

Cal. VD53B

ϕ 29.50 mm

H 4.57 mm

Item	Version No.
Specification - 1	Version 2
Specification - 2	Version 1
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Casing	Version 6
Hand Fitting	Version 3
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Hands	Version 2

MOVEMENT SPECIFICATION - 1

CAL.VD53B 12 3 / 4 Ligne Quartz Movement

Three Hands with 3 Eyes / Date (Minute, 1 / 1 Second Chronograph, 24H Indicator & Calendar)

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 minutes / second : Less than 0.05 μ N·m (5mg·mm)
- Additional function 24 hour indicator : Less than 0.07 μ N·m (7mg·mm)
- Stopwatch : up to 60 minutes in 1 second split time
- 24 hour 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)

≥ 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

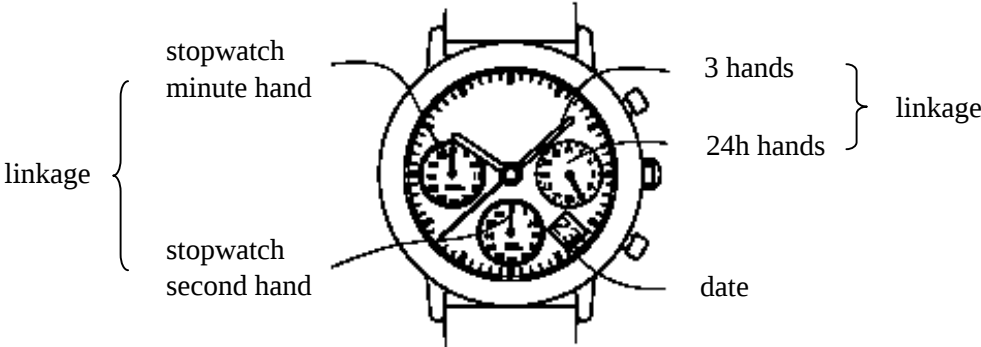
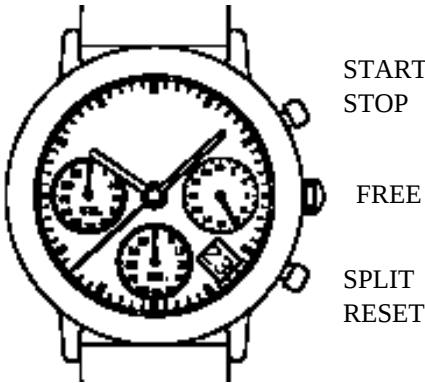
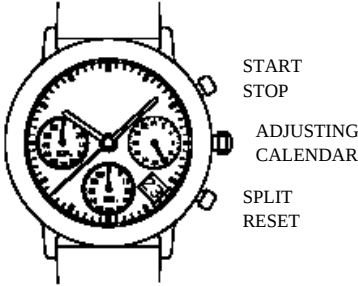
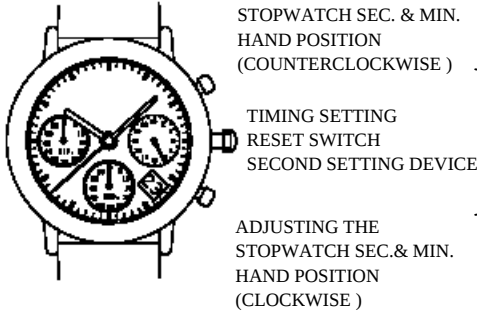
- Equipment to be used SEIKO Quartz Tester QT - 99
Greiner Quartz Timer - C
Witschi Q-Tester 4000
- Duration of measurement 10 seconds
- Microphone to be used Electromagnetic detection type

10. ATTACHED PARTS

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

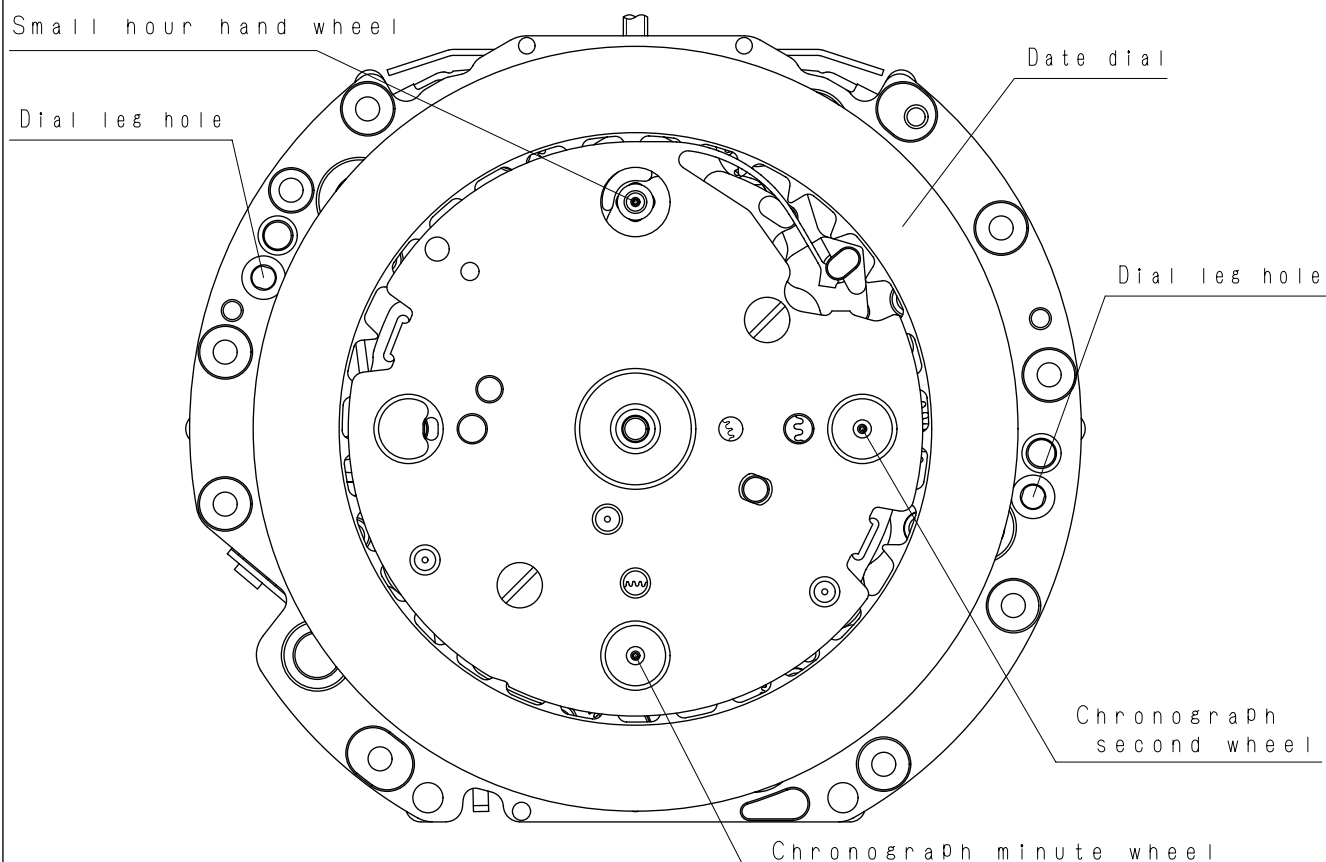
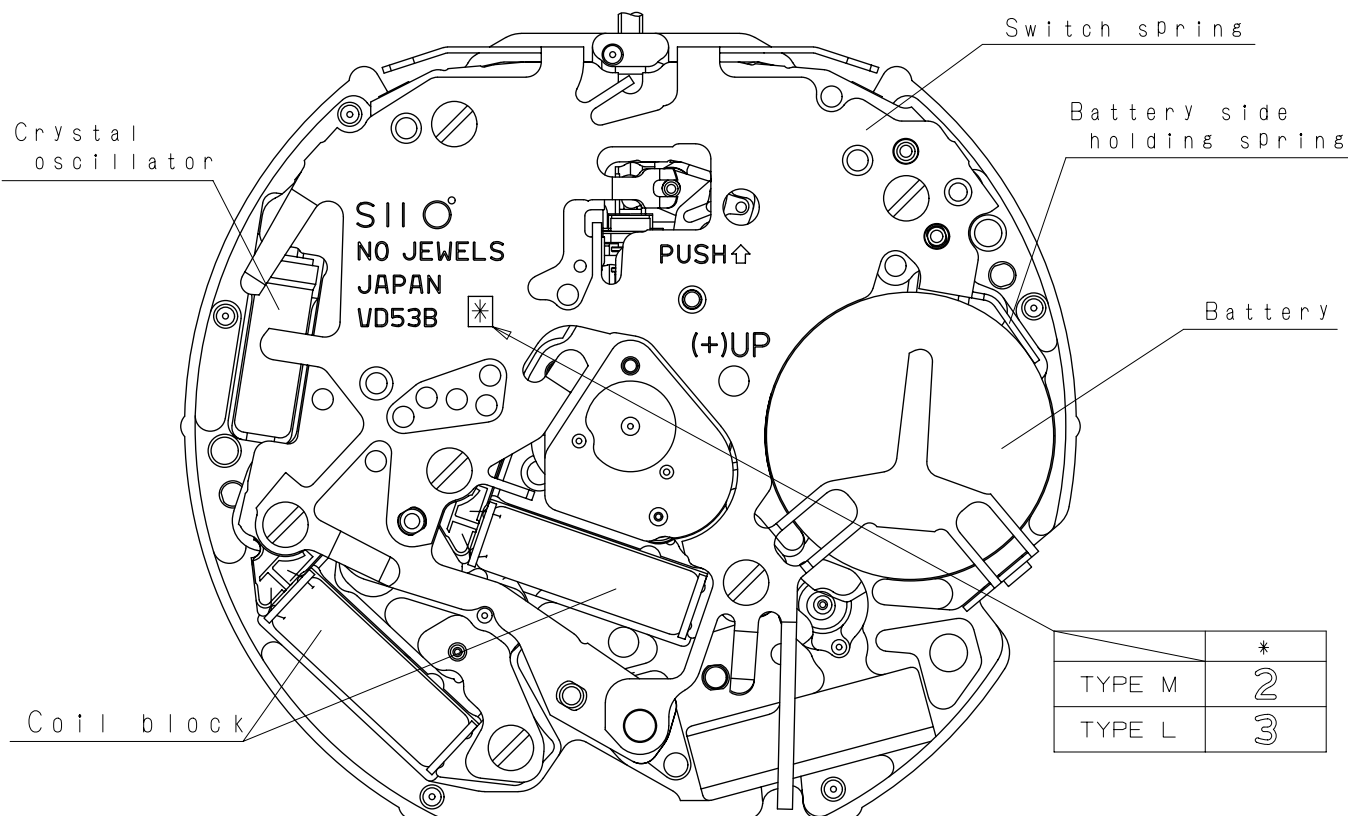
*** All specifications are subject to change without notice.**

