

KT - 31S - 2 Model
HONING MACHINE

Instruction
Manual

Messrs. Hyundai-Motor Corp.

The Manufacturer's Serial Number : HS-466

Manufactured Date : 2007.08.

KUKJE DIAMOND IND. Co., Ltd.

KT-31S-2 HONING MACHINE

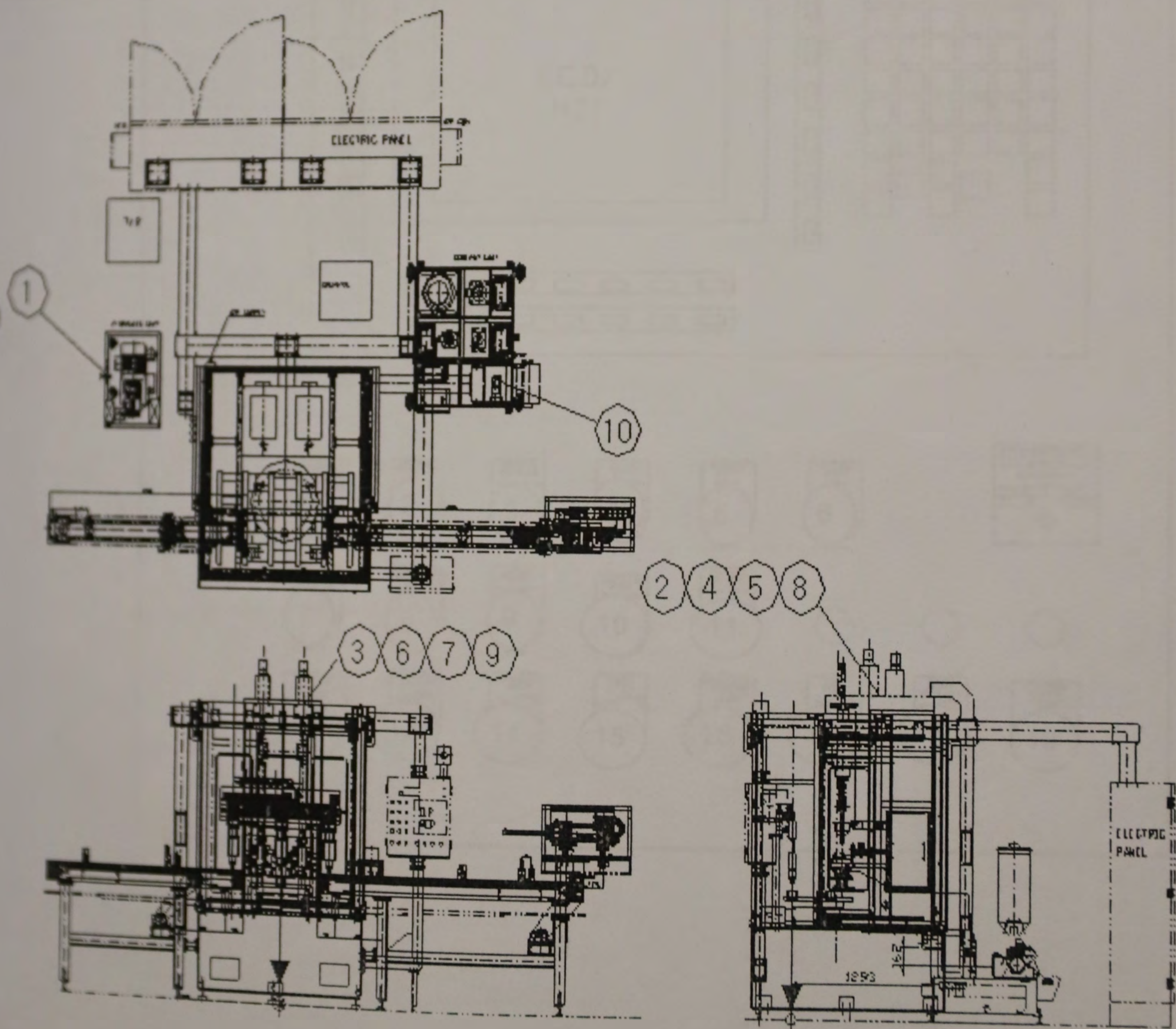
[1. Specification]

