

Watch Movement Specification and Drawing

CALENDAR

Cal. VX33E

Movement Size

10 1/2'''

Casing Diameter

Ø 23.3mm

Height

2.98mm

Battery Life

3 years



Date: 16/Jul./15

Cal. VX33E

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Dial-08	01	6-08
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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 day / date calendar						
Reset switch							
Setting mechanism	<table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Crown at normal position</td> <td>: Free</td> </tr> <tr> <td>Crown pulled out 1st click</td> <td>: Instant day / date change</td> </tr> <tr> <td>Crown pulled out 2nd click</td> <td>: Time setting / Reset</td> </tr> </table>	Crown at normal position	: Free	Crown pulled out 1st click	: Instant day / date change	Crown pulled out 2nd click	: Time setting / Reset
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 Jewels						
Anti-magnetism	Over 1600A/m (Direct current magnetic field)						
Maximum unbalance of hands	<table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Hour hand</td> <td>: 0.5 μ N·m</td> </tr> <tr> <td>Minute hand</td> <td>: 0.6 μ N·m</td> </tr> <tr> <td>Second hand</td> <td>: 0.07 μ N·m</td> </tr> </table>	Hour hand	: 0.5 μ N·m	Minute hand	: 0.6 μ N·m	Second hand	: 0.07 μ N·m
Hour hand	: 0.5 μ N·m						
Minute hand	: 0.6 μ N·m						
Second hand	: 0.07 μ N·m						

5. BATTERY

Type / Size	Silver oxide battery / ϕ 9.5mm × t 2.0mm
Recommended battery	SR920SW (Maxell, Sony, Seizaiken)
Nominal voltage	1.55 V
Battery life	Approx. 3 years
Driving current consumption	Approx. 1.6 μ A
Operation stopping voltage	1.1 V

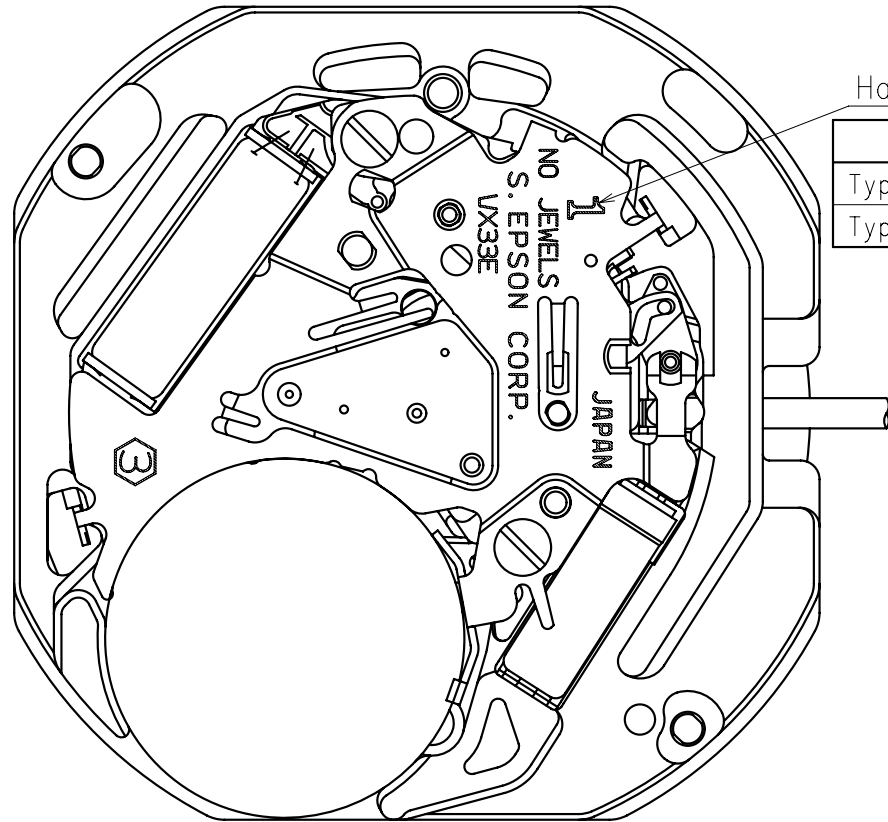
6. SEPARATED PARTS (Parts code)

Hand setting stem	0351177 or 0351578
Battery	SR920SW

7. TEST OF ACCURACY

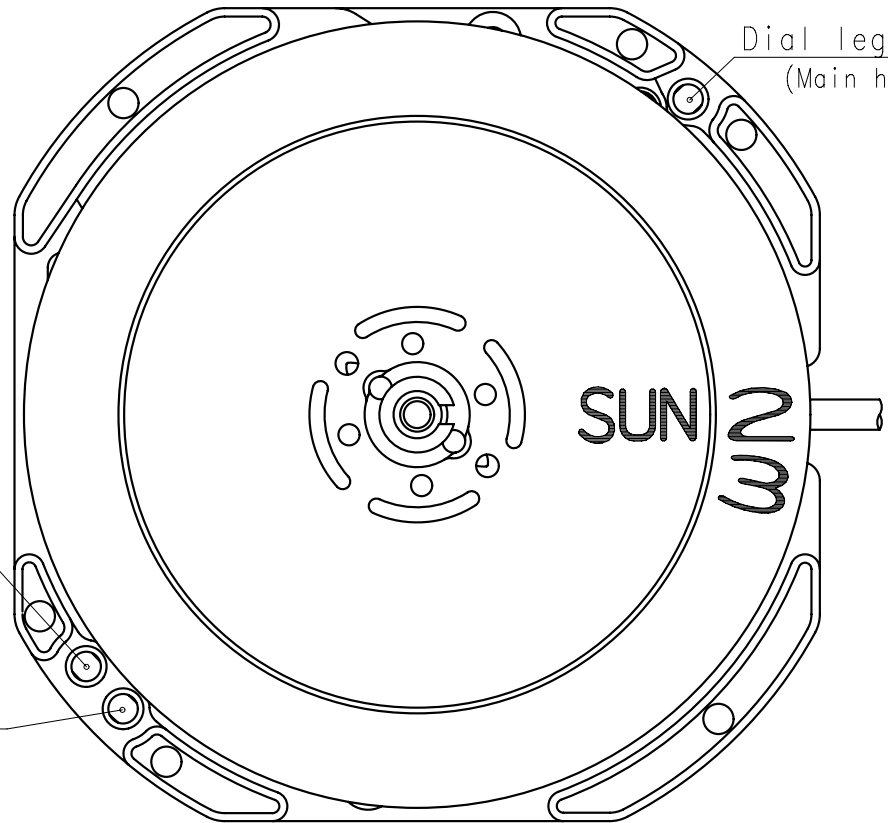
Equipment to be used	SEIKO quartz tester QT-99, Greiner quartz timer-C , Witschi Q-tester 4000
Duration of measurement	10 seconds
Microphone to be used	Electromagnetic detection type

All specifications are subject to change without notice.



Hands type

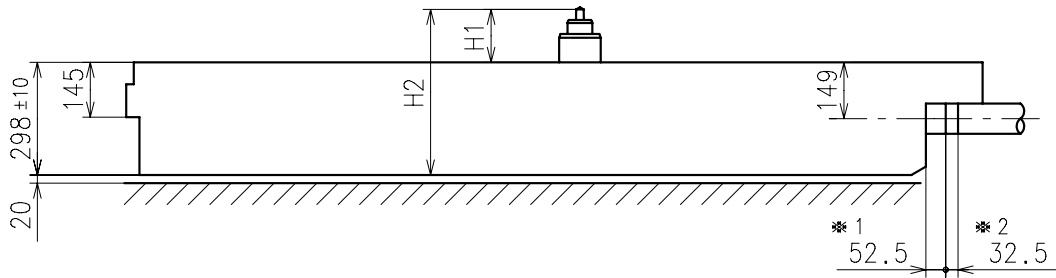
	Mark
Type S (1)	1
Type M (2)	2



Dial leg hole B
(Main hole)

Dial leg hole C
(Sub hole)

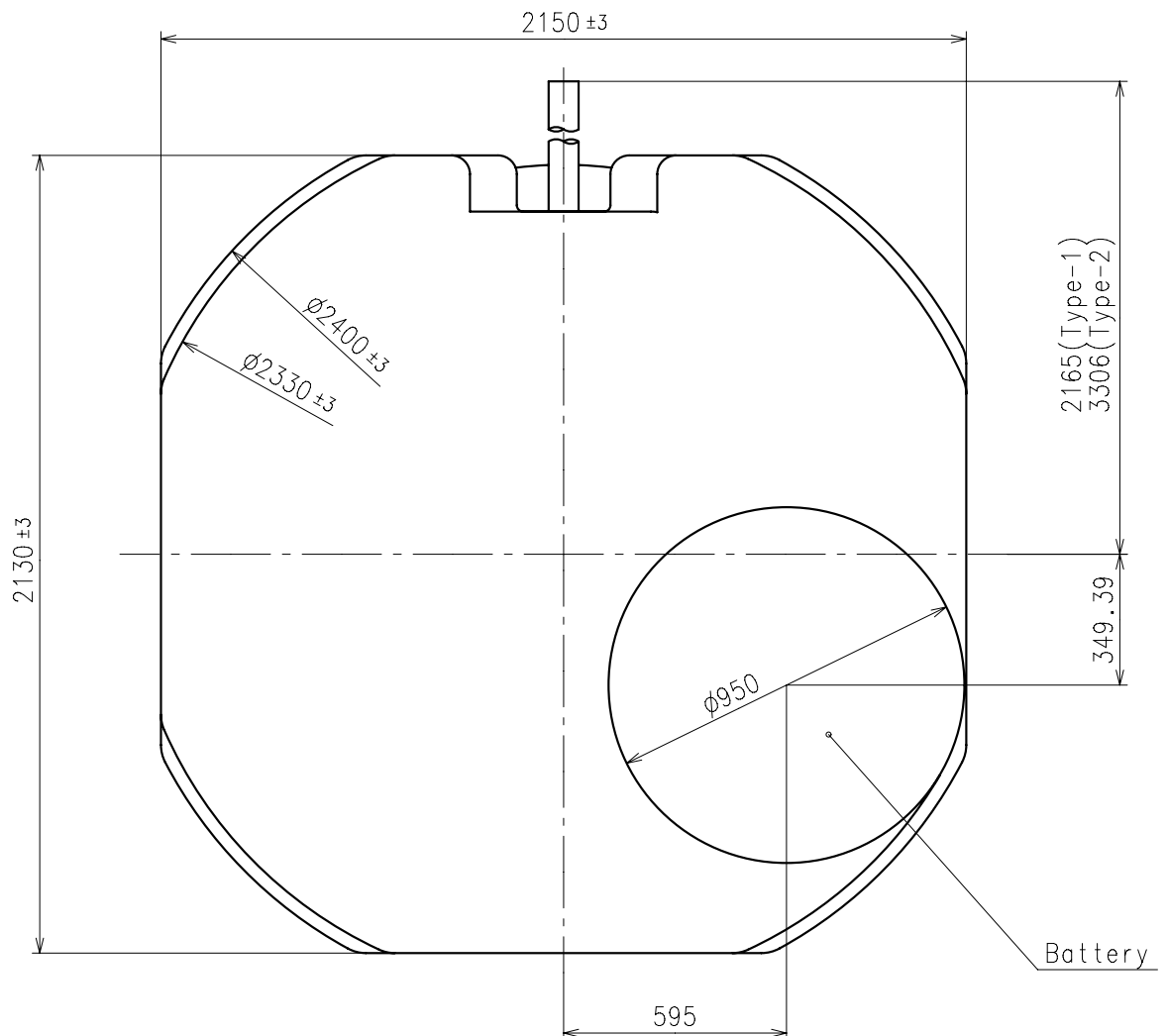
Dial leg hole A
(Main hole)



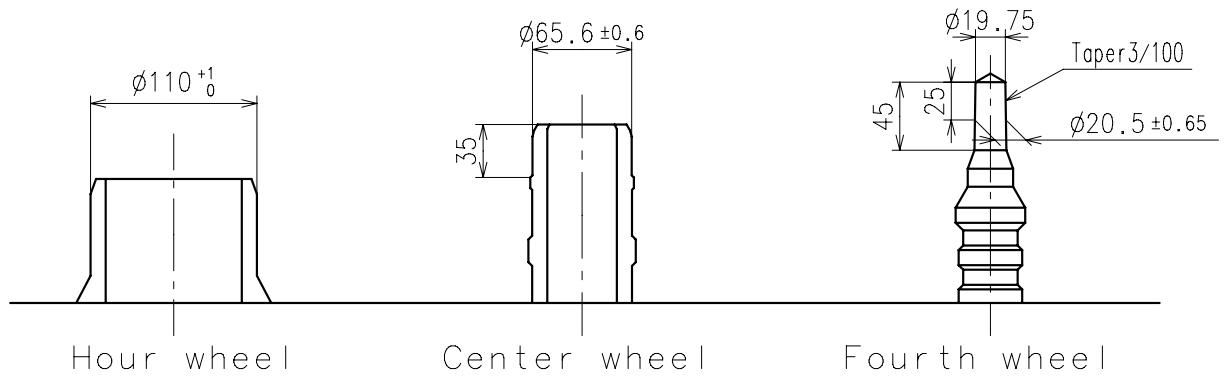
Center post		Type S (1) VX33E1**	Type M (2) VX33E2**
Maximum height from dial support	H1	146	182
Total height including movement	H2	444	480

*1: First pullout stroke

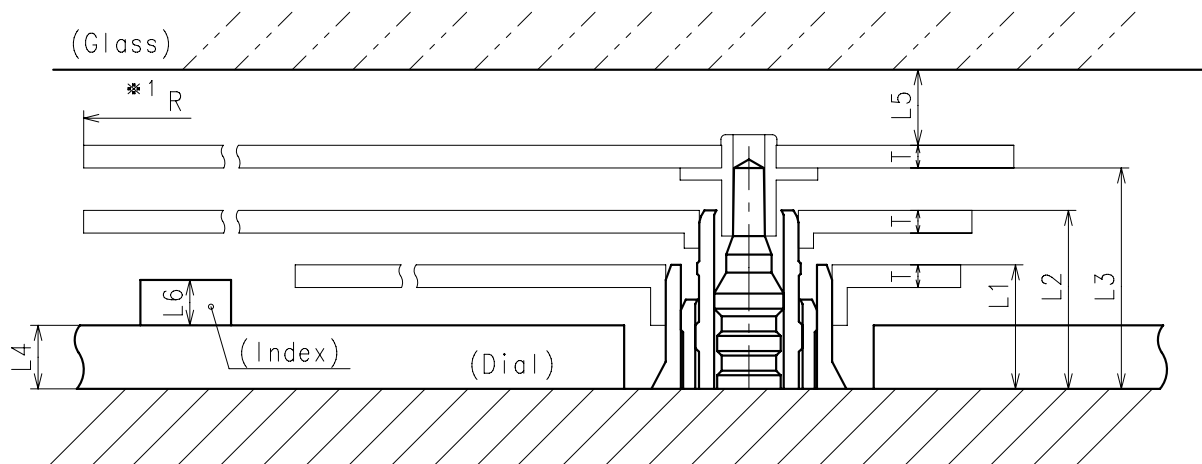
*2: Second pullout stroke



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

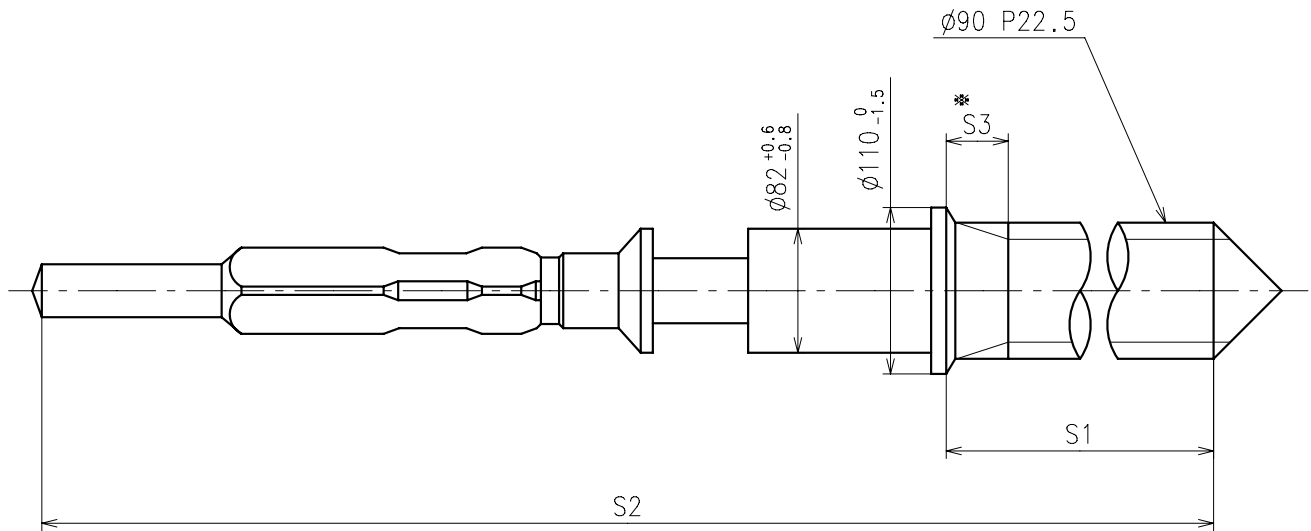


	Parts No.		
	Hour wheel	Center wheel	Fourth wheel
Type S (1) VX33E1**	0271904	0221904	0241904
Type M (2) VX33E2**	0271934	0221934	0241934



	L1	L2	L3	L4	L5	L6	T	*1 R
Type S (1) VX33E1**	82	118	146	40	MIN: 50	MAX: 35	15	MAX: 1250
Type M (2) VX33E2**	105	154	182	40	MIN: 50	MAX: 60	15	MAX: 1250

*1: It is the size taken into consideration for hands attachment.
Please observe some standard value specified in unbalance when using long hands.

