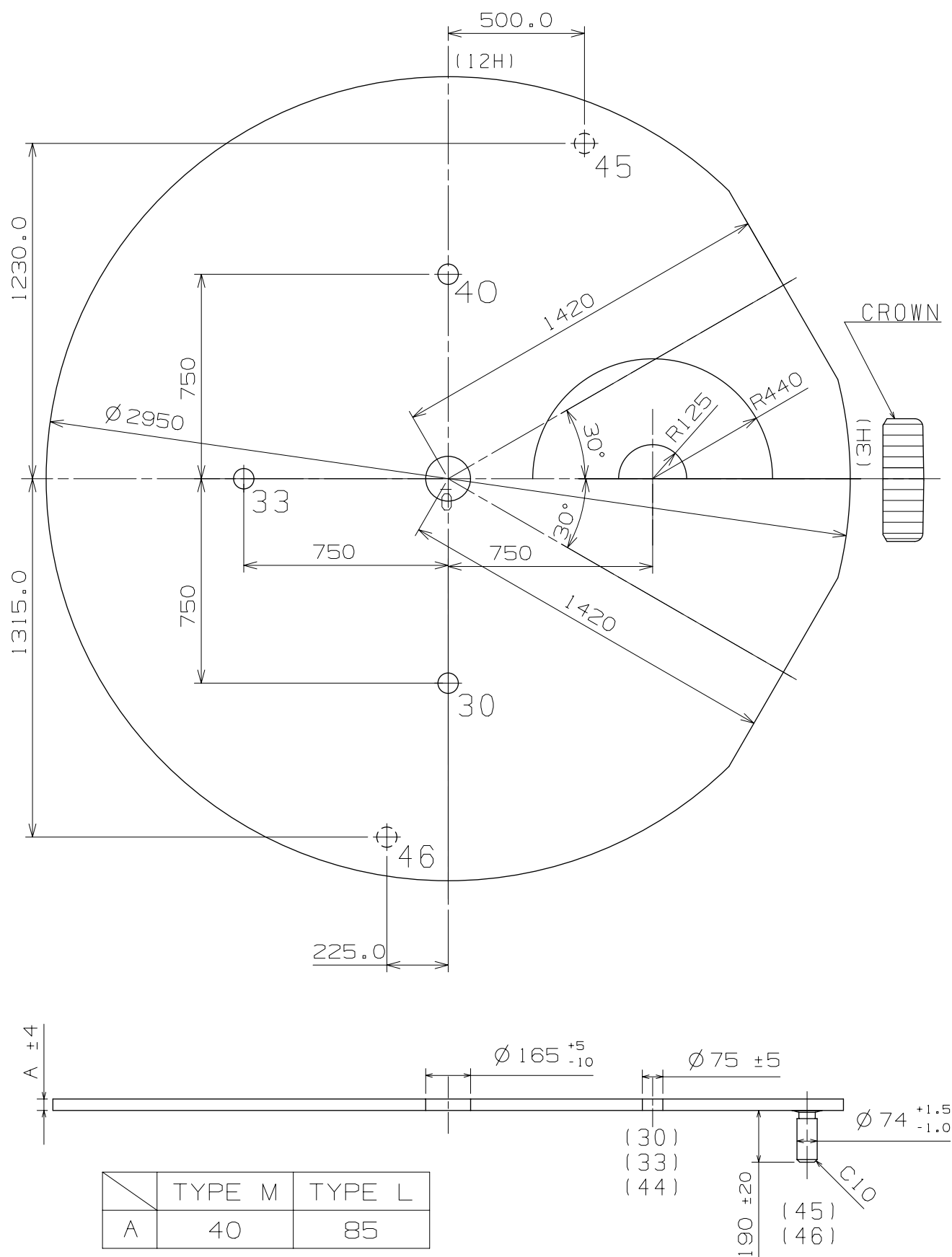


	Part. No.	A	B
TYPE A	0351 1770	1371	1969
TYPE B	0351 1220	1947	2545