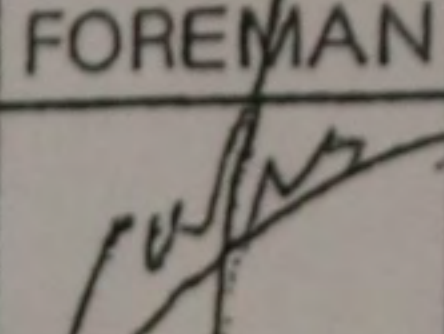
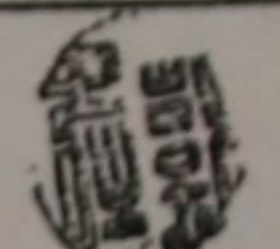
HS466 ZC45/48-90 3RD I/P & 4TH I/P

Classification		User Interface
Number of processing Axis		480mm
Honing Diameter		Ø37, Ø48, Ø52.5
Maximum Length of hole honed		50 mm
Maximum Length of Stroke		450 mm
Distance between centre of the Main axis and column.		430 mm
Distance between centre of the Main axis and base.		720 mm
Distance between centre of the Main axis and table.		160 mm
Rotating speed of the main axis (rpm)		Interval Transmission
Reciprocating Speed		0 ~ 25 m/min
Electromotor	Axis Rotating Motor	2.2 kw 4p
	Axis Reciprocating Motor	9.7 kw (AC Servo)
	hone Expanding Motor (cutting)	0.7 kw (AC Servo)
Height		3,013mm
Floor Space (Required space)		5500(W) x 4170(L)
Oil pressure Tank Capacity		100 Liter
Total Weight		approx. 7 ton
Pulse Expansion (Feed System)		NC fixed feed Expanding Method

