



Cal. AL33A

ϕ 23.3 mm
H 4.15 mm

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Date: 31/Aug./'10

S.EPSON Products

MOVEMENT SPECIFICATIONS

CAL. AL33A

Analog Quartz 10 1/2" size Movement / Three hands(H/M/S) with Day / Date

1. MOVEMENT DIMENSIONS

*Outside diameter	ϕ 23.70mm \times 22.00mm(3-9H) \times 22.60mm(12-6H)
*Casing diameter	ϕ 23.00mm
*Total height	4.15mm (including battery)

2. TIME STANDARD

*Type of quartz oscillator	Tuning fork
*Frequency of quartz oscillator	32,768 Hz
*Accuracy	\pm 20 seconds per month (on wrist)
*Operating temperature range	-5°C to +50°C
*Regulation device	Nil (Pre-adjusted)

3. INDICATOR / FUNCTIONS

*3 Hands	Hour / Minute / Second
*Day / Date	Instant setting device for day/date calendar
*Reset switch	
*Setting mechanism	Crown at normal position : Free Crown pulled out 1st click : Instant day / date change Crown pulled out 2nd click : Time setting / Reset

4. FEATURES

*Jewels	0 Jewel
*Anti-magnetism	Over 1600A/m (Direct current magnetic field)
*Maximum unbalance of hands	Second hand : 6 μ g·m Minute hand : 60 μ g·m Hour hand : 50 μ g·m

5. BATTERY

*Type / Size	Silver oxide battery / ϕ 6.8mm \times t 2.6mm
*Recommended battery	SR626SW
*Nominal voltage	1.55 V
*Battery life	Approx. 2 years
*Driving current consumption	Approx. 1.50 μ A
*Operation stopping voltage	1.1 V

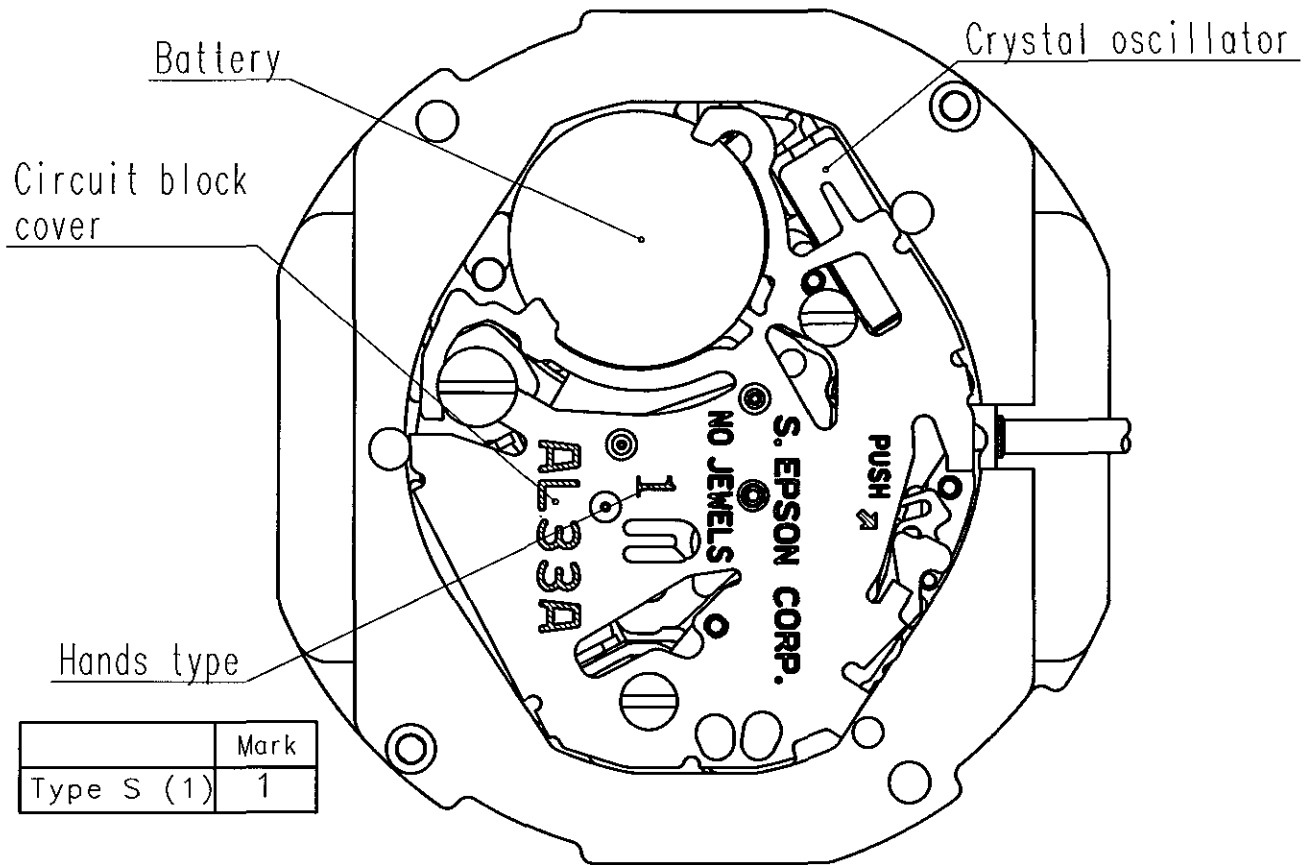
6. SEPARATED PARTS (Parts code)

*Battery	SR626SW
*Hand setting stem	0351177

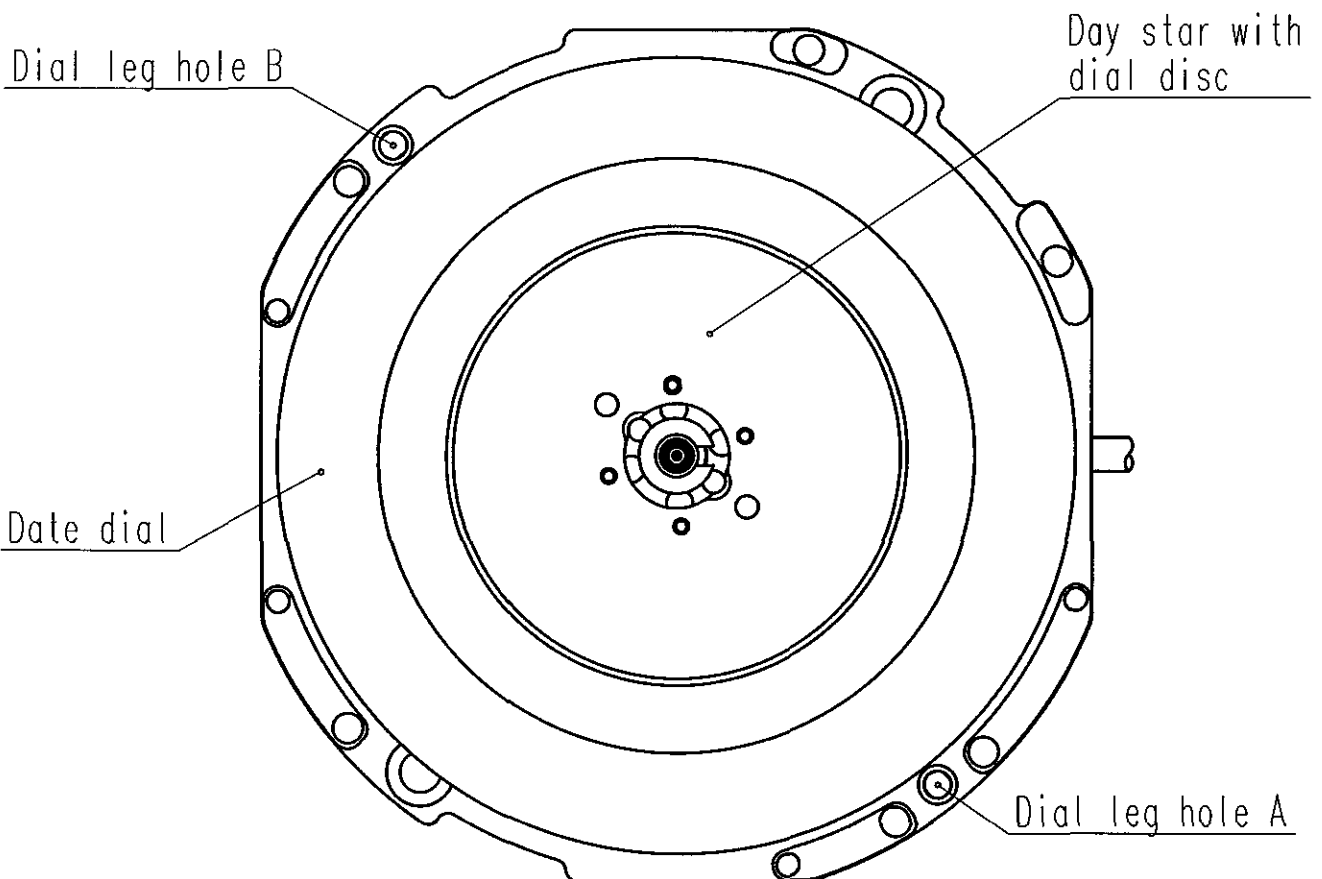
7. TEST OF ACCURACY

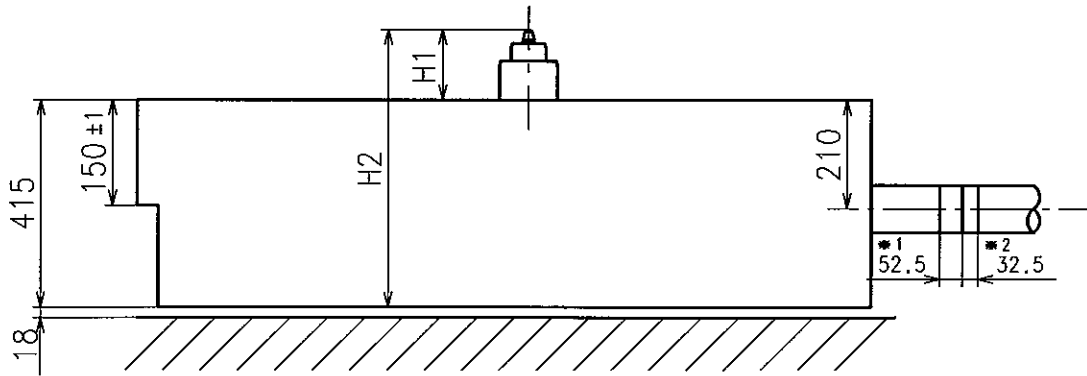
*Equipment to be used	SEIKO quartz tester QT-99, Greiner quartz timer-C , Witschi Q-tester 4000
*Duration of measurement	10 seconds
*Microphone to be used	Electromagnetic detection type

All specifications are subject to change without notice.



	Mark
Type S (1)	1

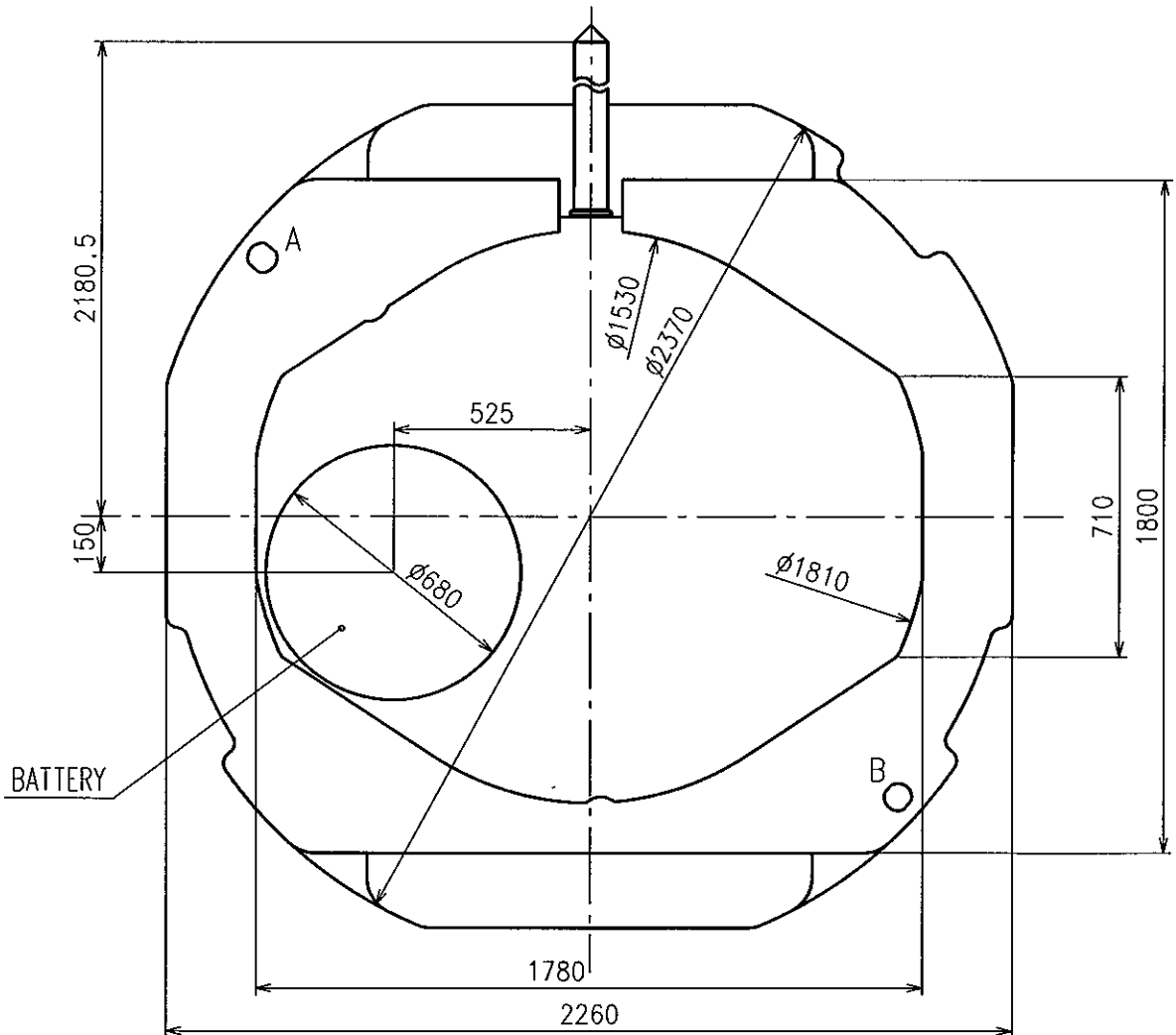




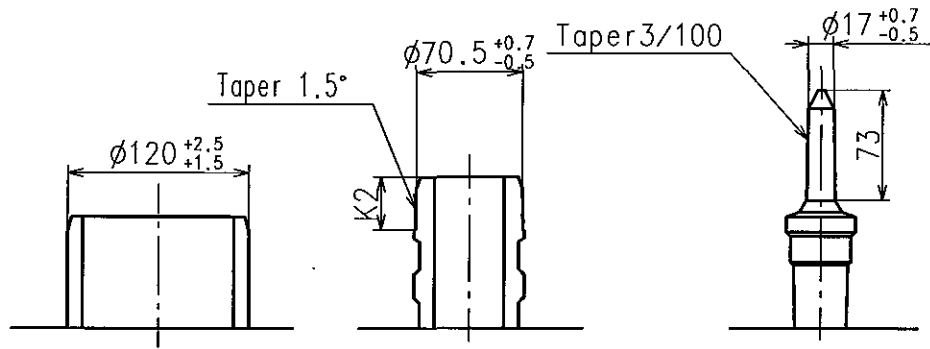
* 1: First pullout stroke

* 2: Second pullout stroke

Center post		Type S (1) AL33A
Maximum height from dial support	H1	185
Total height incl. movement	H2	600



