

Cal. VX33E

ϕ 23.3 mm
H 2.98 mm

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Date: 28/Apr./'09

MOVEMENT SPECIFICATIONS

CAL. VX33E

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

1. MOVEMENT DIMENSIONS

*Outside diameter	ϕ 24.00mm × 21.30mm(3-9H) × 21.50mm(12-6H)
*Casing diameter	ϕ 23.30mm × 21.30mm(3-9H) × 21.50mm(12-6H)
*Total height	2.98mm (including battery)

2. TIME STANDARD

*Type of quartz oscillator	Tuning fork
*Frequency of quartz oscillator	32,768 Hz
*Accuracy	±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 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 : 7 mg•mm Minute hand : 60 mg•mm Hour hand : 50 mg•mm

5. BATTERY

*Type / Size	Silver oxide battery / ϕ 9.5mm × t 2.0mm
*Recommended battery	SR920SW (Maxell, Panasonic, Sony, Seizaiken)
*Nominal voltage	1.55 V
*Battery life	Approx. 3 years
*Driving current consumption	Approx. 1.50 μ A
*Operation stopping voltage	1.1 V

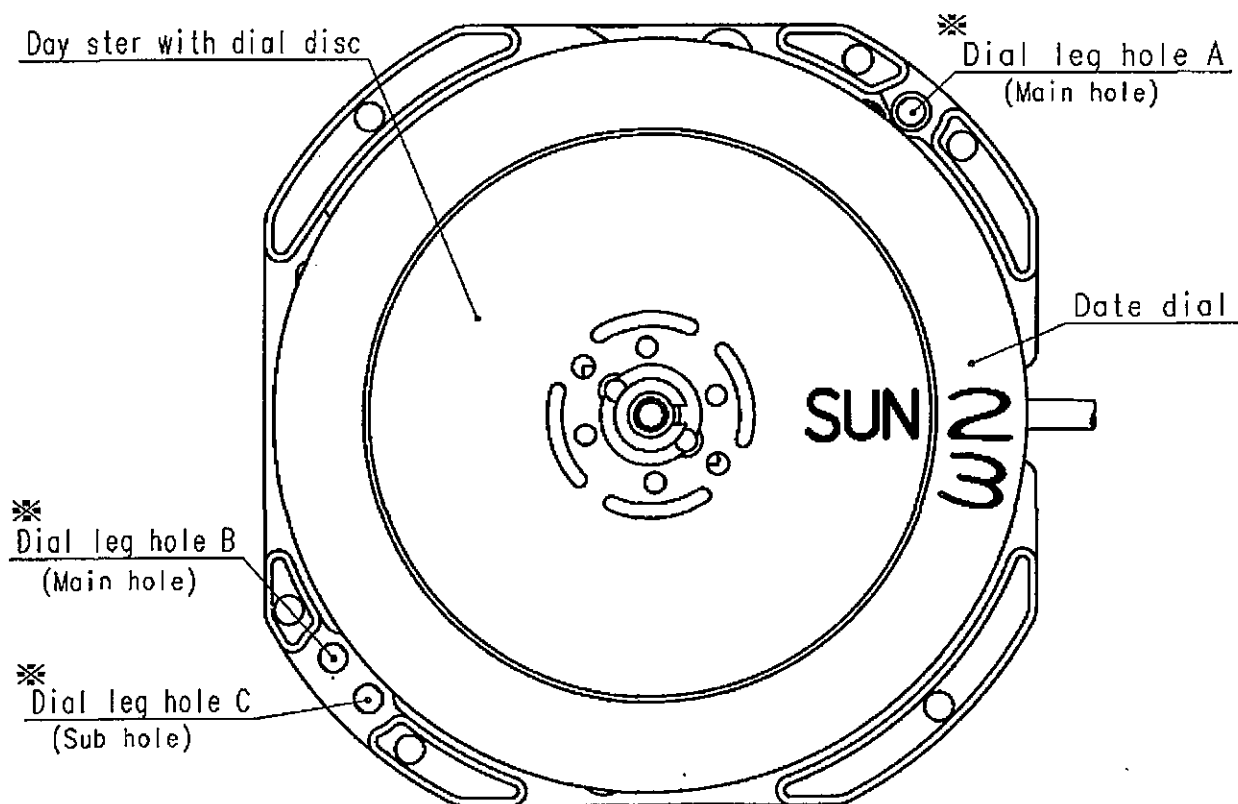
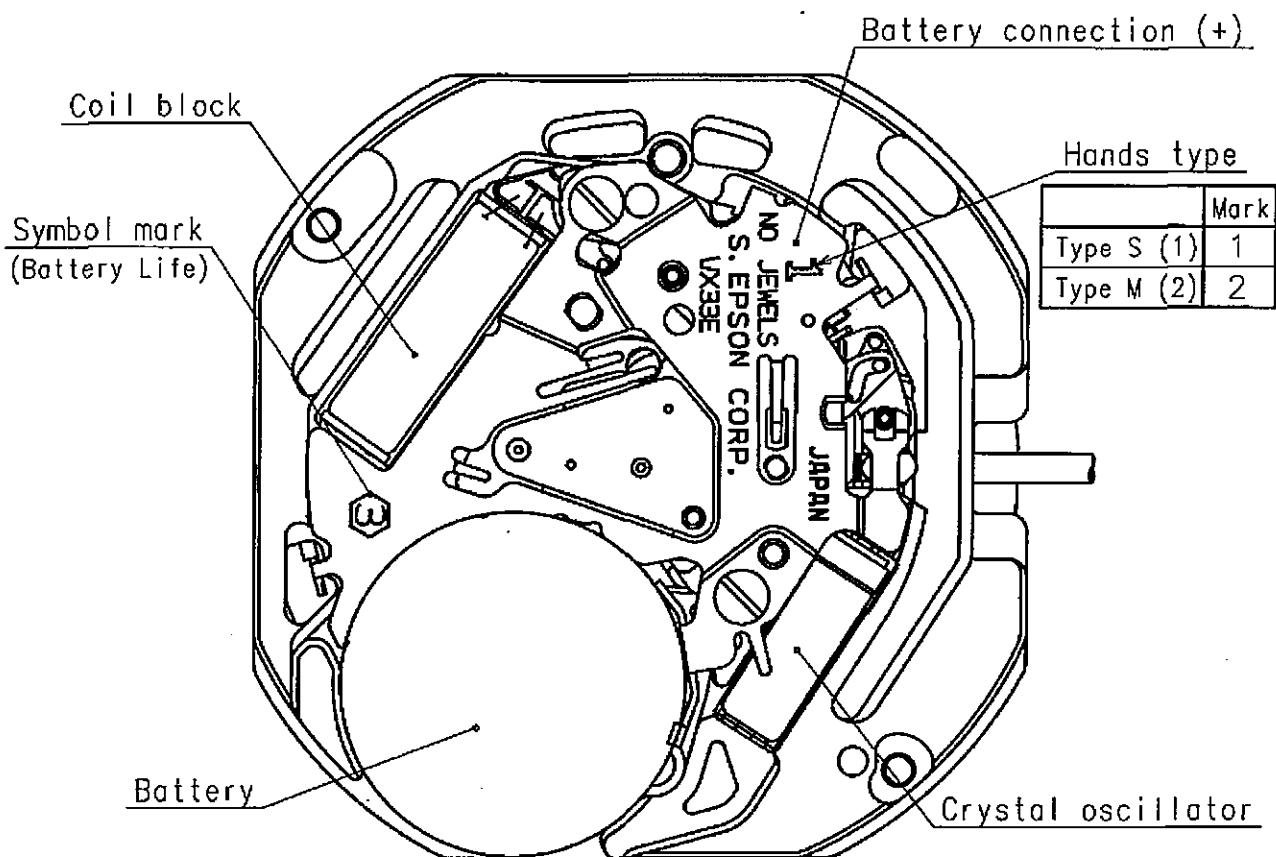
6. SEPARATED PARTS (Parts code)

*Hand setting stem	0351177 or 0351577
*Battery	SR920SW

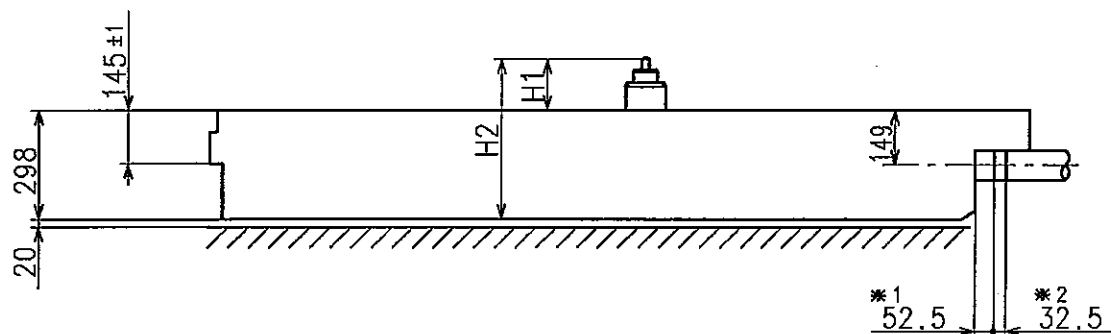
7. TEST OF ACCURACY

*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.



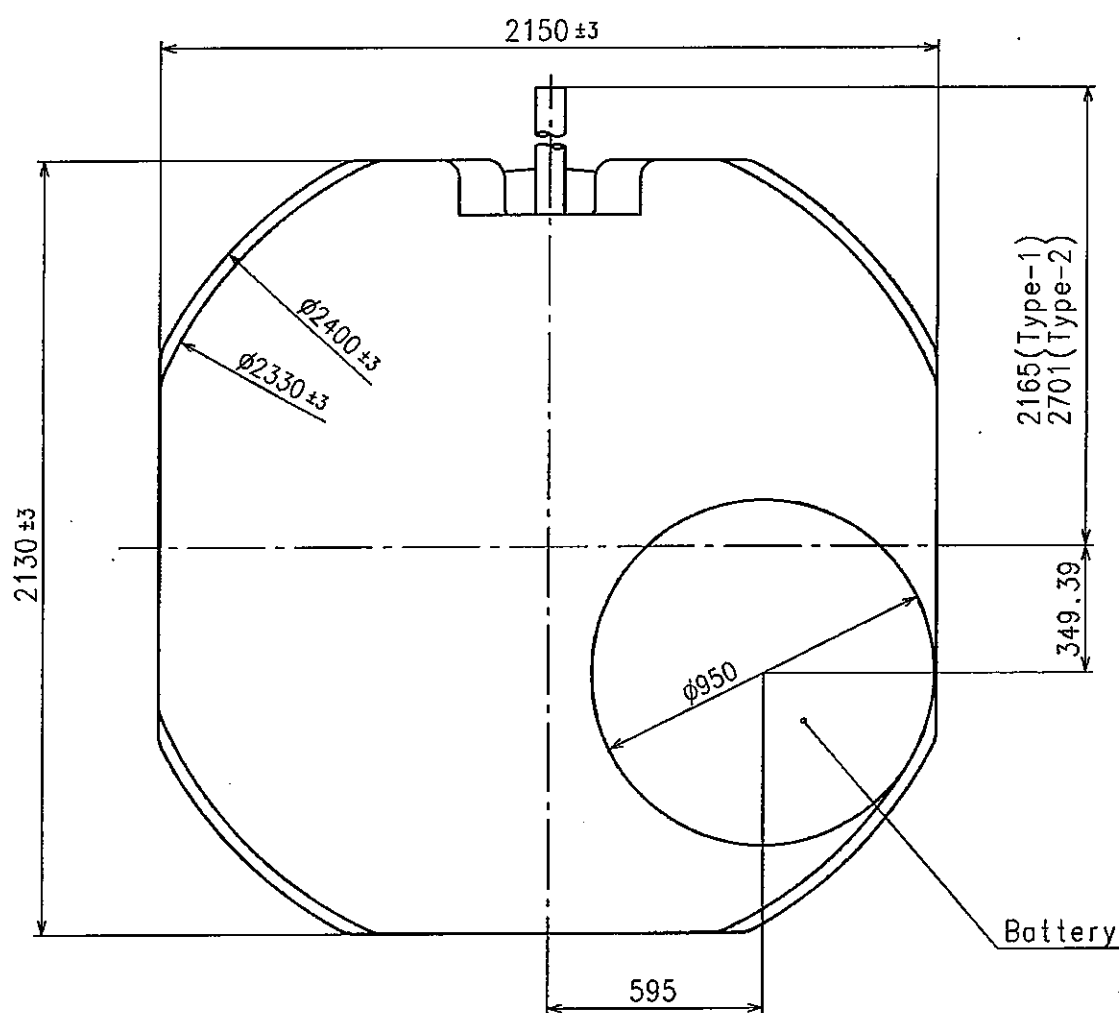
*: Combination of dial leg hole A-B, (A-C)