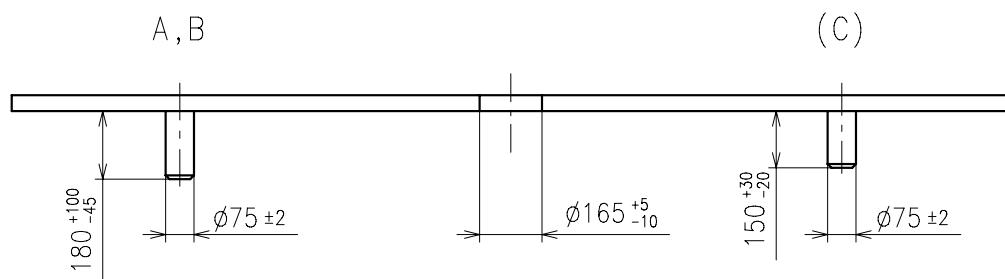
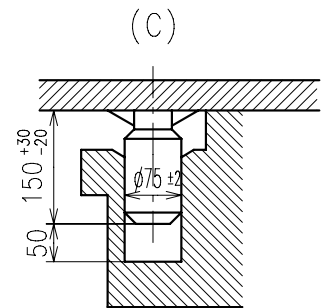
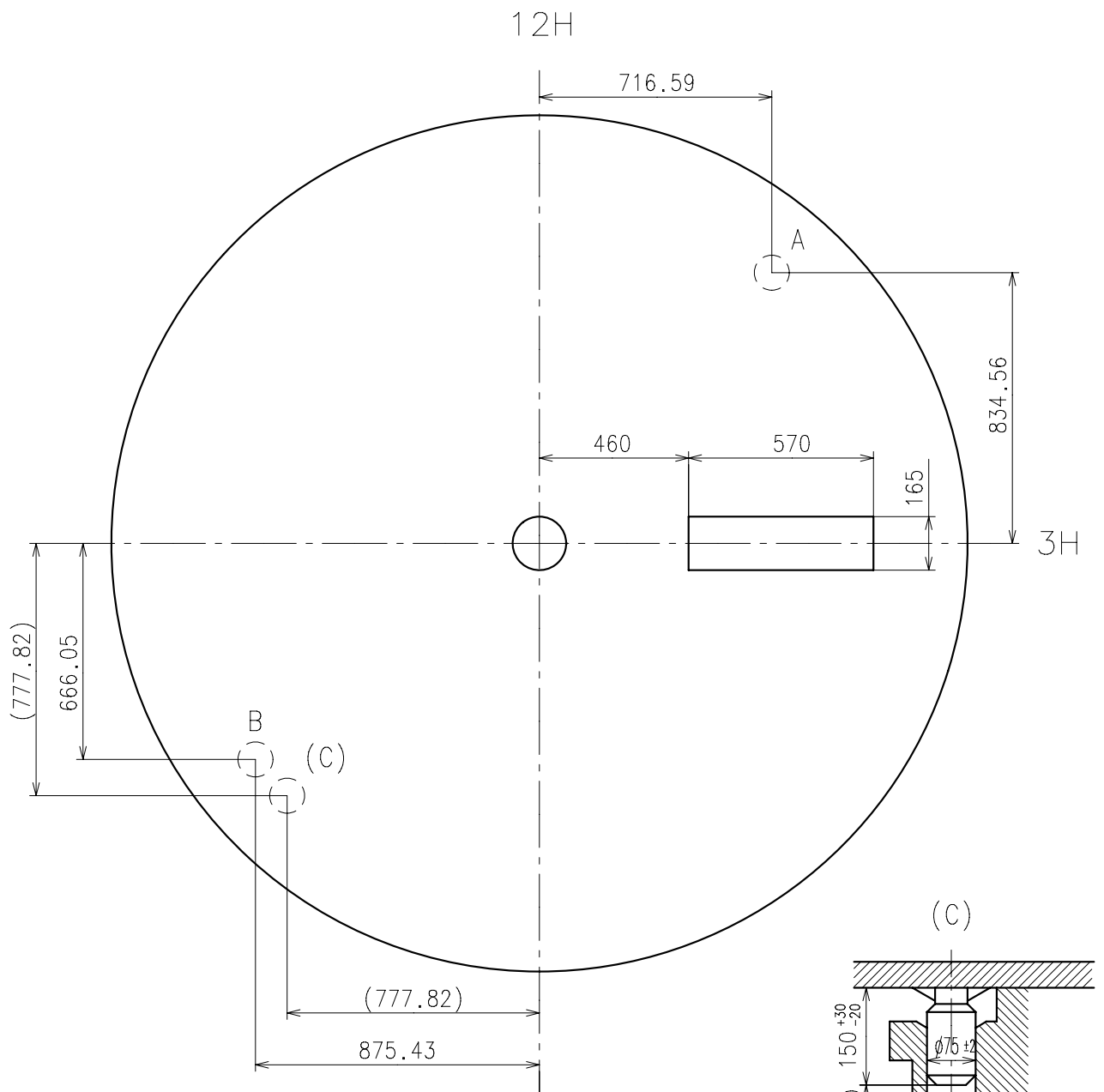


※ Not threaded

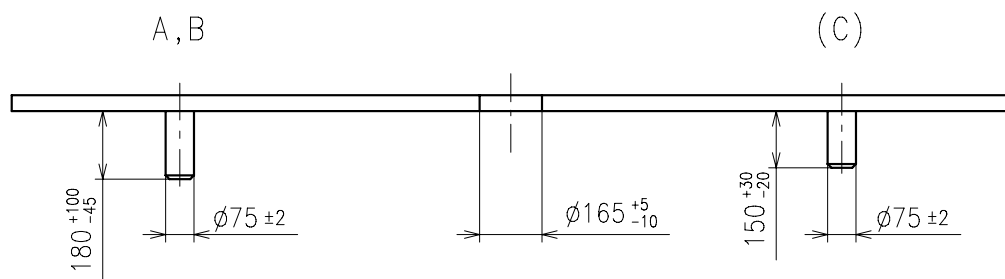
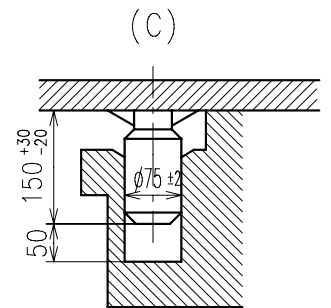
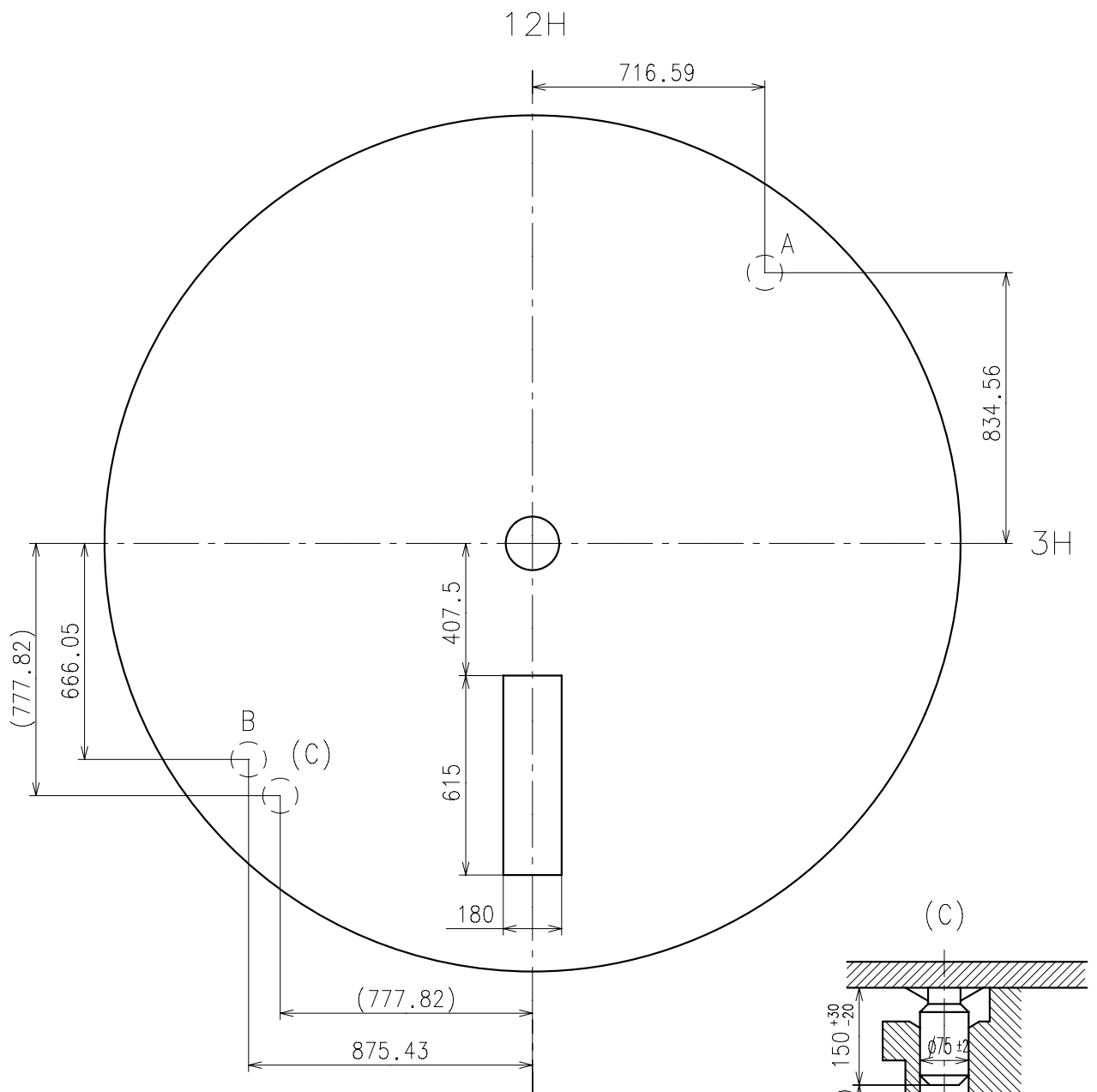
	Part No.	S1	S2	※ S3
Type-1 (Standard)	0351177	1366	1964	60
Type-2	0351578	2507	3105	650

Material : Steel

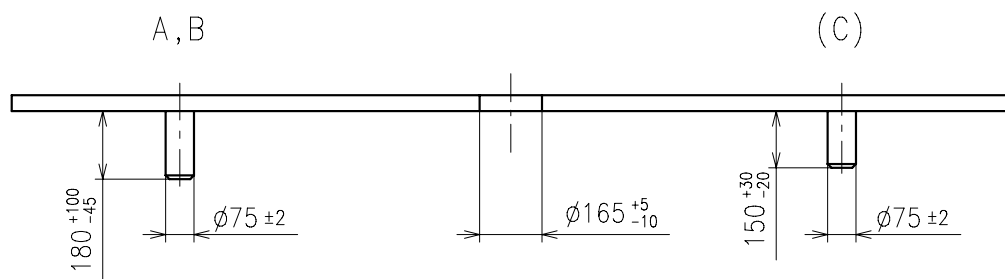
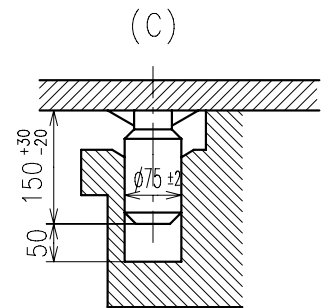
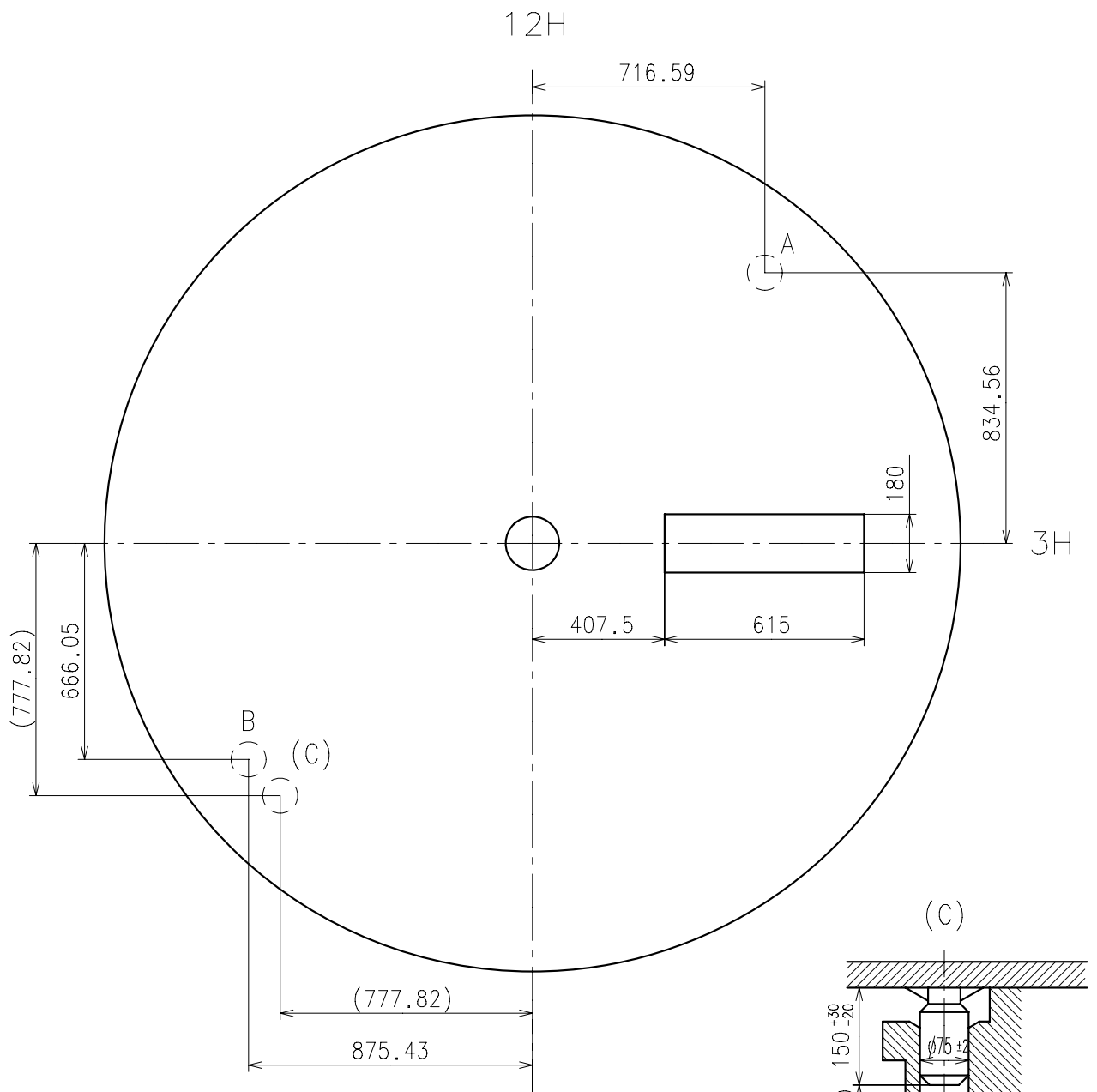
Hardness : Vickers 600±50