Scale : 20/1

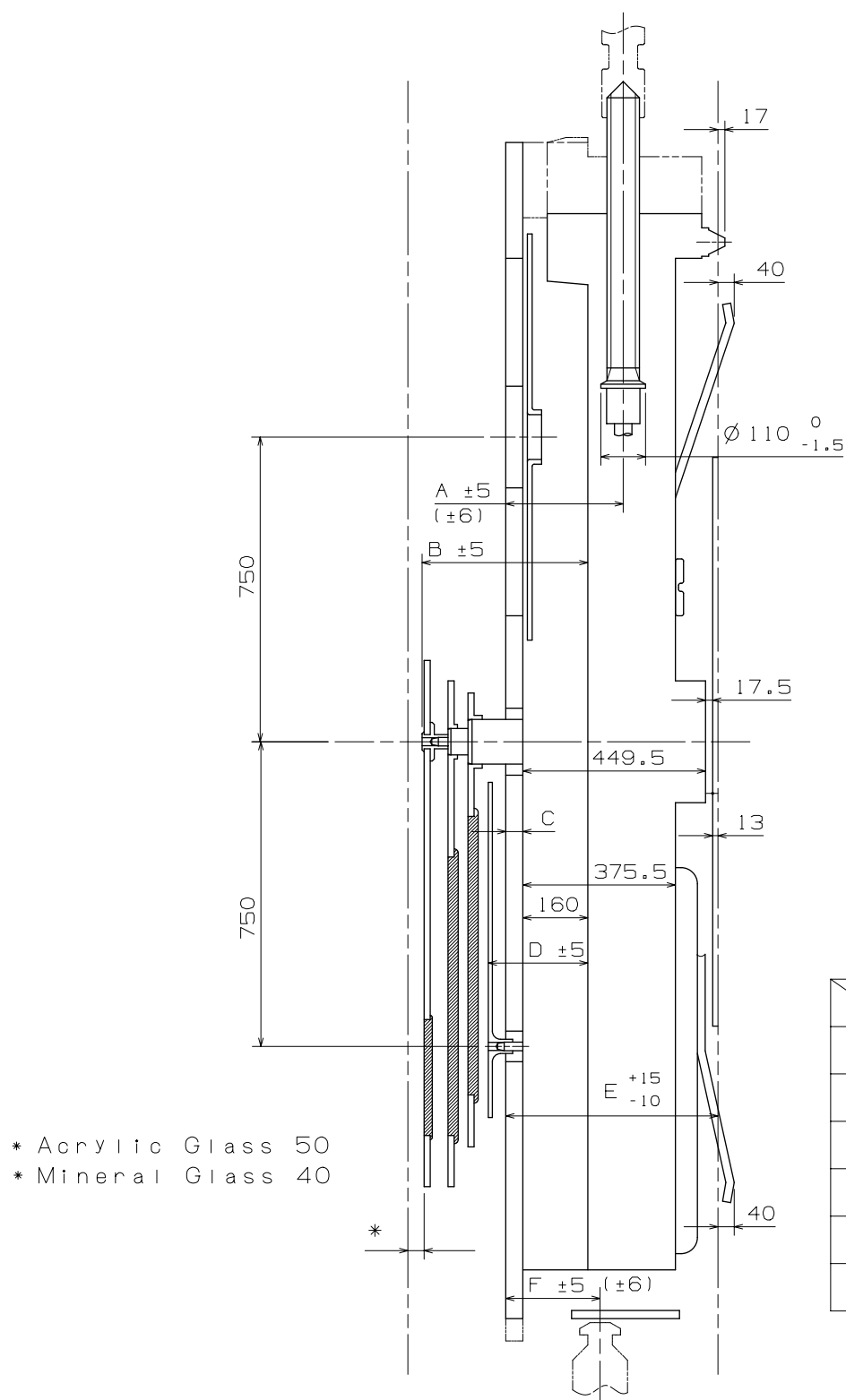
Unit : 1 = 1/100 mm

Version: 7



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