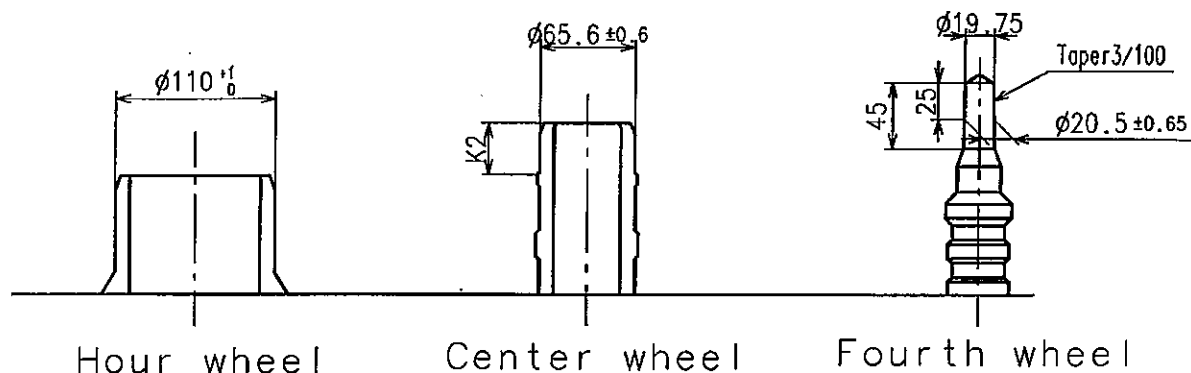
Center post		Type S (1) VX33E1**	Type M (2) VX33E2**
Maximum height from dial support	H1	146	182
Total height incl. movement	H2	444	480

*1:First pullout stroke

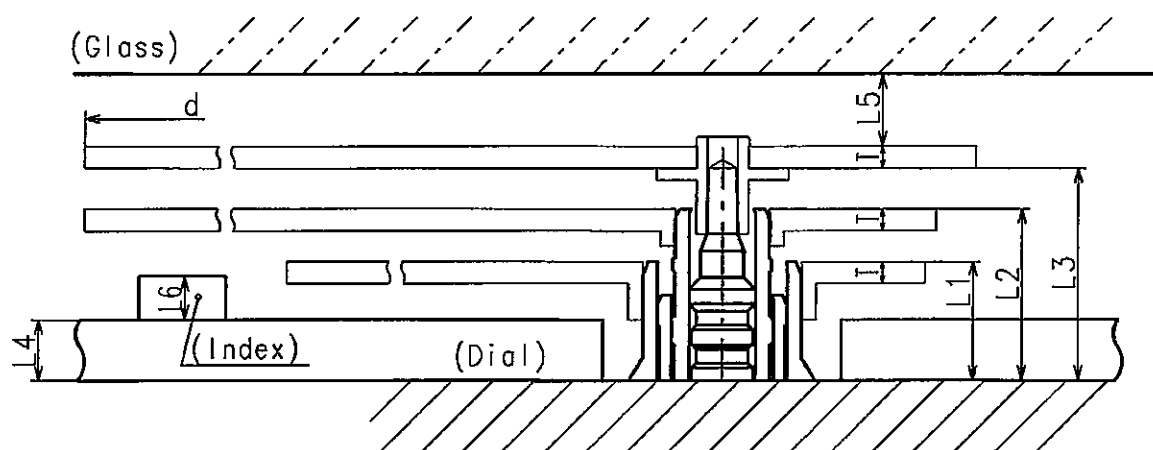
*2:Second pullout stroke



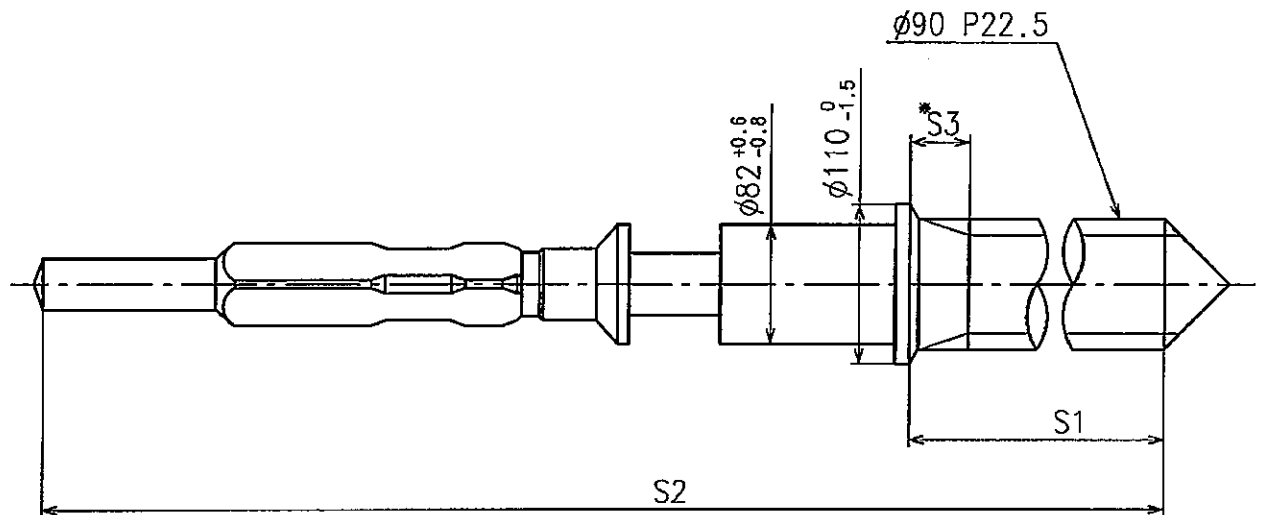
- ※ Hour hand unbalance $\leq 50\mu\text{g} \cdot \text{m}$ ($0.5\mu\text{N} \cdot \text{m}$)
- ※ Minute hand unbalance $\leq 60\mu\text{g} \cdot \text{m}$ ($0.6\mu\text{N} \cdot \text{m}$)
- ※ Second hand unbalance $\leq 7\mu\text{g} \cdot \text{m}$ ($0.07\mu\text{N} \cdot \text{m}$)



	Parts No.			Dimension
	Hour wheel	Center wheel	Fourth wheel	K2
Type S (1) VX33E1**	0271904	0221904	0241904	35
Type M (2) VX33E2**	0271934	0221934	0241934	35



	L1	L2	L3	L4	L5	L6	T	d
Type S (1) VX33E1**	82	118	146	40	MIN: 50	MAX: 35	15	MAX: Ø2500
Type M (2) VX33E2**	105	154	182	40	MIN: 50	MAX: 60	15	MAX: Ø2500

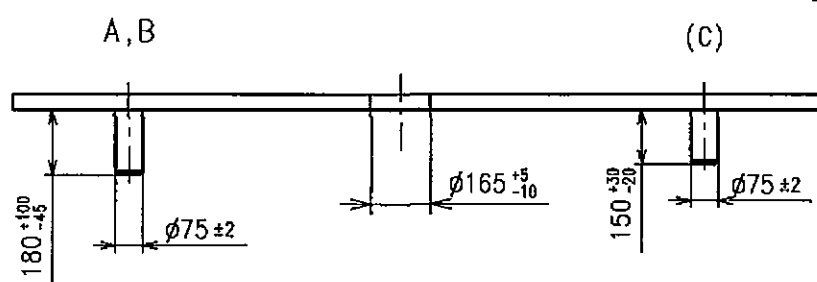
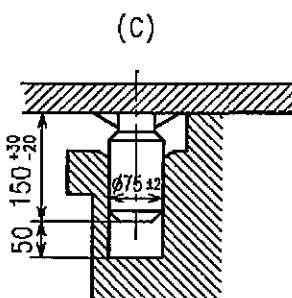
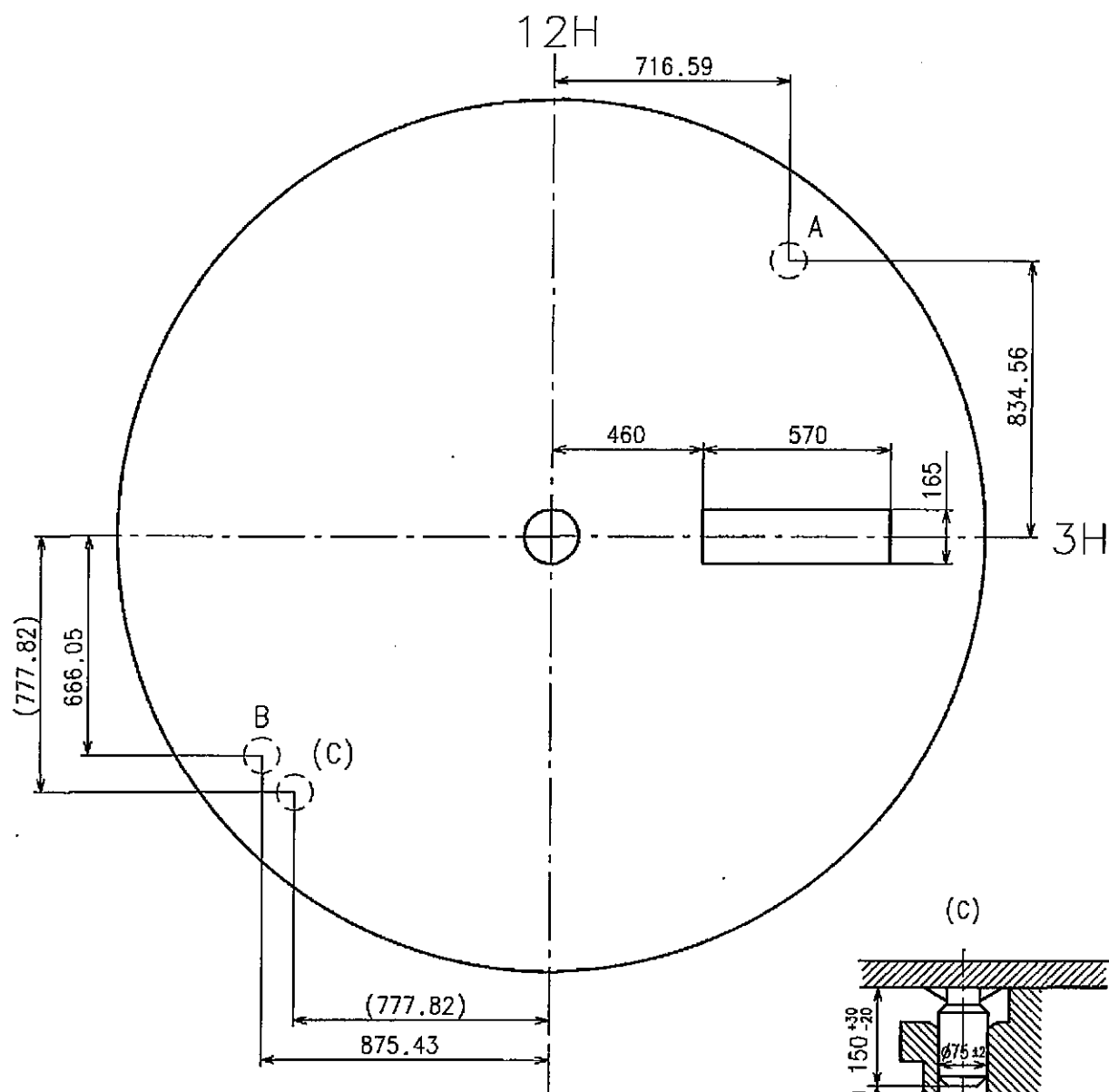