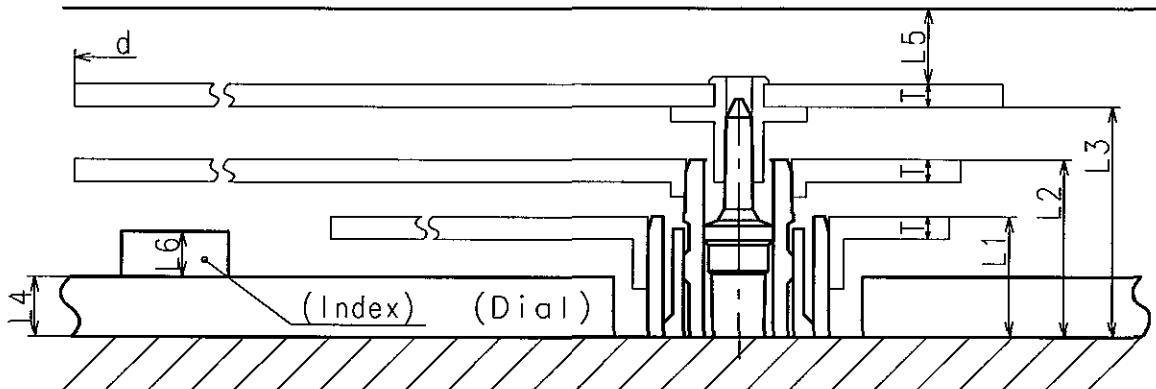
- * Second hand unbalance $\leq 6\mu g \cdot m (0.06\mu N \cdot m)$
- * Minute hand unbalance $\leq 60\mu g \cdot m (0.6\mu N \cdot m)$
- * Hour hand unbalance $\leq 50\mu g \cdot m (0.5\mu N \cdot m)$



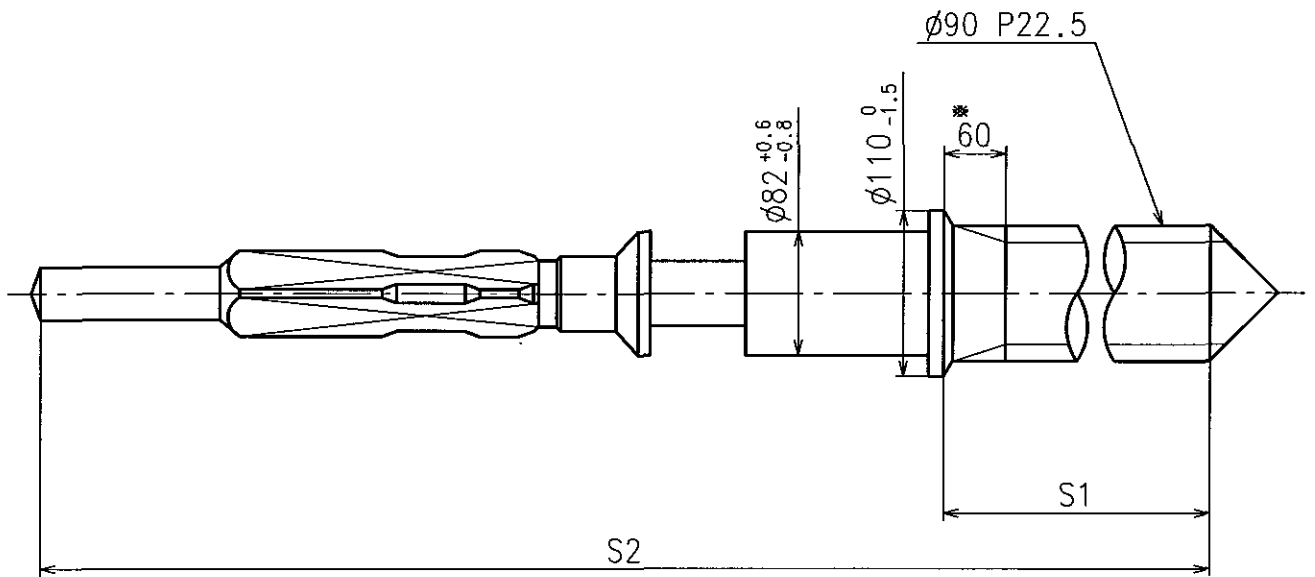
Hour wheel Center wheel Fourth wheel

	Parts No.			Dimension	
	Hour wheel	Center wheel	Fourth wheel		K2
Type S (1) AL33A	0271517	0221565	0241527		35

(Glass) " " " " " " " " " "



	L1	L2	L3	L4	L5	L6	T	d
Type S (1) AL33A	110	150	180	40	MIN: 50	MAX: 30	15	MAX: $\phi 2500$

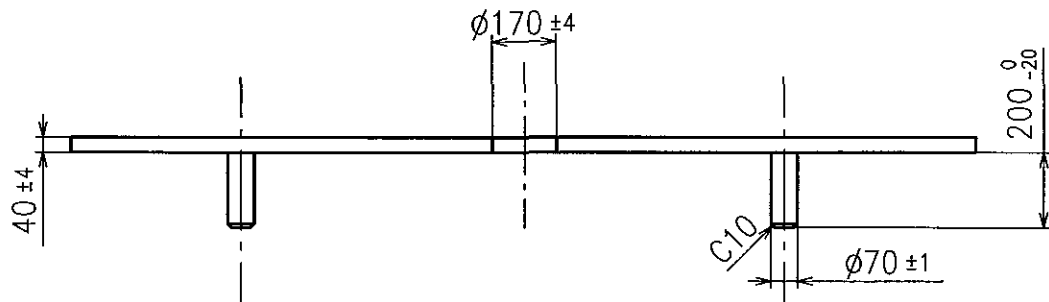
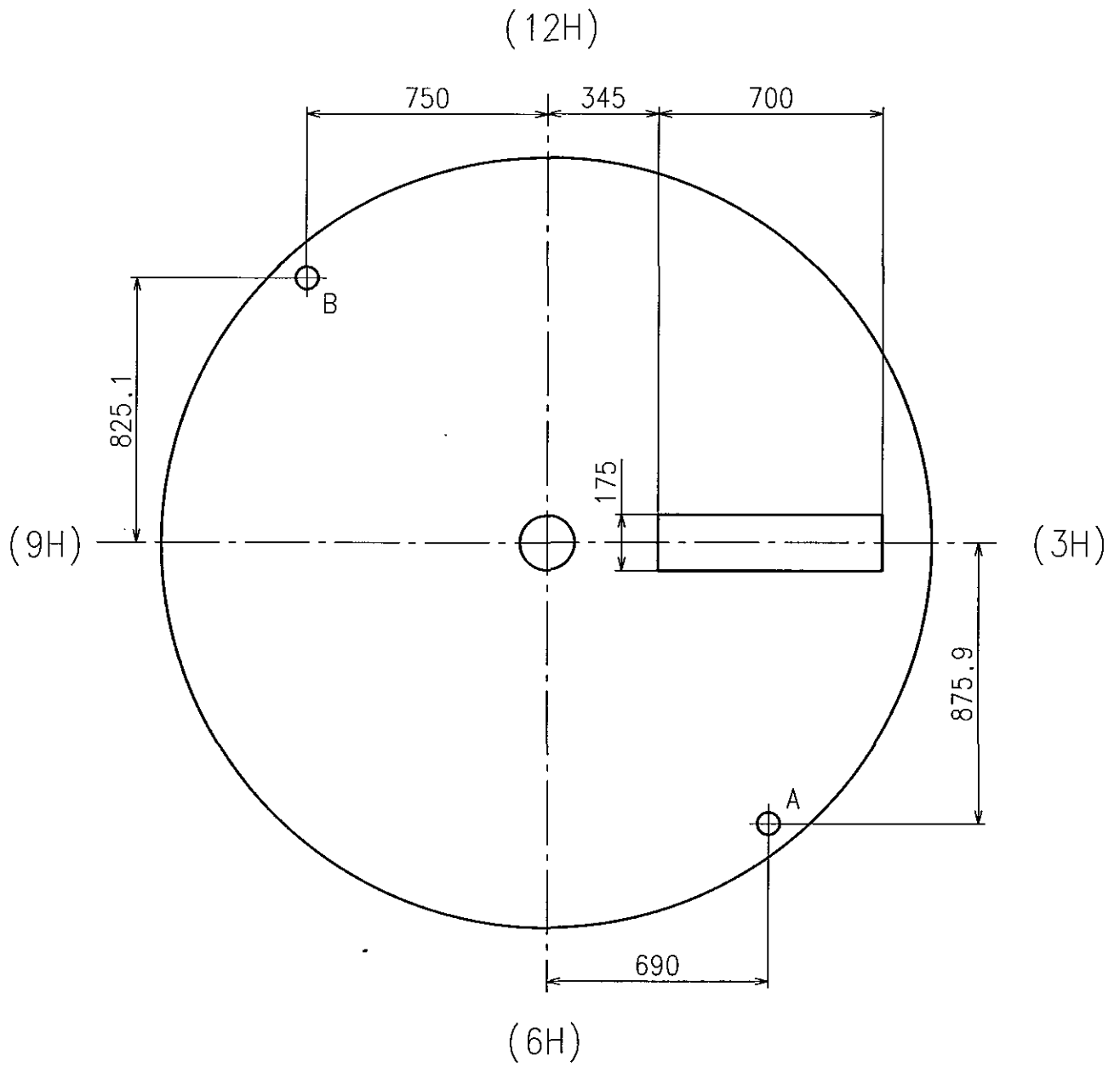


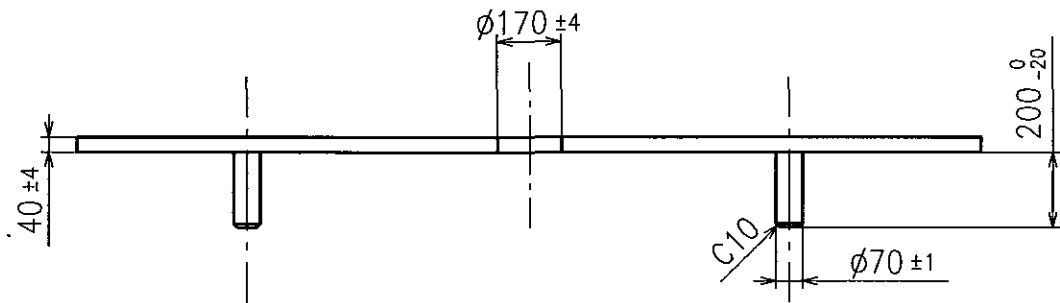
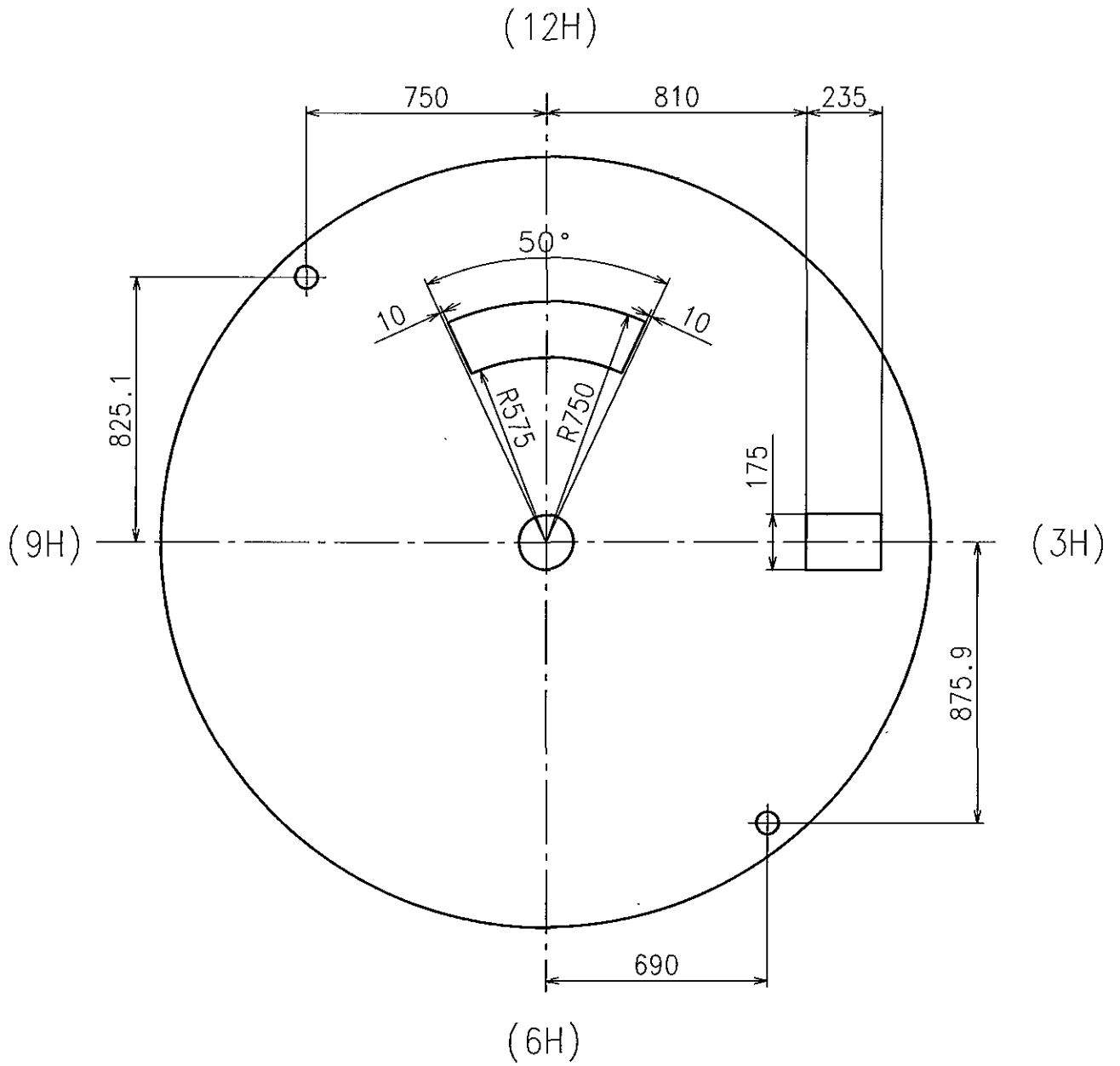
* Not threaded