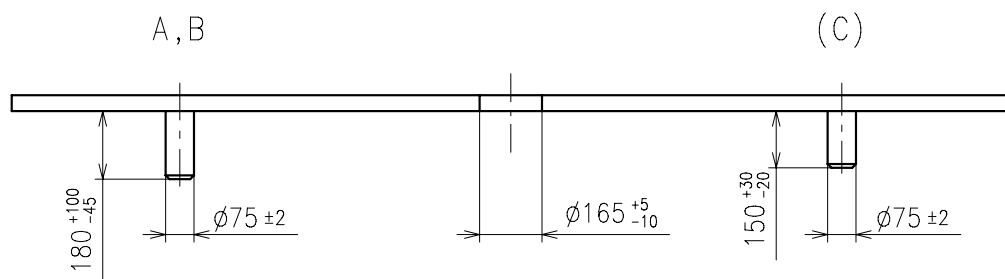
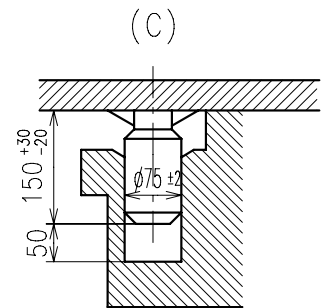
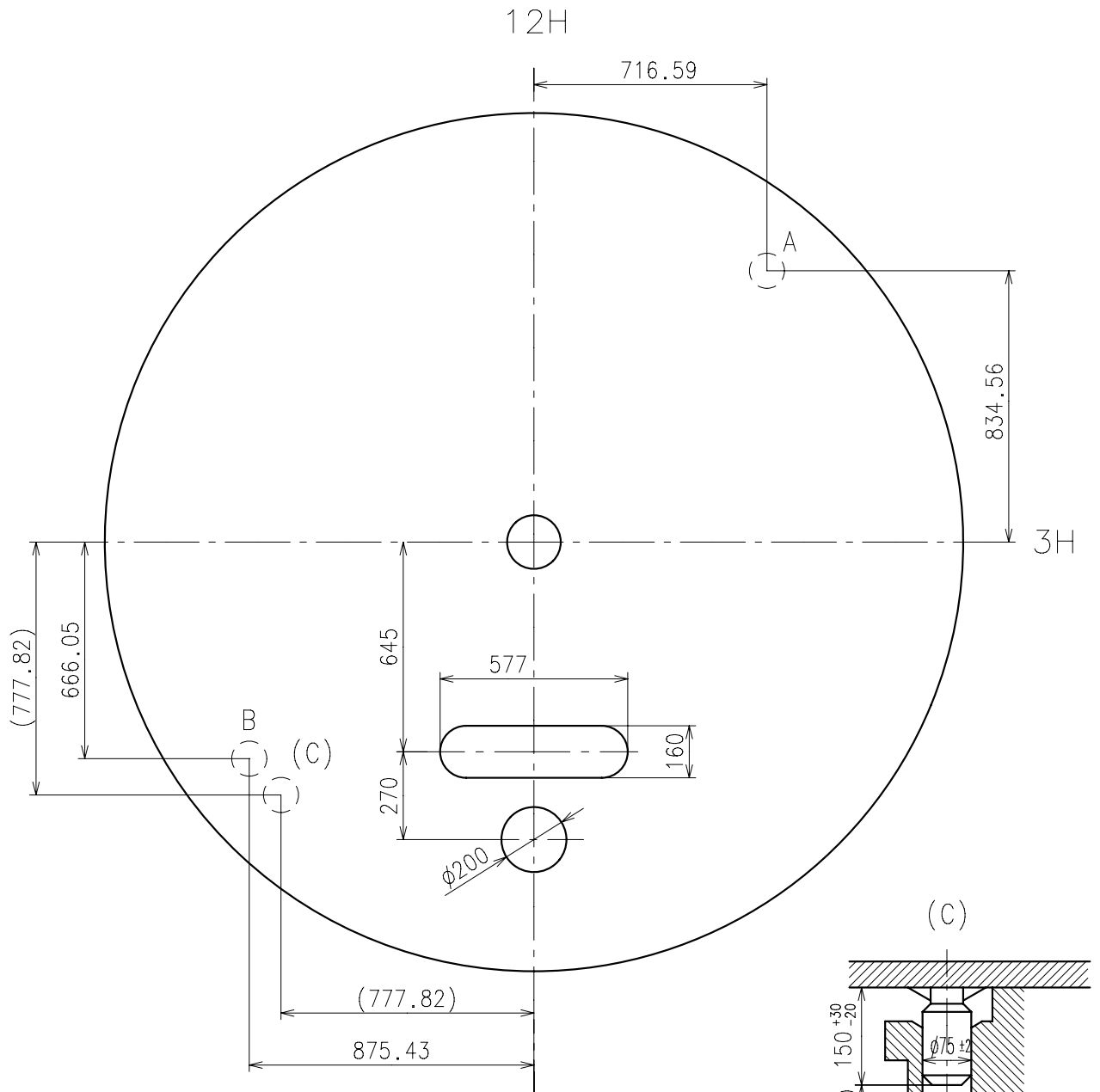
* Use dial leg A-B or (A-C)