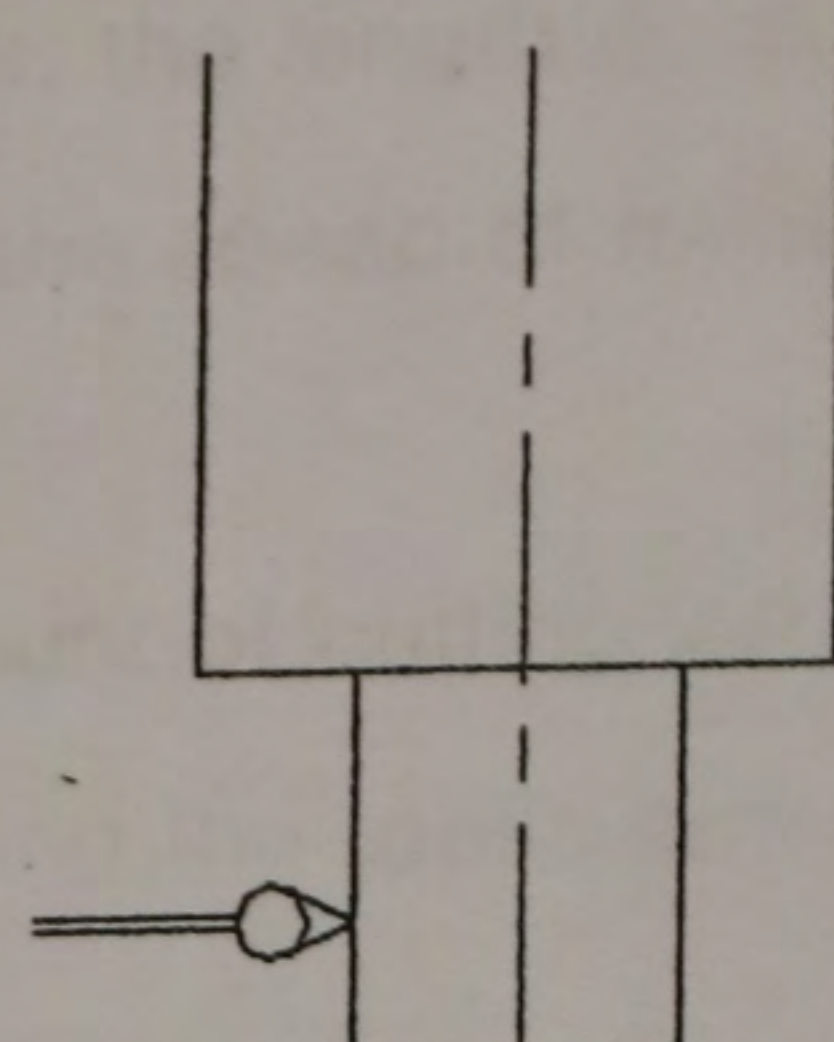
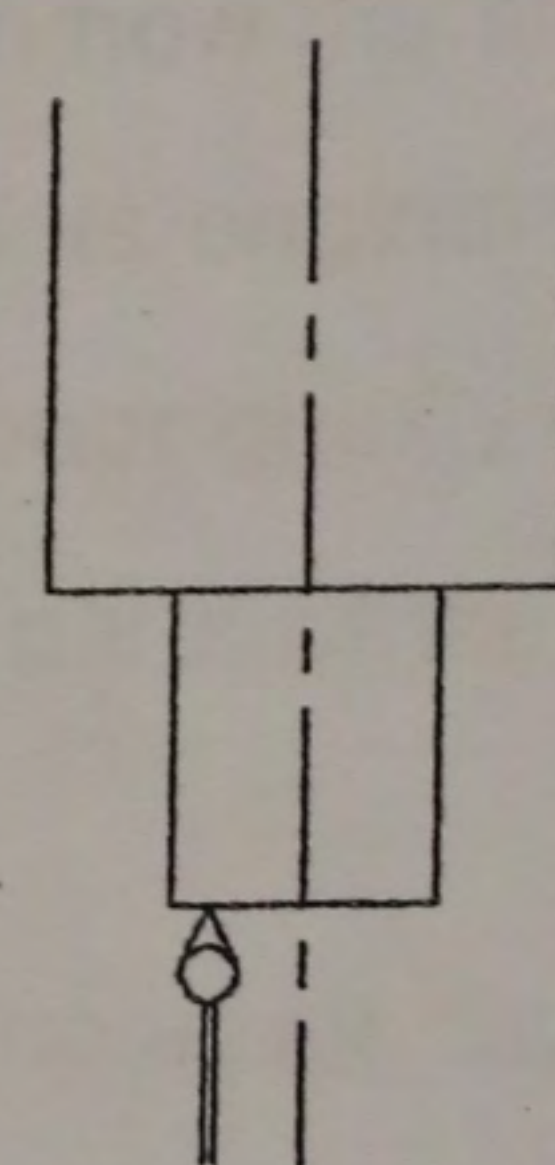