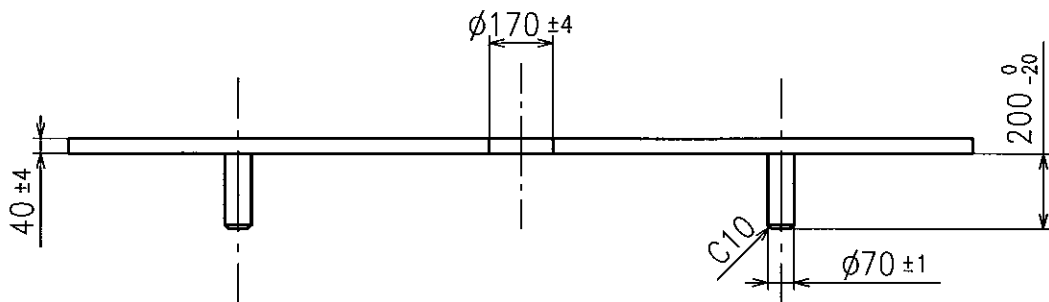
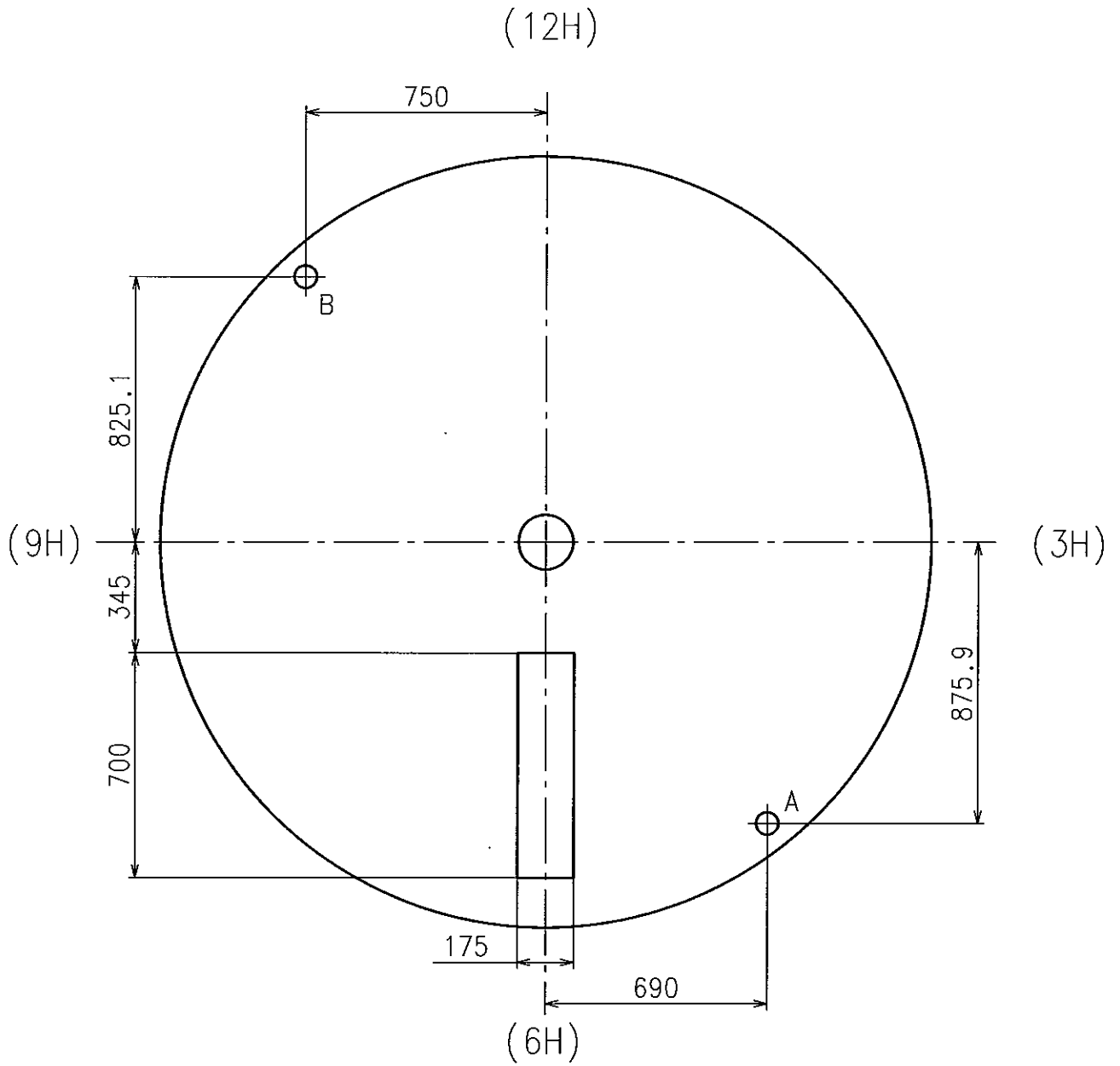
	Part No.	S1	S2
Standard	0351177	1366	1964

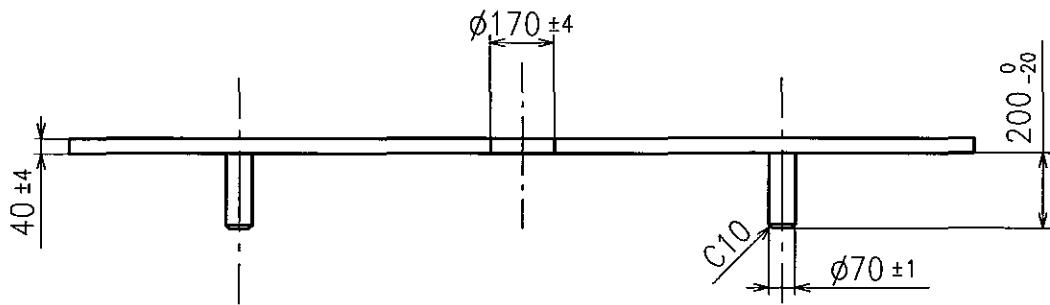
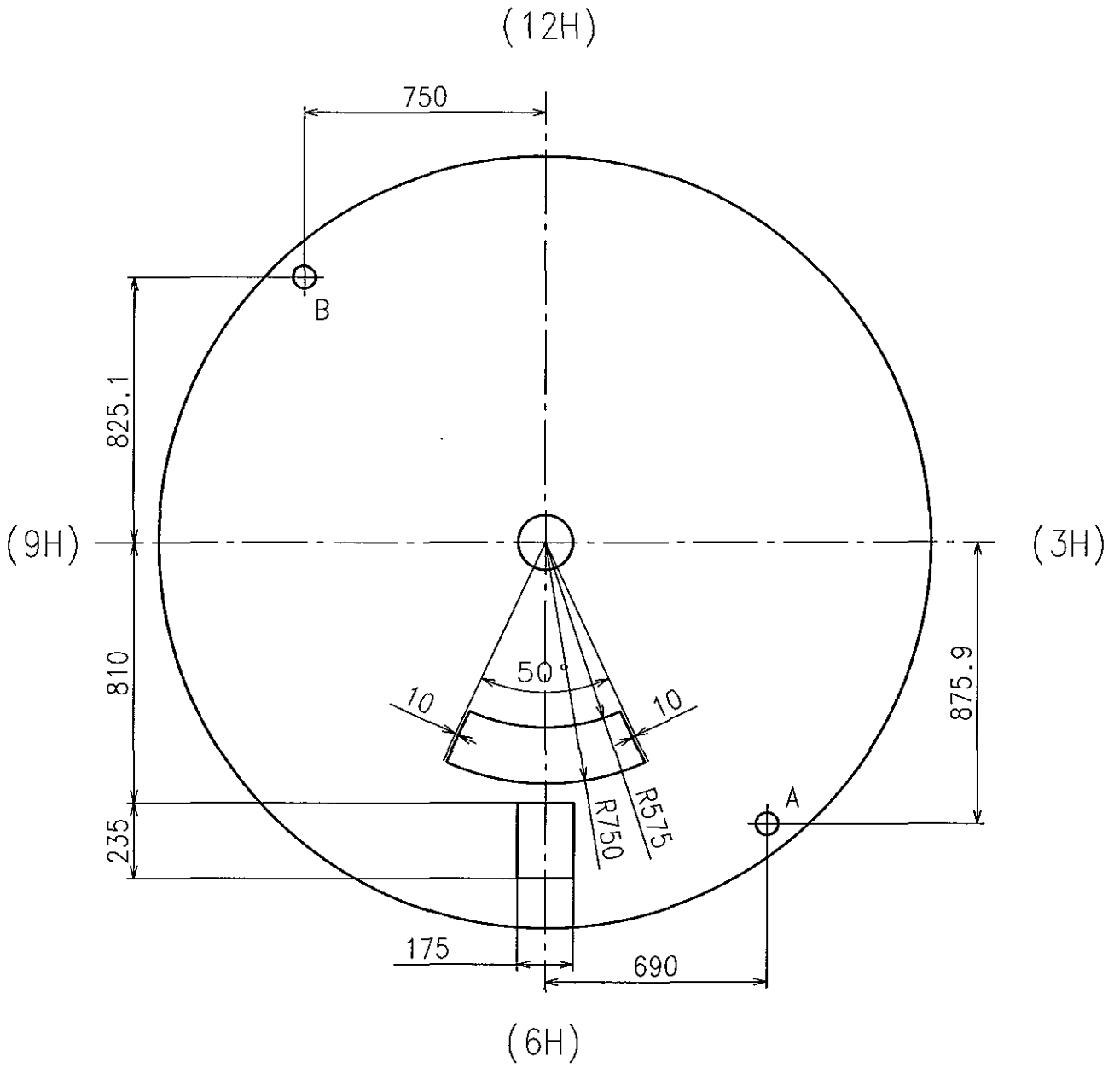
Material : Steel