Movement Specification - 2

	CAL. VD53B	
OPERATION	2 step motors (3 hands with calendar, 1 / 1 sec. chrono. maximum to 60 minutes)	
	 linkage { stopwatch minute hand, stopwatch second hand, 24h hands, date }	
	Normal position  START STOP FREE SPLIT RESET	
	1st click adjusting calendar (clockwise)  START STOP ADJUSTING CALENDAR SPLIT RESET	2nd click adjusting minute, hour & chrono. hands  ADJUSTING THE STOPWATCH SEC. & MIN. HAND POSITION (COUNTERCLOCKWISE) TIMING SETTING RESET SWITCH SECOND SETTING DEVICE ADJUSTING THE STOPWATCH SEC.& MIN. HAND POSITION (CLOCKWISE)
	AC FUNCTIONS (KEEP BUTTONS "A" AND "B" PRESSED AT THE SAME TIME FOR 2 SECONDS, AND THEN, RELEASE THE BUTTONS)	
	* Pull the crown to 2nd click to adjust the stopwatch hand position. * AC functions is available if stopwatch hand position is disorderly. * 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)	
		Version 1

Appearance

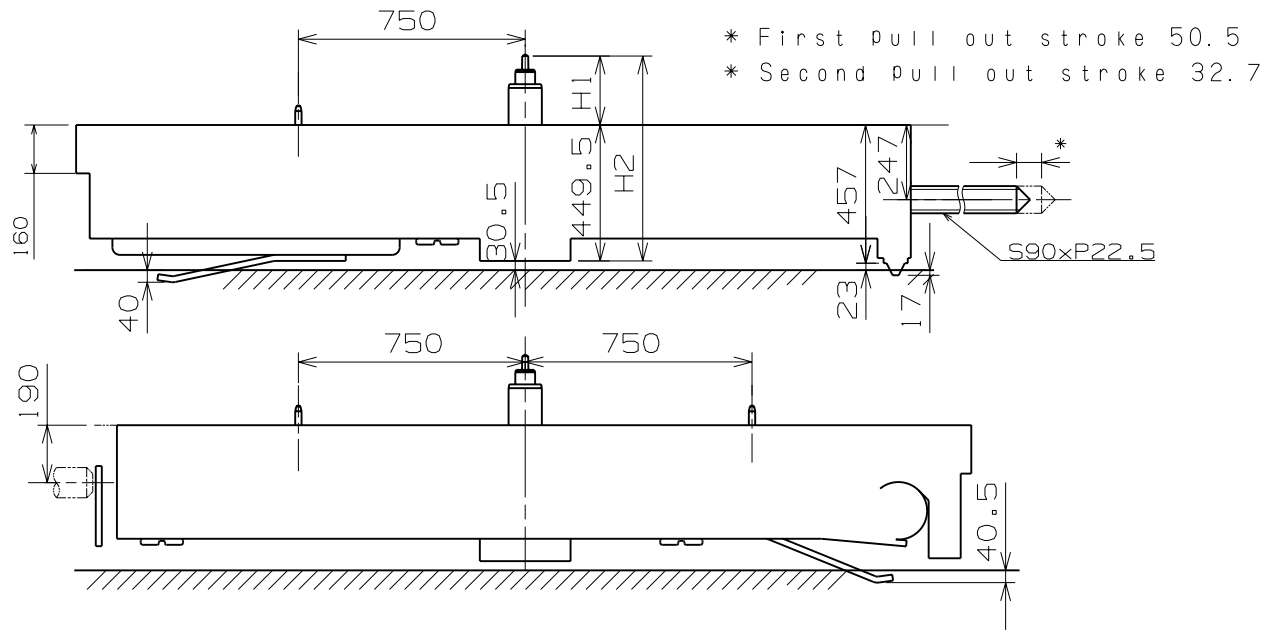
Cal. VD53B



Scale : 4/1

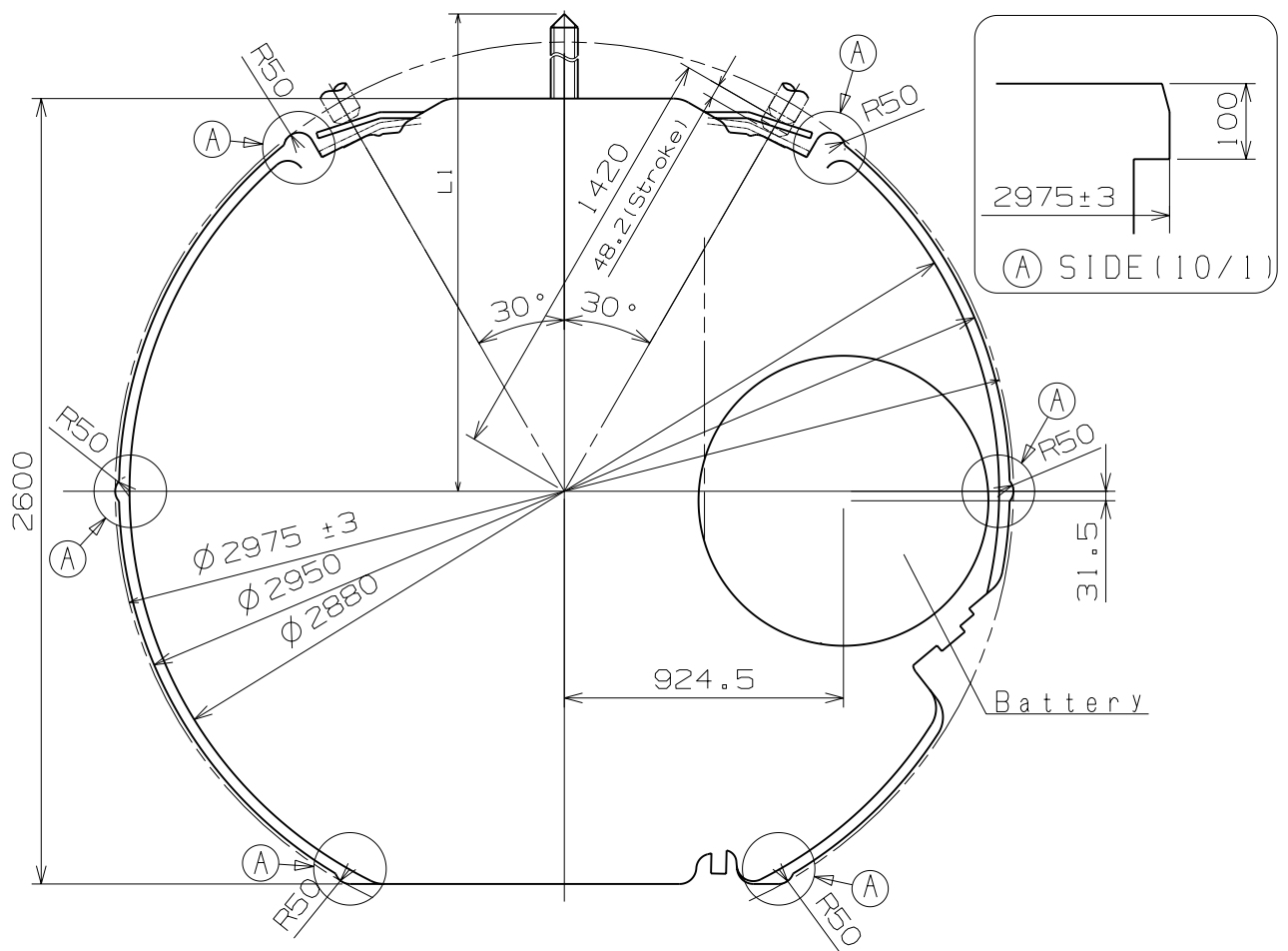
Unit : 1=1/100mm

Version:4



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

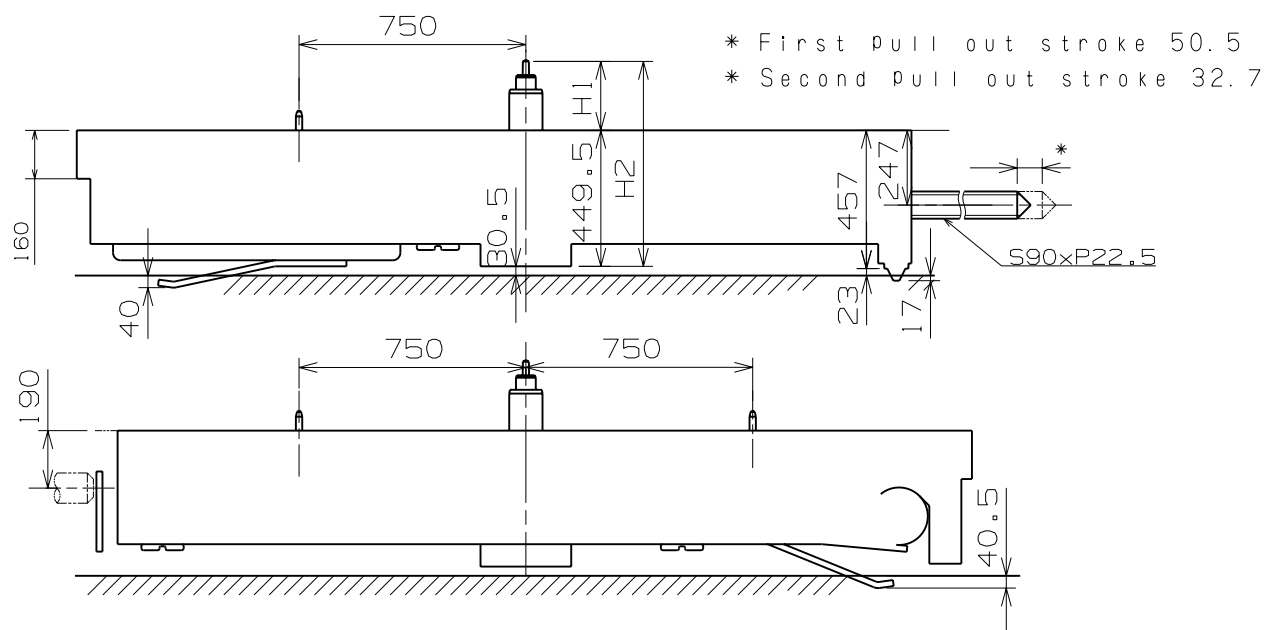
Hand Setting Stem	TYPE A	TYPE B
L1	2285	2861