※ Not threaded

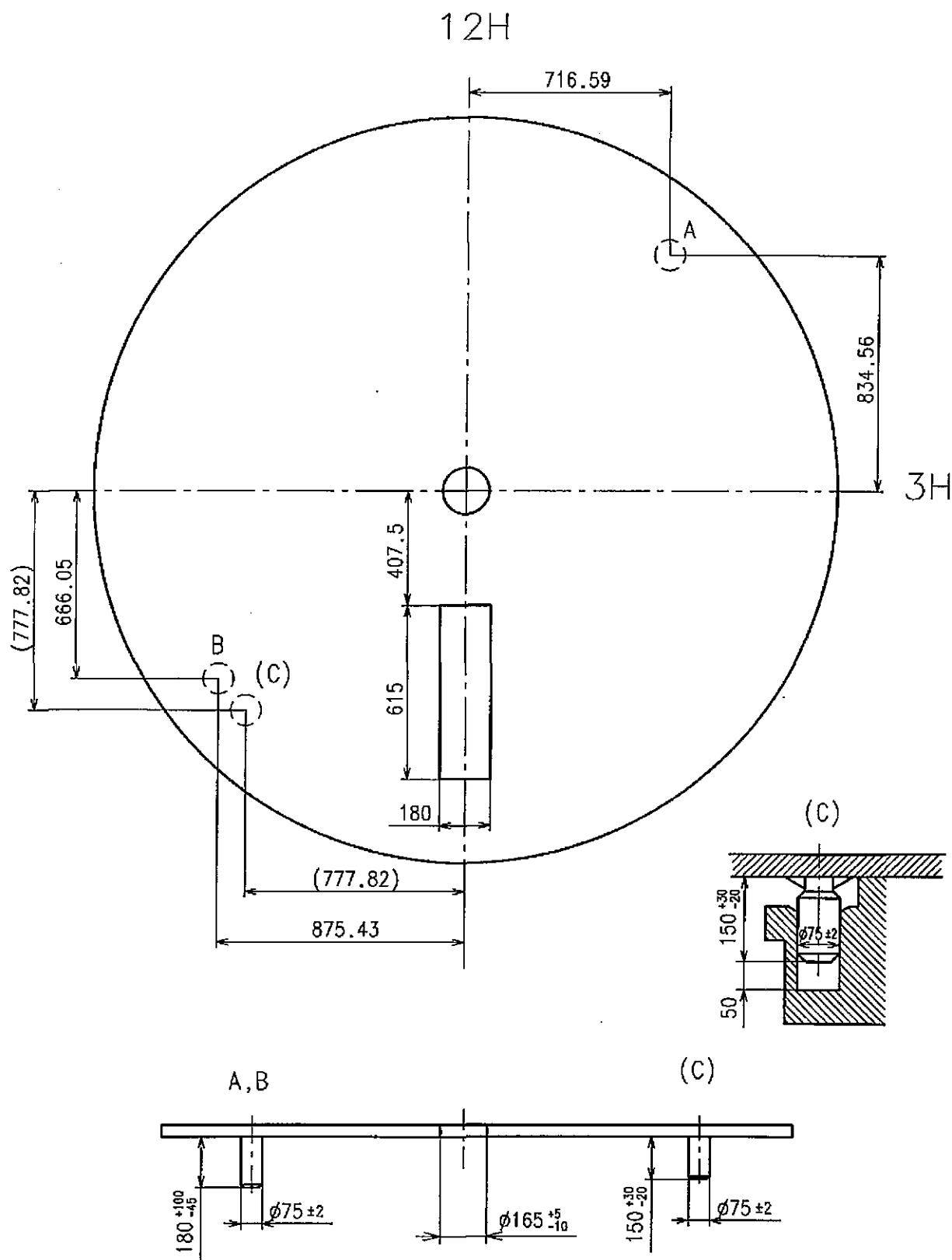
	Part No.	S1	S2	※ S3
Type-1 (Standard)	0351177	1366	1964	60
Type-2	0351577	1902	2500	1000

Material : Steel

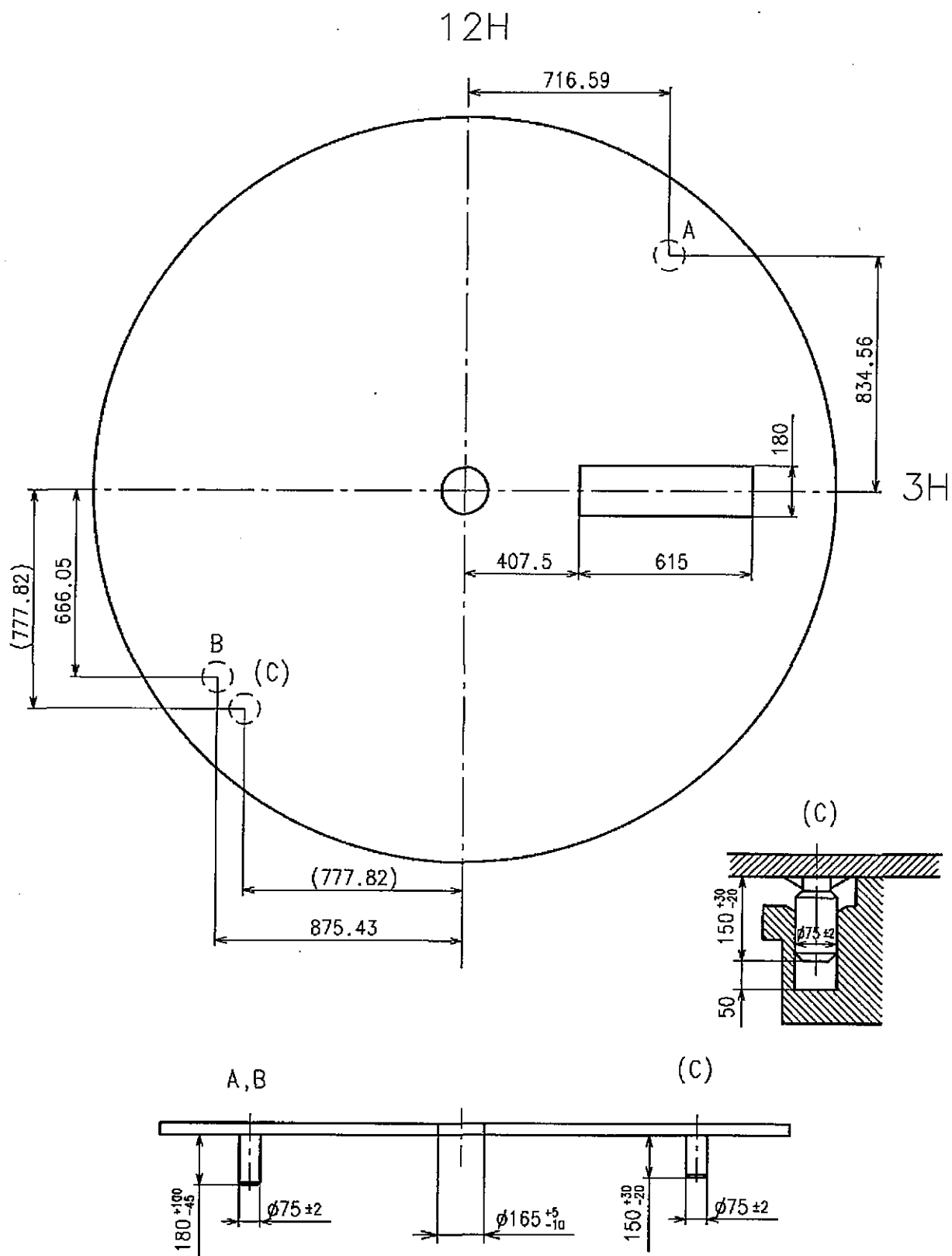
Hardness : Vickers 600±50



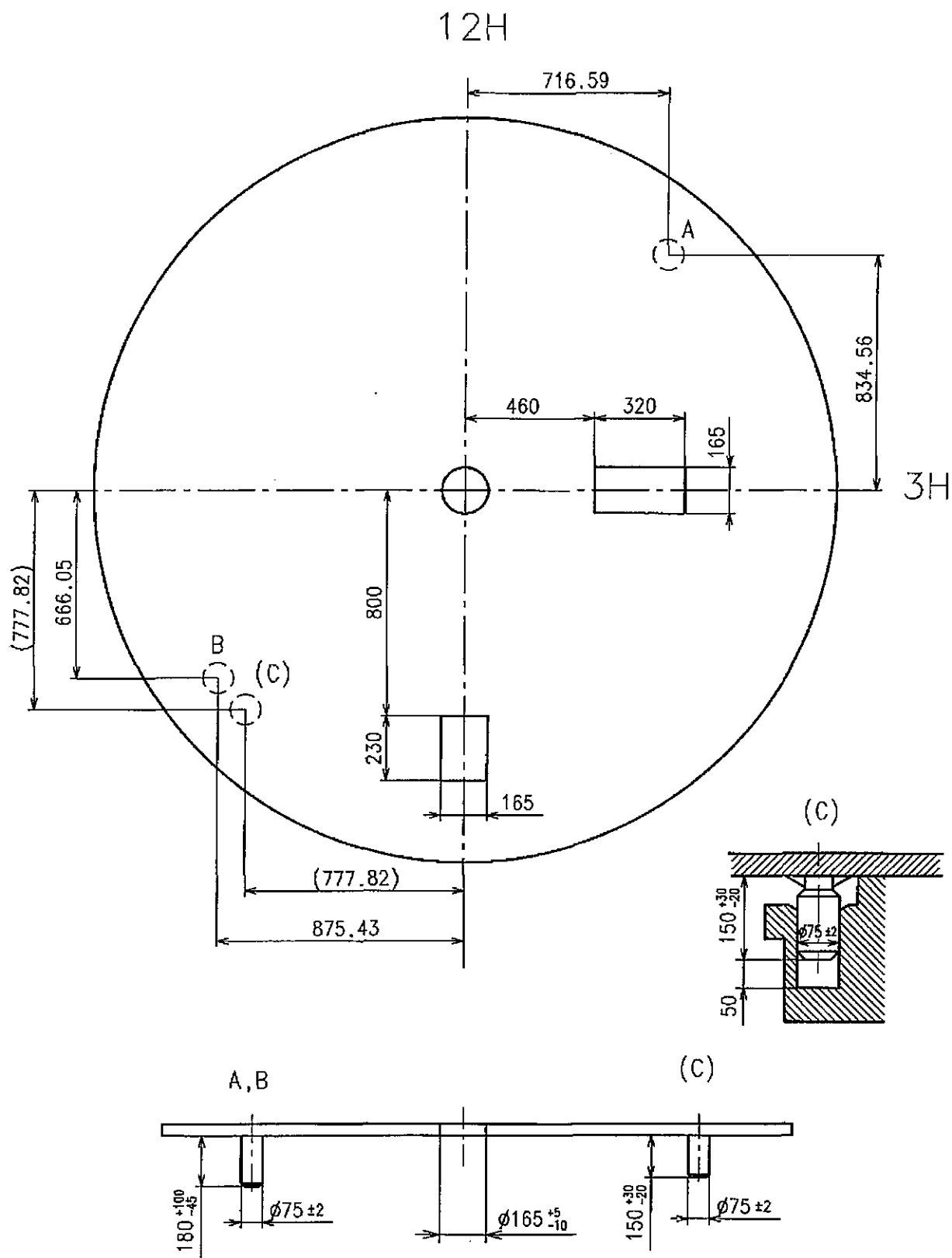
※ Use dial leg hole as like below A-B or (A-C)