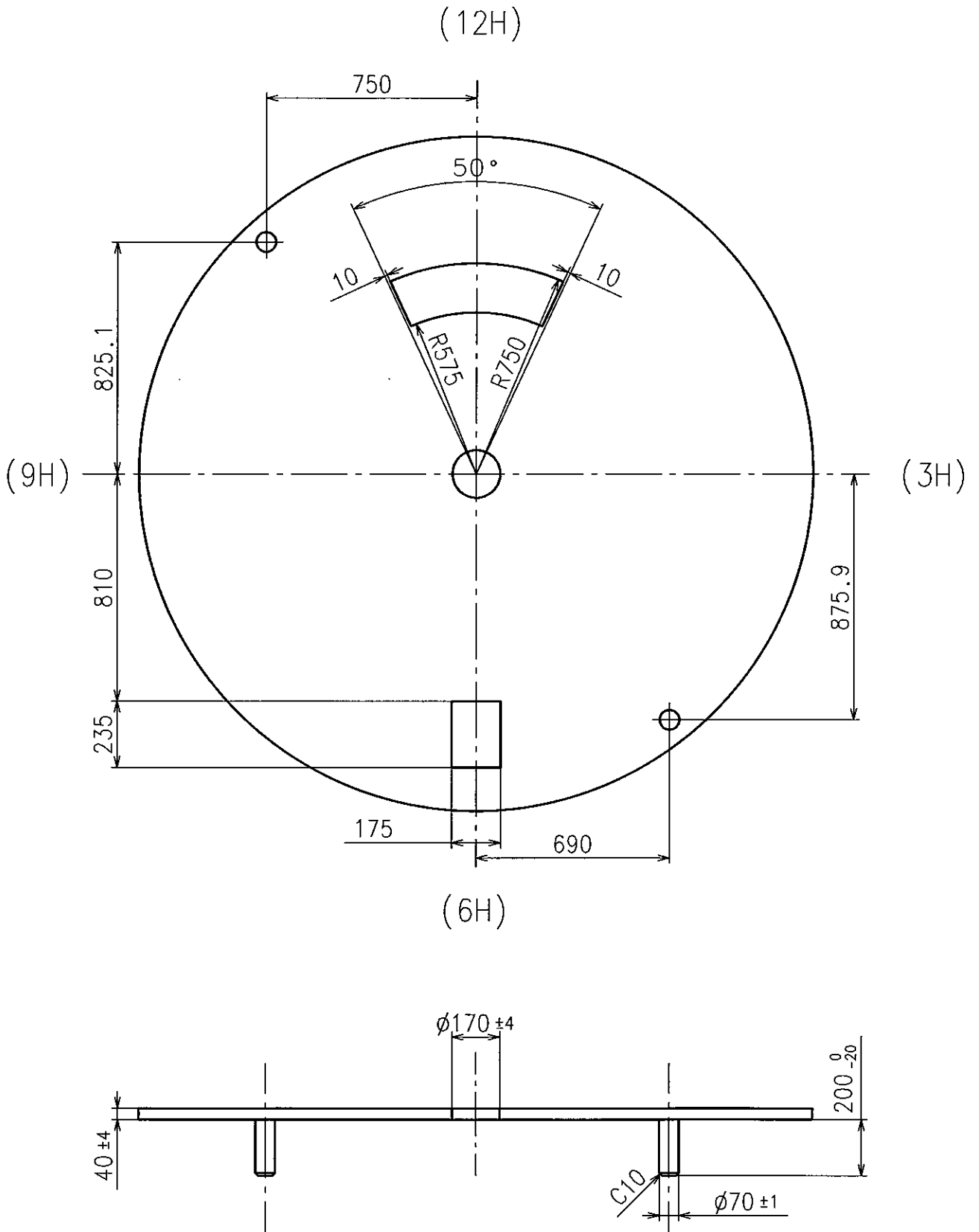
Hardness : Vickers 600±50

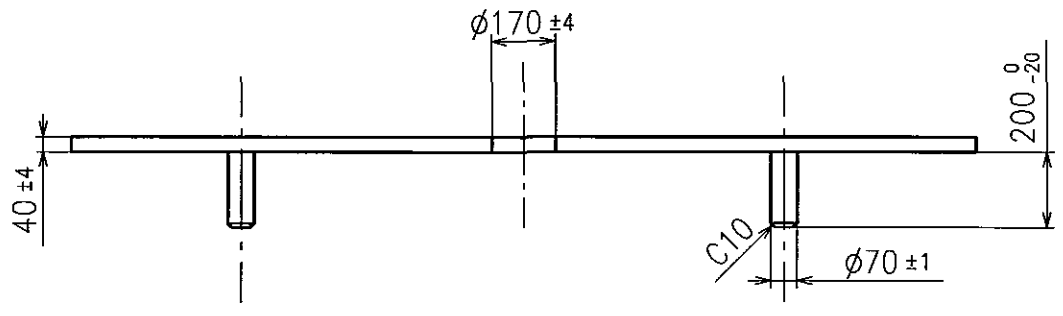
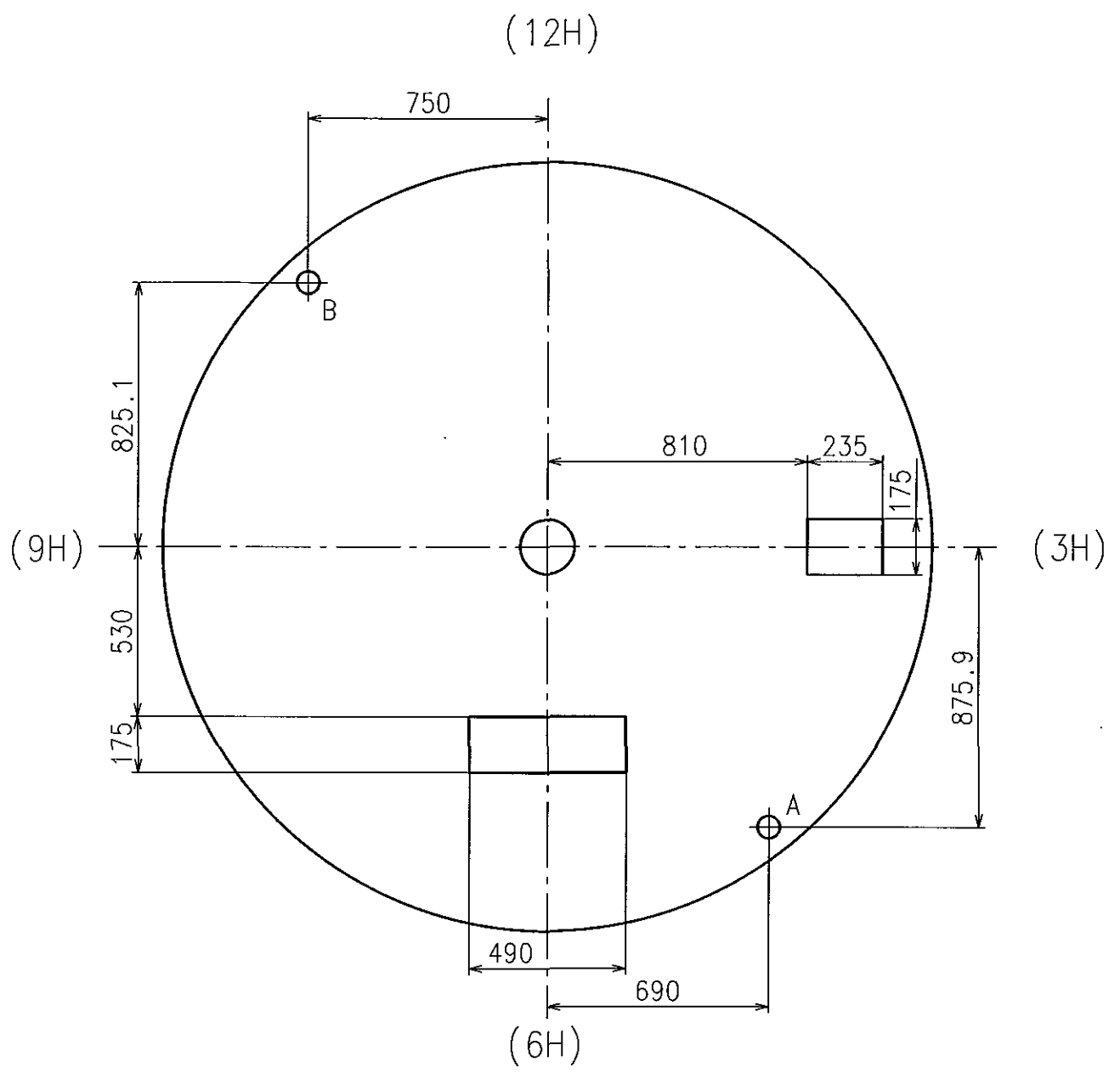


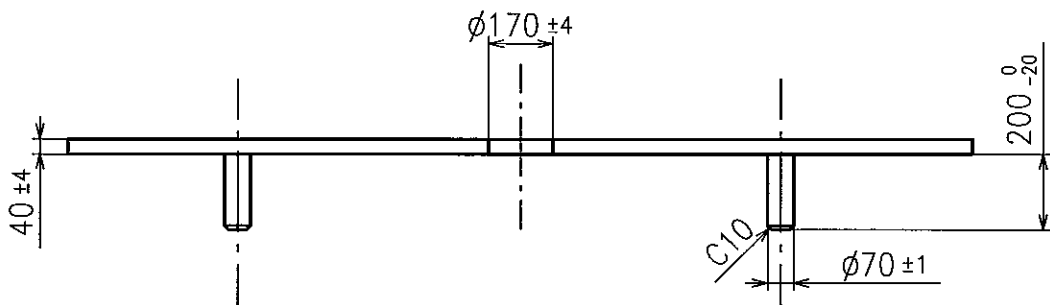
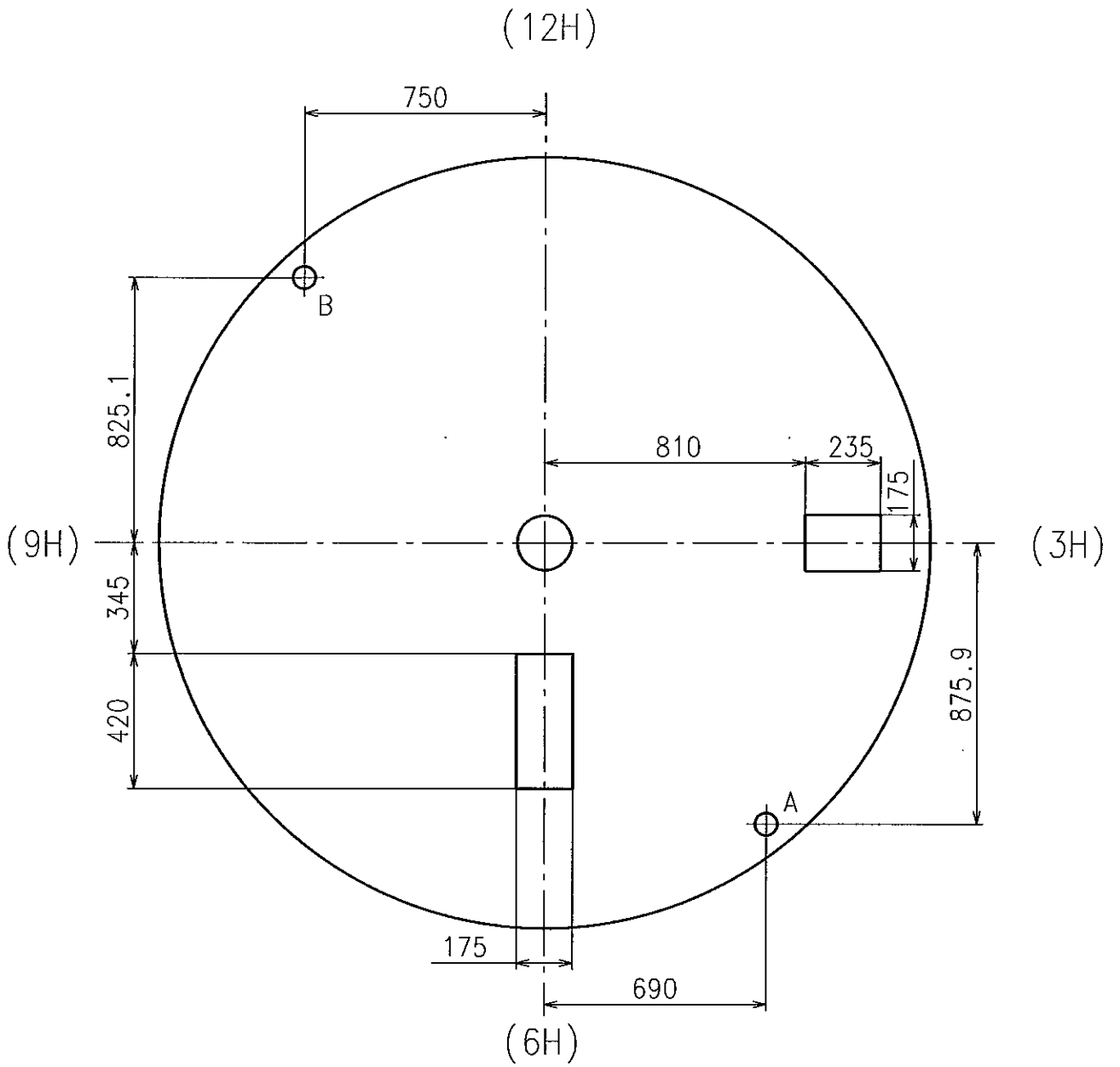