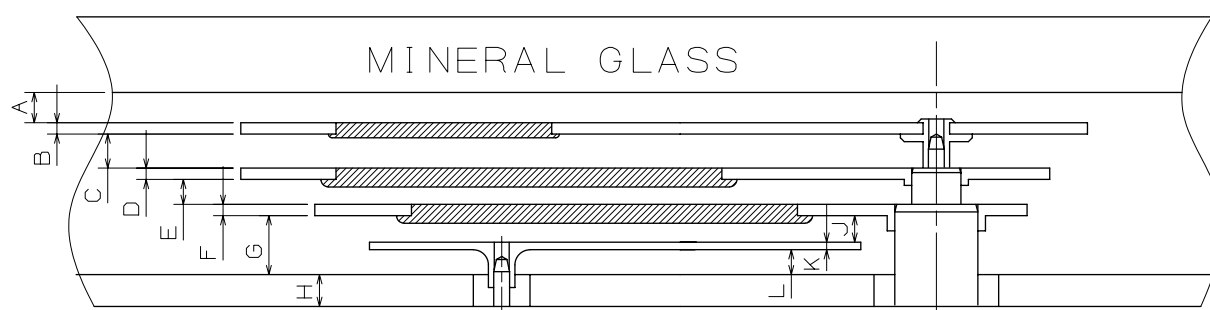
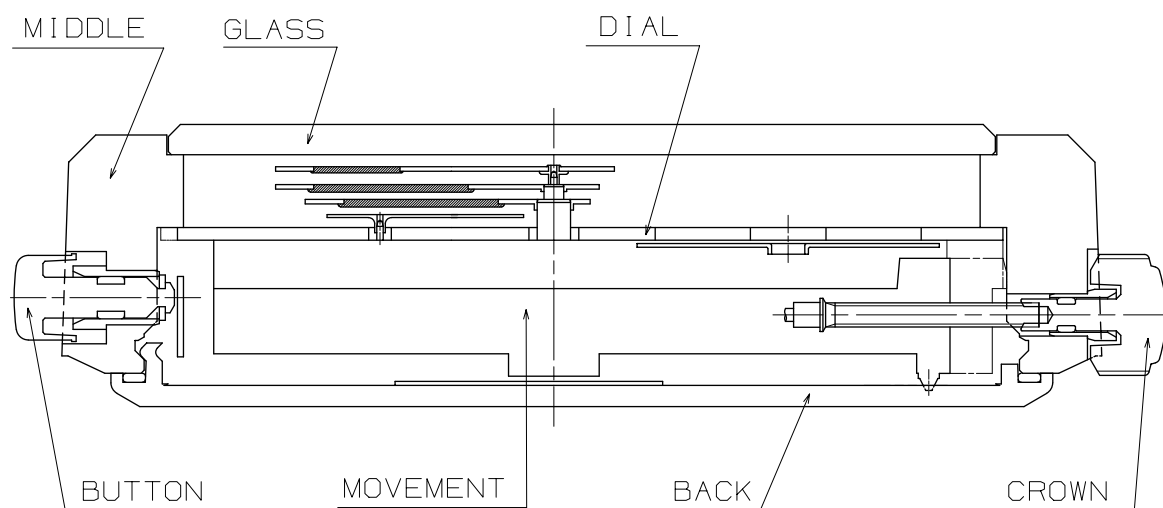
Version : 4