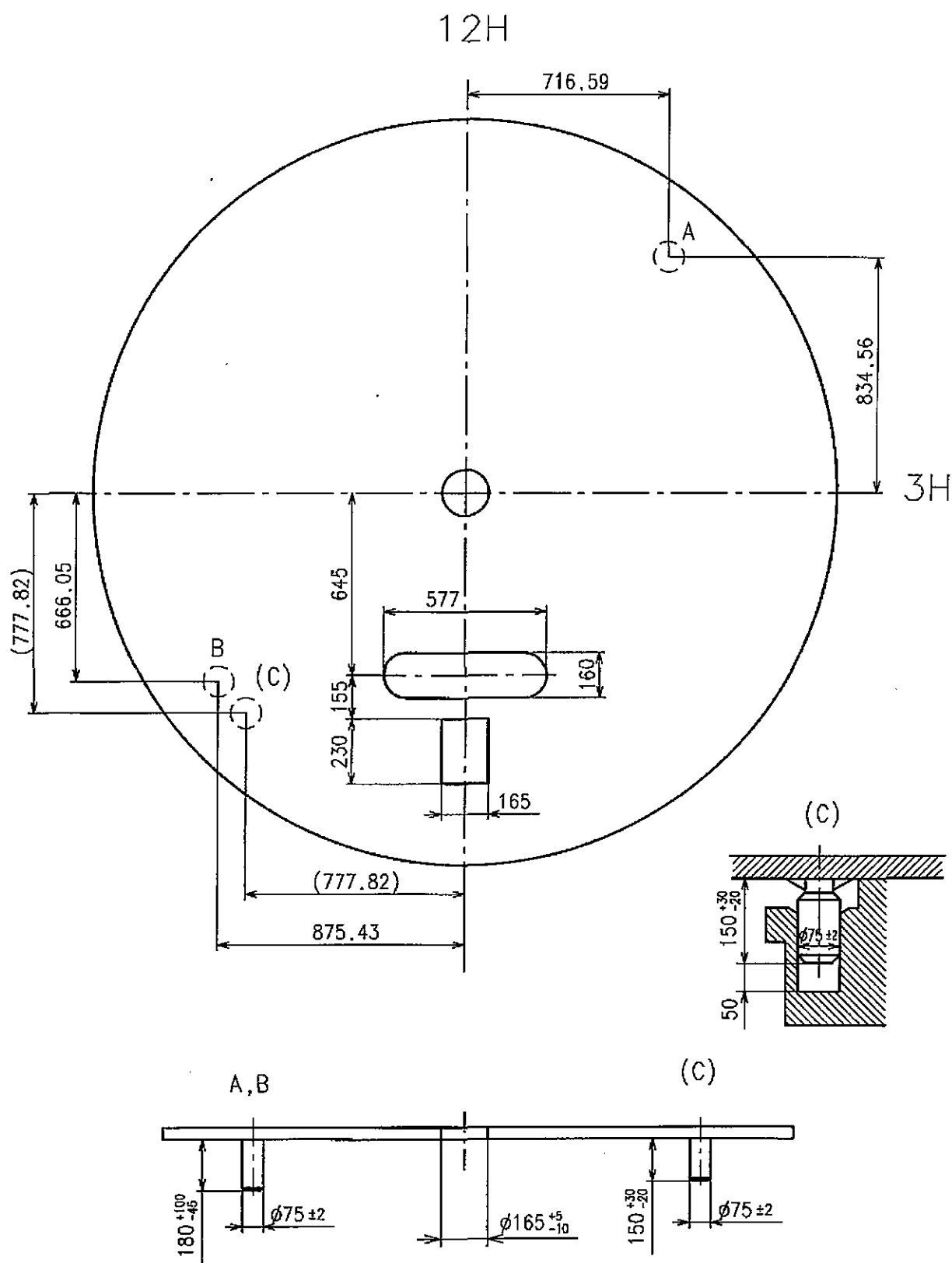
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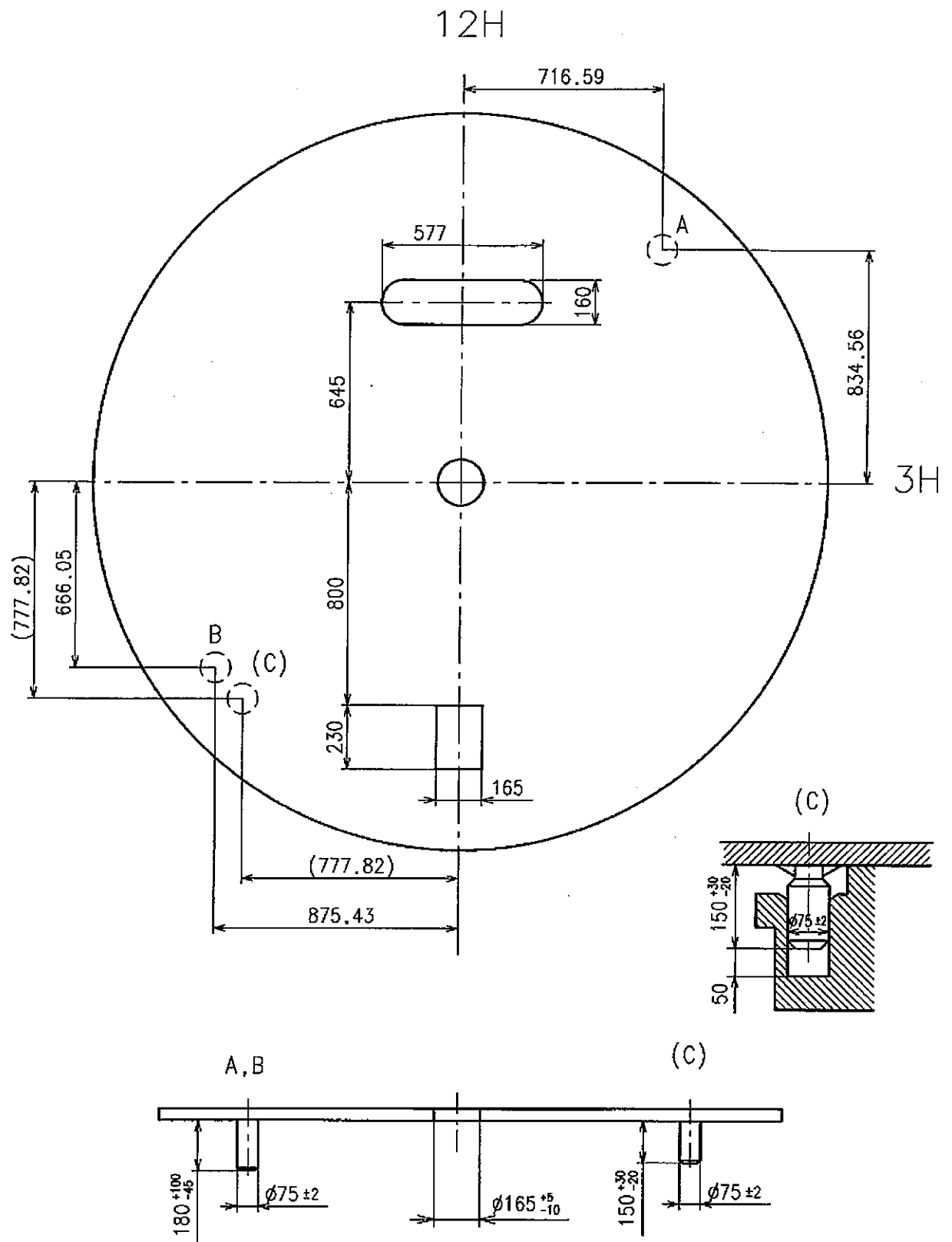
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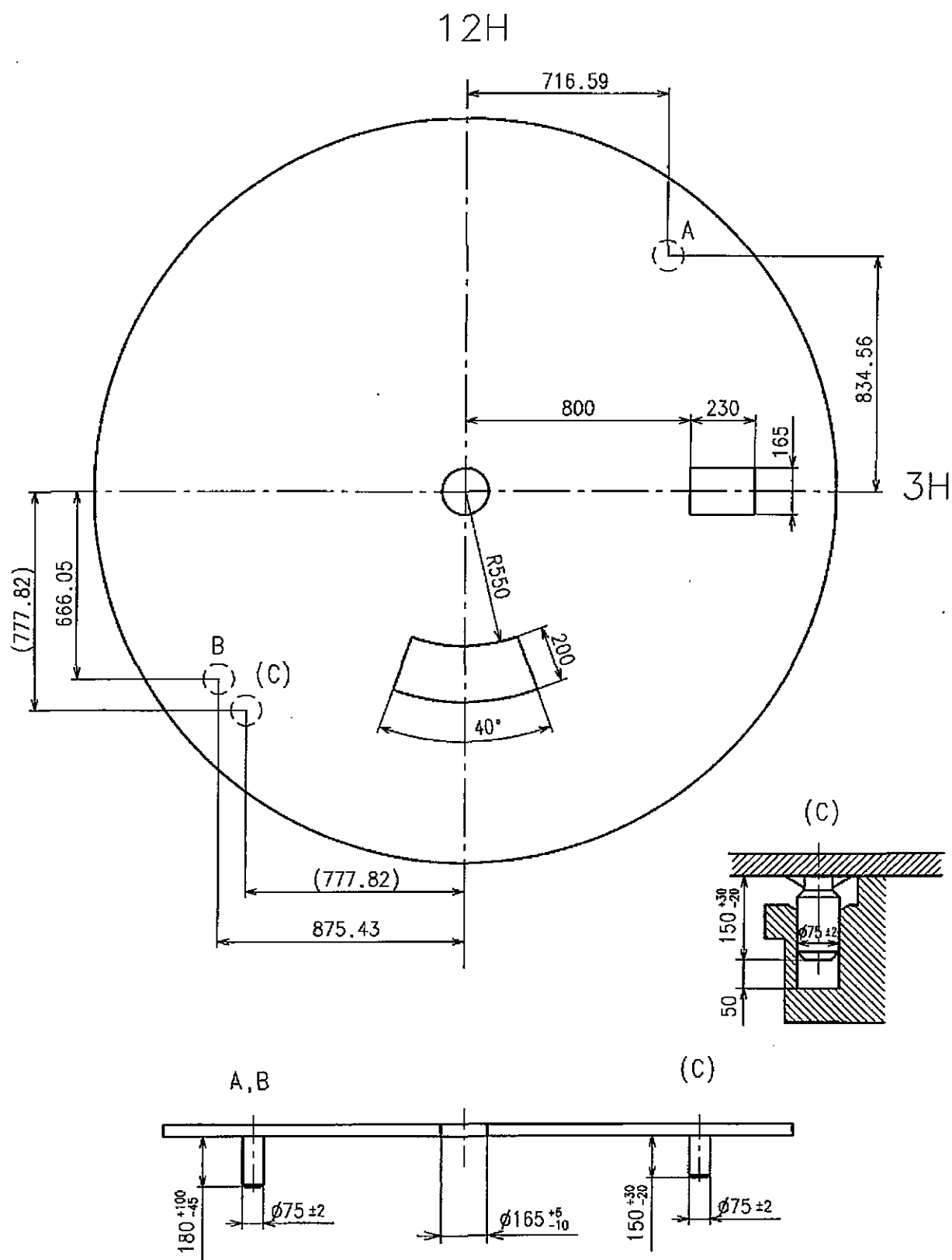
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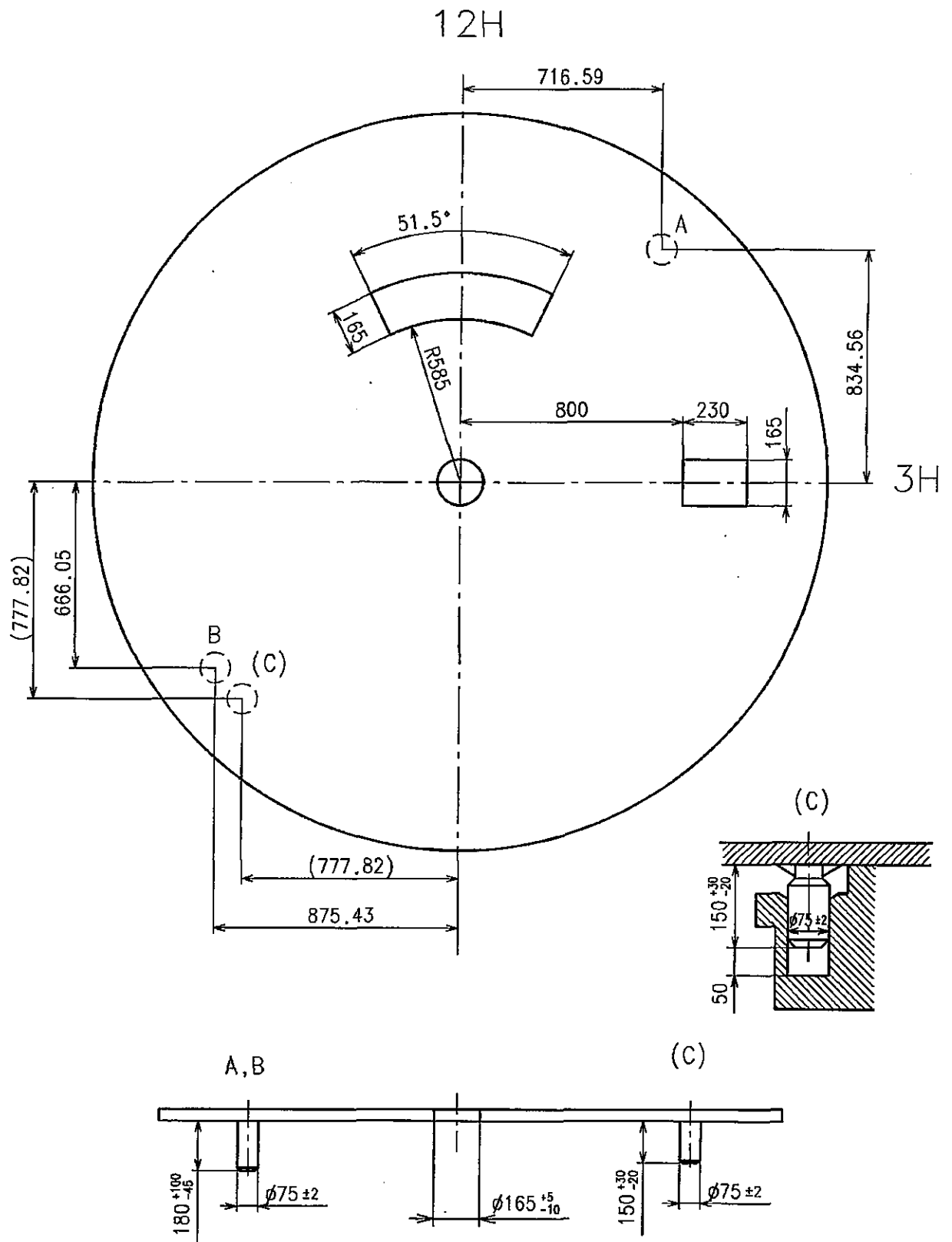