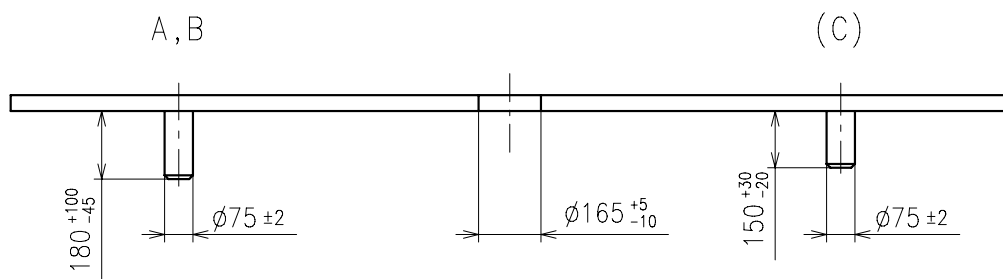
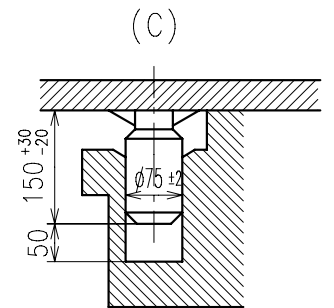
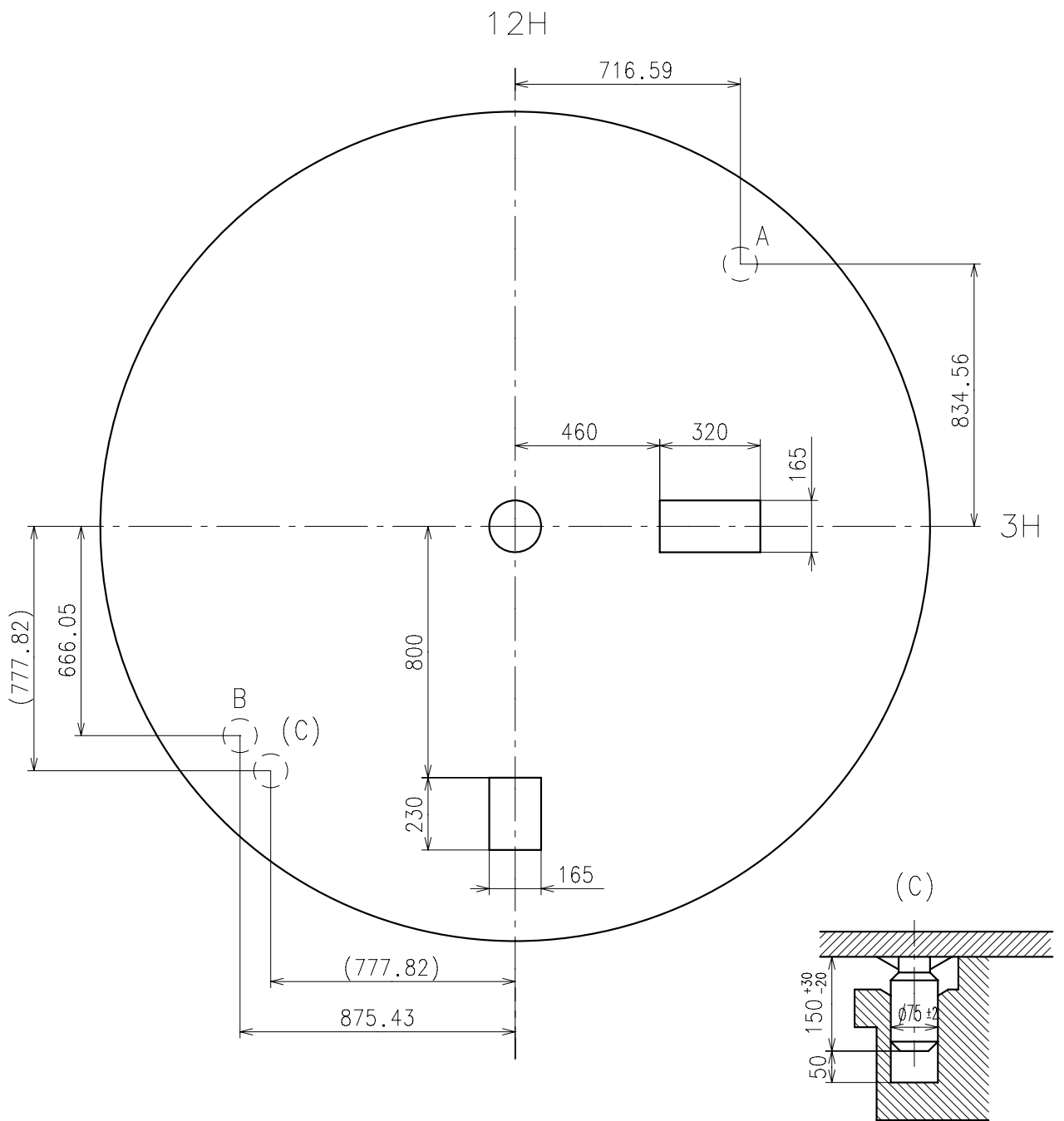
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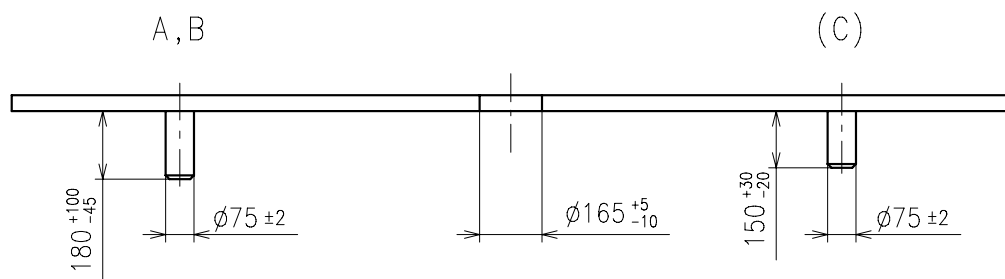
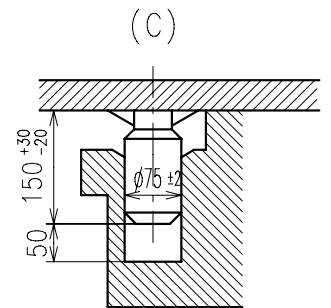
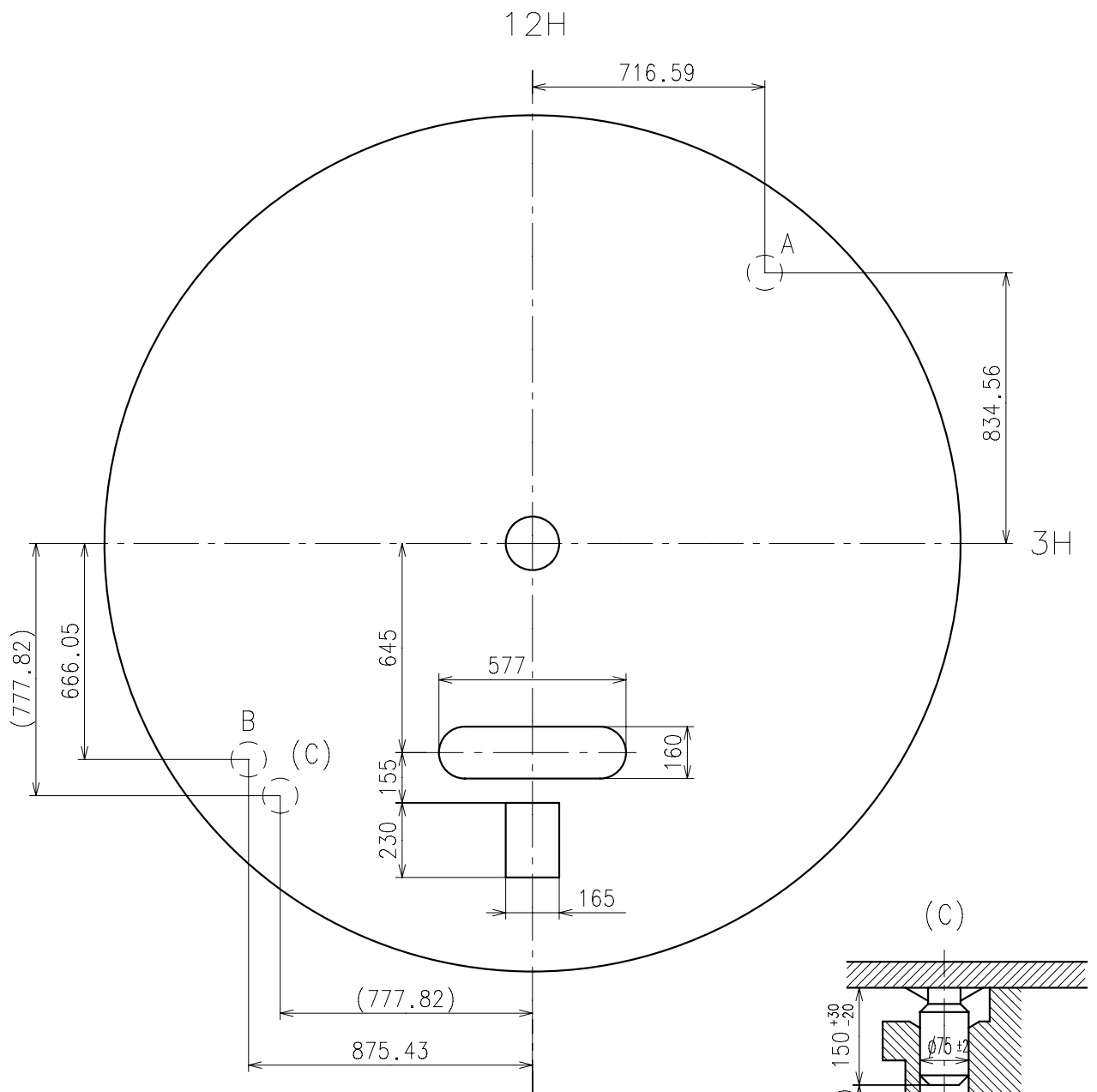
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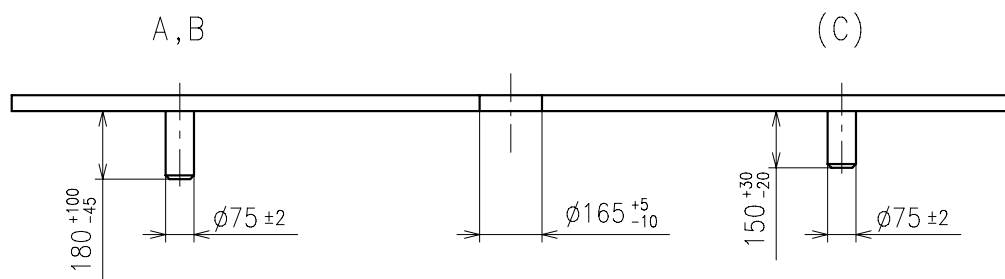
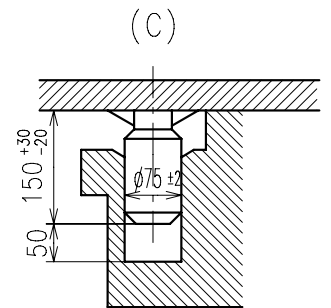
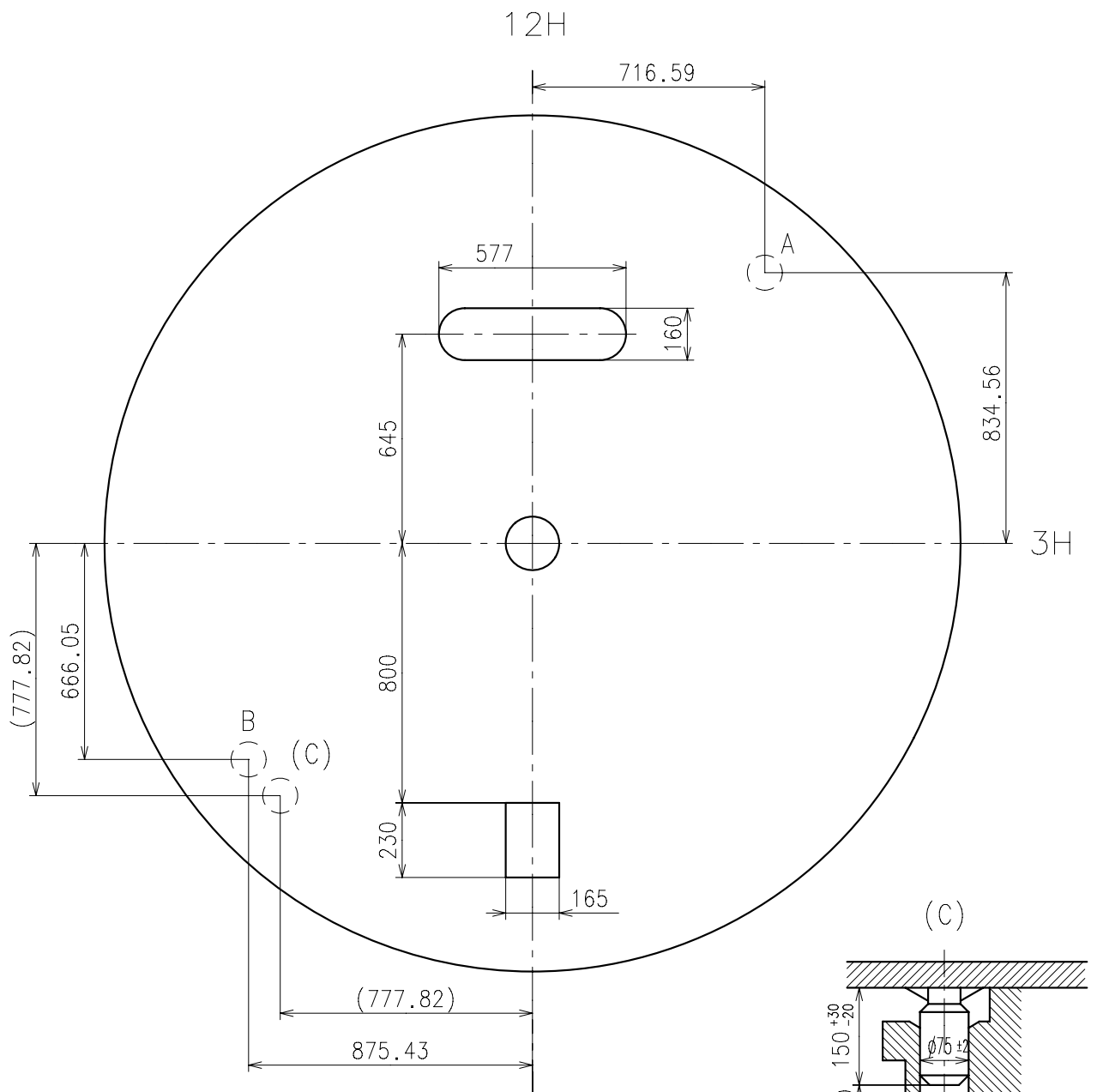
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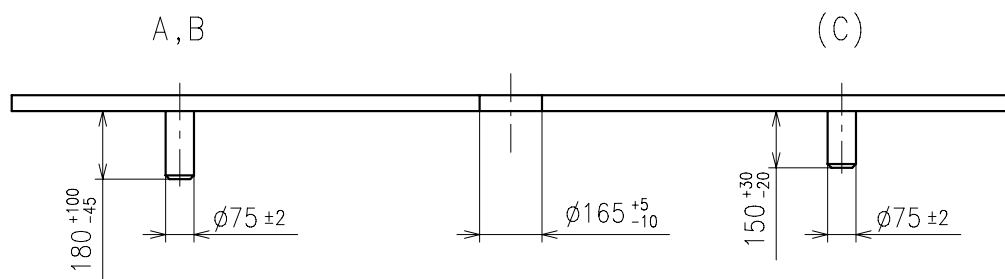
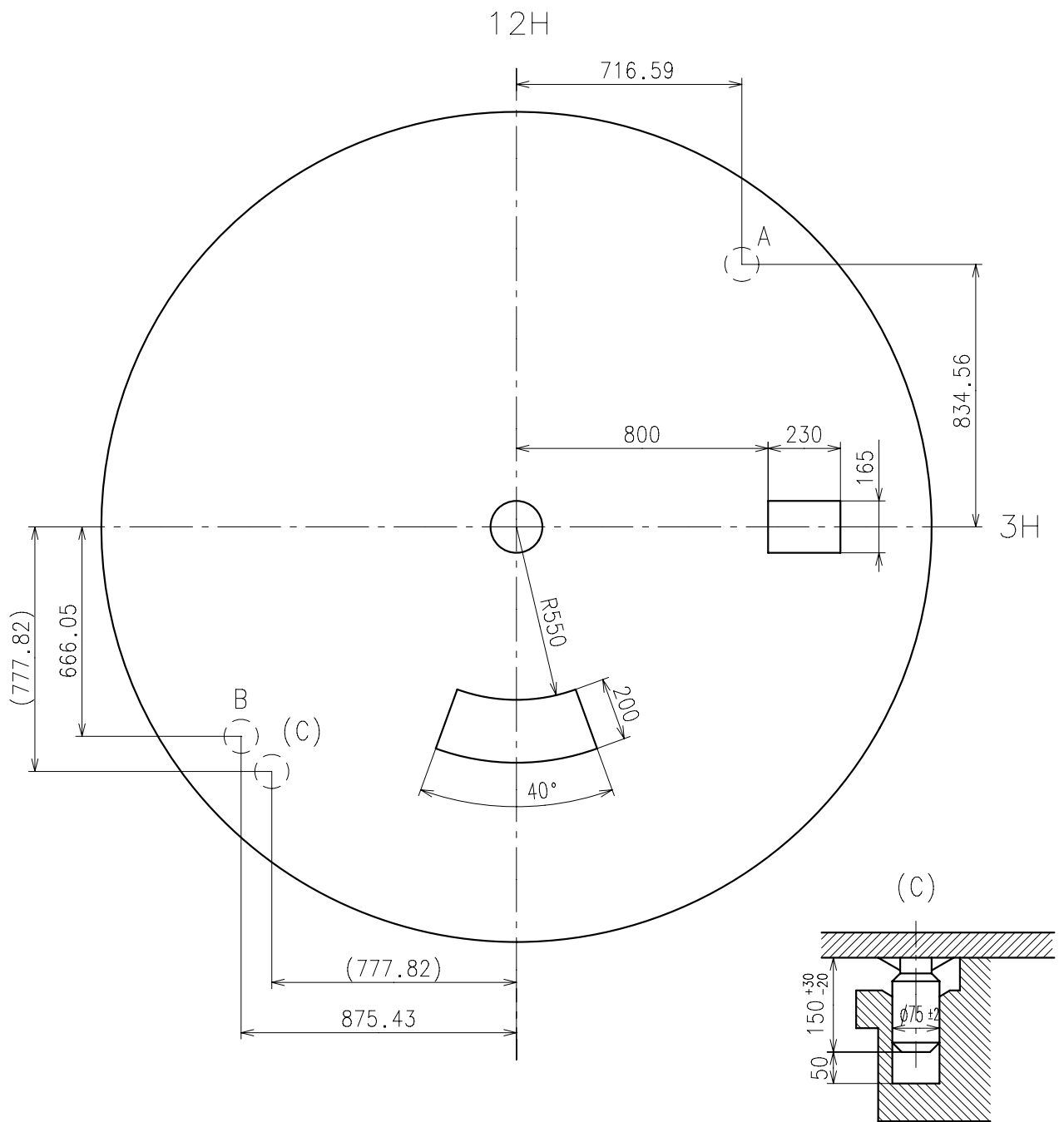
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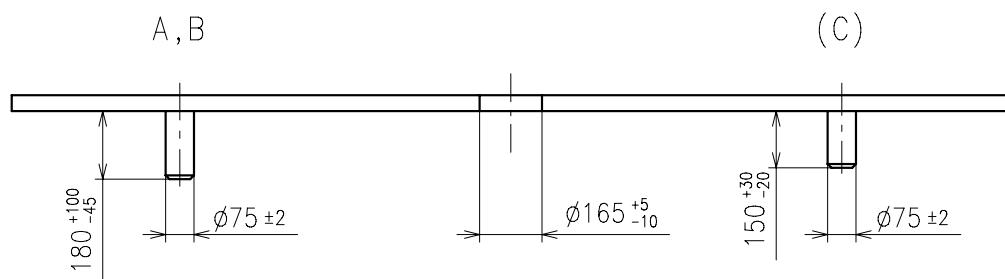