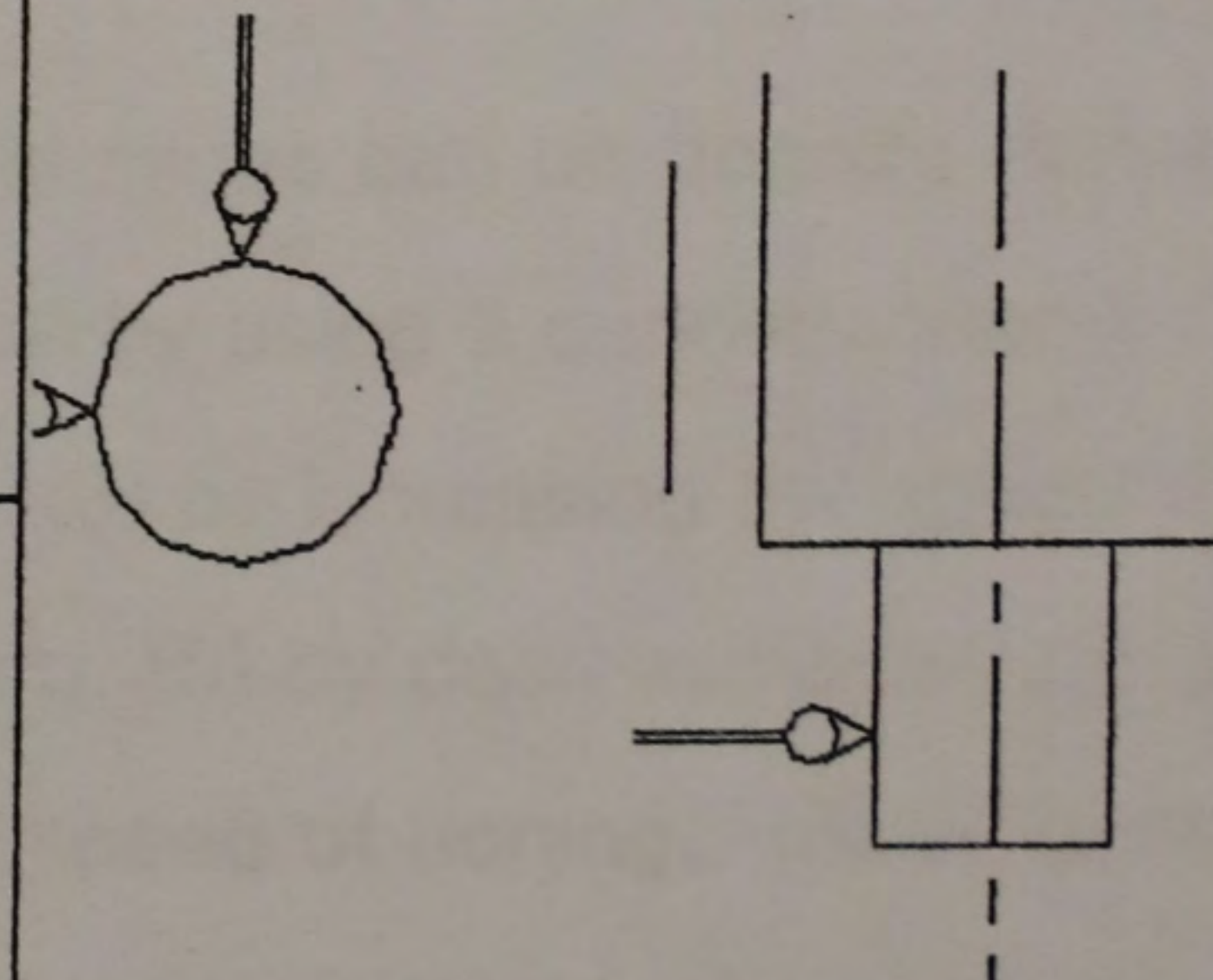