Scale : 4/1

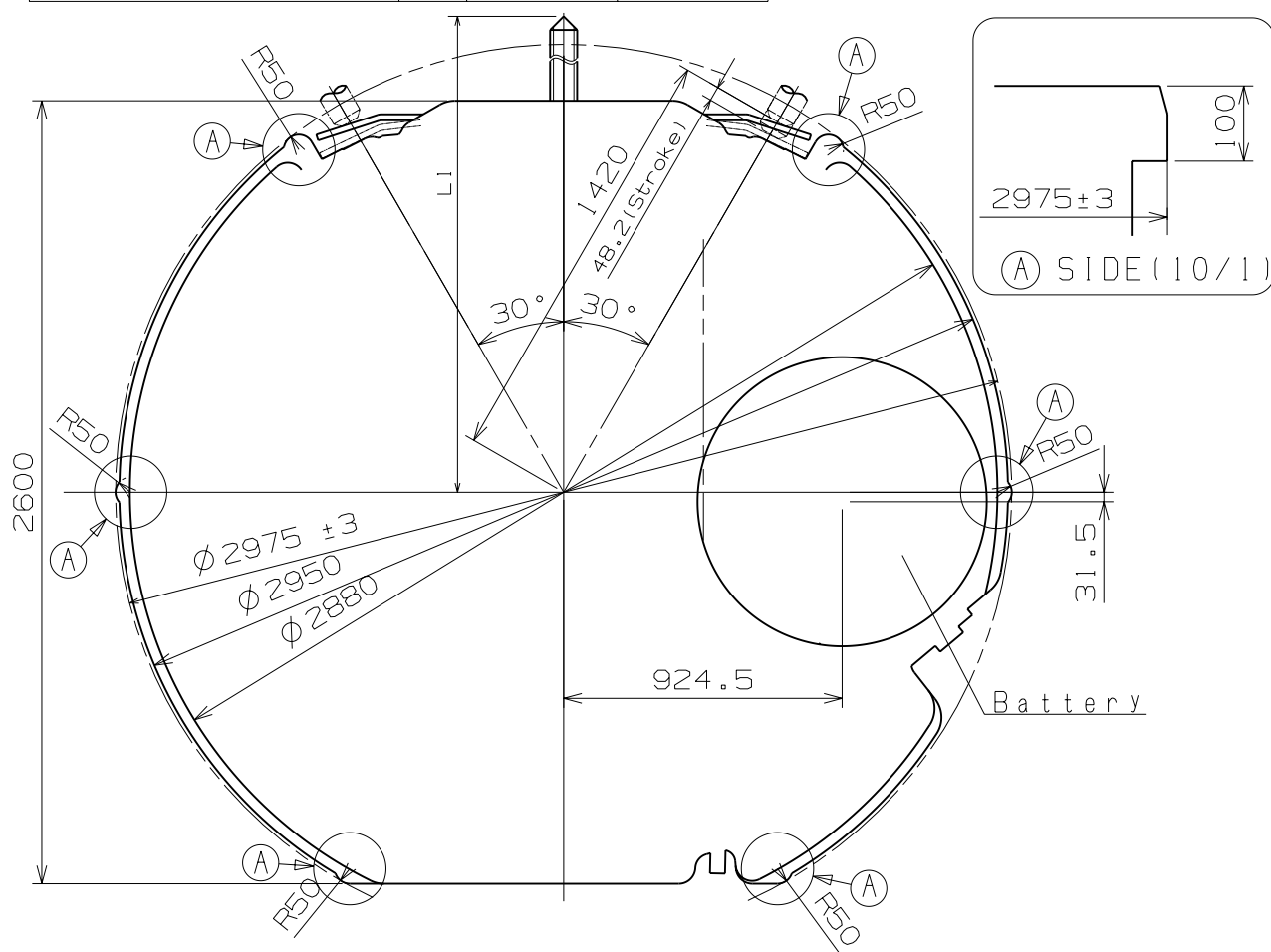
Unit : 1 = 1/100mm

Version : 6



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

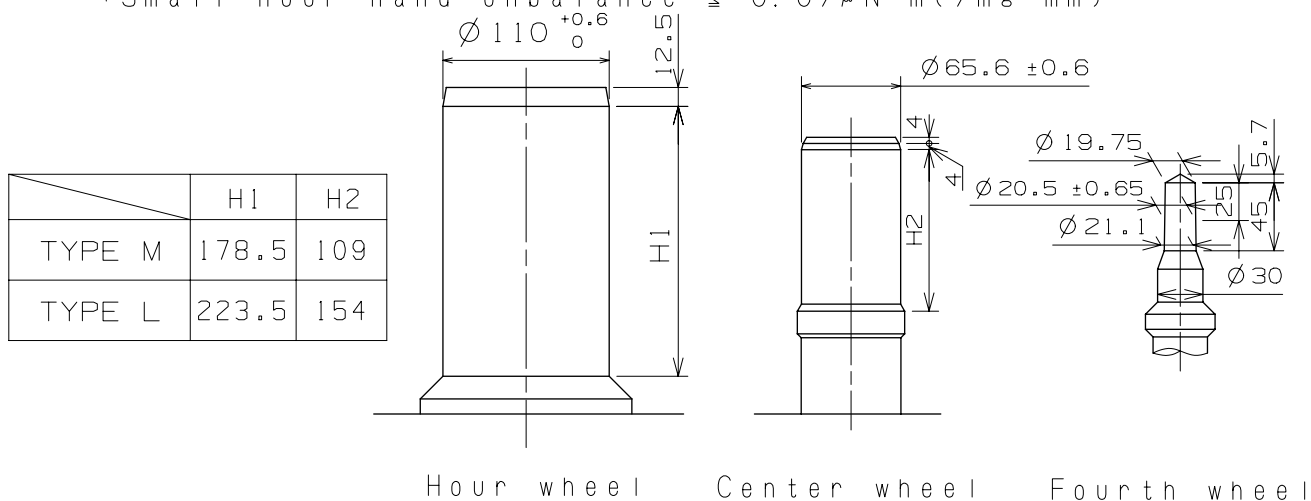
Unit : 1=1/100mm

Version:6

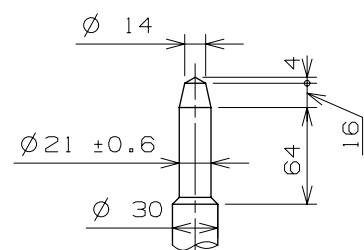
Hand fitting

Cal. VD53B

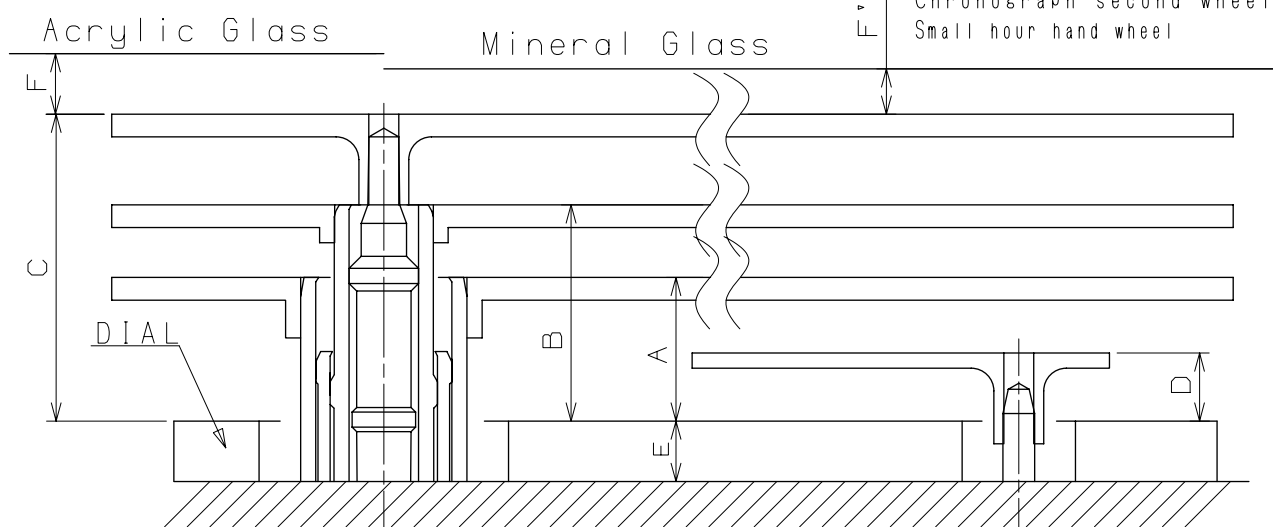
- *Hour hand unbalance $\leq 0.5\mu\text{N}\cdot\text{m}$ (50mg·mm)
- *Minute hand unbalance $\leq 0.6\mu\text{N}\cdot\text{m}$ (60mg·mm)
- *Second hand unbalance $\leq 0.07\mu\text{N}\cdot\text{m}$ (7mg·mm)
- *Chronograph hand unbalance $\leq 0.05\mu\text{N}\cdot\text{m}$ (5mg·mm)
- *Small hour hand unbalance $\leq 0.07\mu\text{N}\cdot\text{m}$ (7mg·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
Small hour hand wheel	0157 0060	0157 0070



Chronograph minute wheel
Chronograph second wheel
Small hour hand wheel



	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

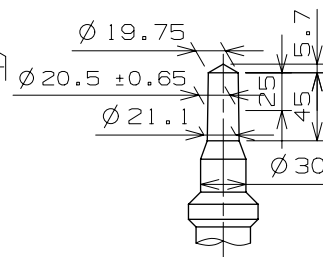