	TYPE M	TYPE L
A	287	332
B	403	448
C	40	85
D	245	290
E	520	565
F	230	275

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

Version : 4



	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

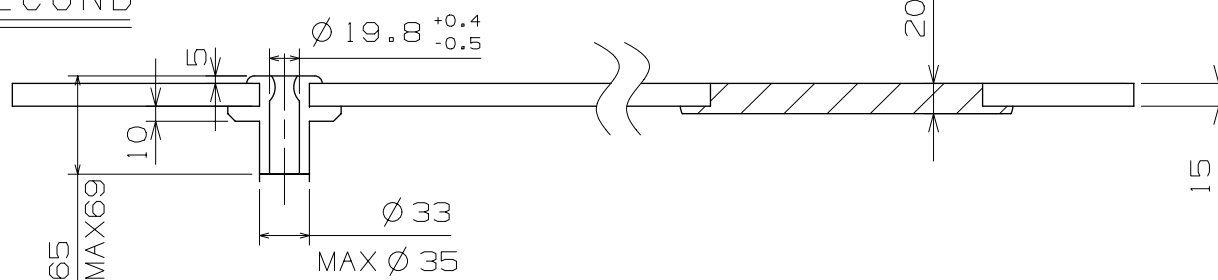
Scale : \neq
Unit : 1=1/100mm

Version:4

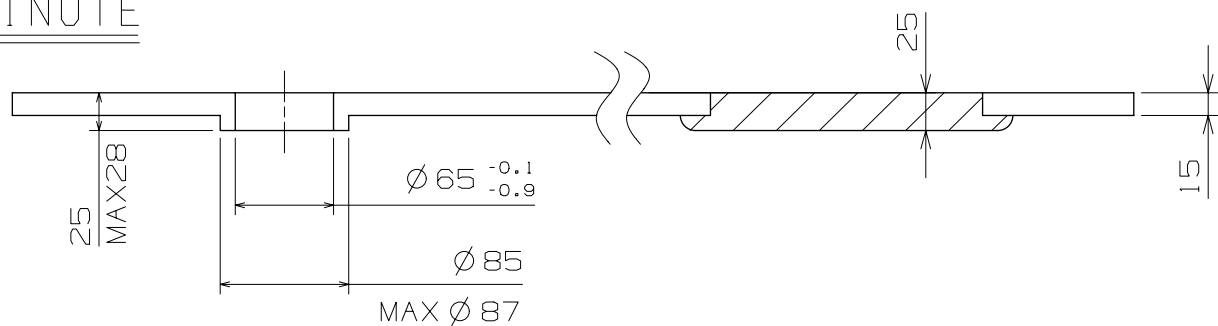
Hands

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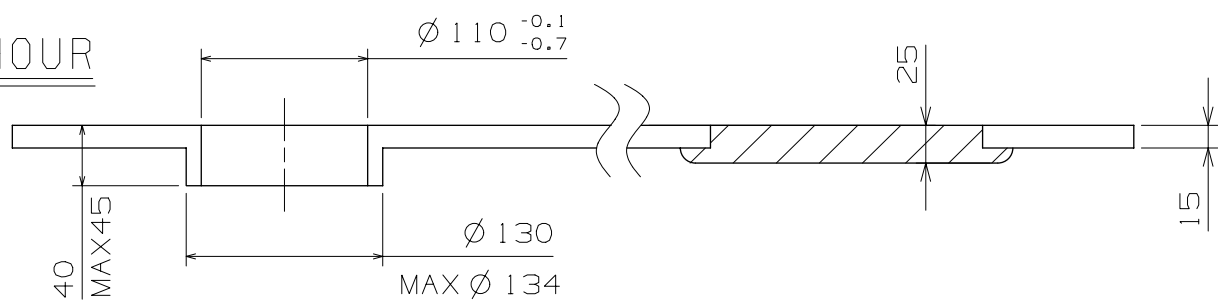
SECOND



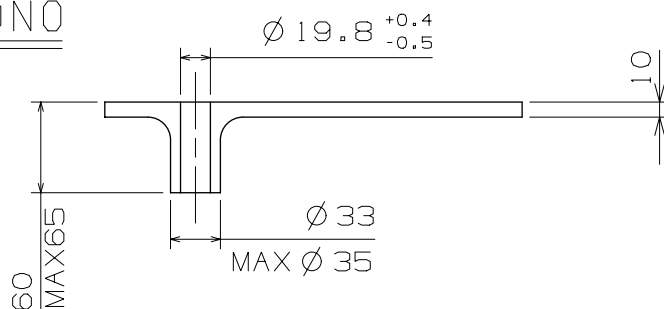
MINUTE



HOUR



CHRONO



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

Version:3