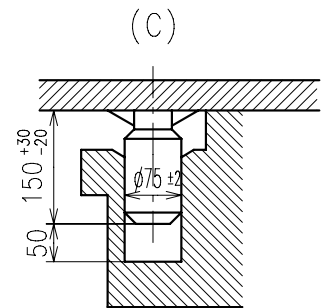
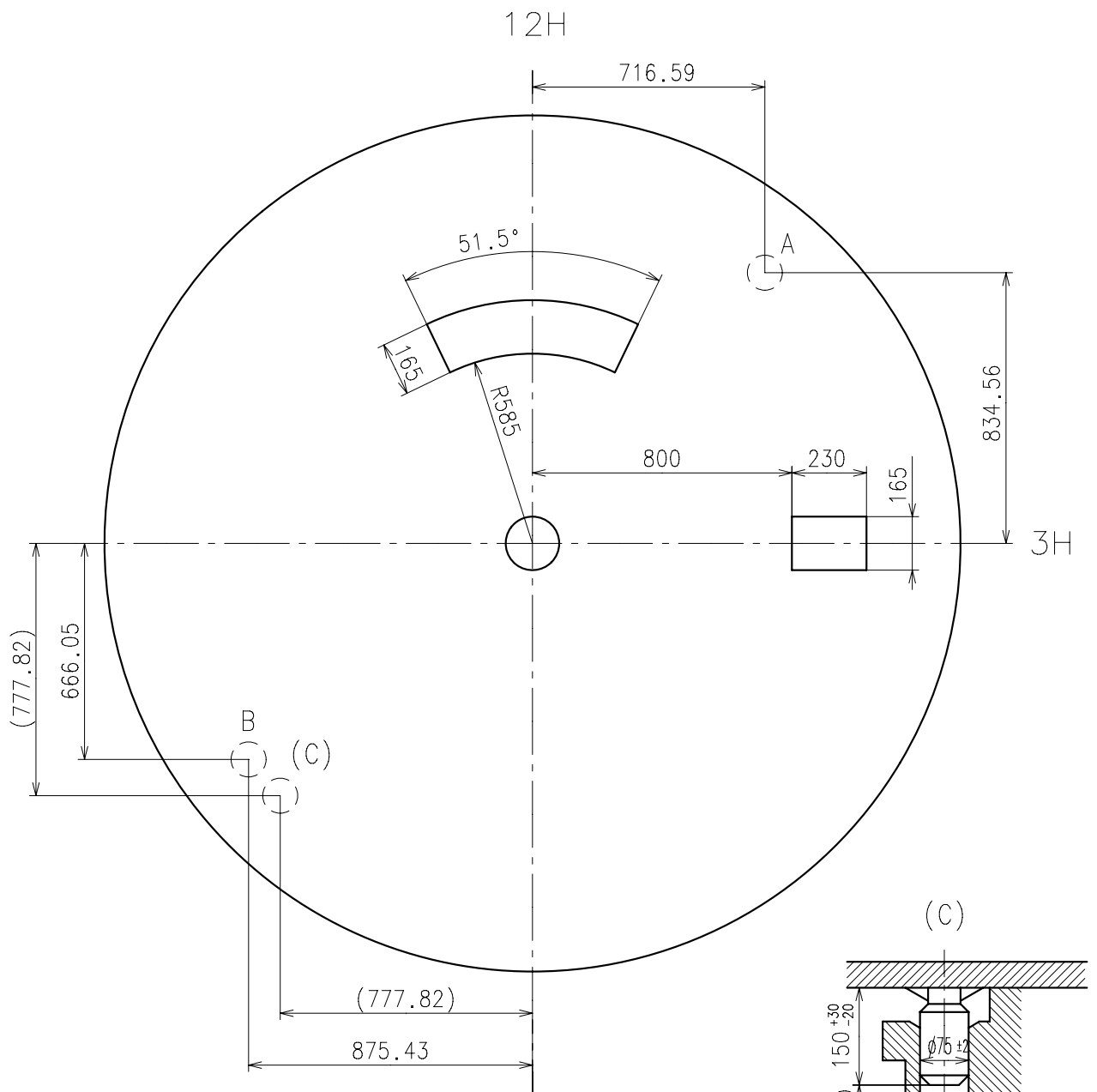
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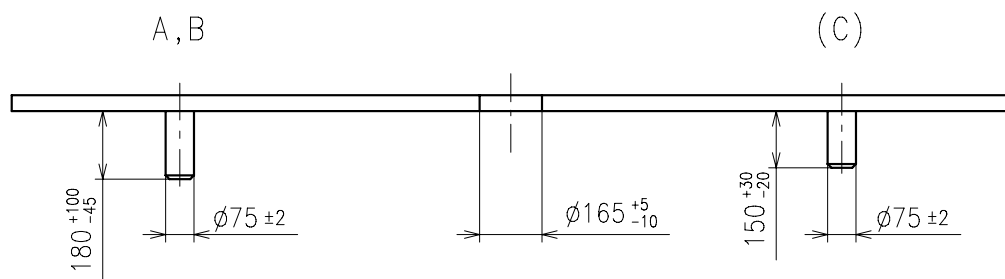
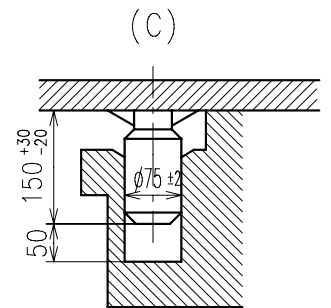
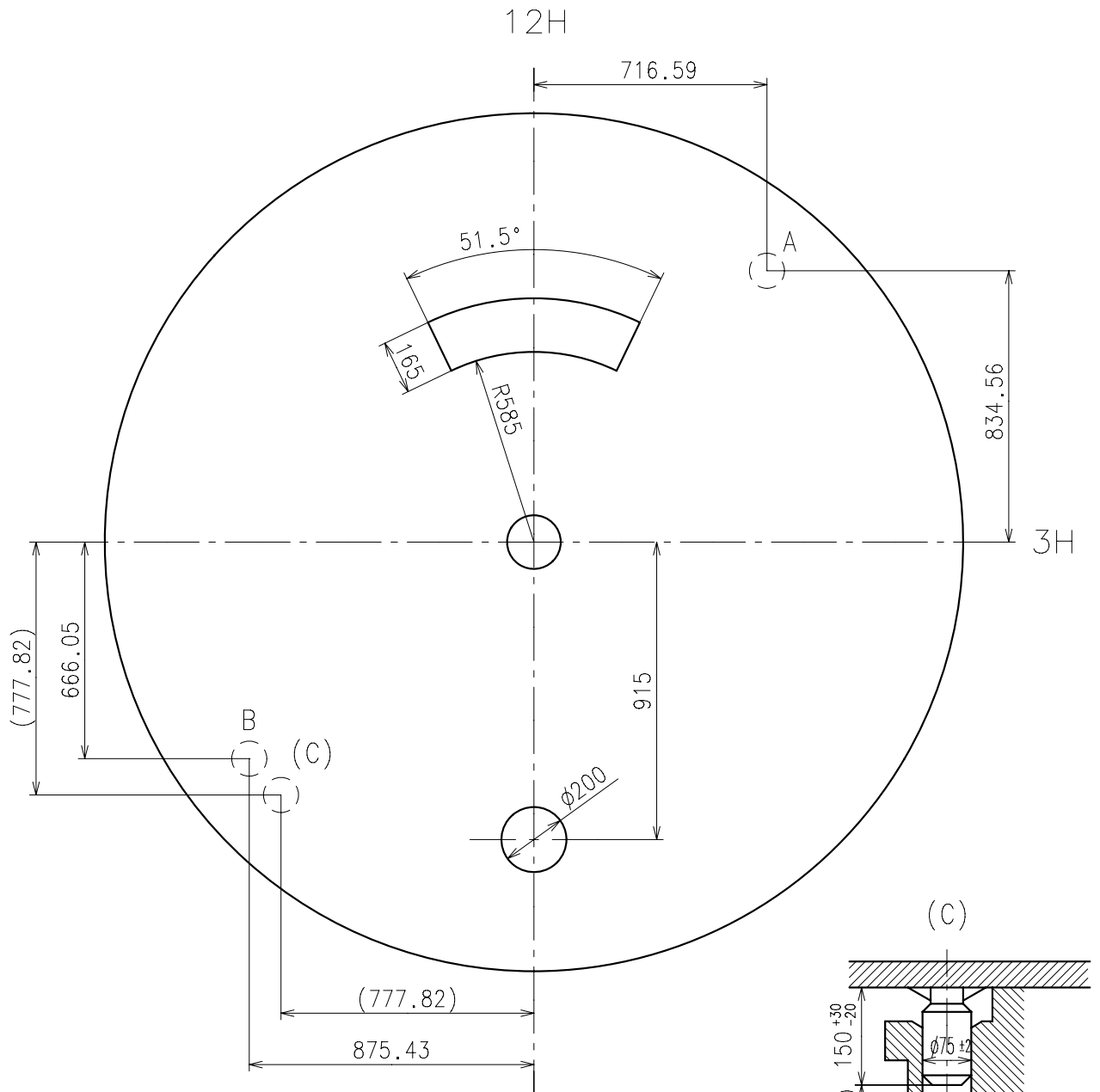
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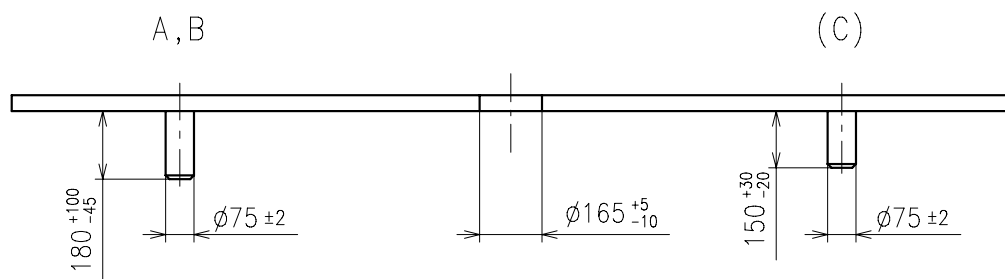
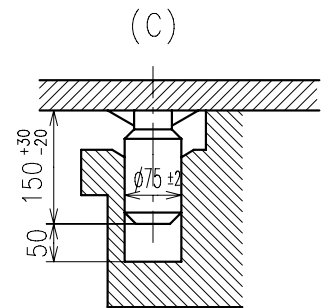
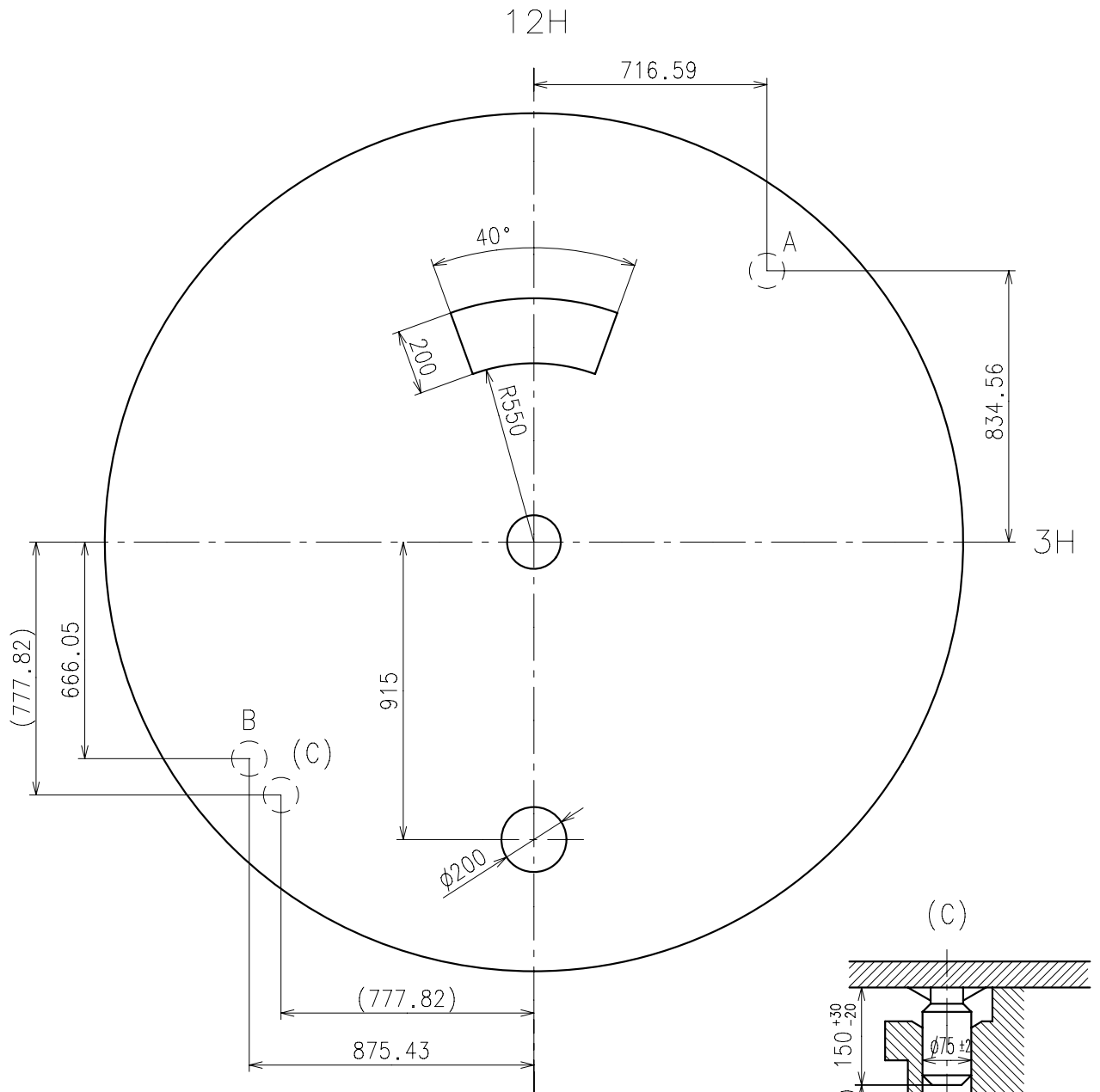
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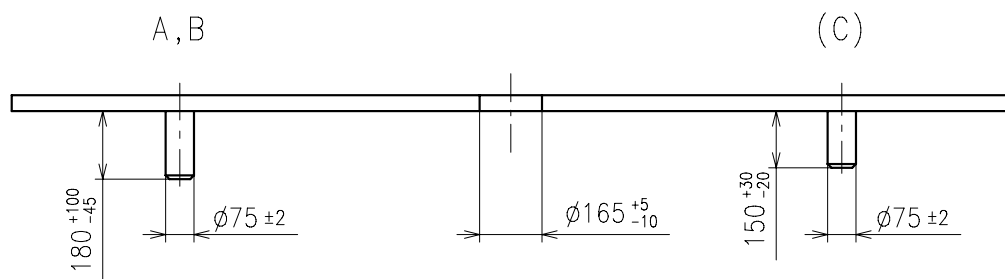
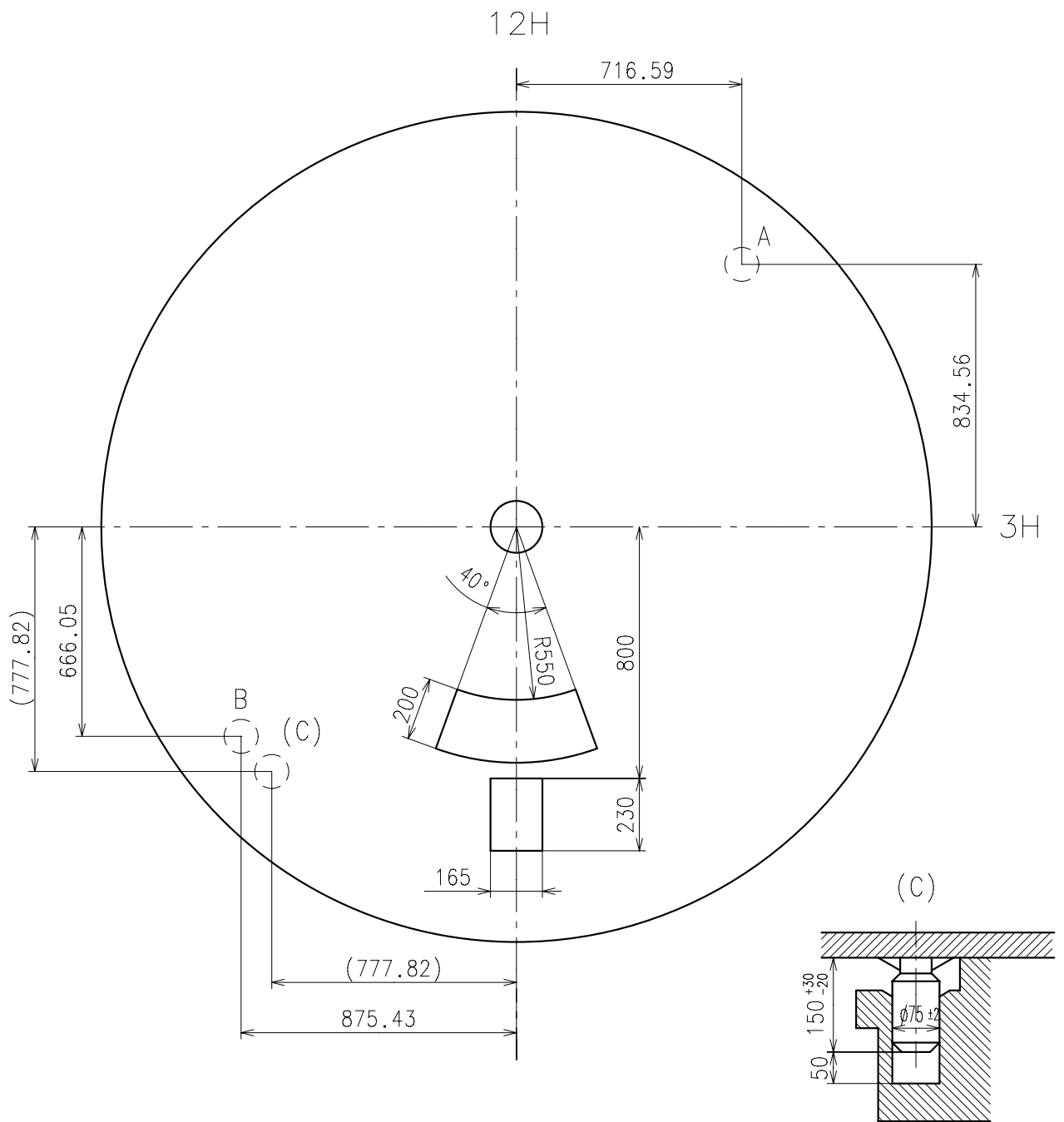
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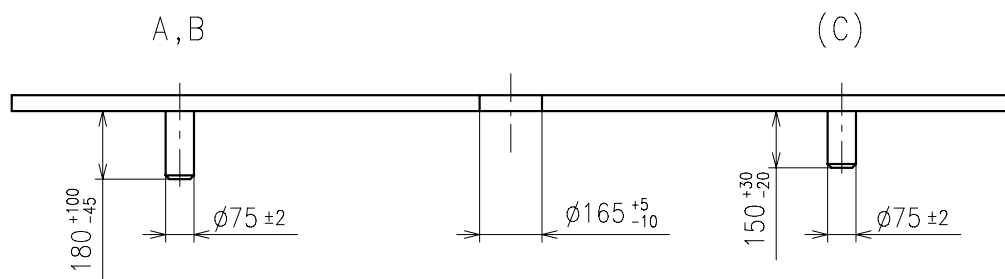