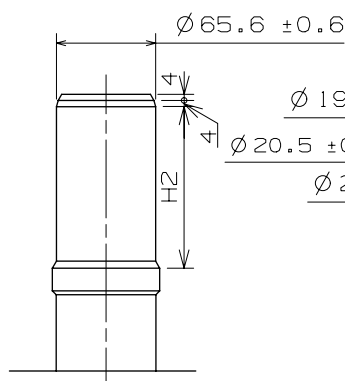
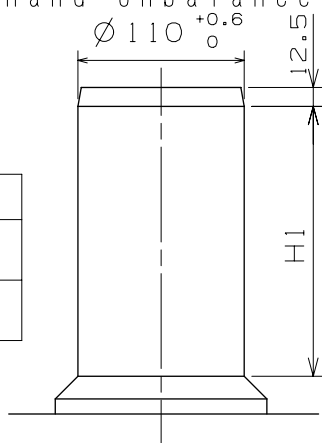
Version:3

Hand fitting

Cal. VD53B

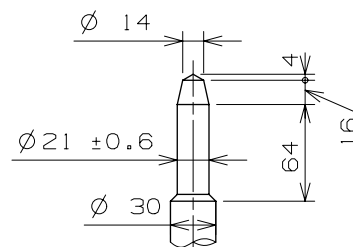
- *Hour hand unbalance $\leq 0.5\mu\text{N}\cdot\text{m}$ (50mg·mm)
- *Minute hand unbalance $\leq 0.6\mu\text{N}\cdot\text{m}$ (60mg·mm)
- *Second hand unbalance $\leq 0.07\mu\text{N}\cdot\text{m}$ (7mg·mm)
- *Chronograph hand unbalance $\leq 0.05\mu\text{N}\cdot\text{m}$ (5mg·mm)
- *Small hour hand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

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

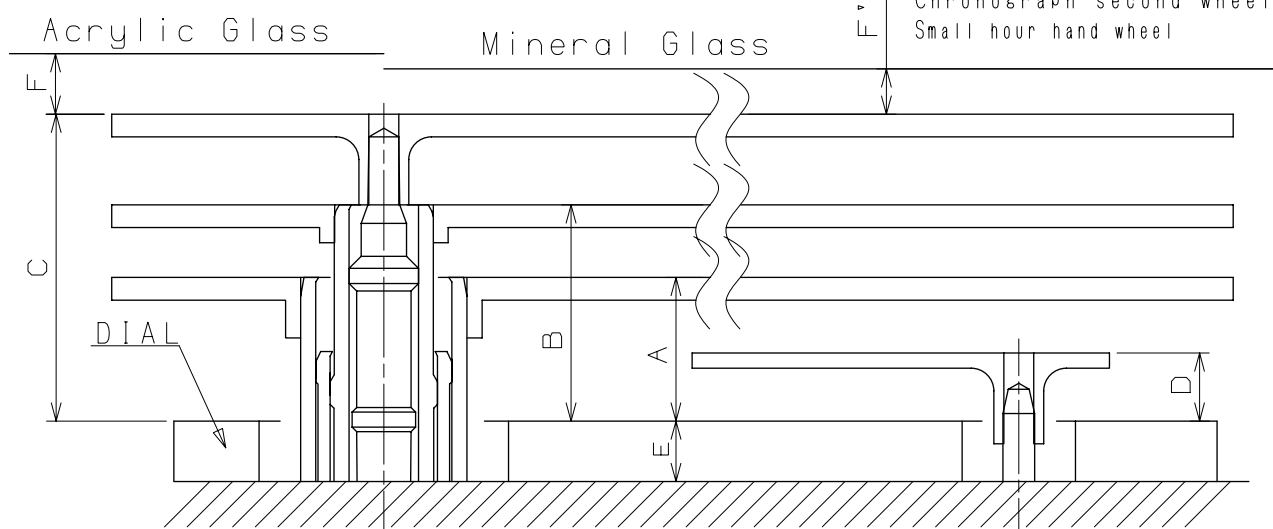


Hour wheel Center wheel Fourth wheel

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
Small hour hand wheel 小時針輪	0157 0060	0157 0070



Chronograph minute wheel
Chronograph second wheel
Small hour hand wheel

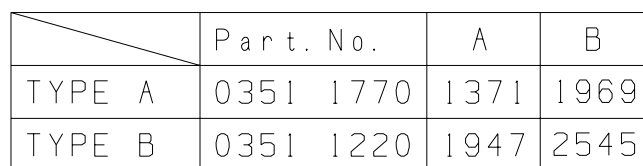


	A	B	C	D	E	F	F'
TYPE M 一般針高	95	143	203	45	40	50	40
TYPE L 高針	95	143	203	45	85	50	40