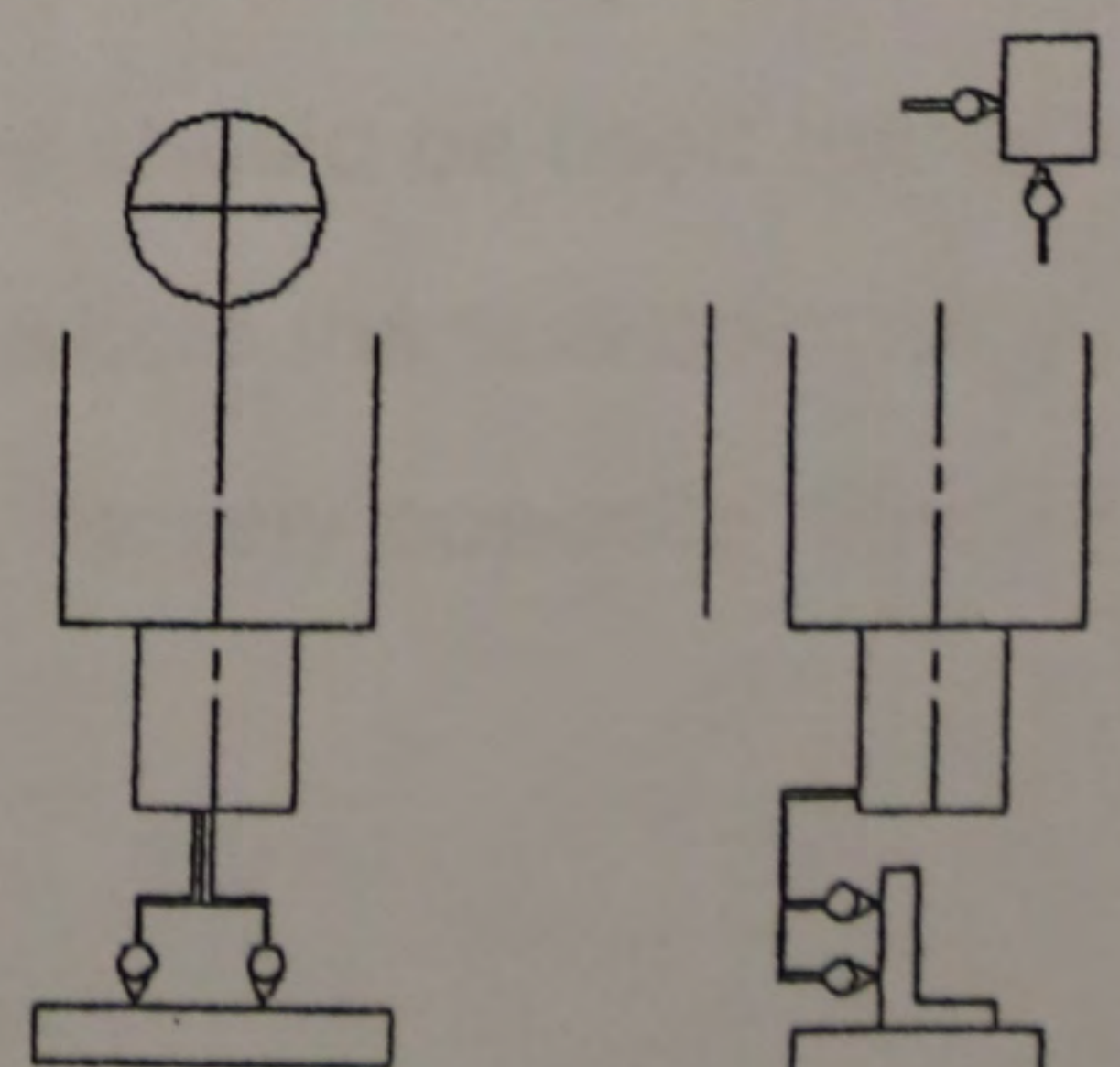
2-8. Refueling Chart (HS464,6,470)