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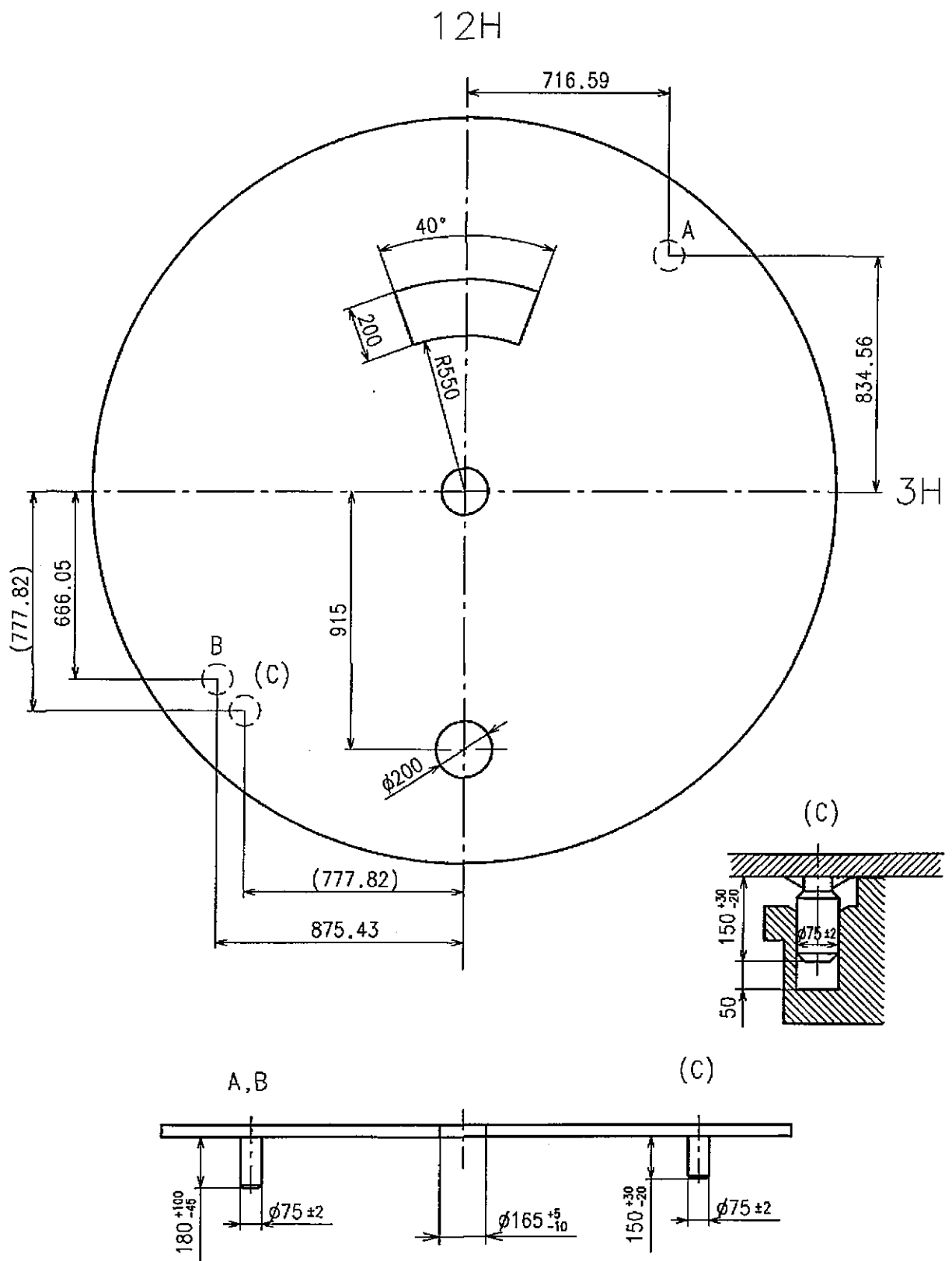
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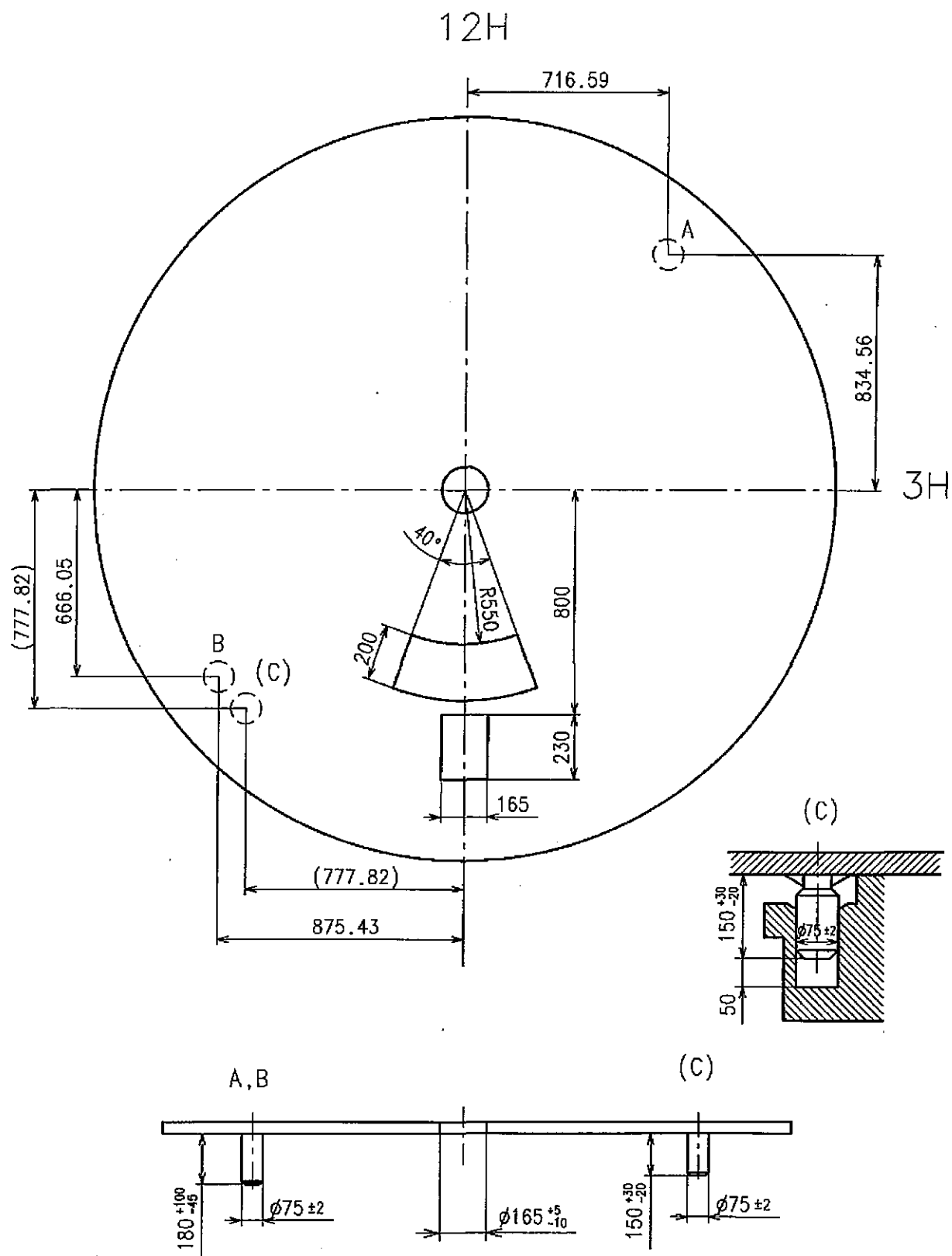
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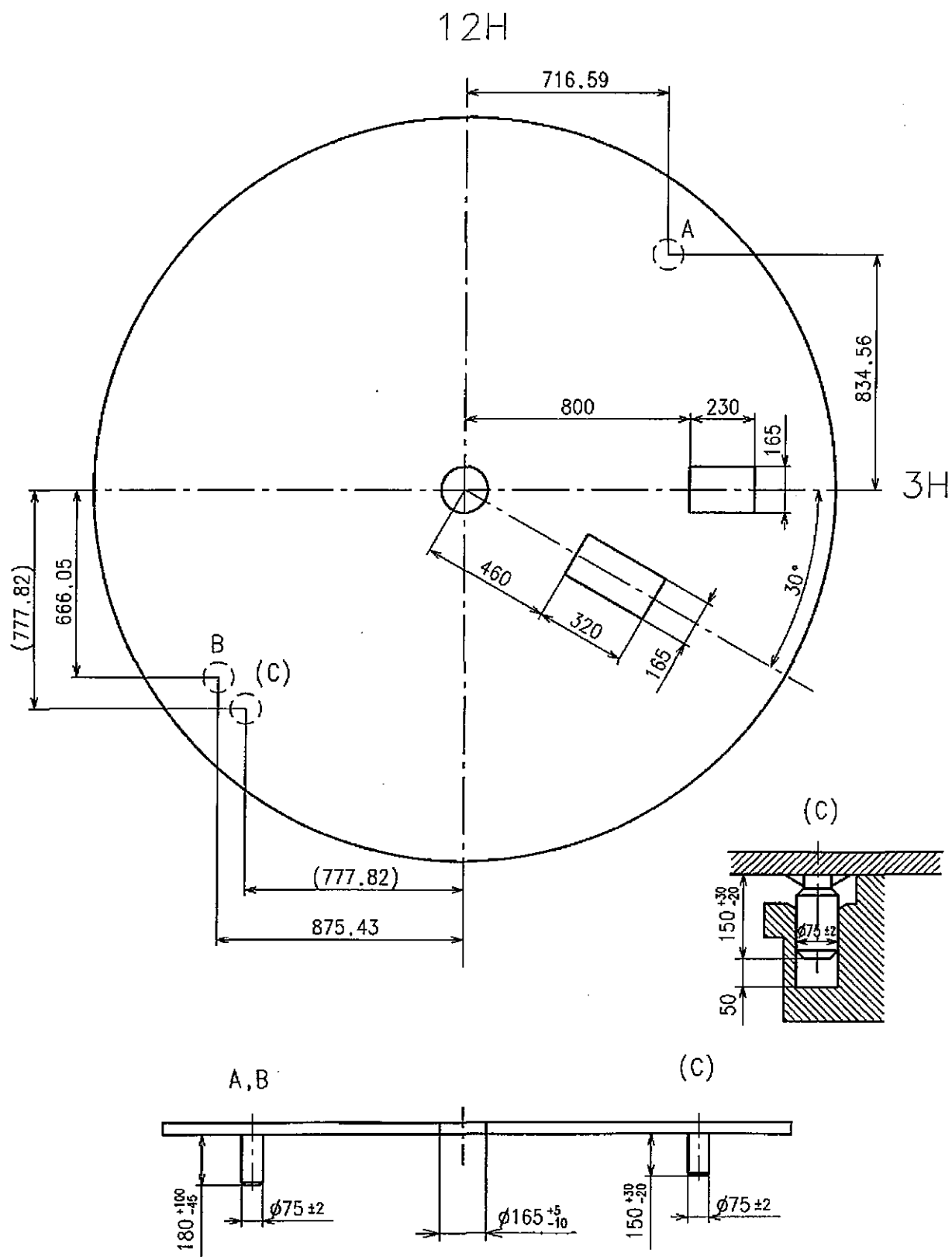
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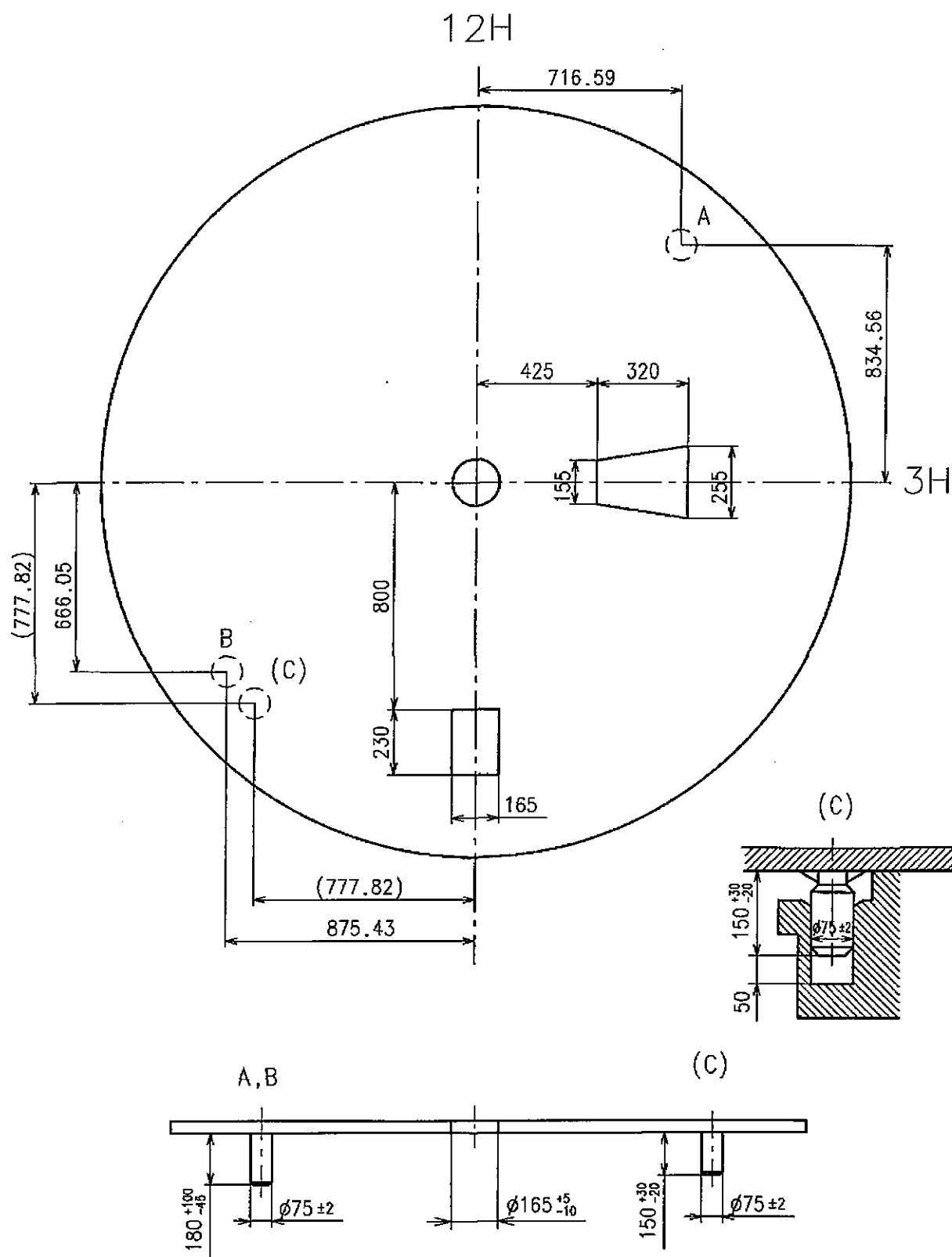