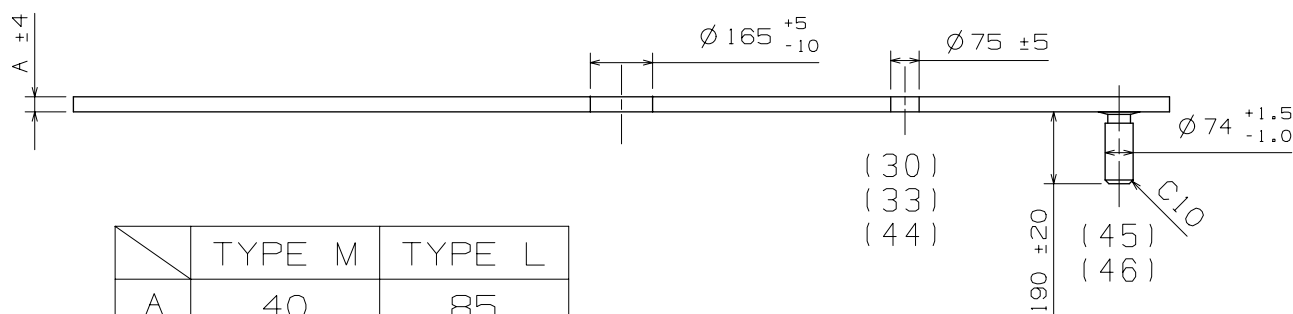
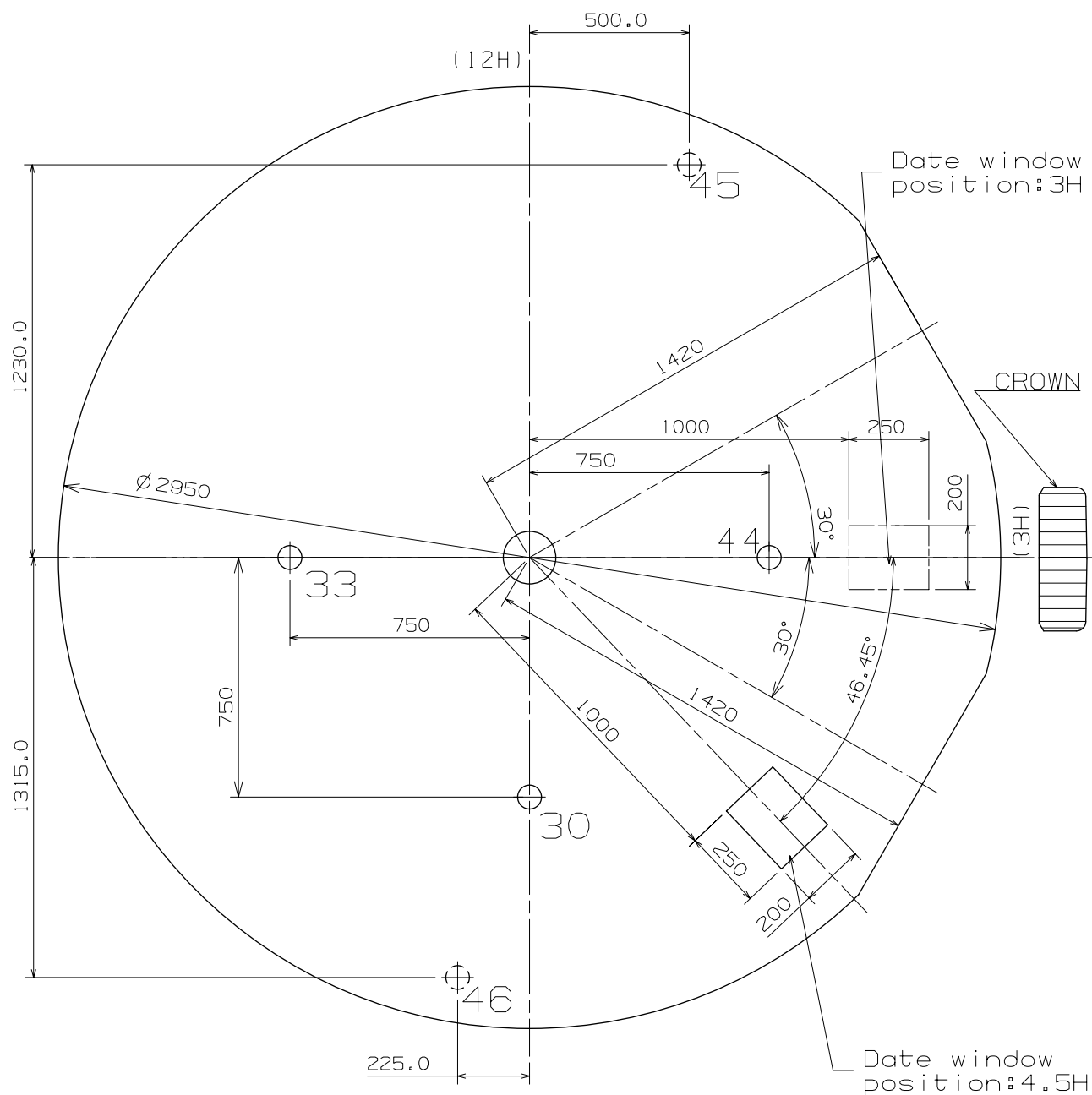
Scale : 20/1

Unit : 1=1/100mm

Version : 3



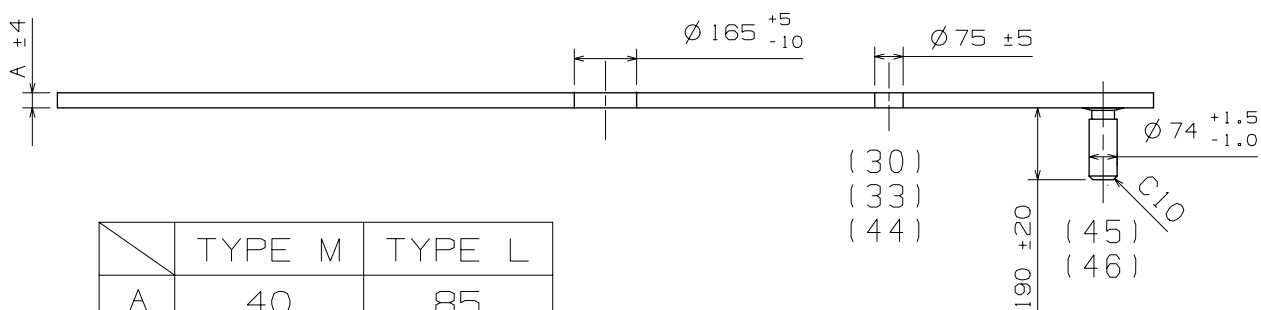
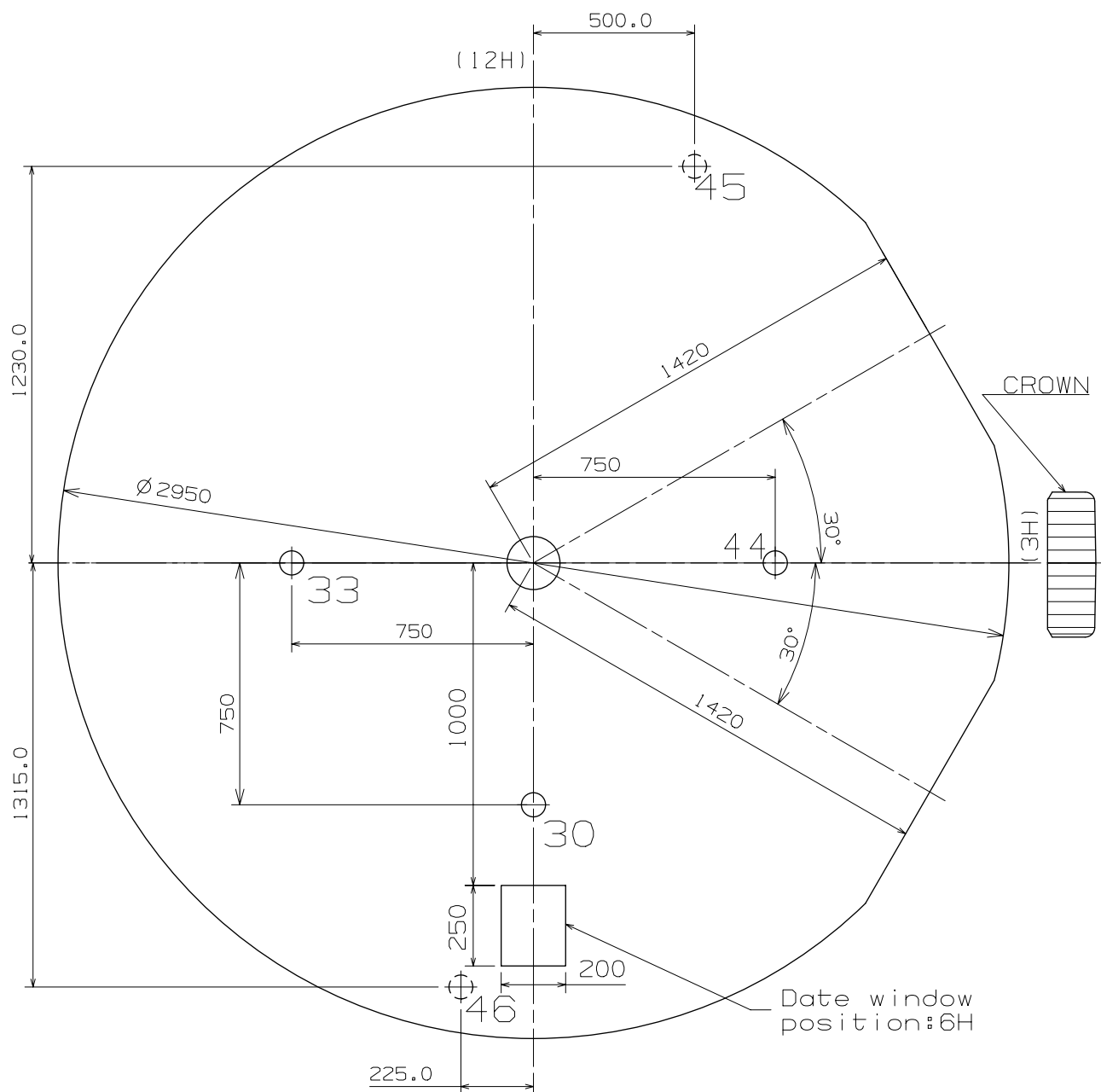
Unit : 1 = 1/100 mm