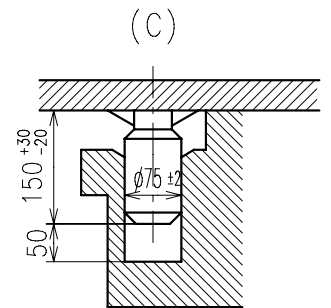
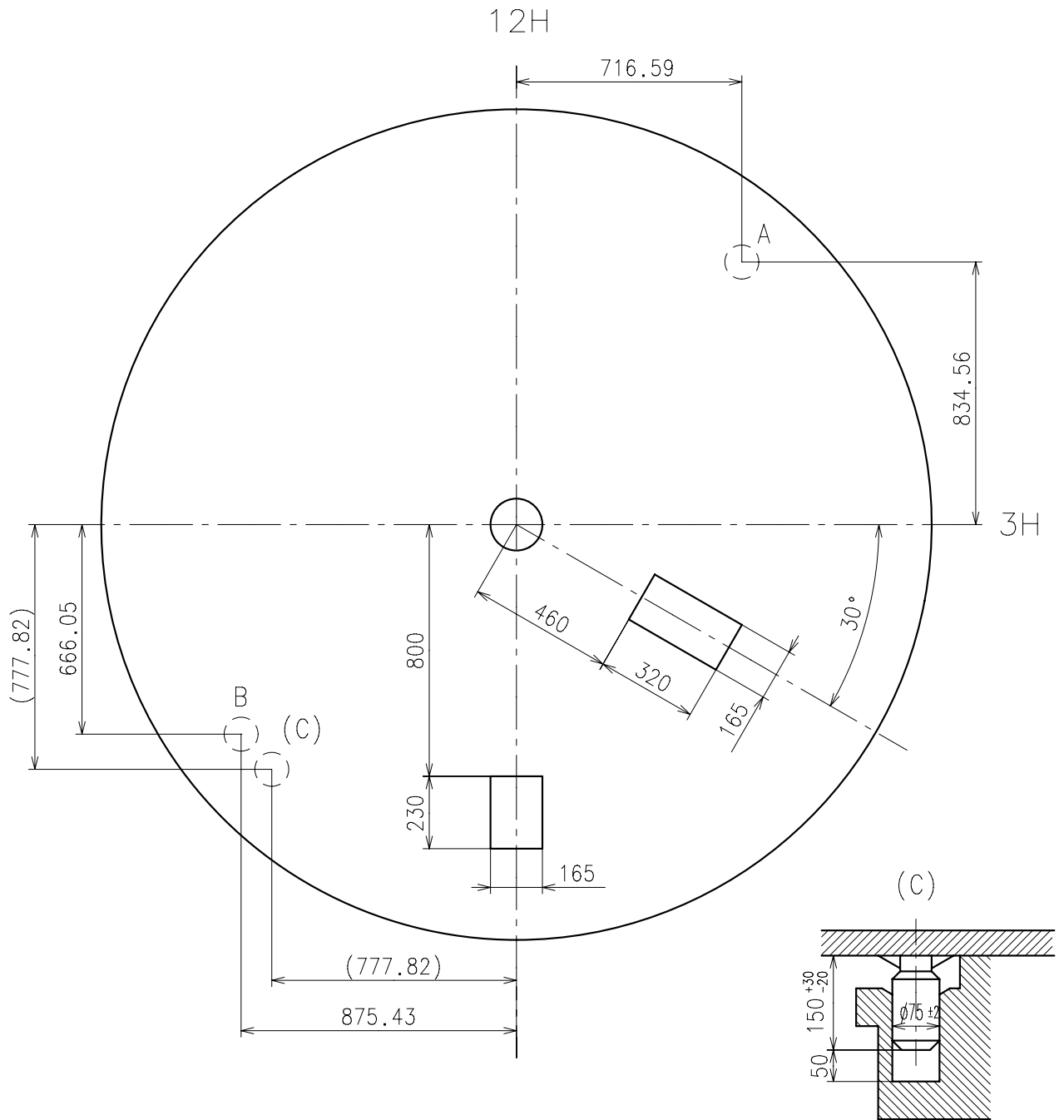
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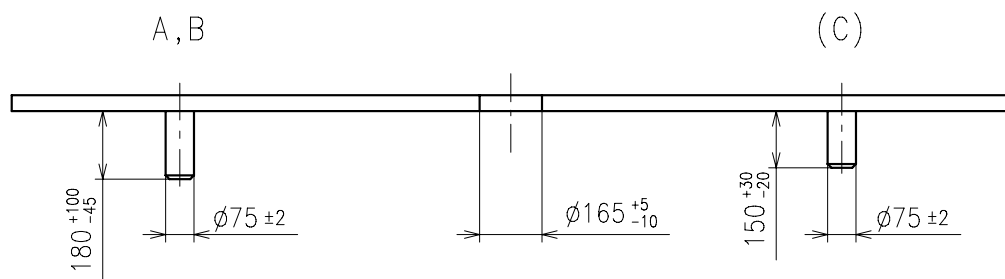
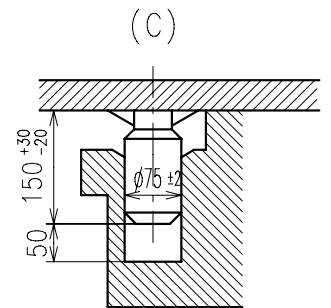
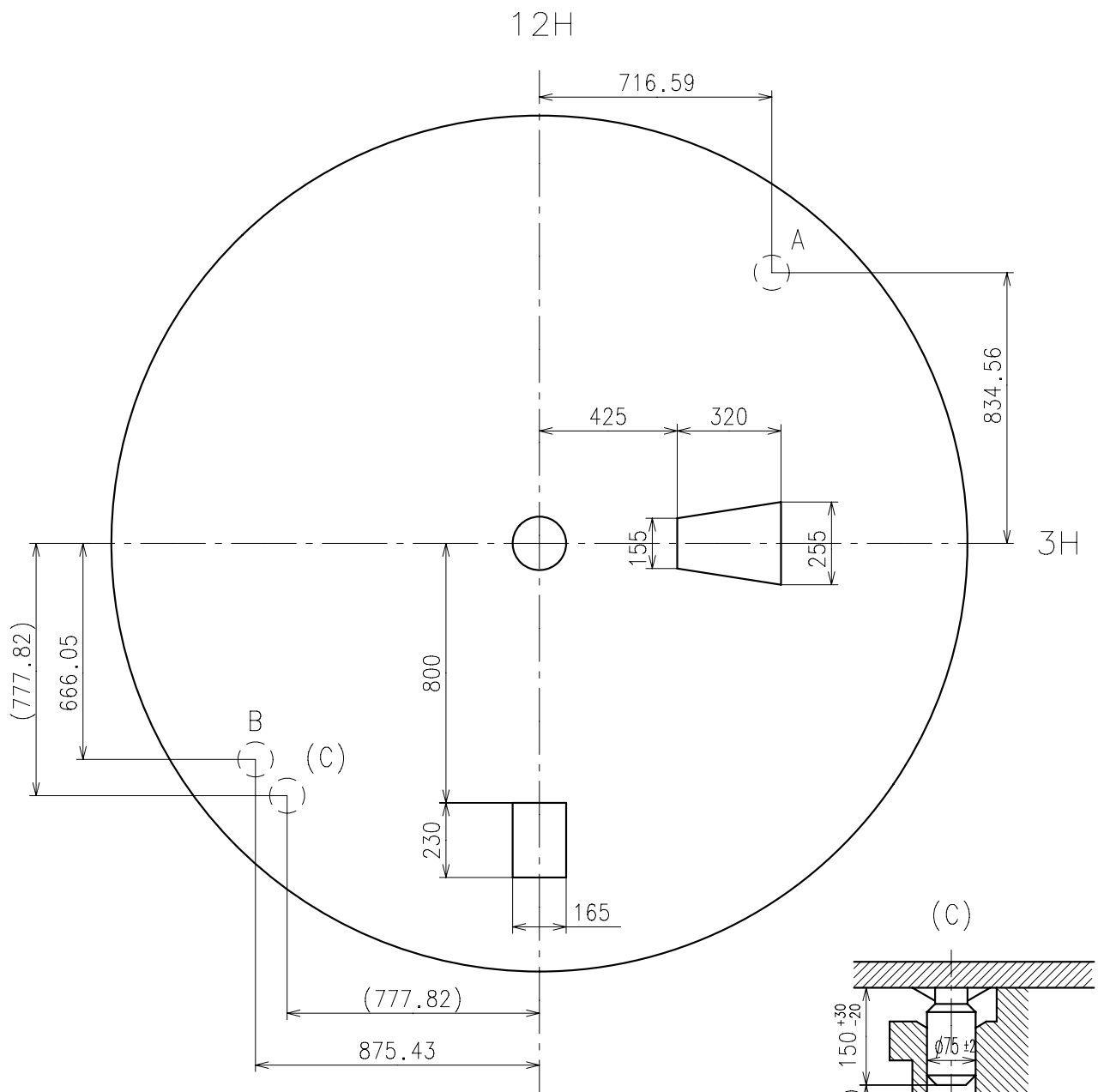
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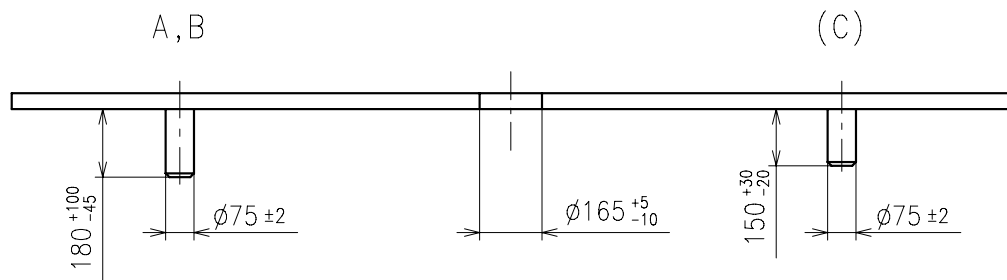
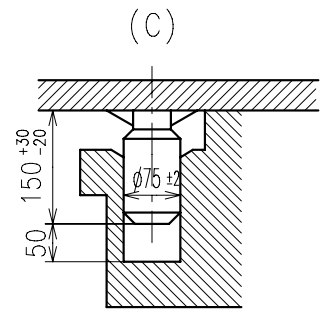
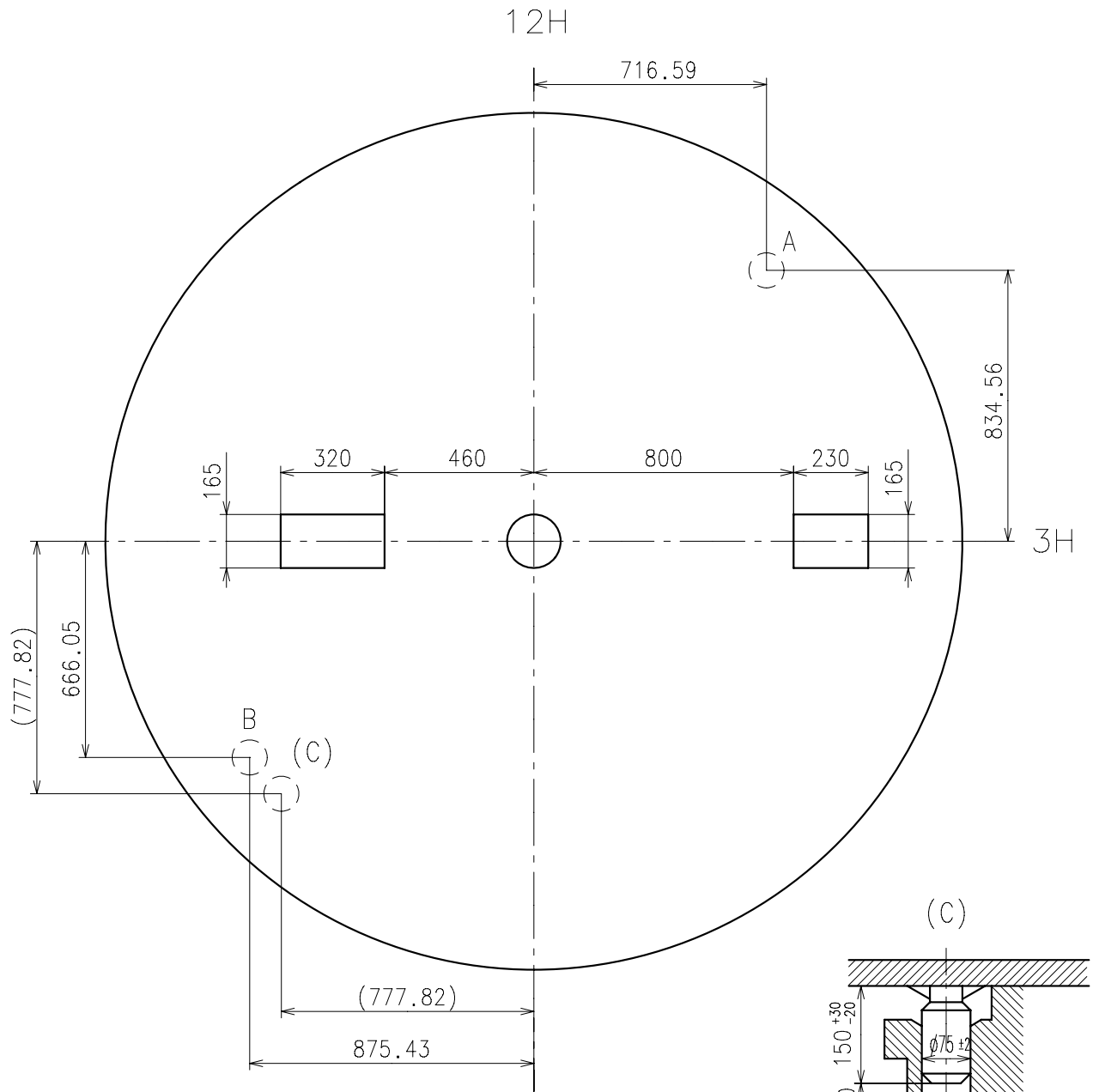
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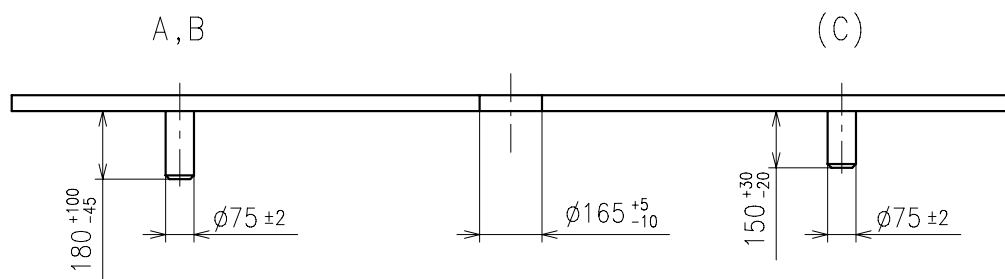
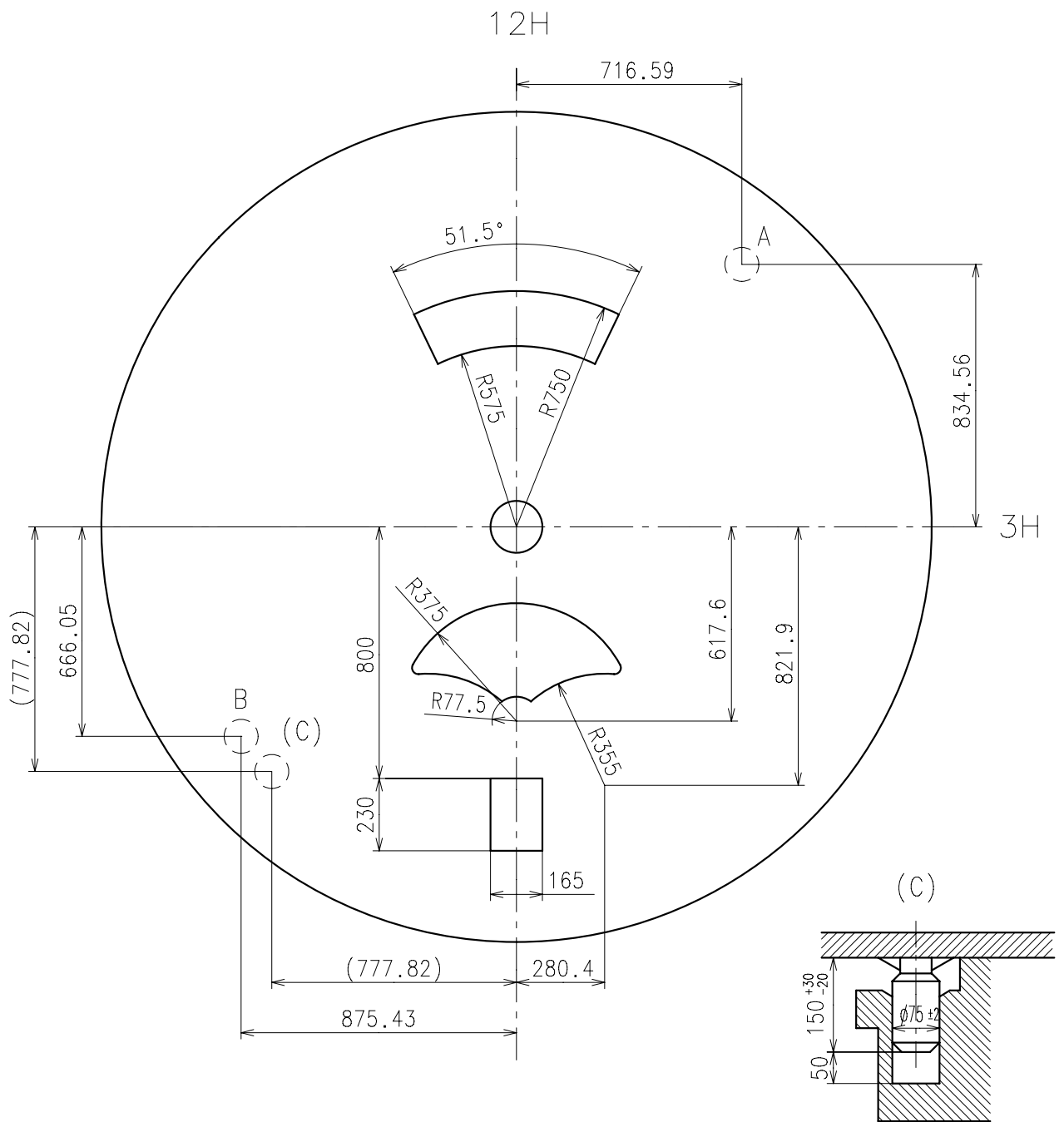
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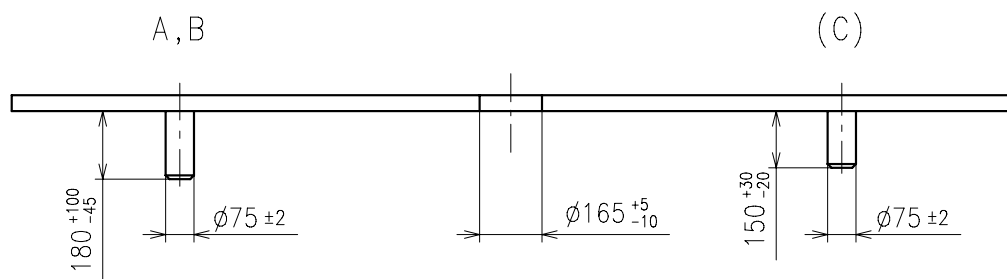
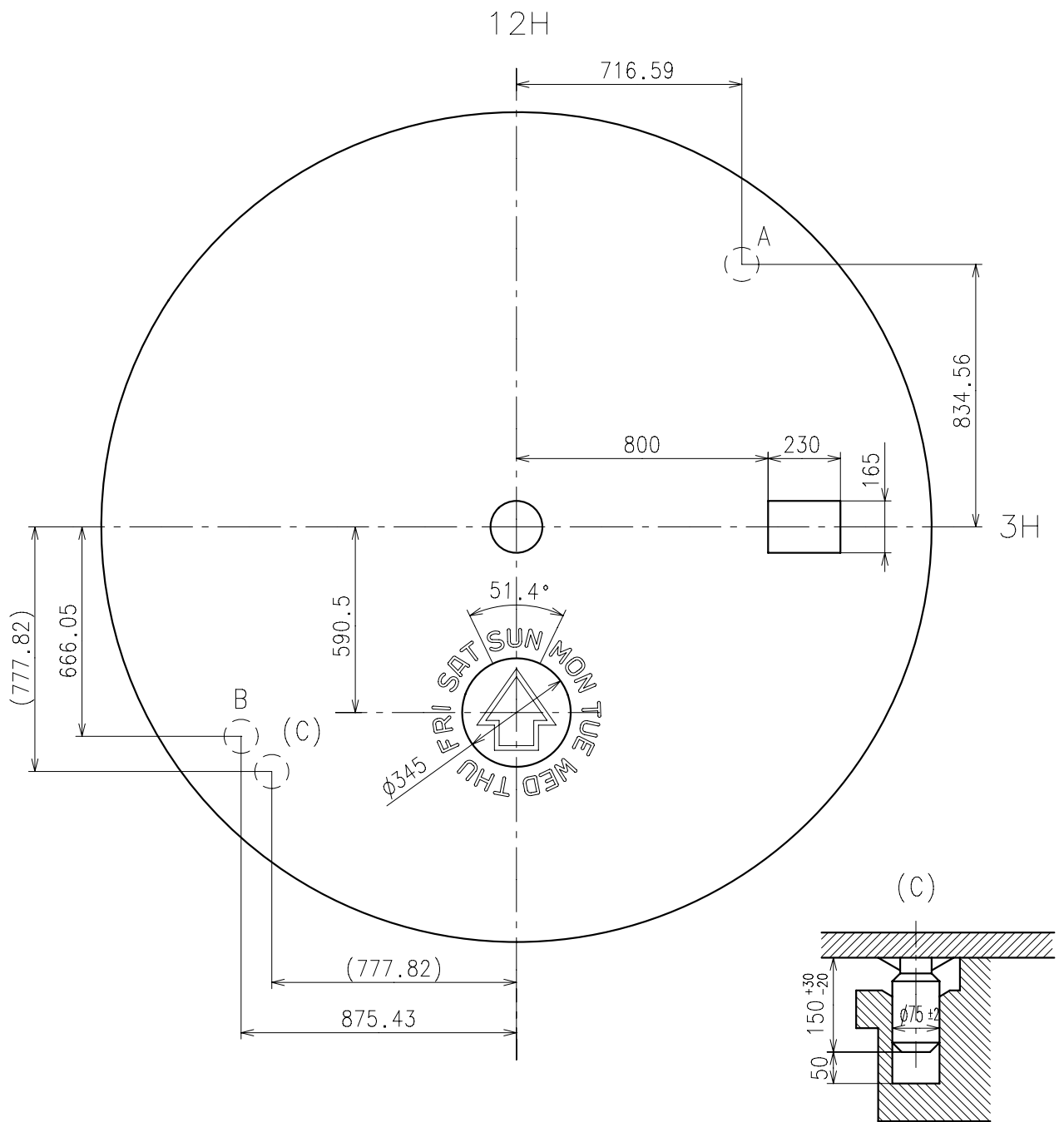