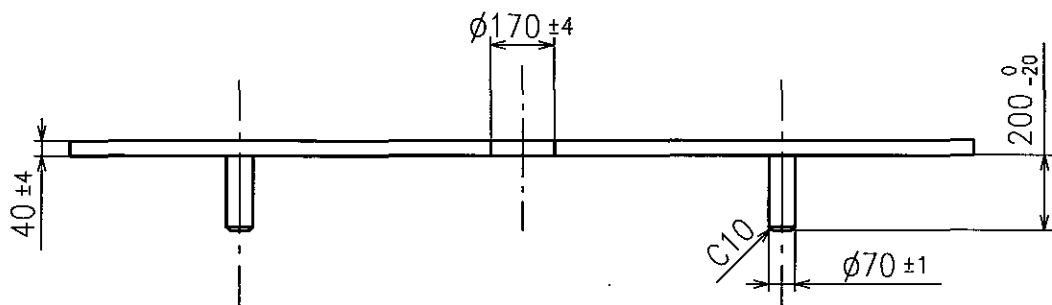
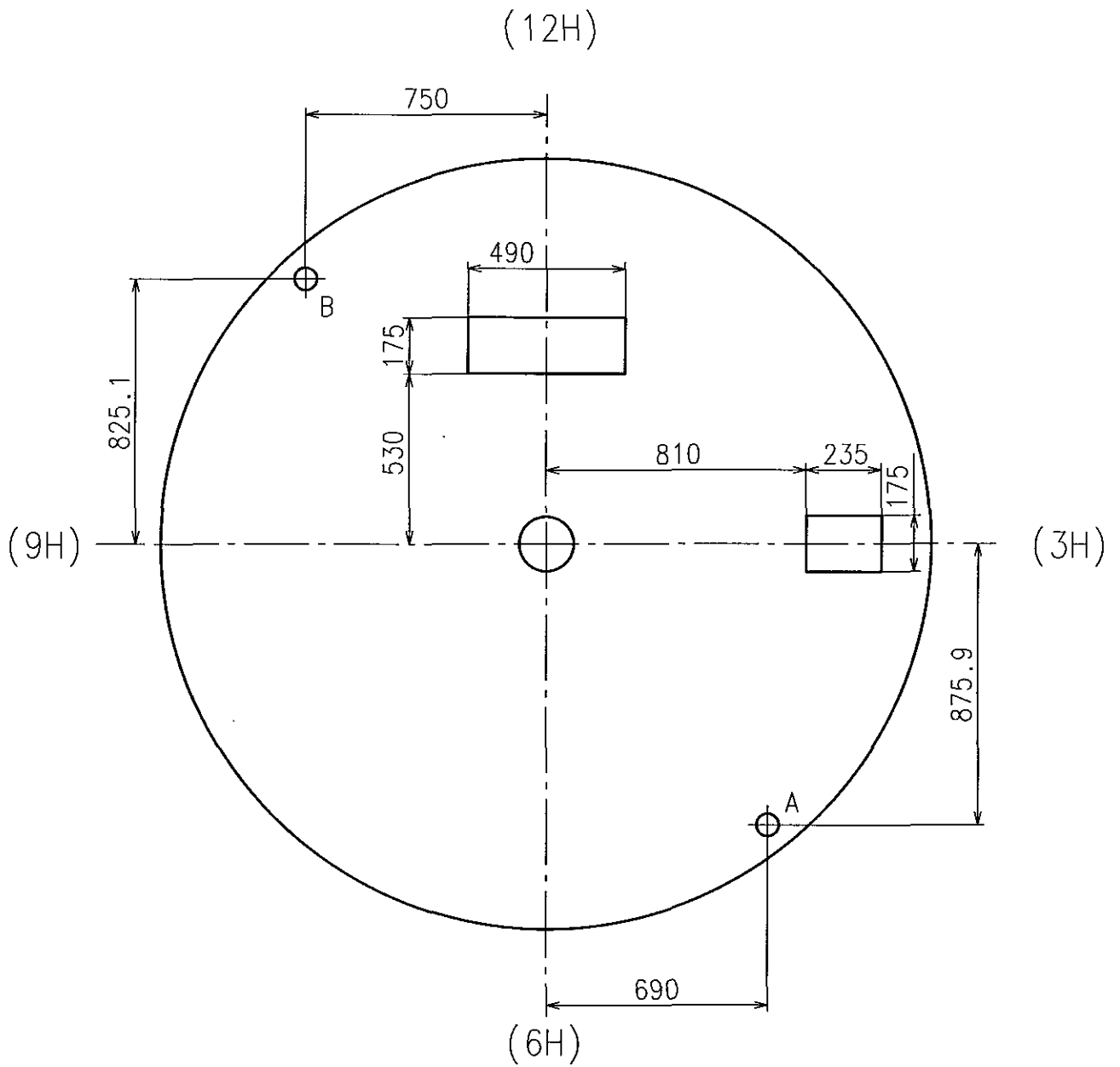


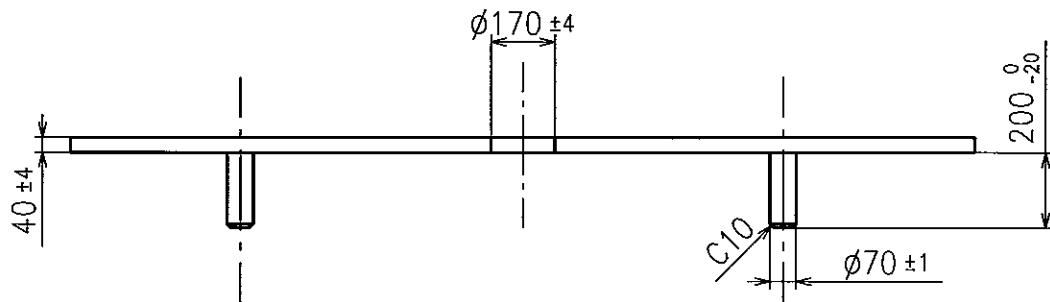
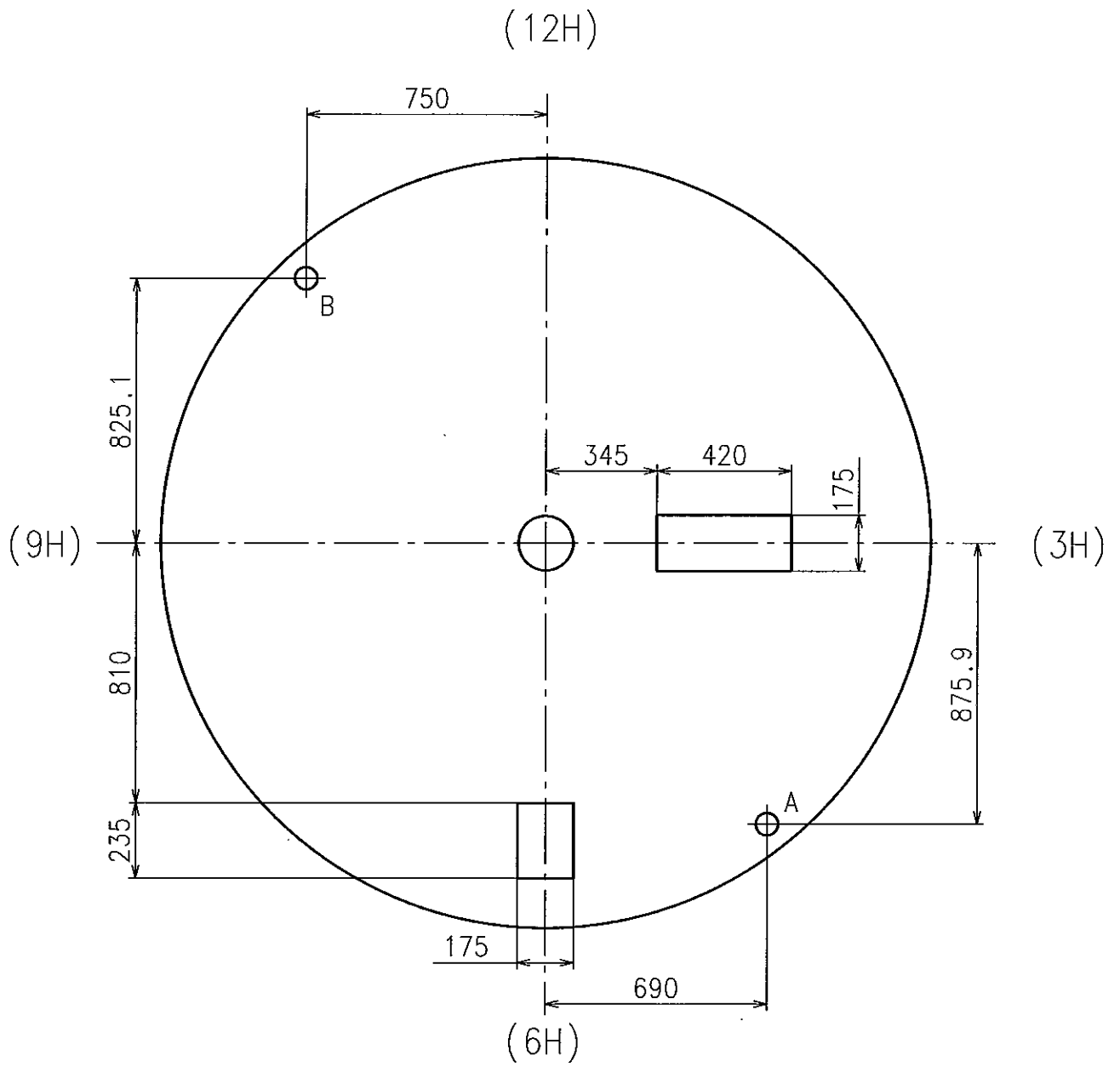


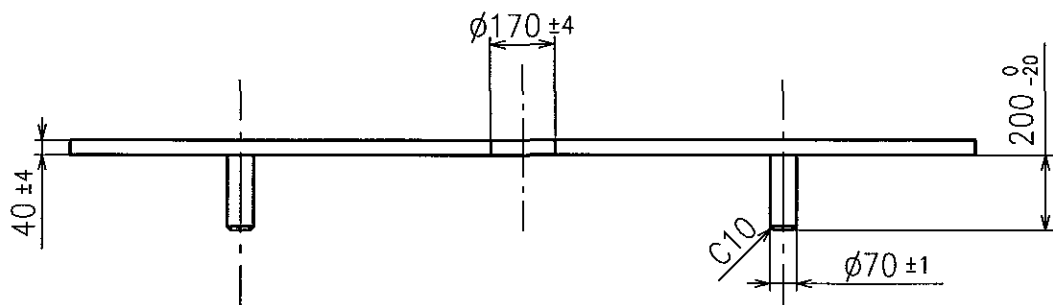
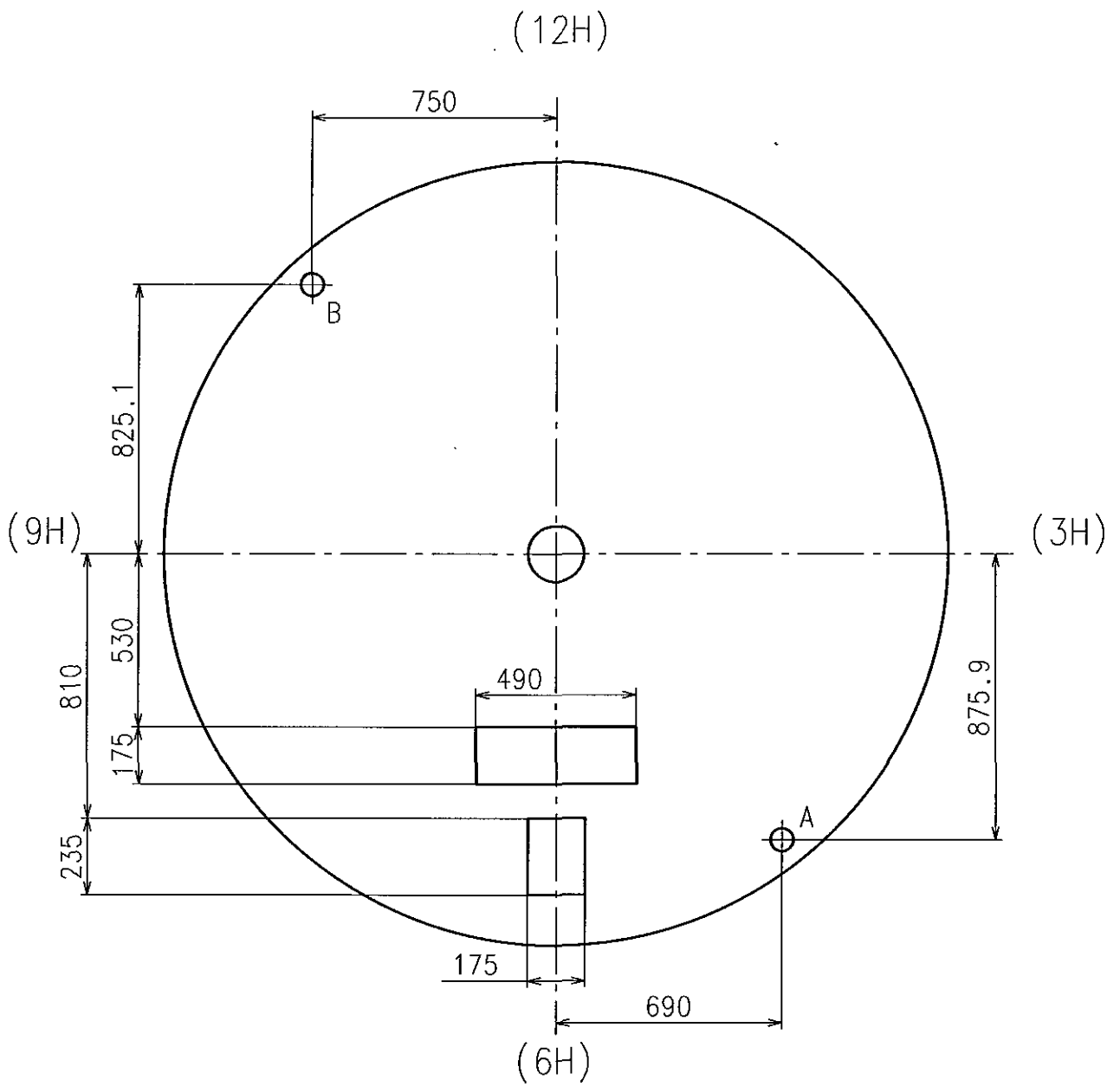