Scale : 5/1

Unit : 1=1/100mm

Version : 4

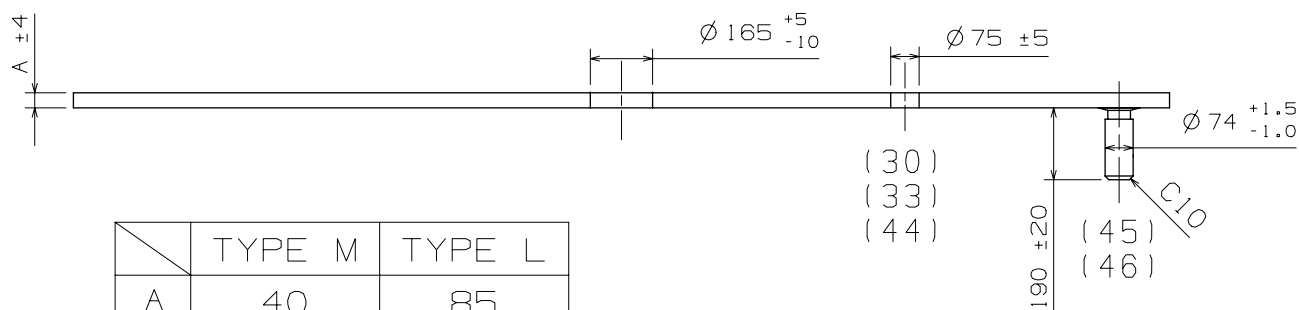
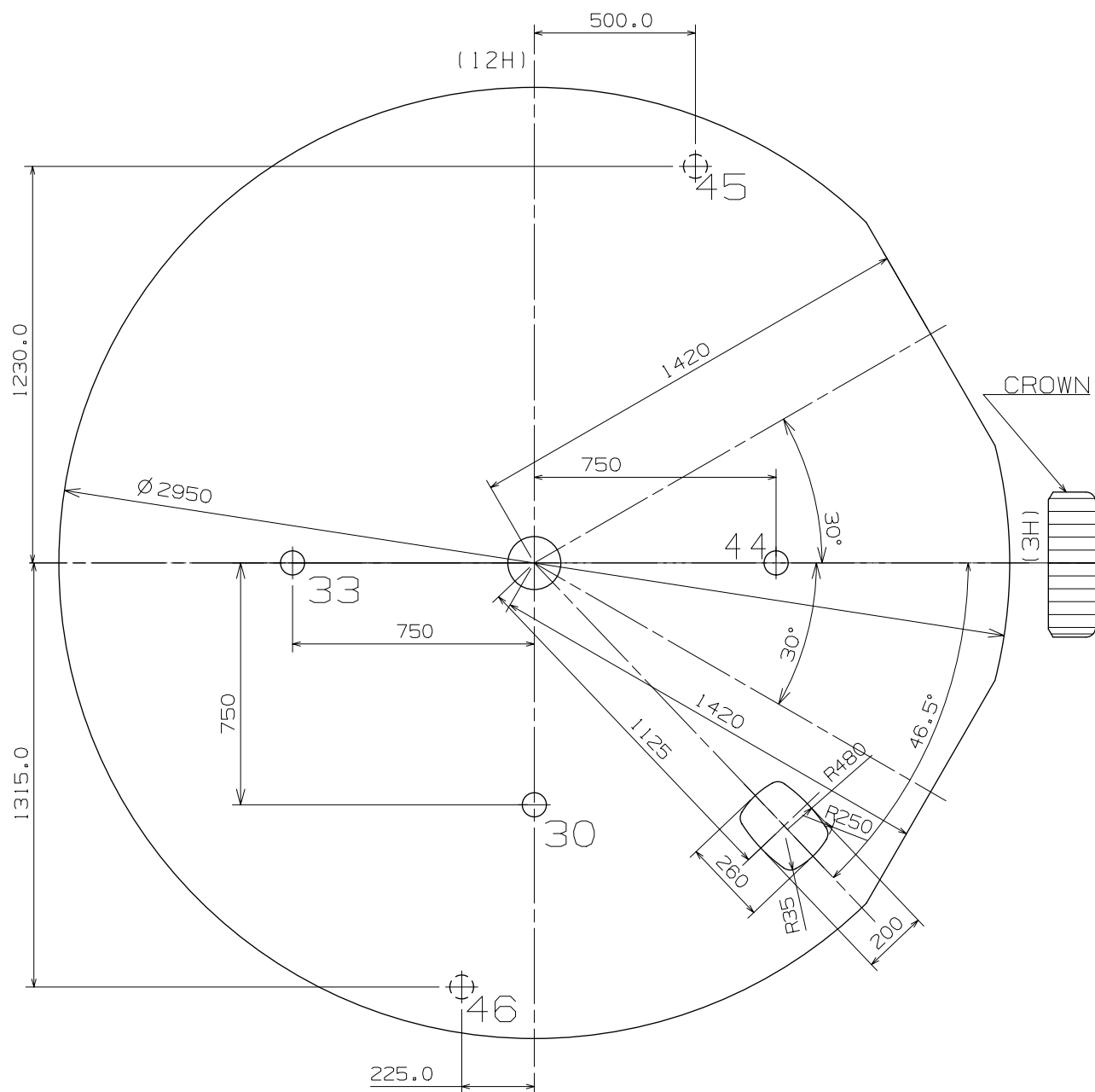


	TYPE M	TYPE L
A	40	85

Scale : 5/1

Unit : 1=1/100mm

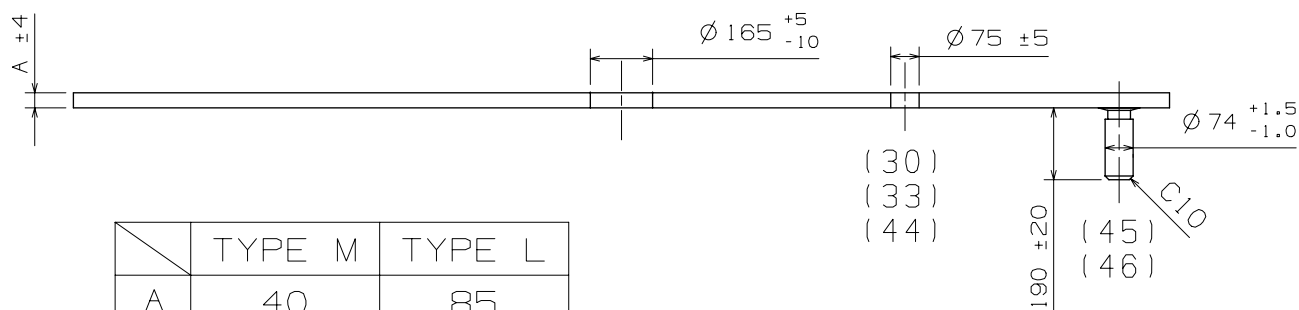
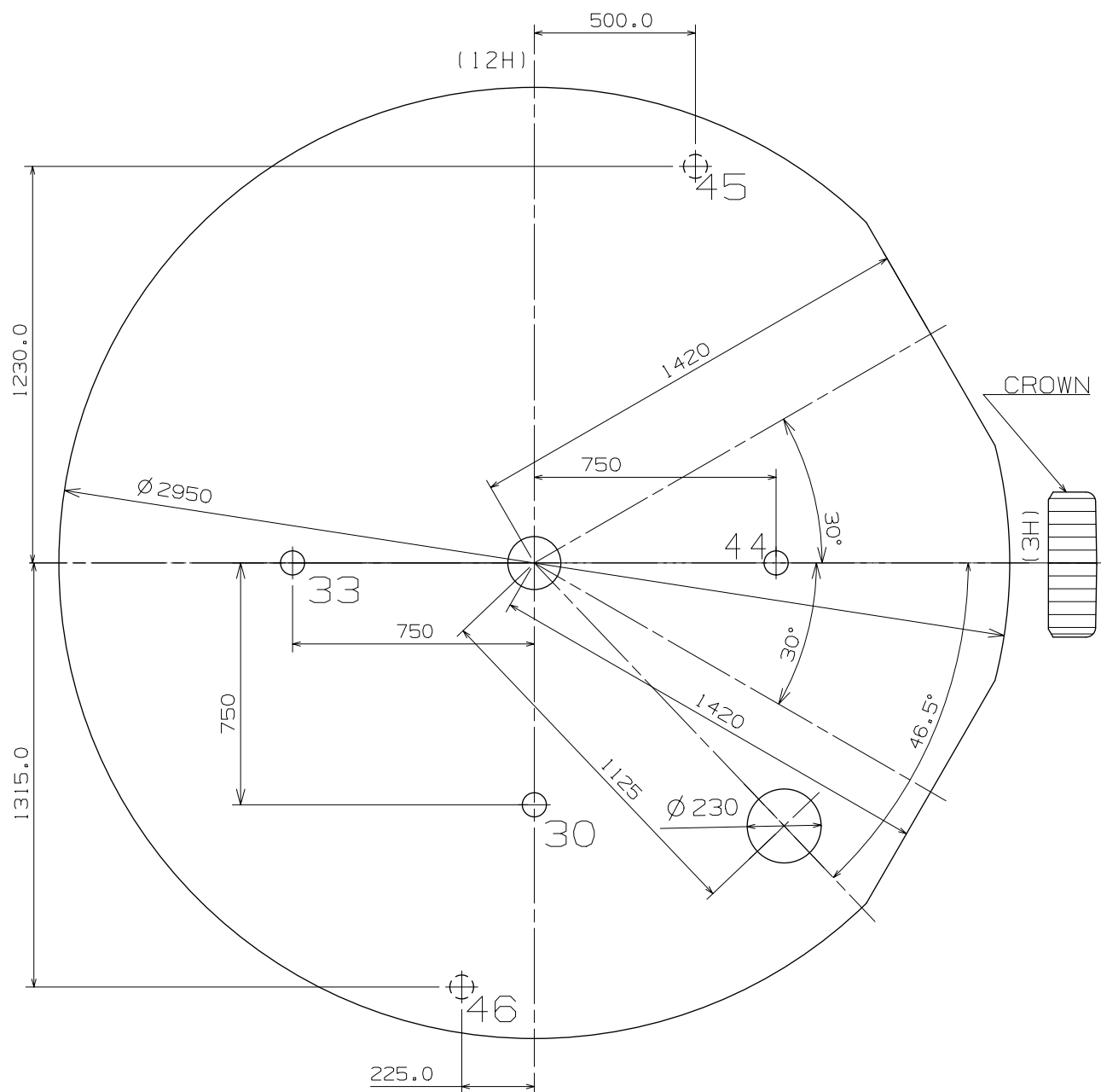
Version: 3