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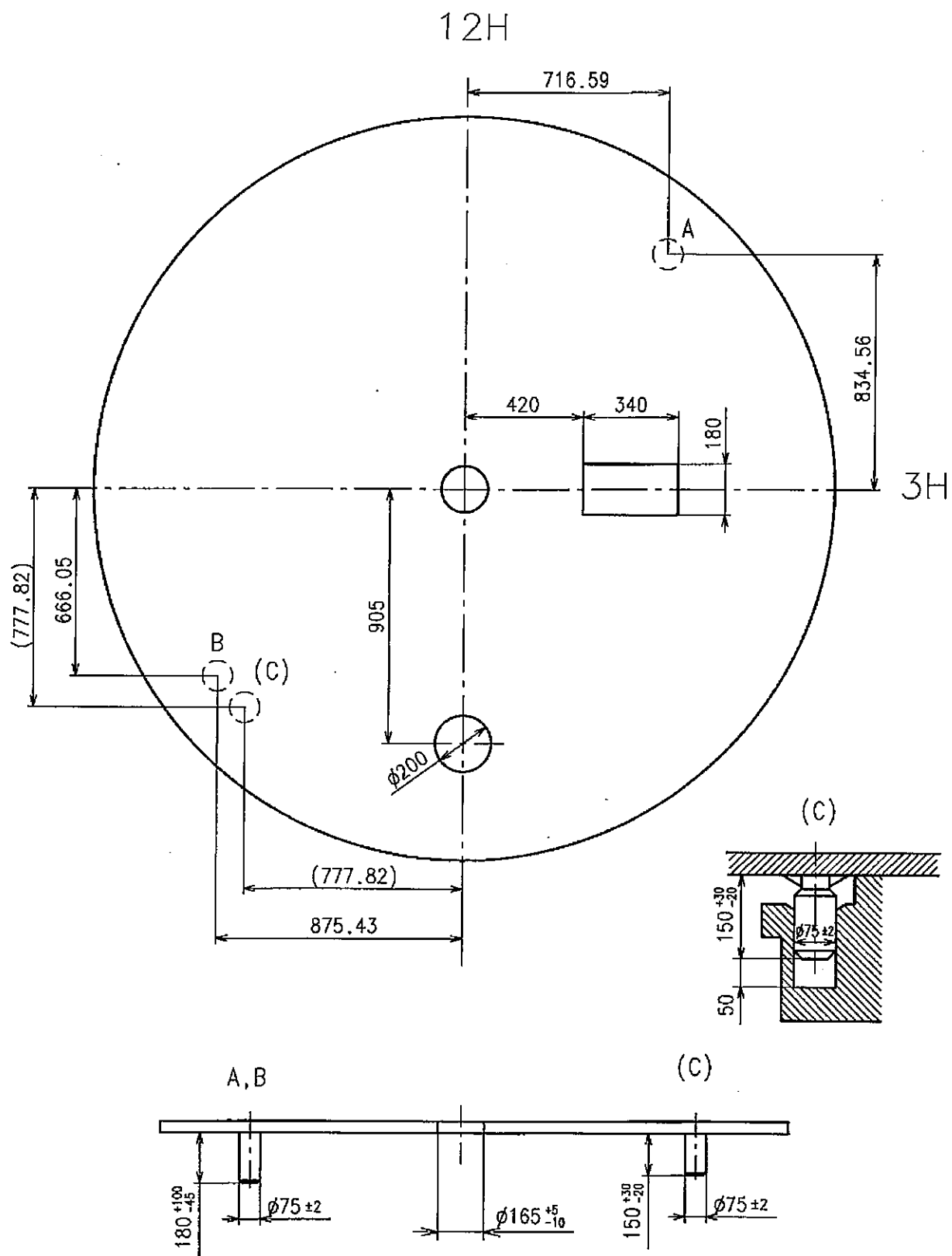
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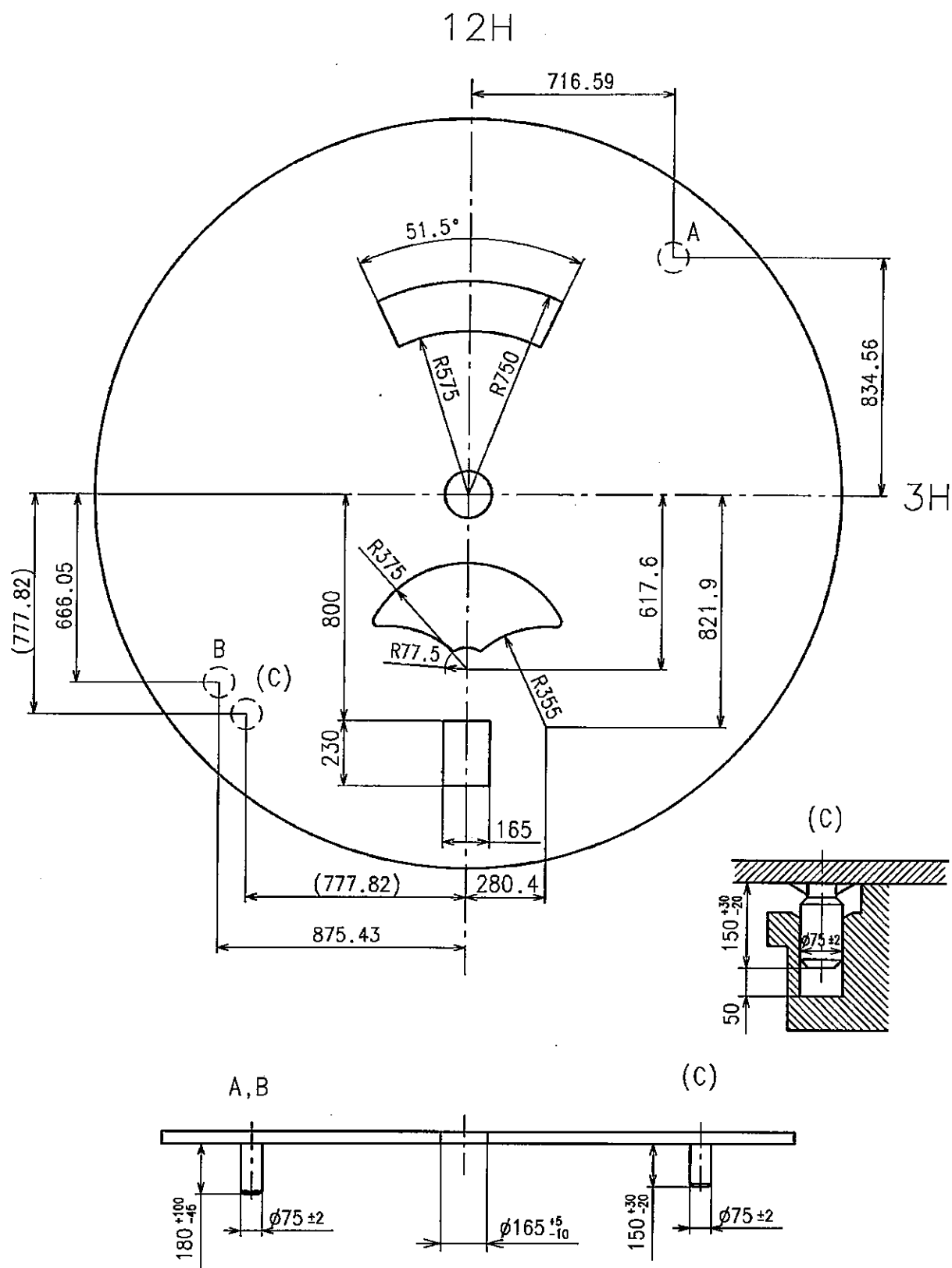
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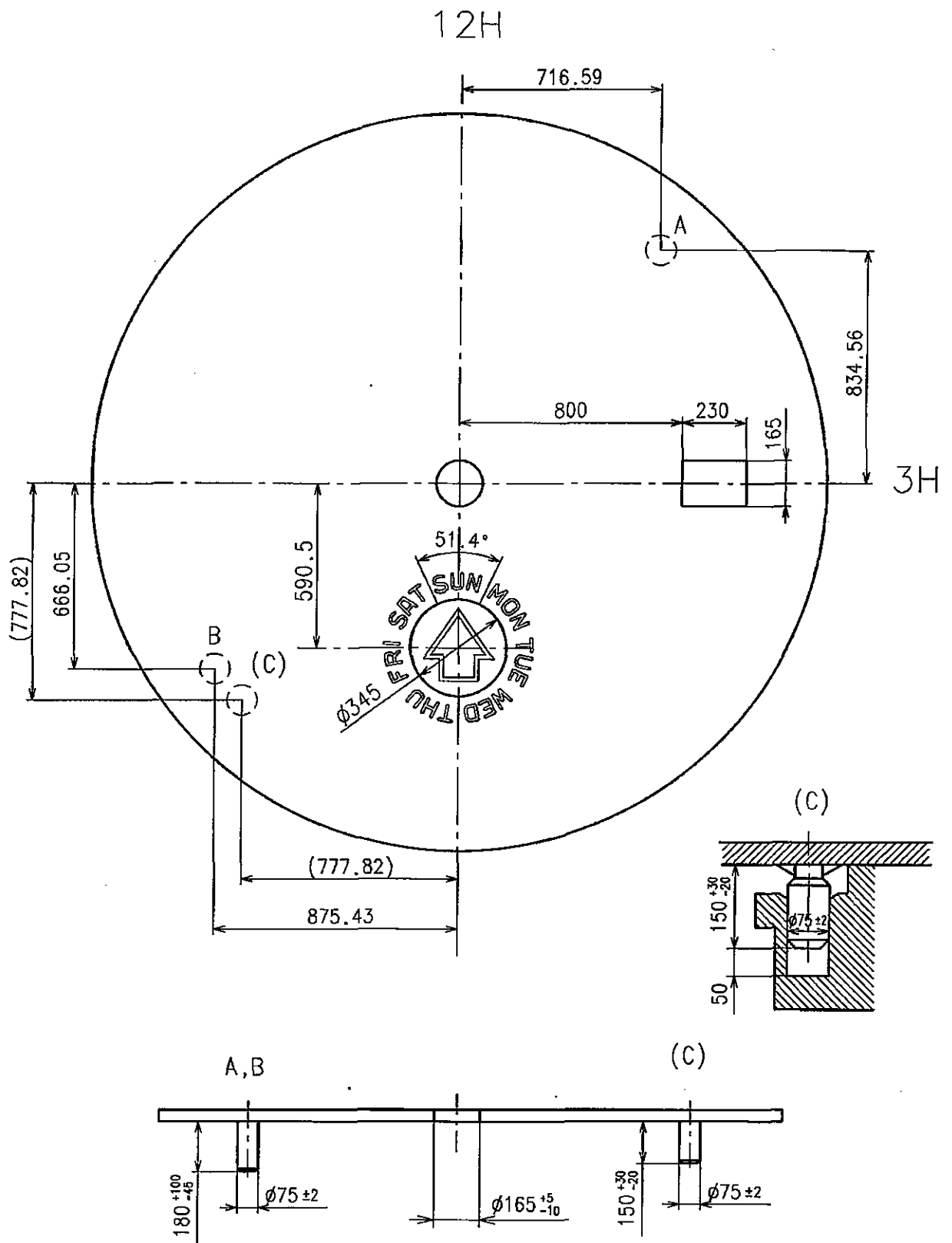
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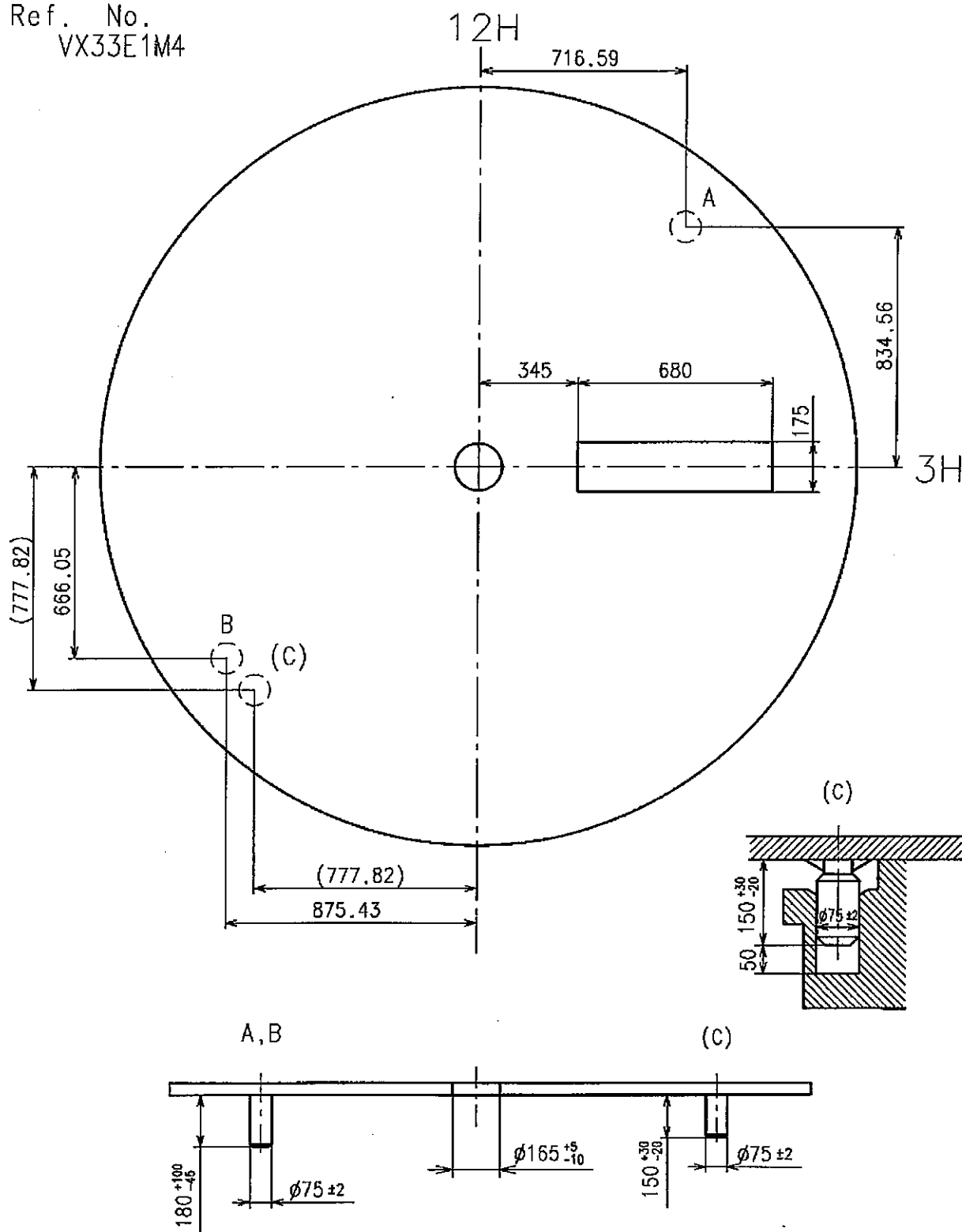