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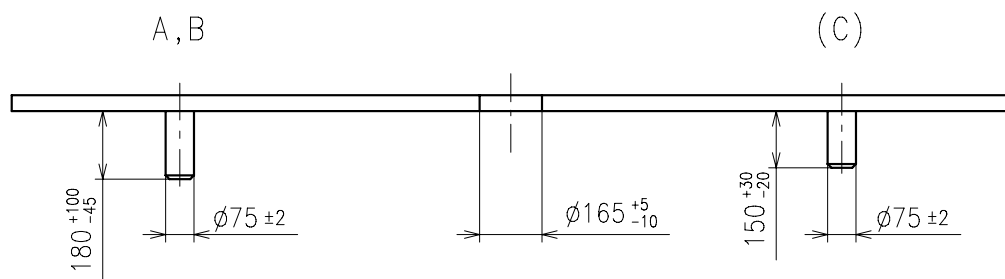
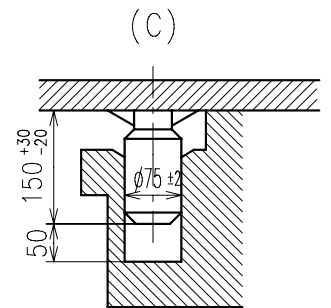
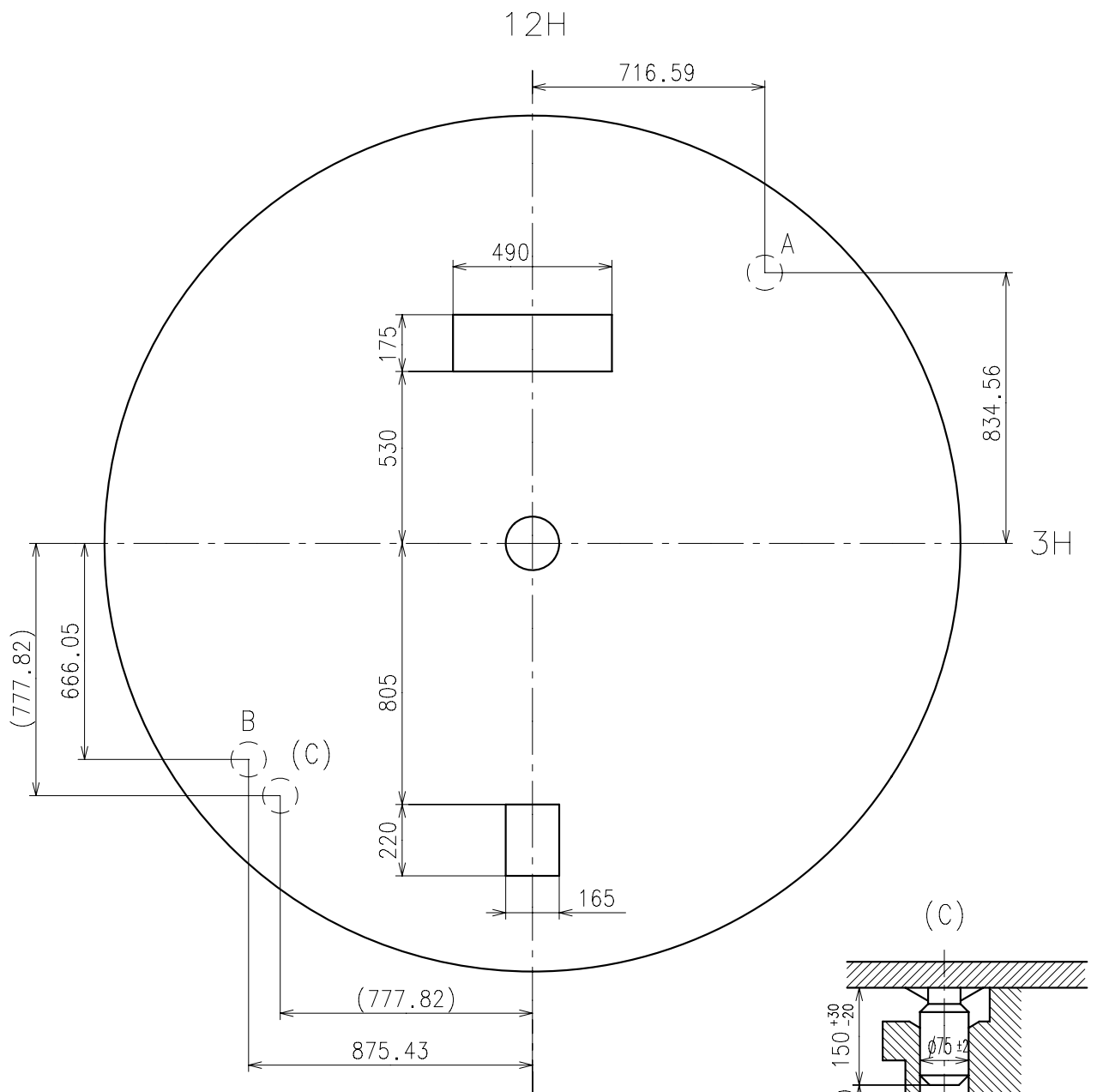
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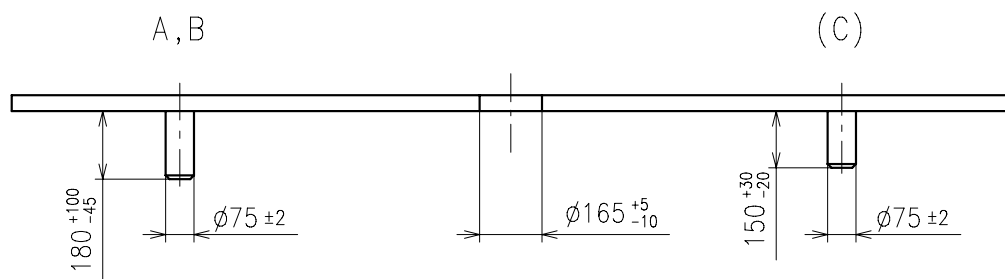
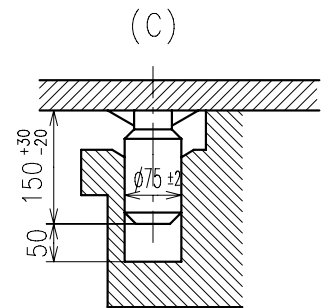
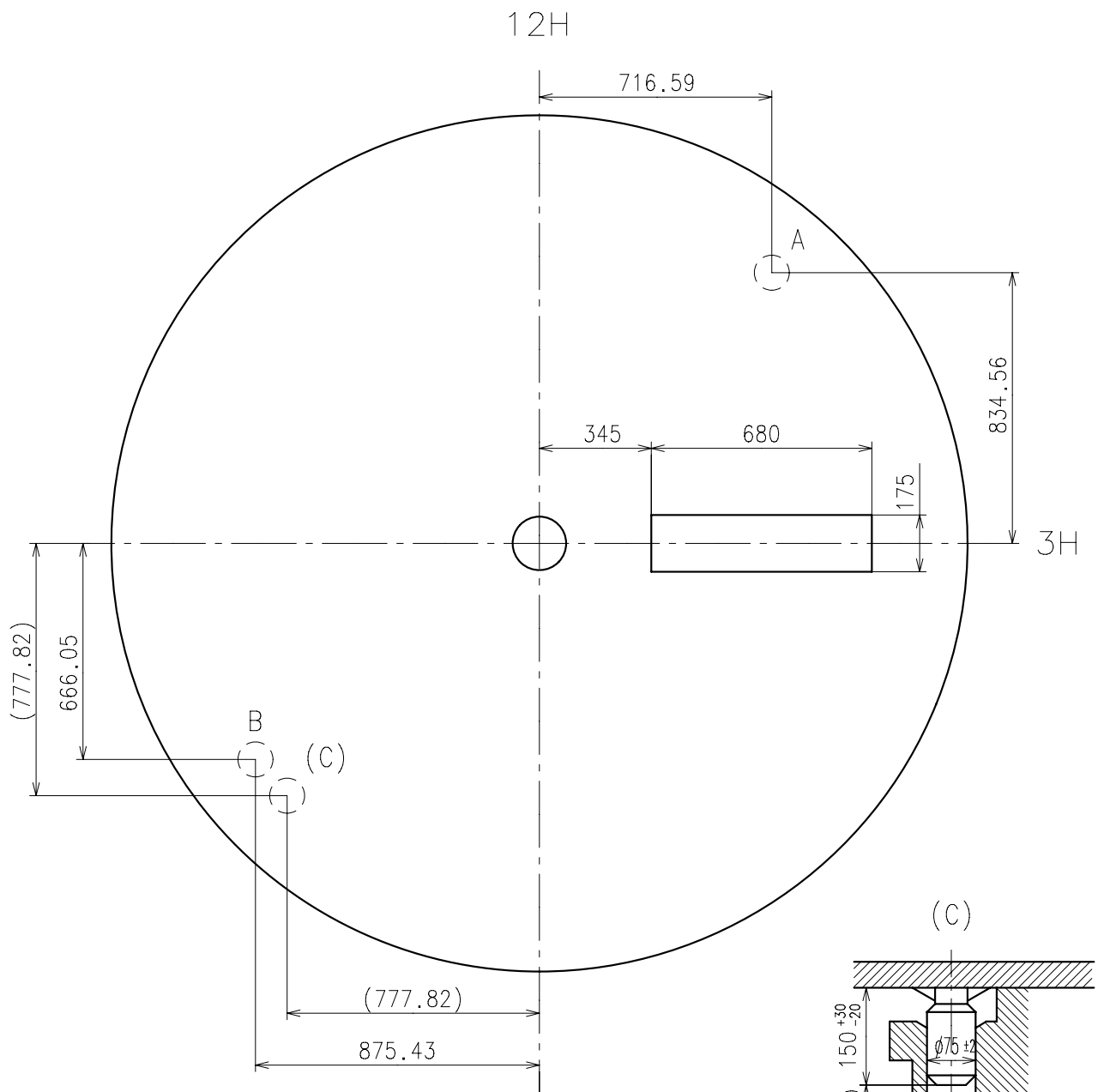
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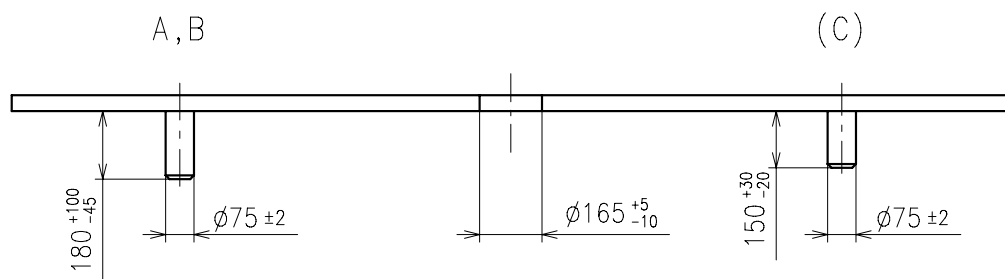
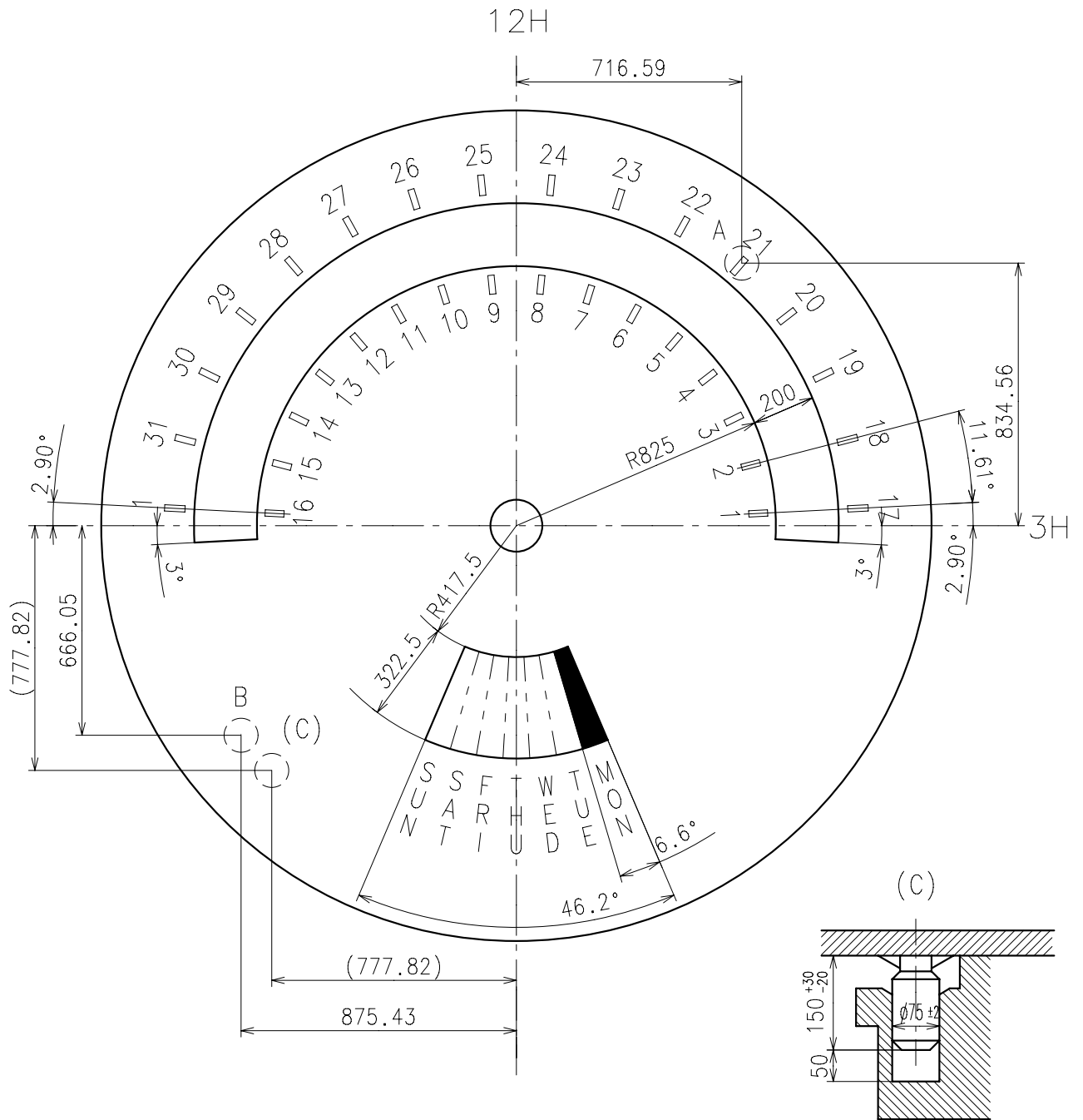
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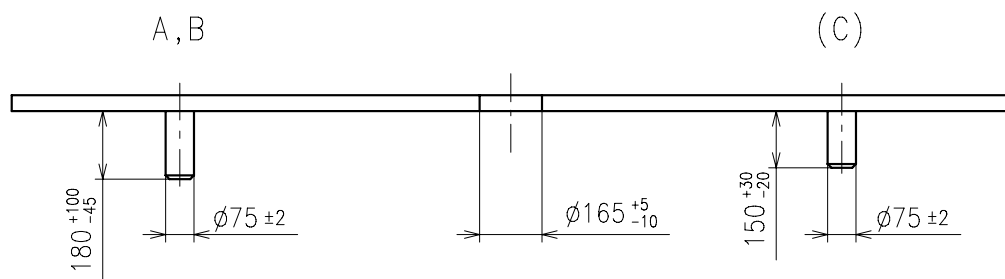
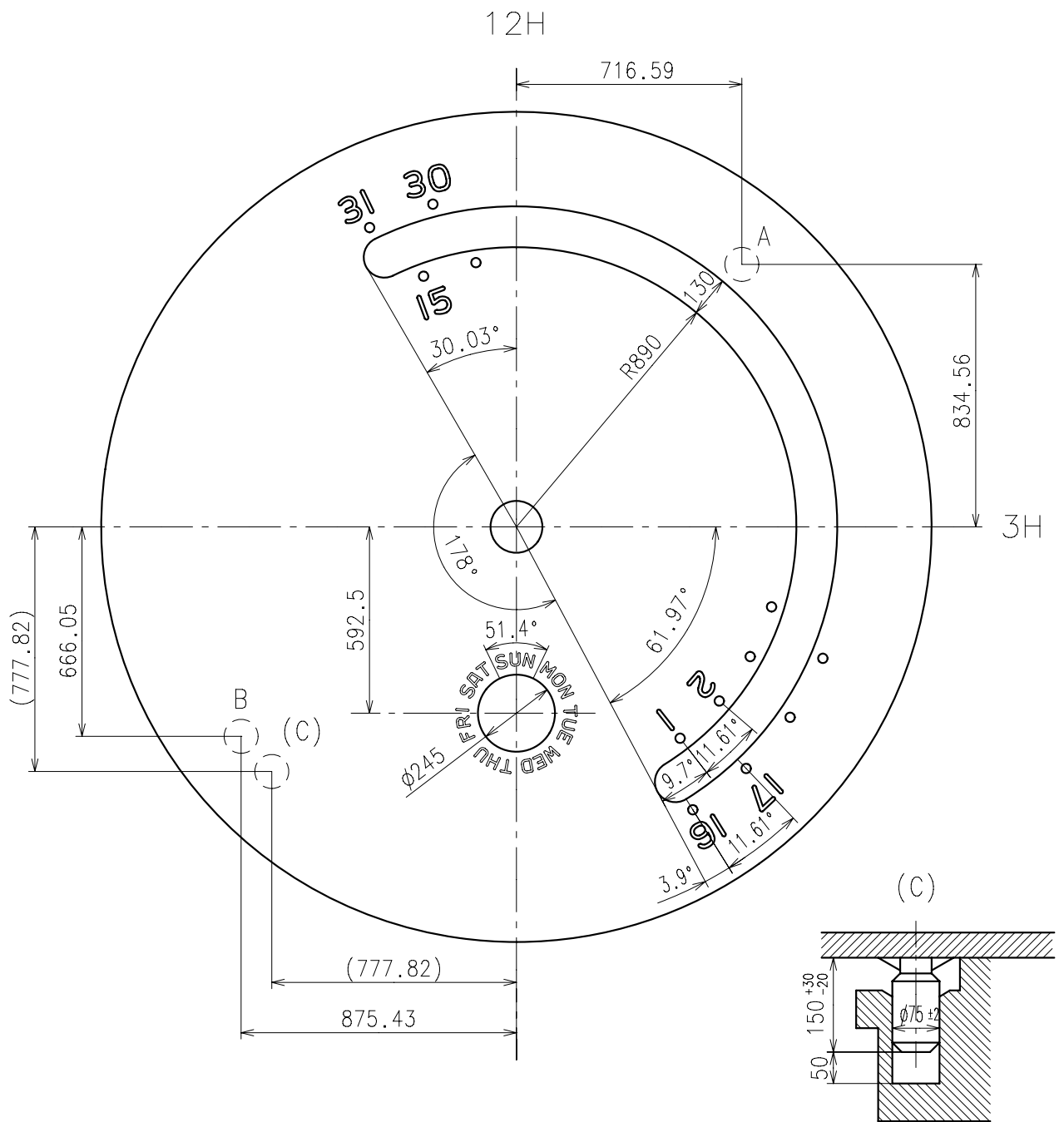
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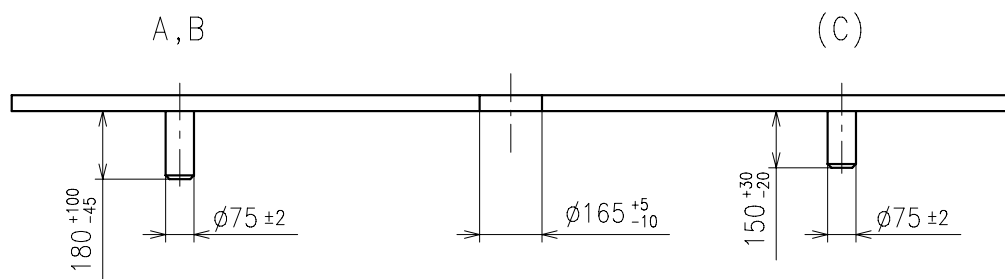