	TYPE M	TYPE L
A	40	85

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

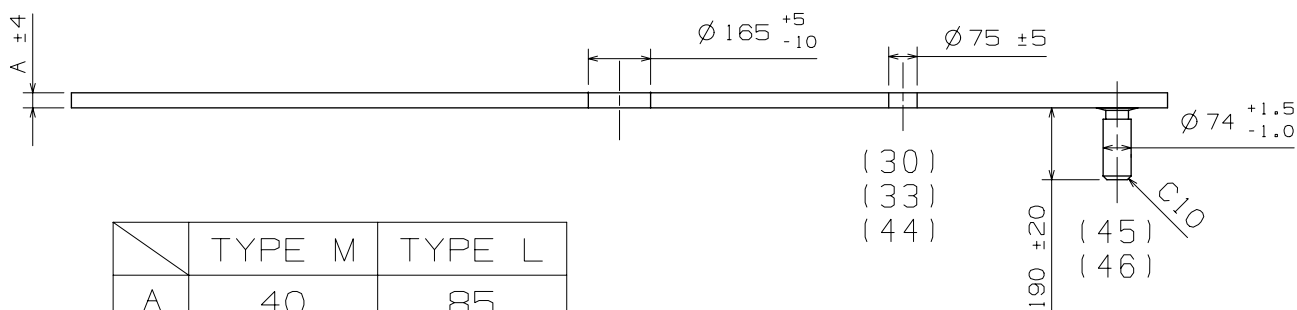
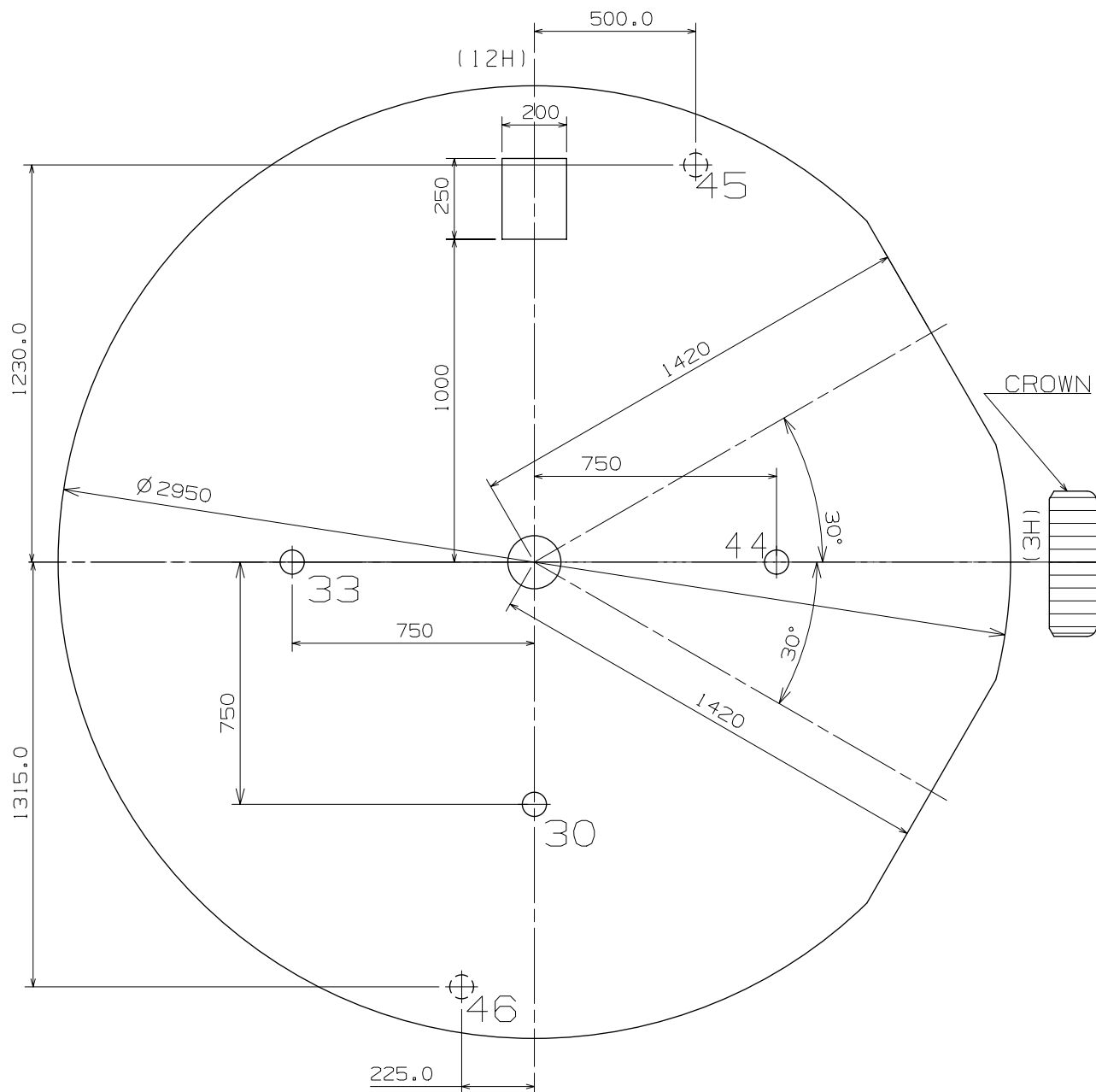
Version : 3