※ Use dial leg hole as like below A-B or (A-C)

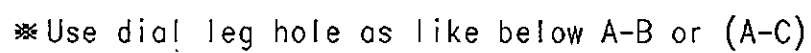


※ Use dial leg hole as like below A-B or (A-C)

Ref. No.
VX33E1M4



*Use dial leg hole as like below A-B or (A-C)

12H

VX33E1R2

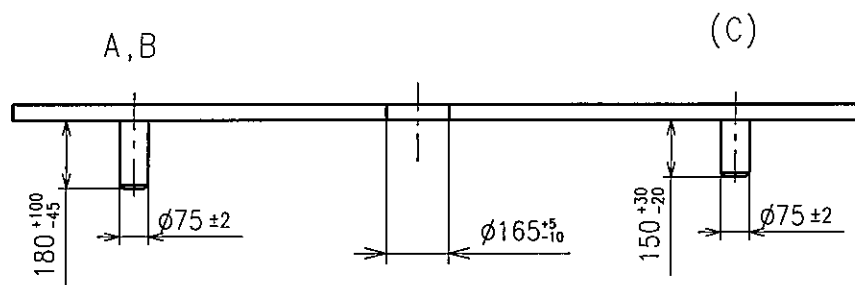
Technical drawing of a circular mechanical part, showing a semi-circular profile and a cross-section view (C).