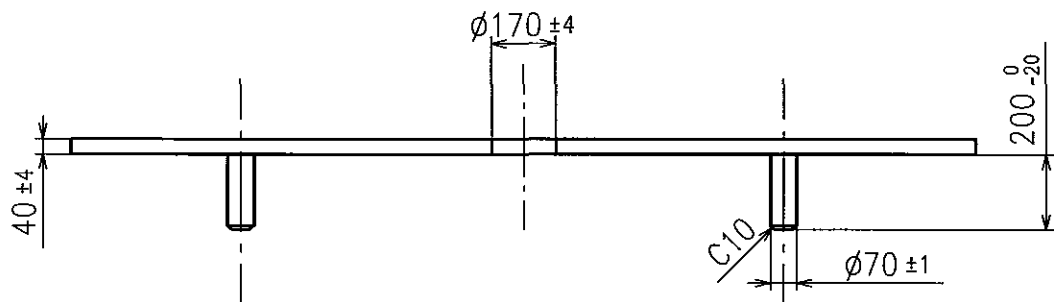
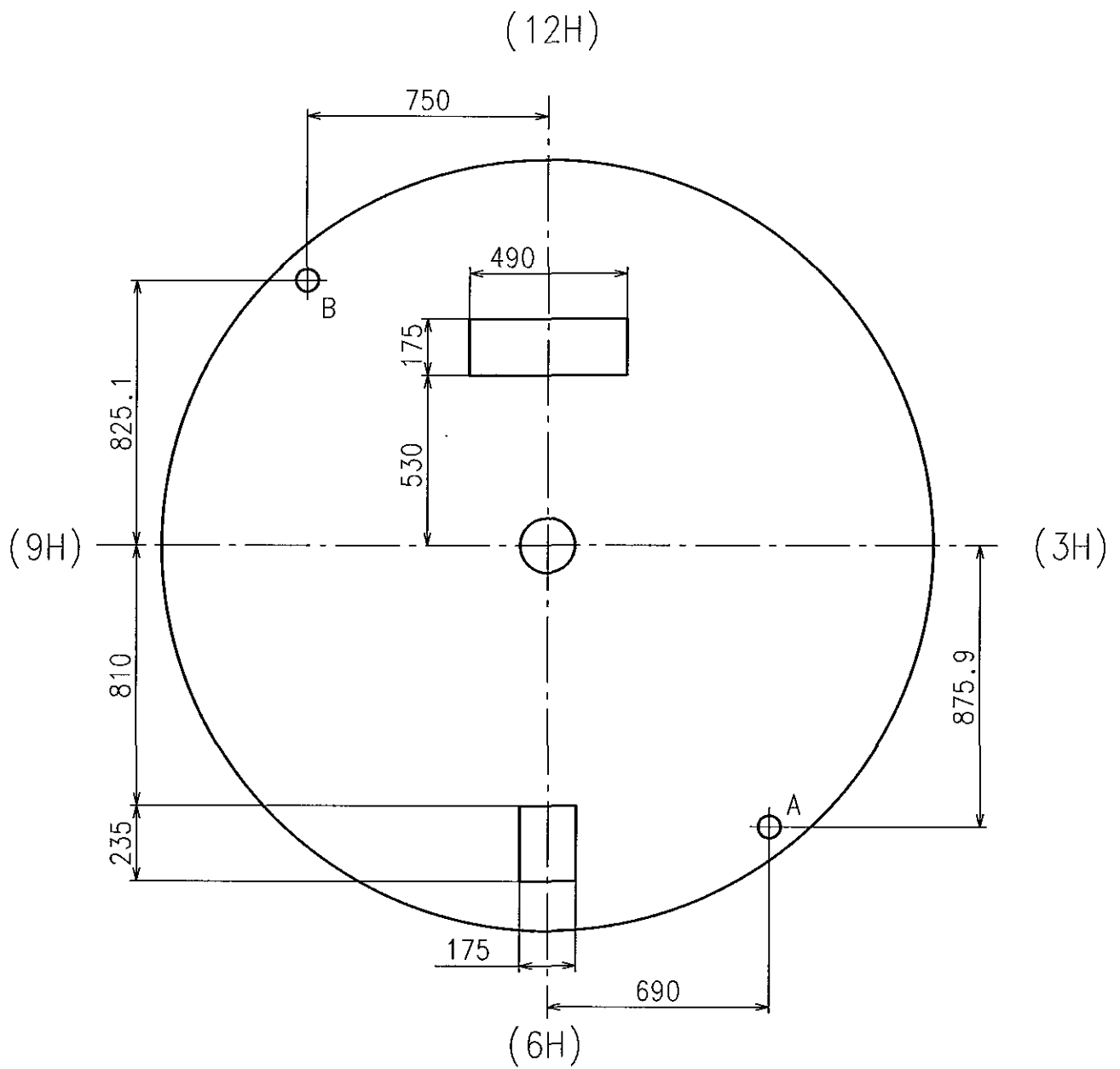


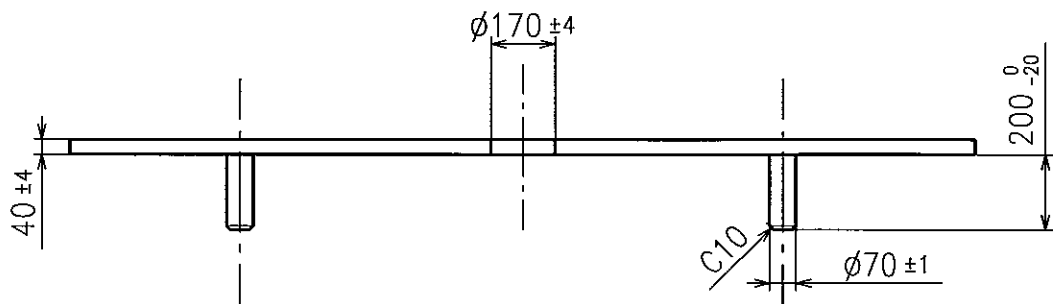
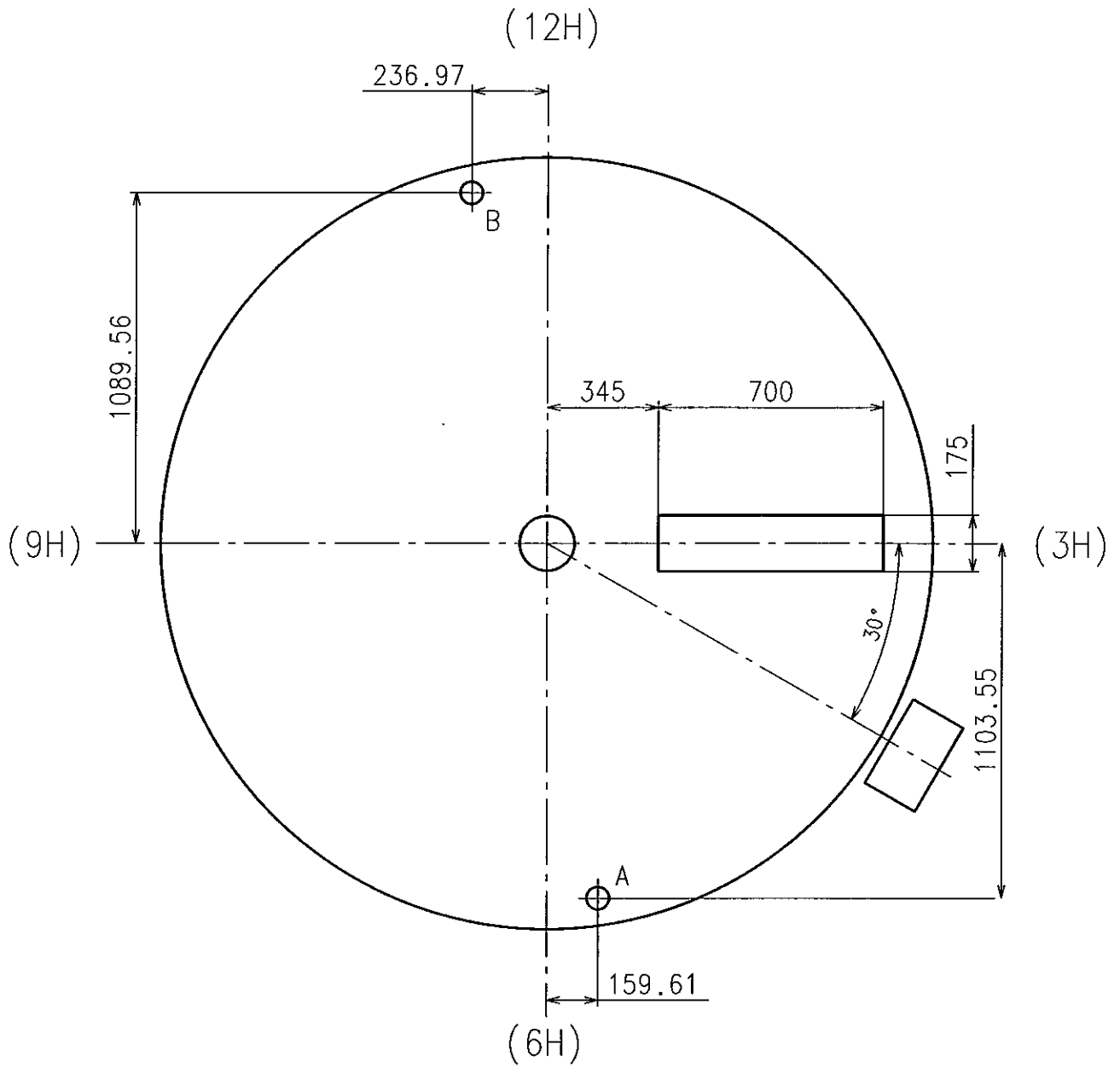


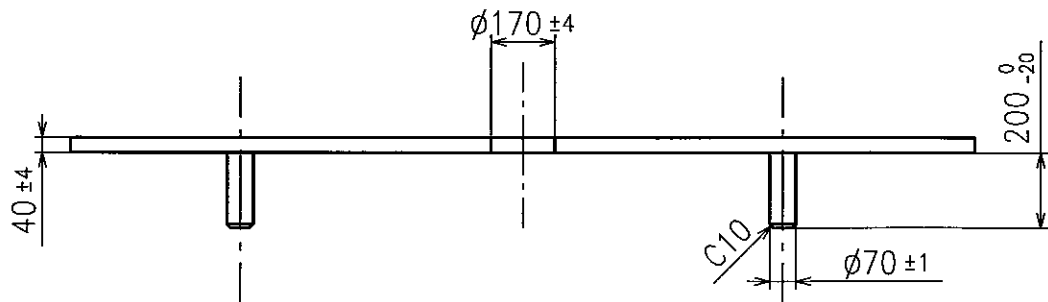
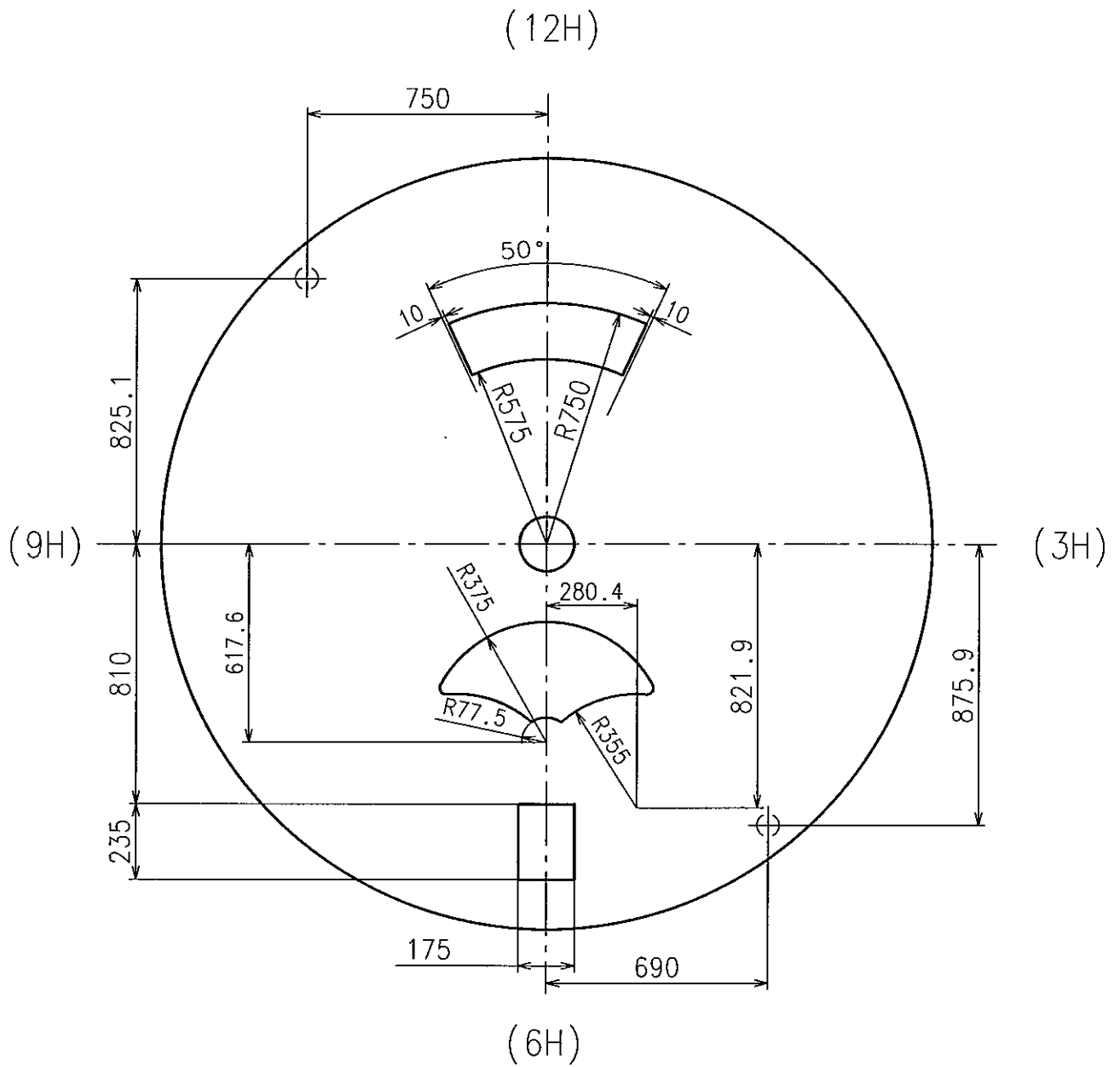