	TYPE M	TYPE L
A	40	85

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

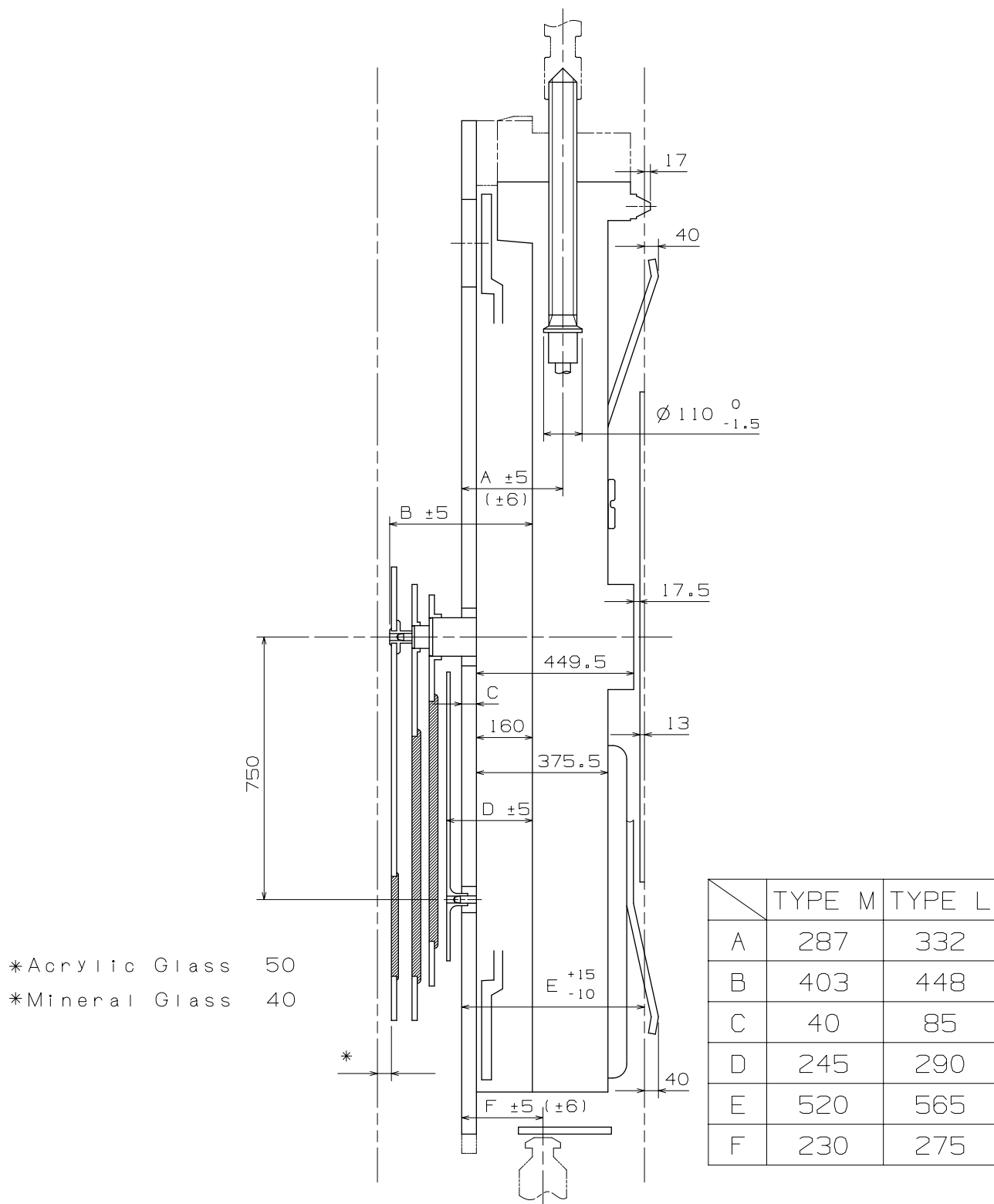
Version : 3



Scale : 5/1

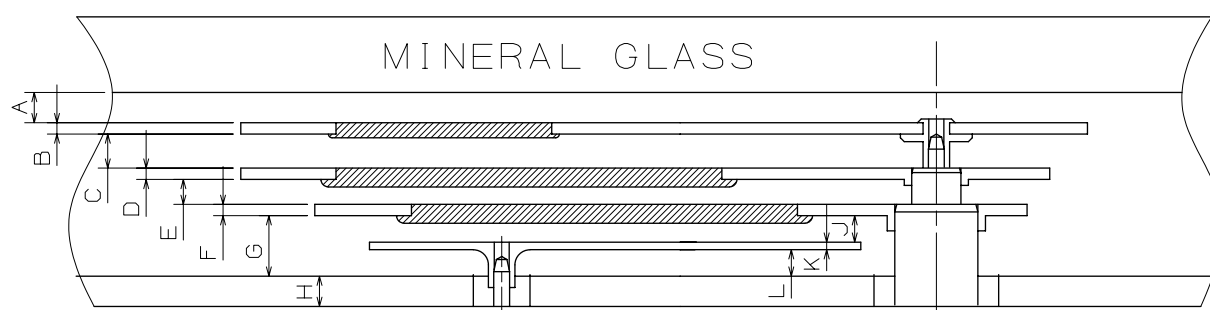
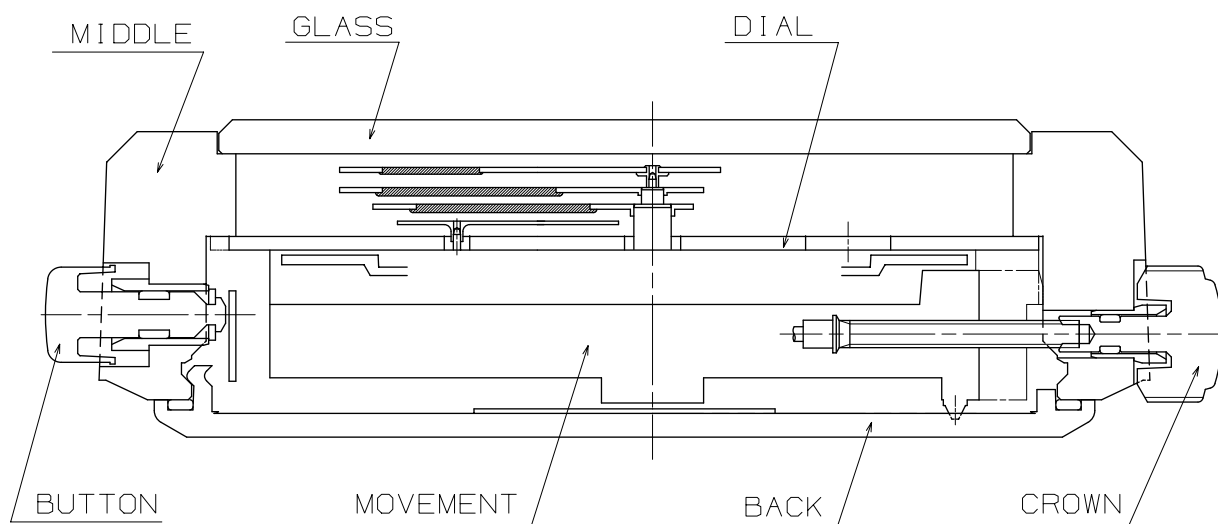
Unit : 1=1/100mm

Version : 2



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

Version:3



	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

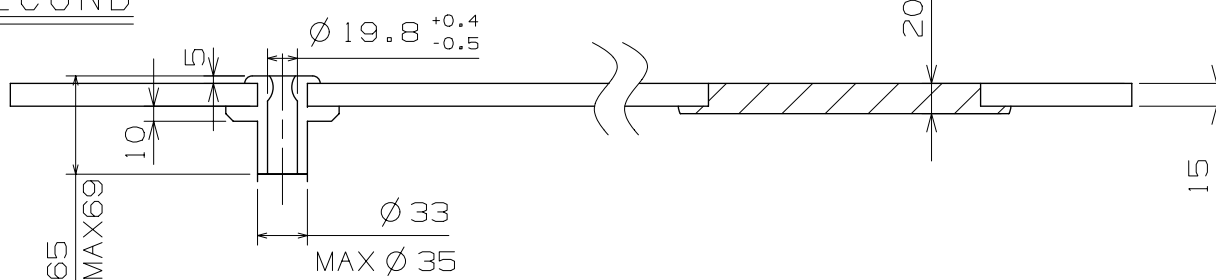
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Unit : 1=1/100mm

Version:3

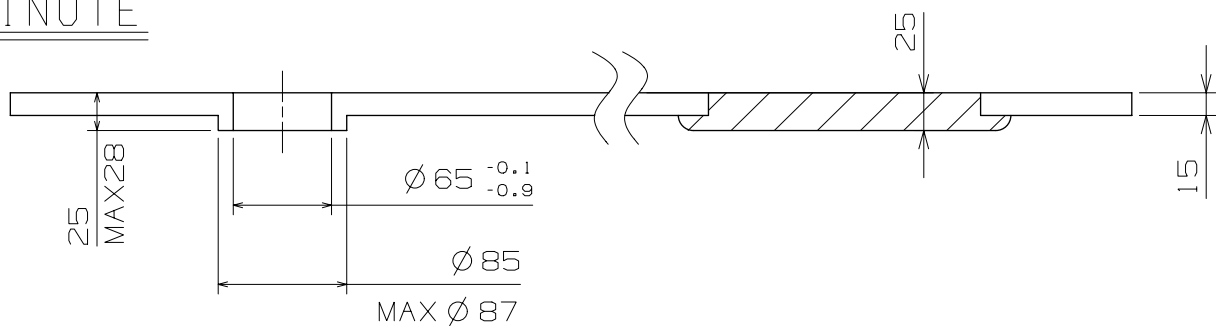
Hands

Cal. VD53B

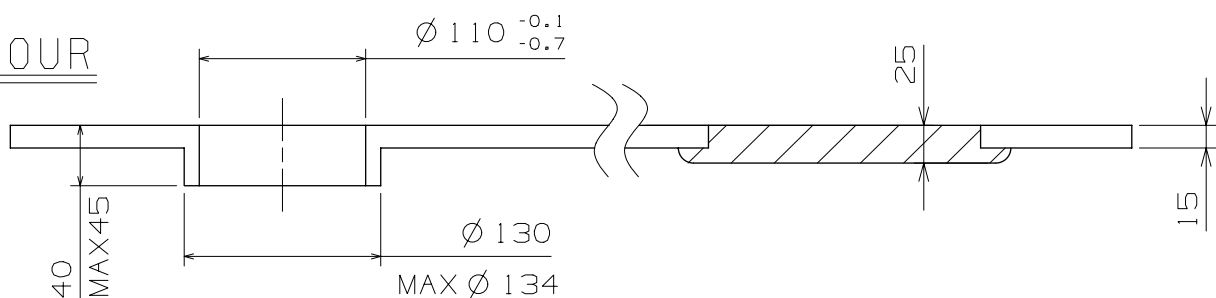
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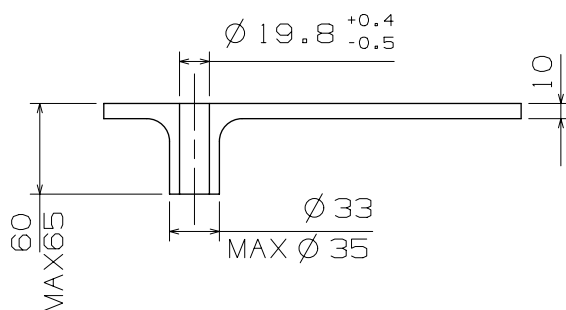
MINUTE



HOUR



CHRONO SMALL HOUR



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

Version:2