Profile View Dimensions:

- Overall width: 716.59
- Overall height: 834.56
- Inner radius: R1025
- Outer radius: R825
- Inner radius: R750
- Outer radius: R585
- Angle: 51.5°
- Angle: 3°
- Angle: 3°
- Dimension: 666.05
- Dimension: (777.82)
- Dimension: (777.82)
- Dimension: 875.43

Cross-section View (C) Dimensions:

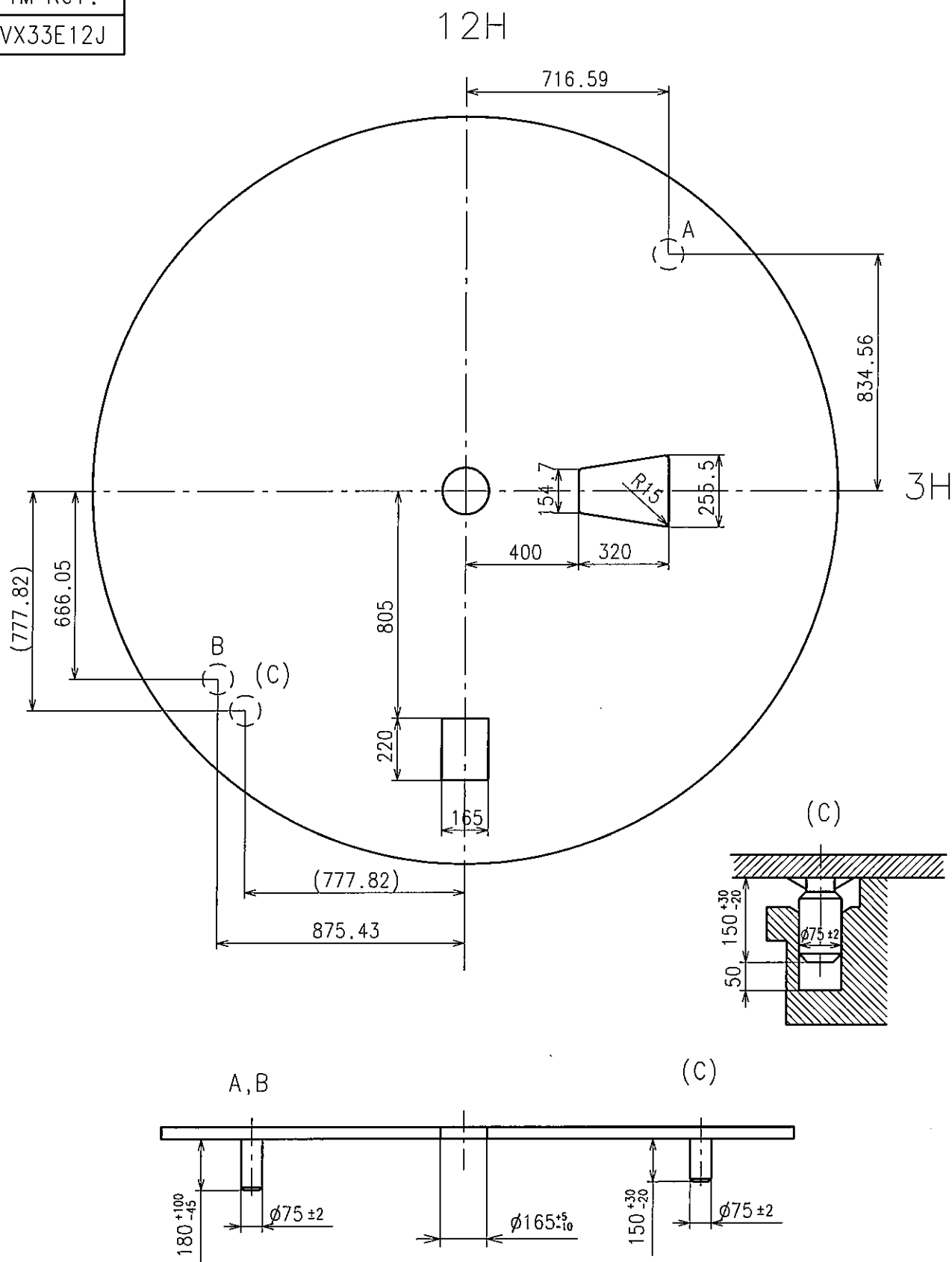
- Overall height: 150 $^{+30}_{-20}$
- Inner diameter: $\phi 75 \pm 2$
- Dimension: 50



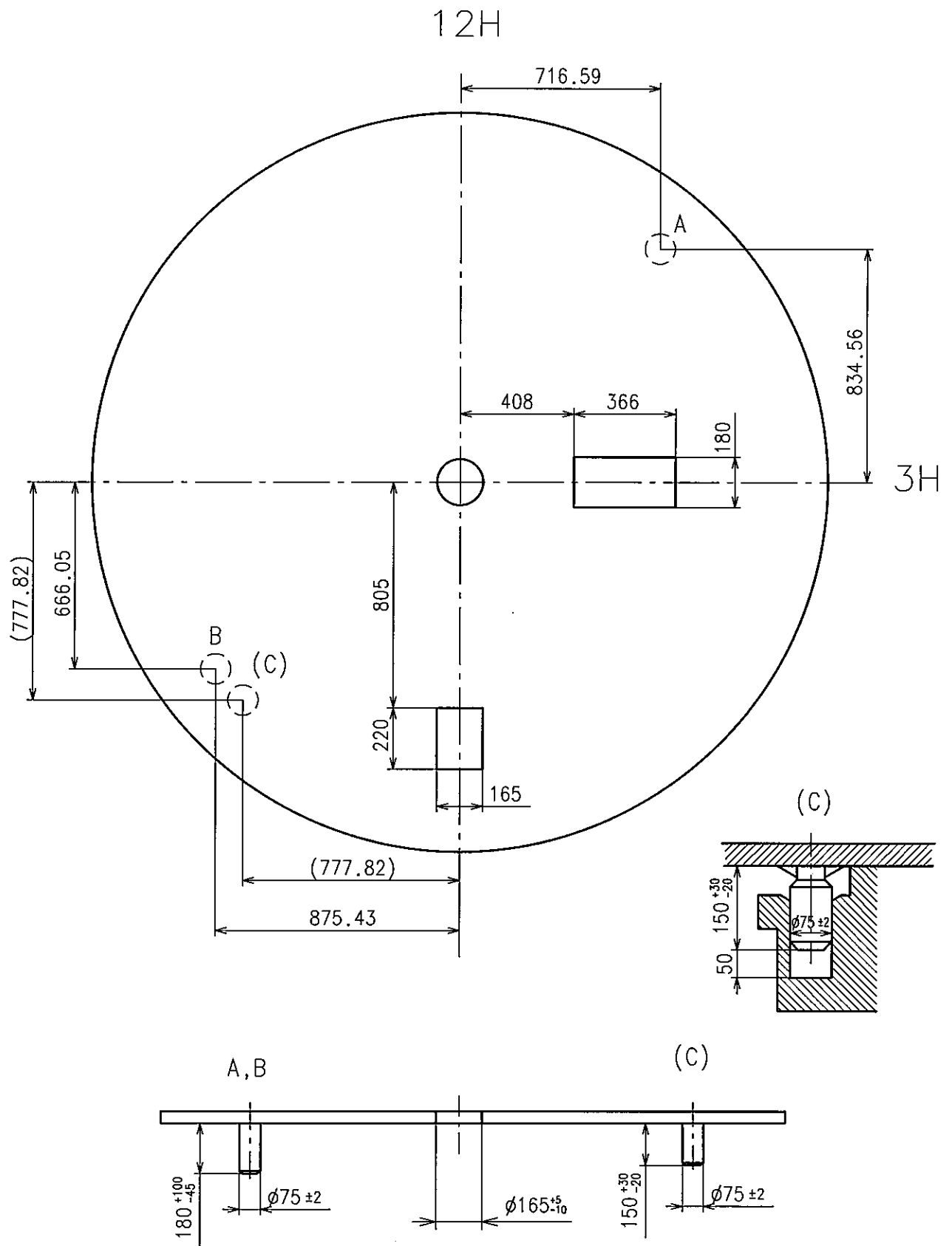
P. 6-26

TM Ref.

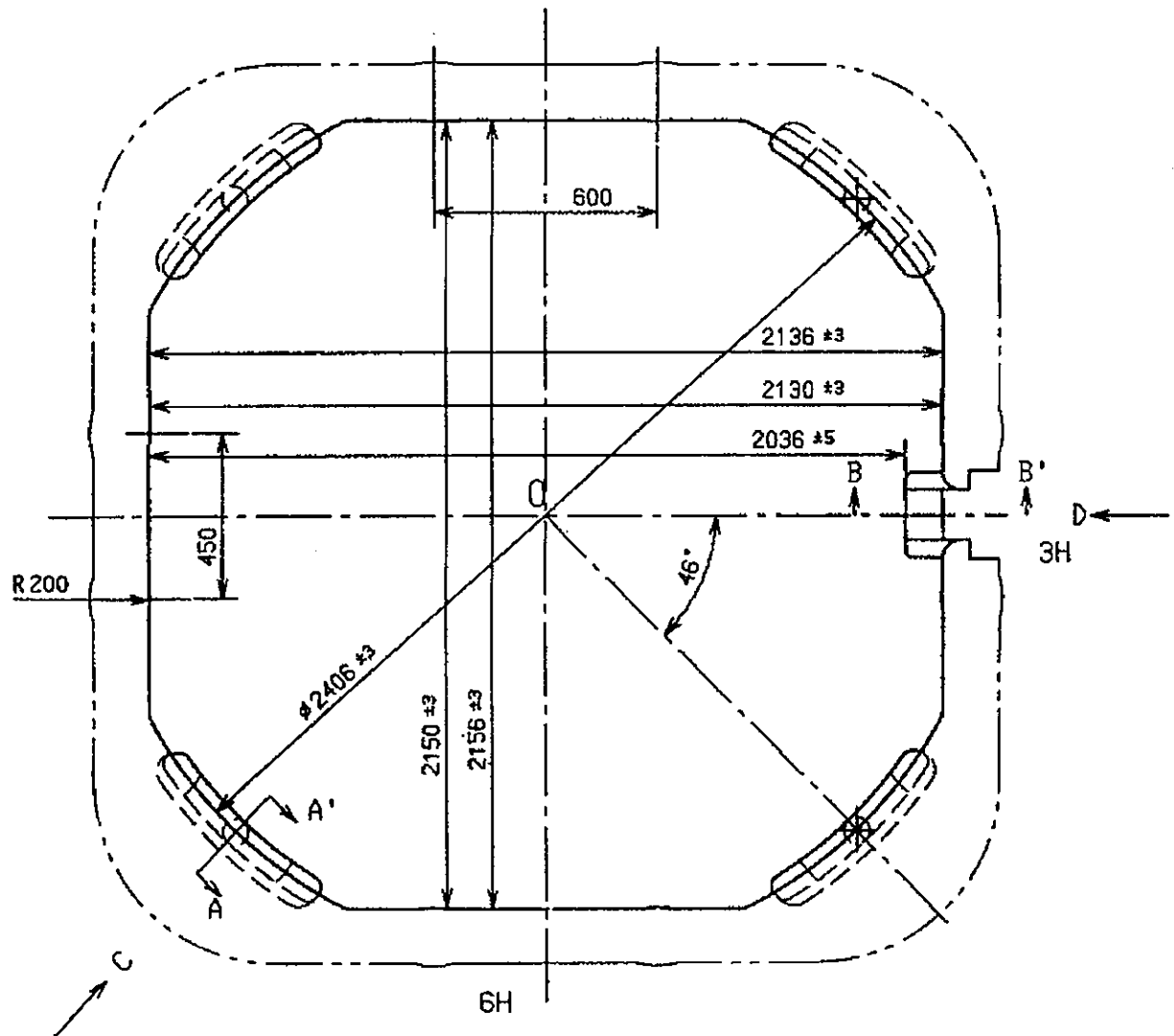
VX33E12J



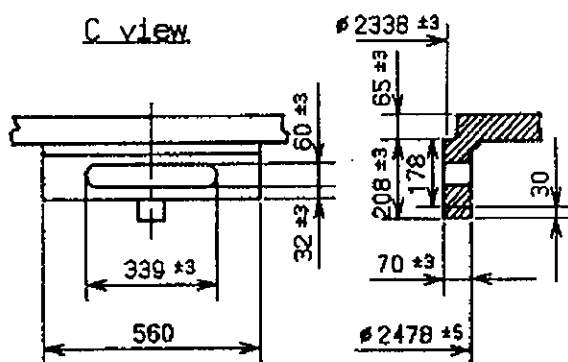
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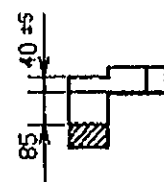
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A-A' section



B-B' section



D view