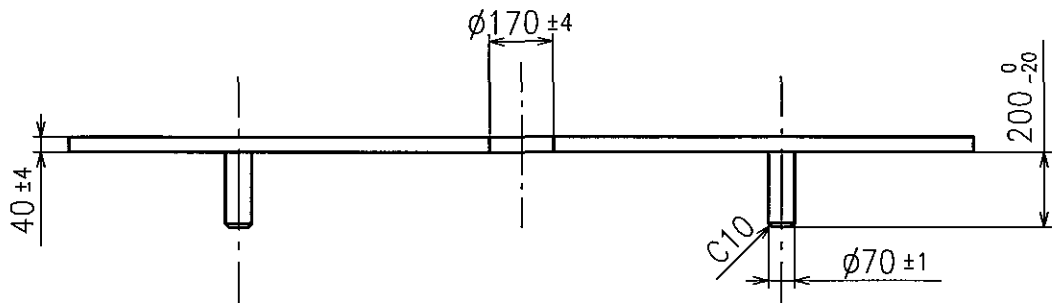
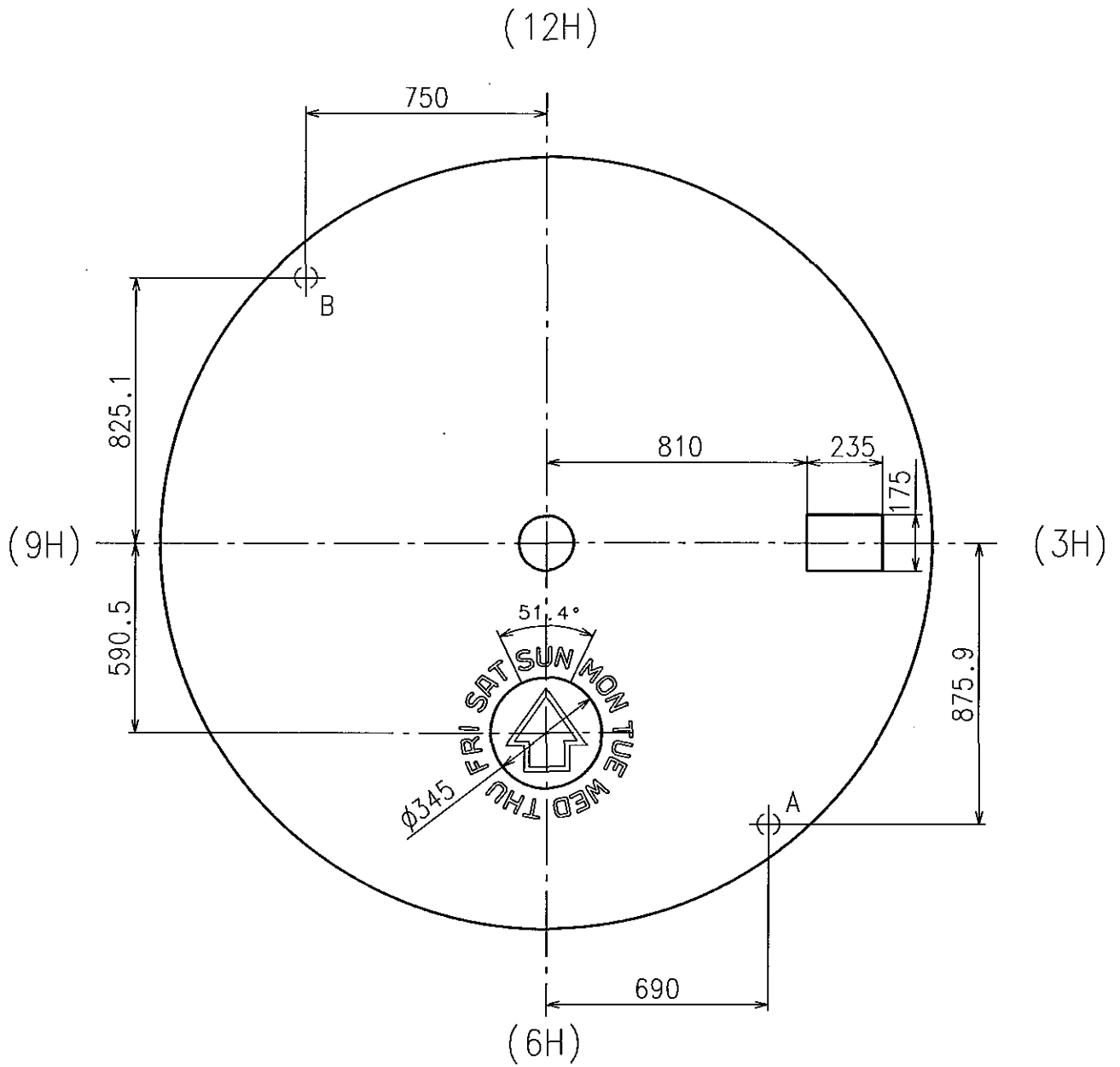












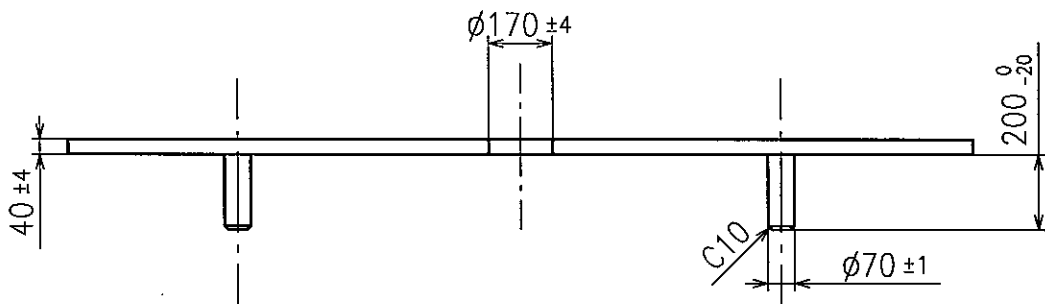
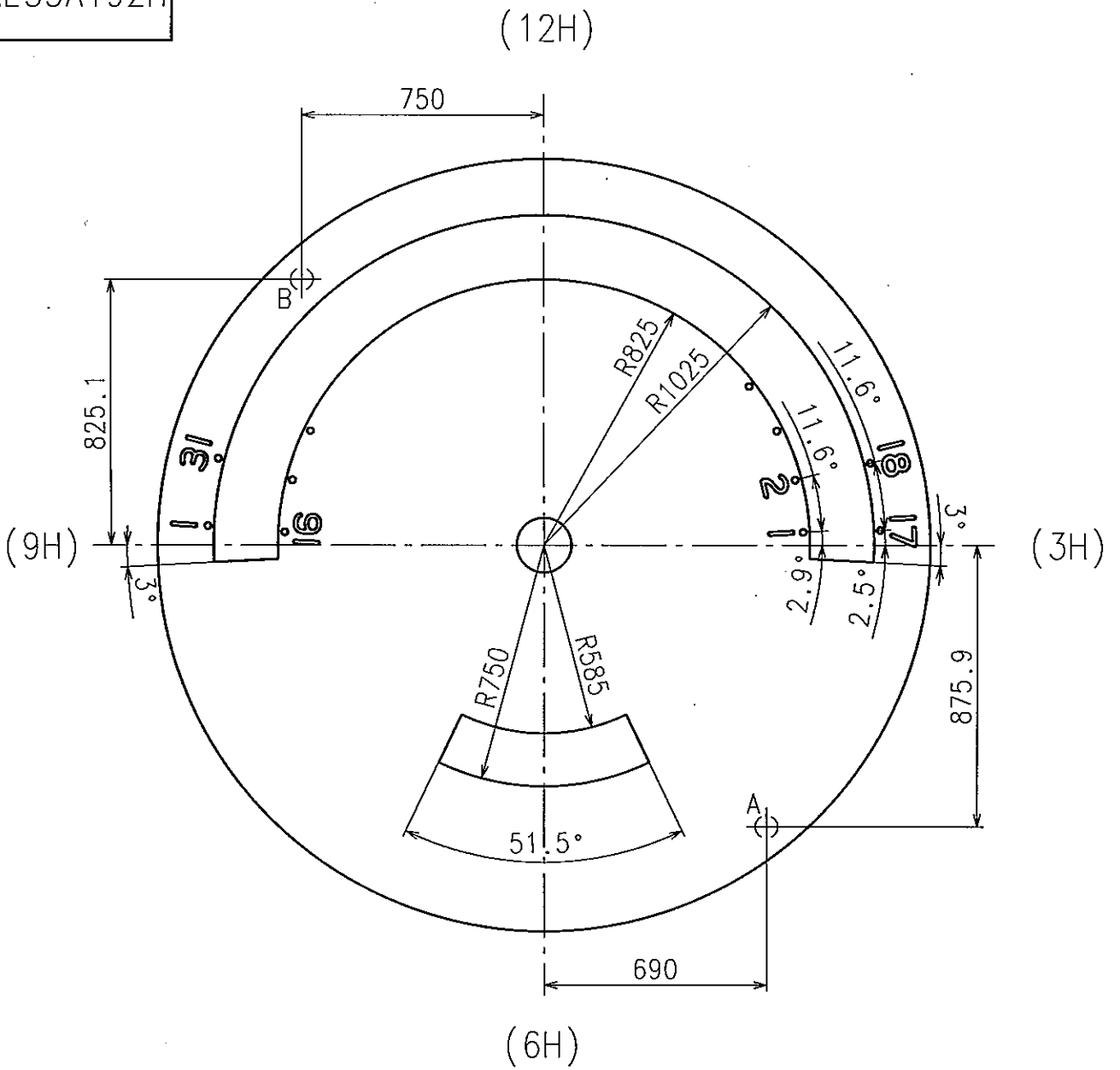
Cal.
AL33A

Dial-15

Date: 29/Mar./'07

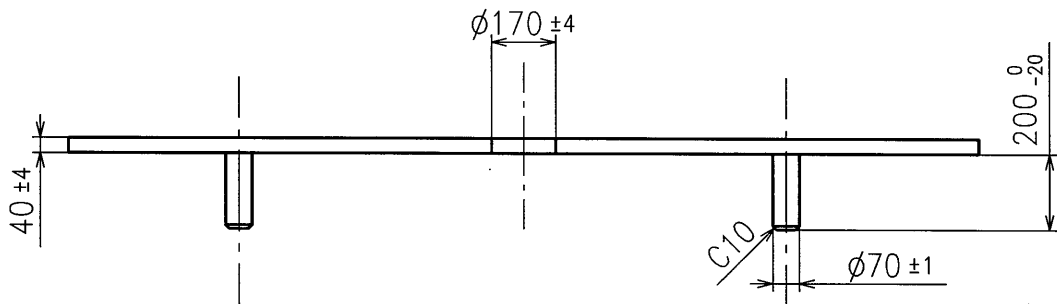
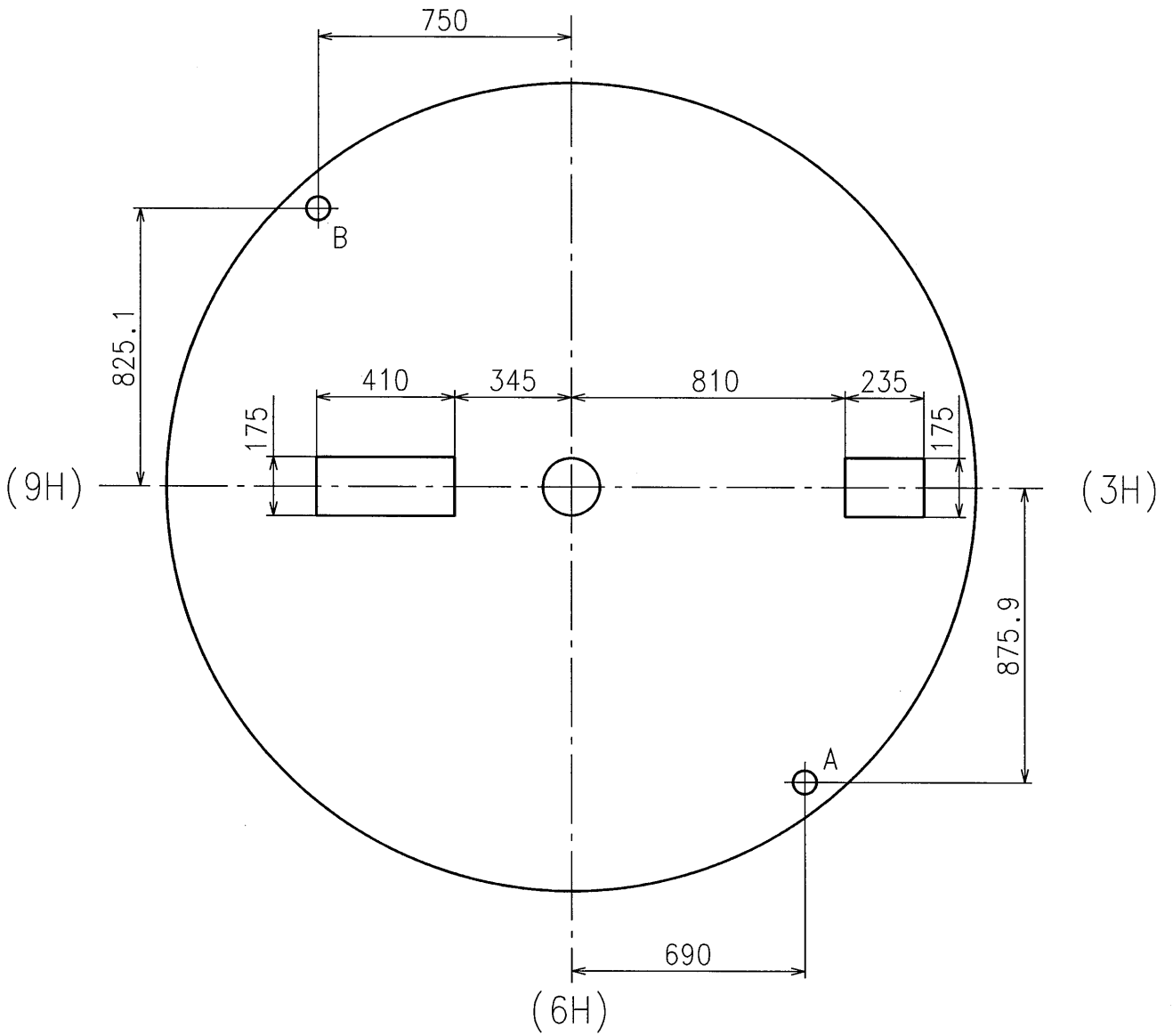
Rev.: 00