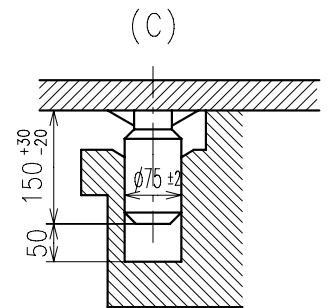
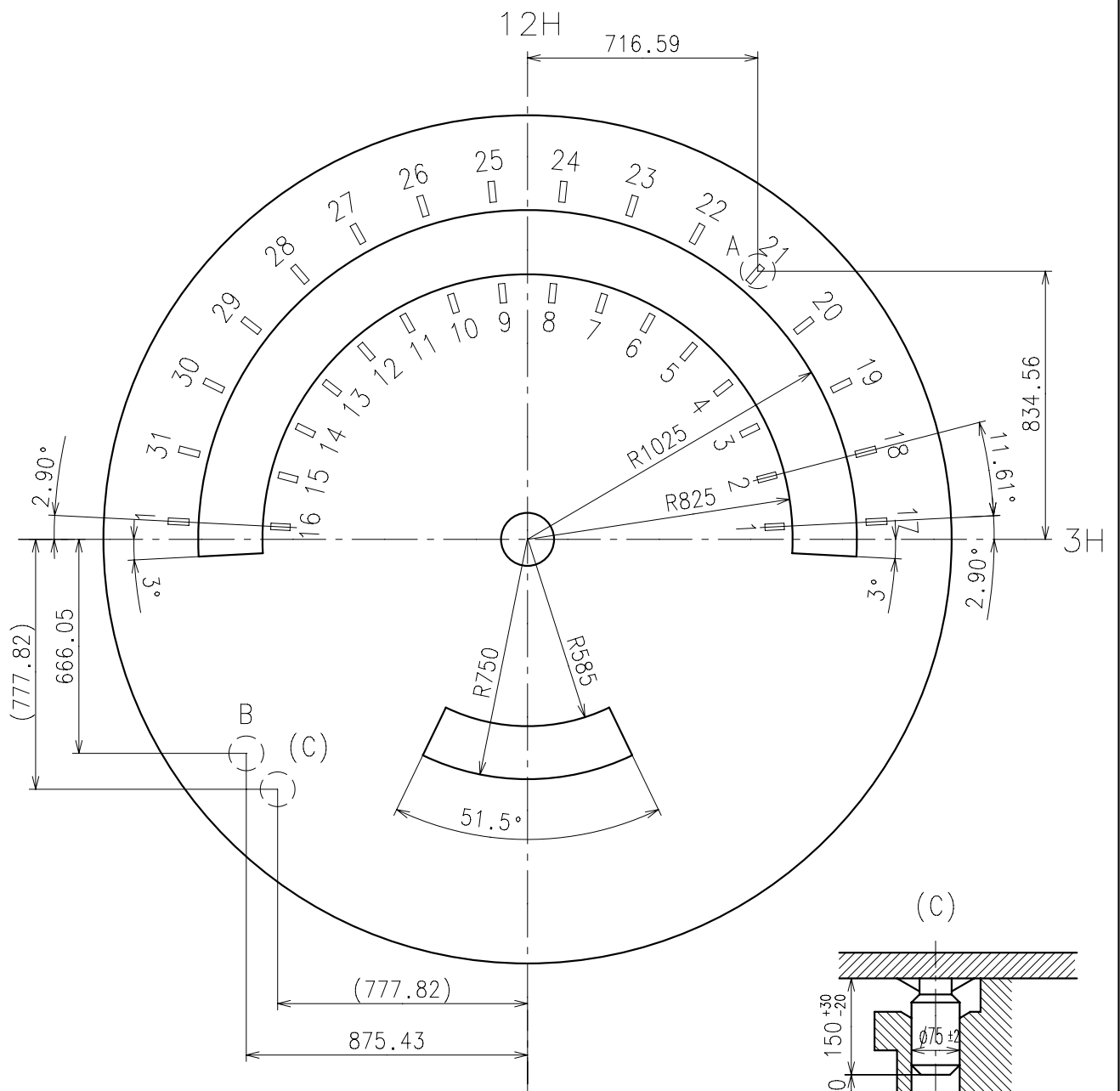
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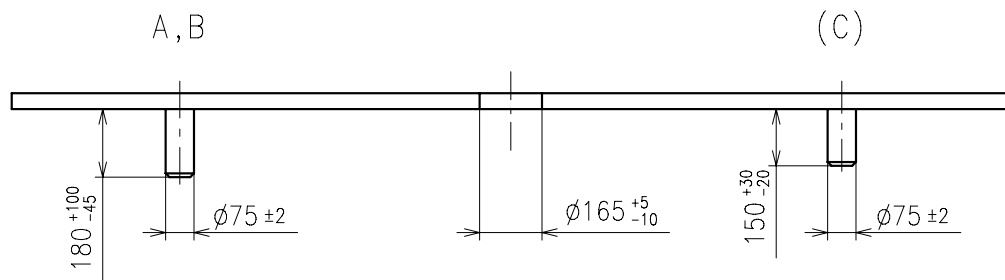
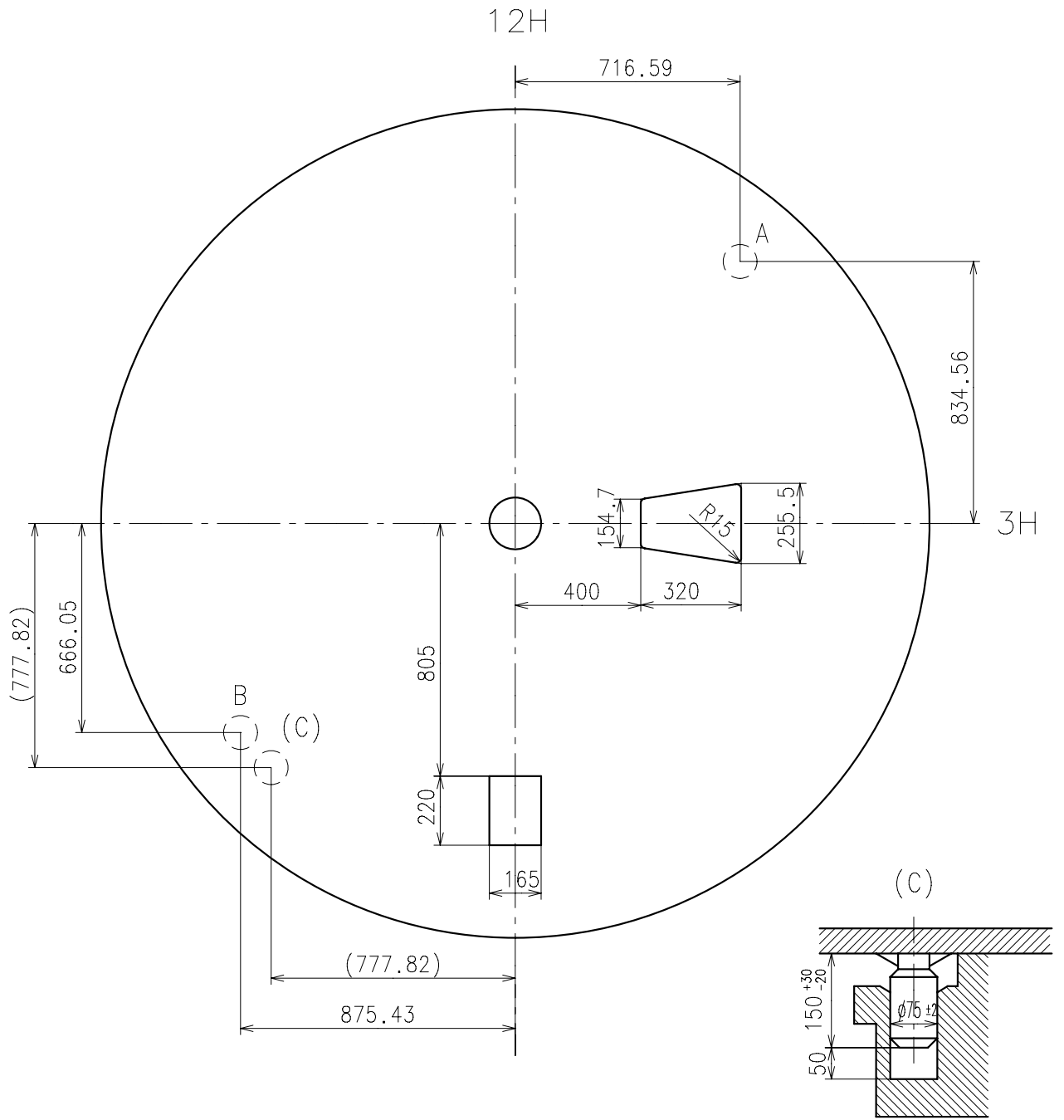
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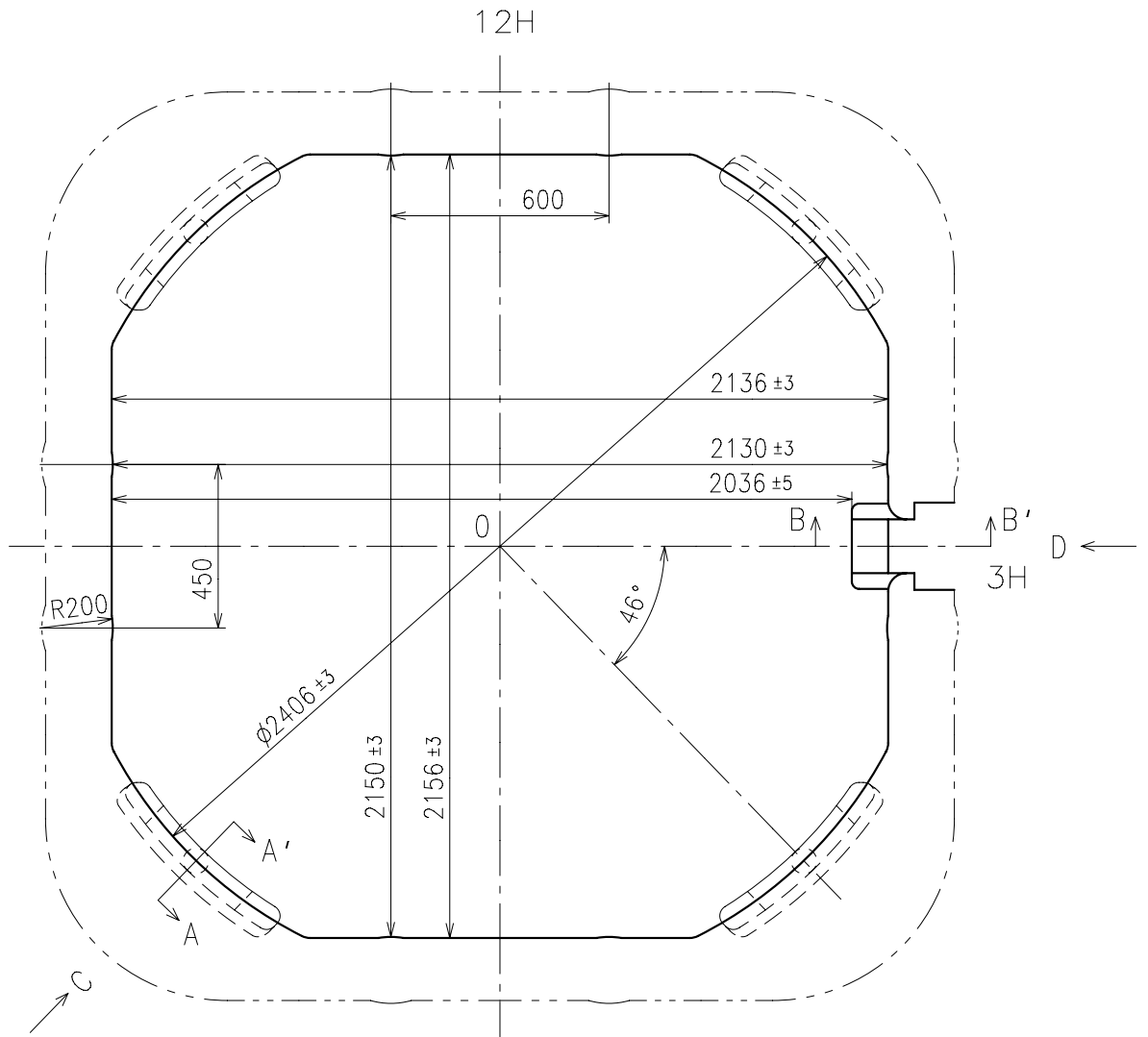
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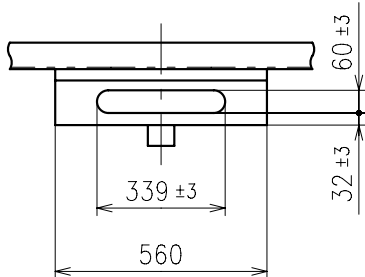
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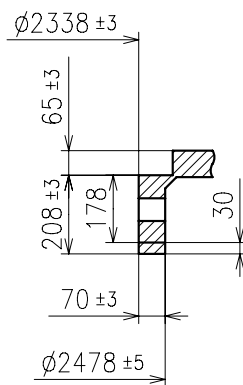
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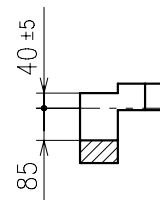
C view



A-A' section



B-B' section



D view