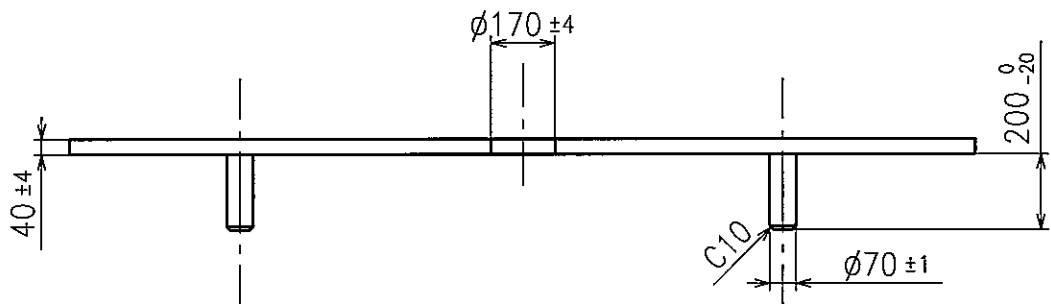
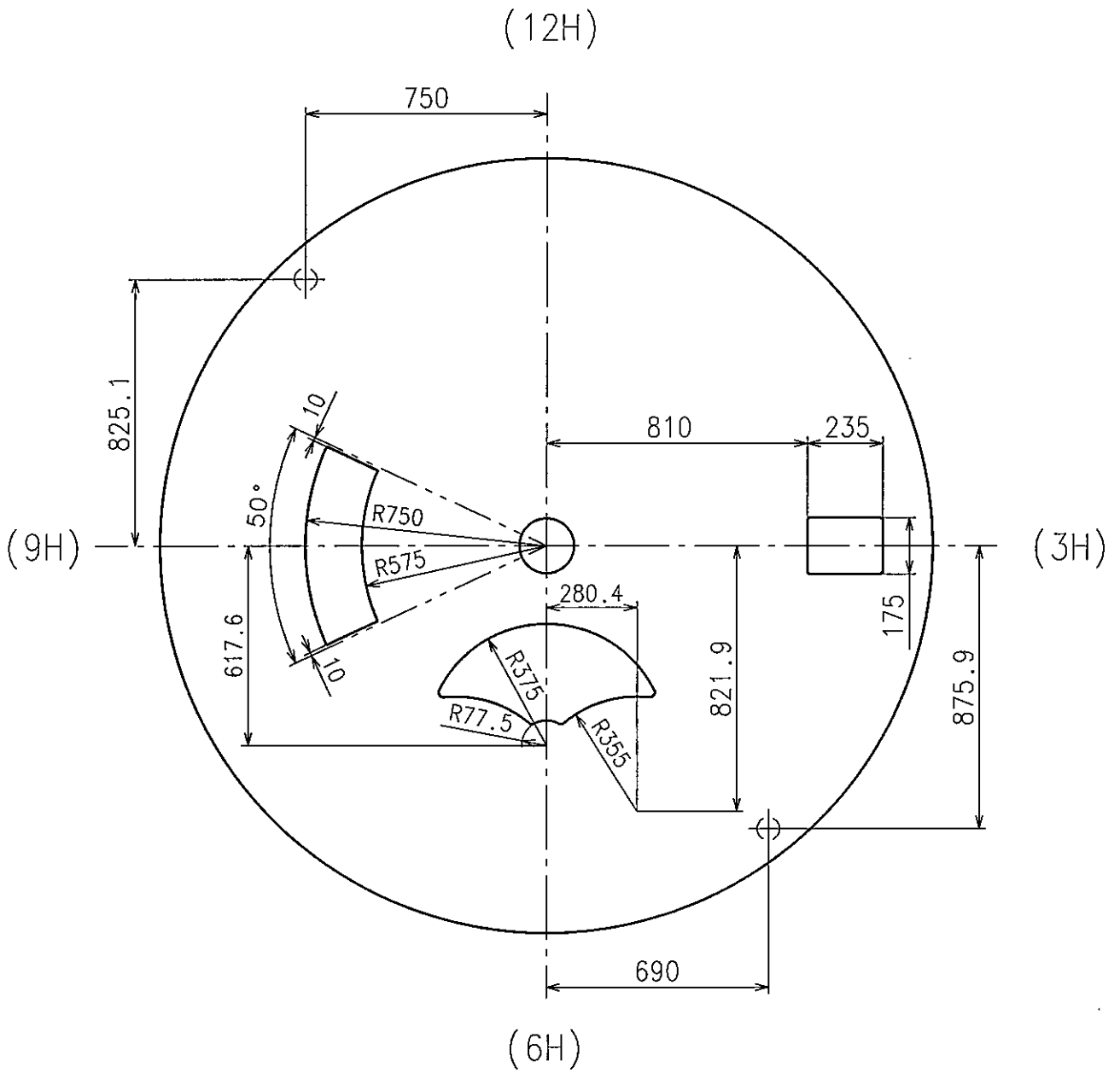
AL33A192H

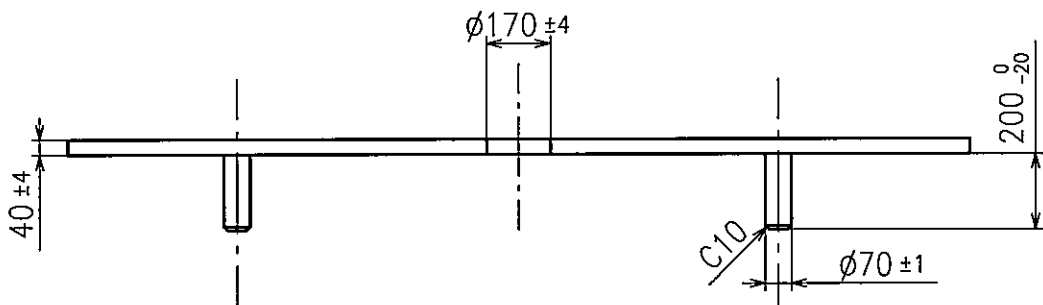
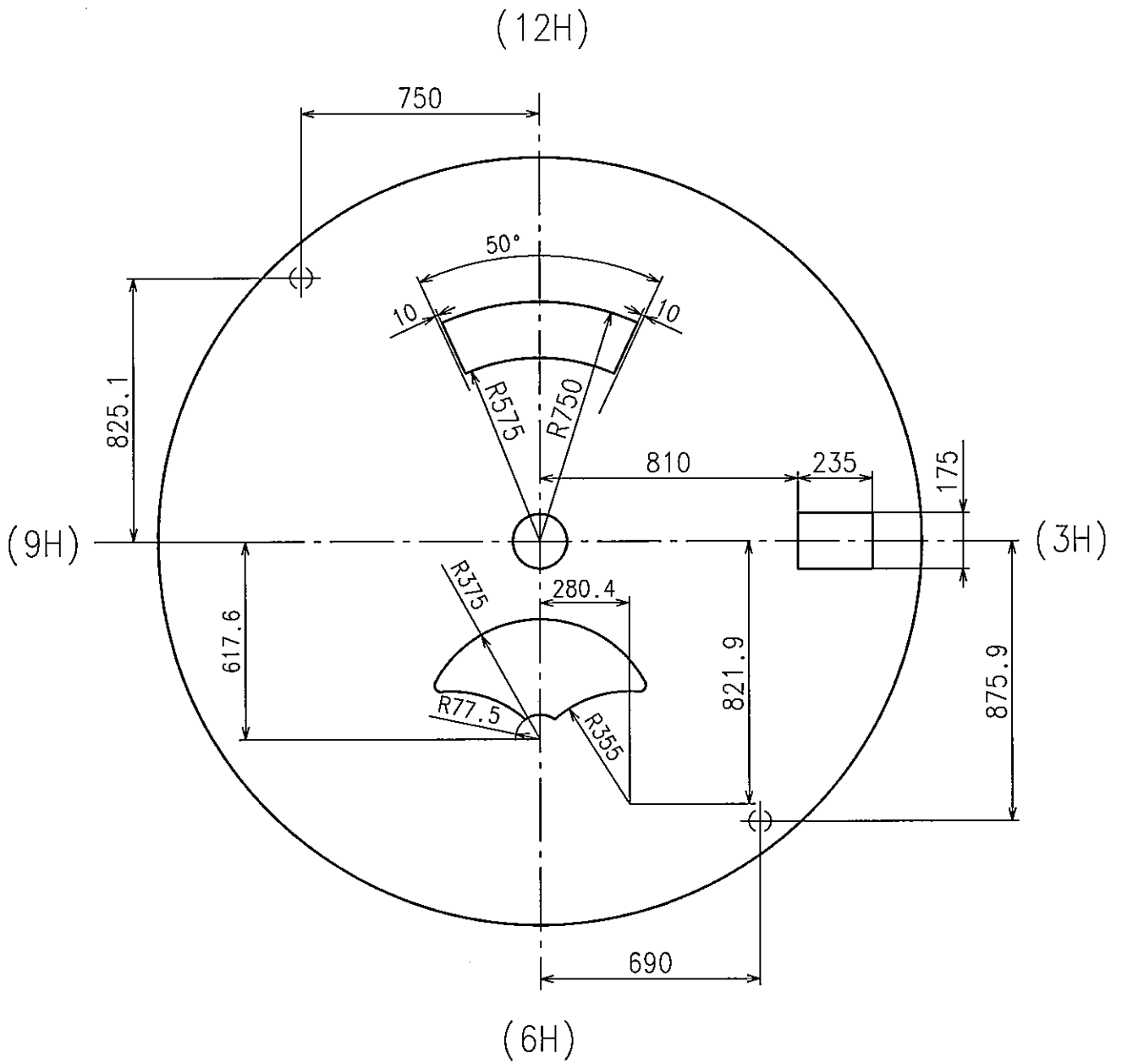


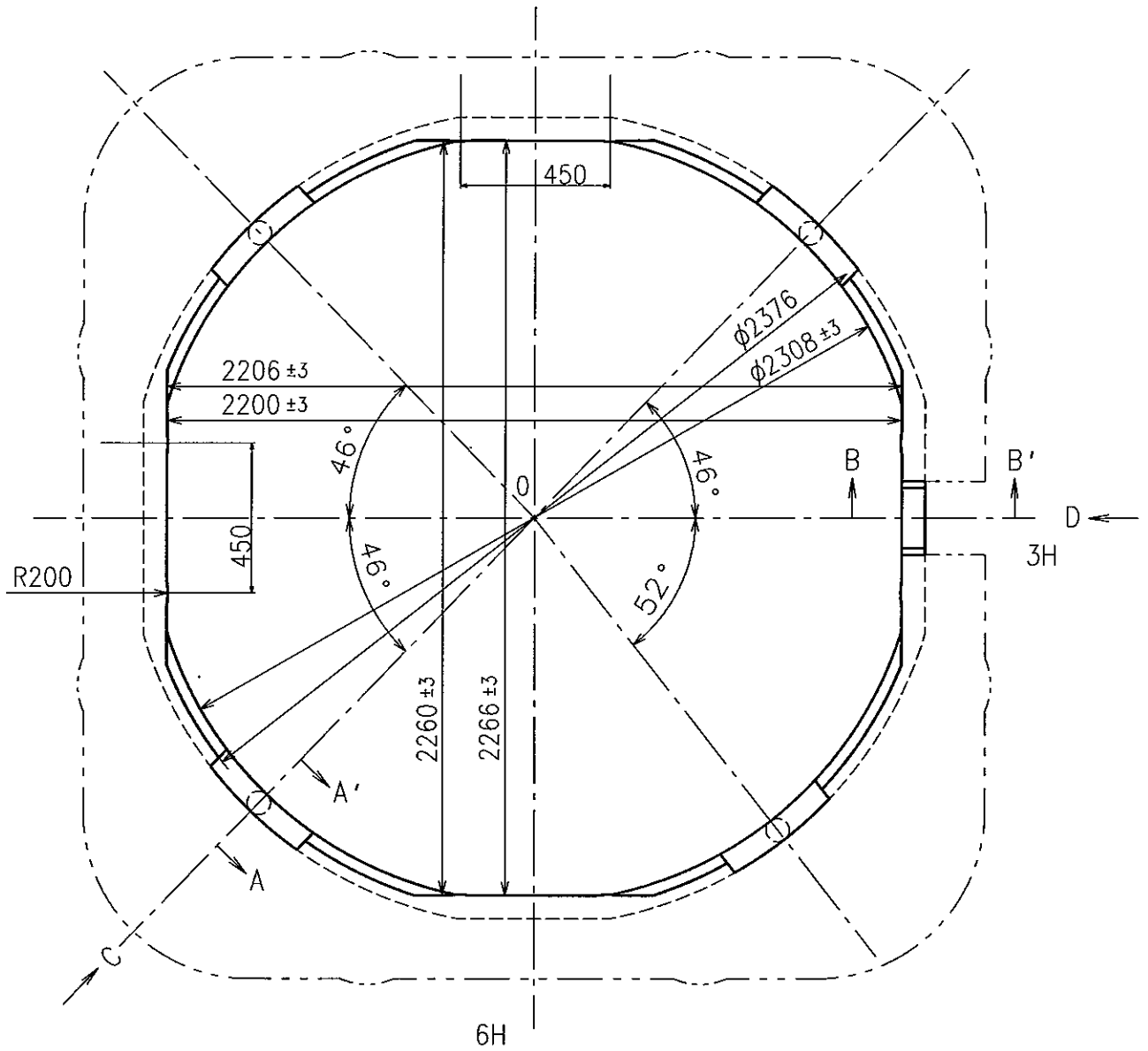
Ref. NO.
AL33A1TKH

(12H)

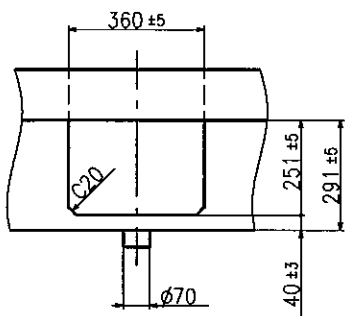




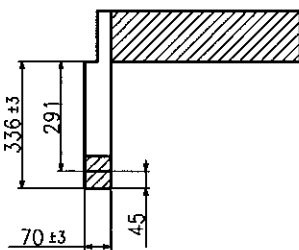




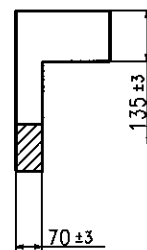
C view



A-A' section



B-B' section



D view