2-8. Refueling Chart						
No.	Location Used	Refueling Method	inspecti on diffusio	Recommended Oil		
				MOBIL OIL CO.	SHELL OIL CO.	
①	Oil Pressure Tank	100 Liter		VACUOLIN OIL 1405	TELLUS OIL 32	Once every 6 months Maintain Oil Level
②	BALL SCREW					
③	Inside the main axis, BEARING, GEAR					
④	Upper Main Axis GUIDE(2 spots)	From Lubricant Oil		VACTRA OIL No. 2 (SLC)	TONNE OIL T-68	Refuel every 2 weeks
⑤	Lower Main Axis GUIDE(2 spots)					
⑥	BEARING for SPLINE					
⑦	SPLINE	OIL BATH				
⑧	Upper Bearing of BALL SCREW					
⑨	BEARING for Cutting					
⑩	COOLANT TANK	400 Liter			YUSHIRON CUT H35	

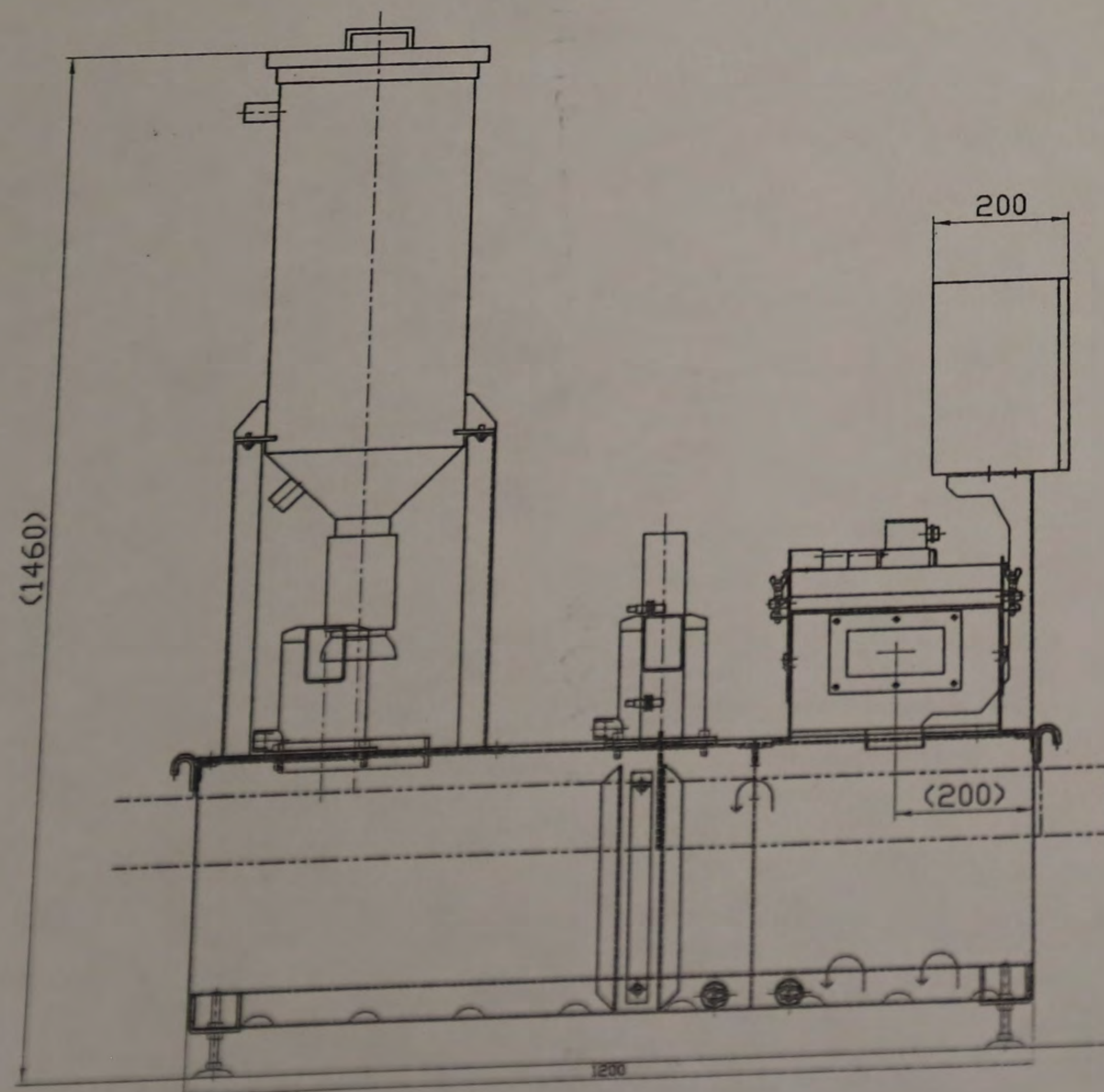
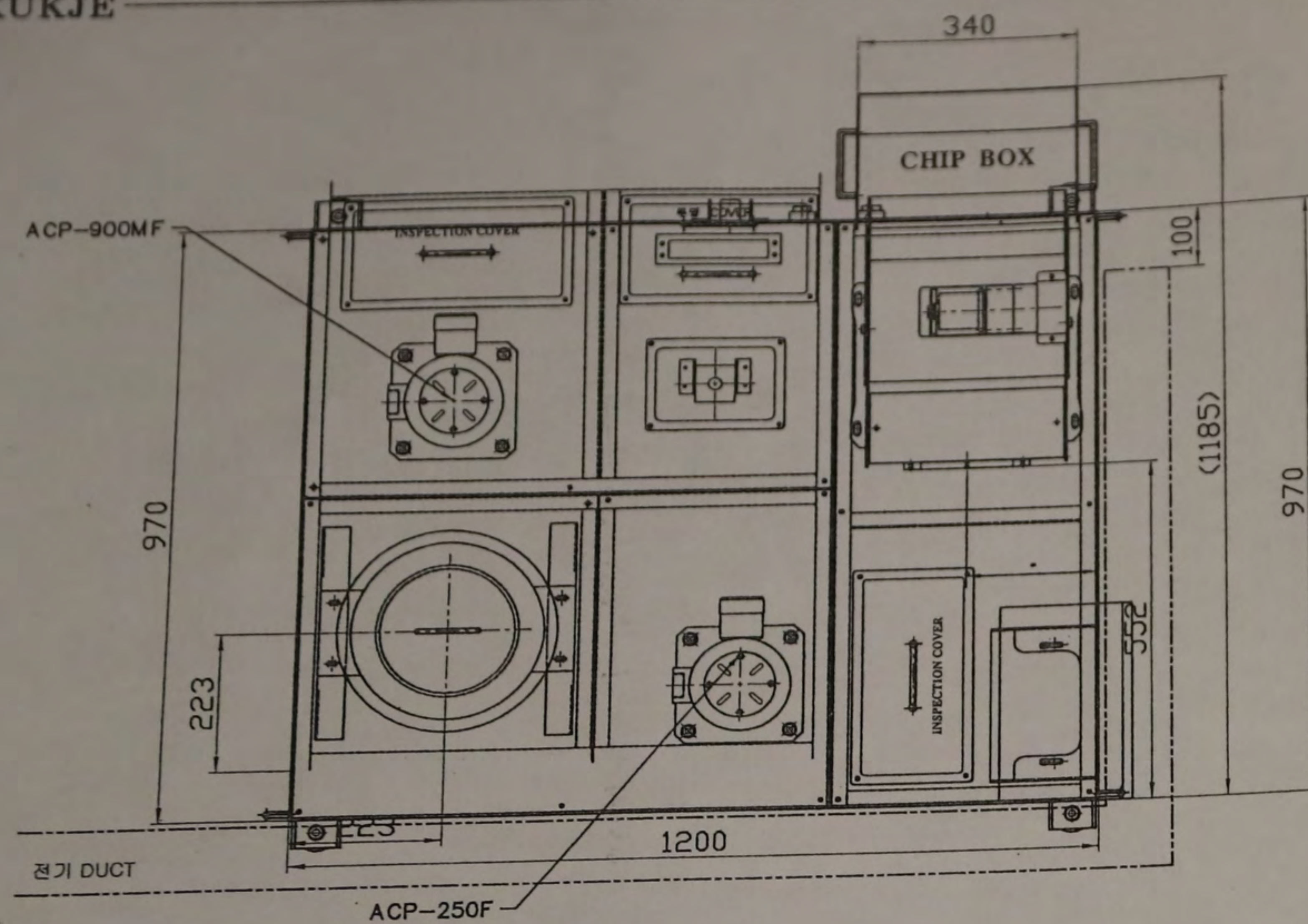


INSPECTOR	FOREMAN	CHECKED	APPROV
권 재석			

2007년 6월 8일

KUJE DIAMOND		EXAMINATION RECORD		OP NO : ZC45/48-90(HS-46)		
customer : H.M.M.C		HONING M/C KT-31S-2		WORK : SPEED GEAR		
NO	Item		Illustration	tolerance	NO	Measure
1	RUN OUT OF MAIN SPINDLE	TO be measured around bottom end of spindle		0.02	ROUGH	0.002
					FINISH	0.0015
2	CAM ACTION OF MAIN SPINDLE	TO be measured around bottom end of spindle		0.02	ROUGH	0.0016
					FINISH	0.0017
3	parallelism of main spindle movement with main spindle center line	cross direction		0.03 in 100	ROUGH	0.015
		longitudinal		0.03 in 100	FINISH	0.013
4	squareness of main spindle center line with mounting reference surface of work holder	cross direction		0.03 in 100	ROUGH	0.022
		longitudinal		0.03 in 100	FINISH	0.024

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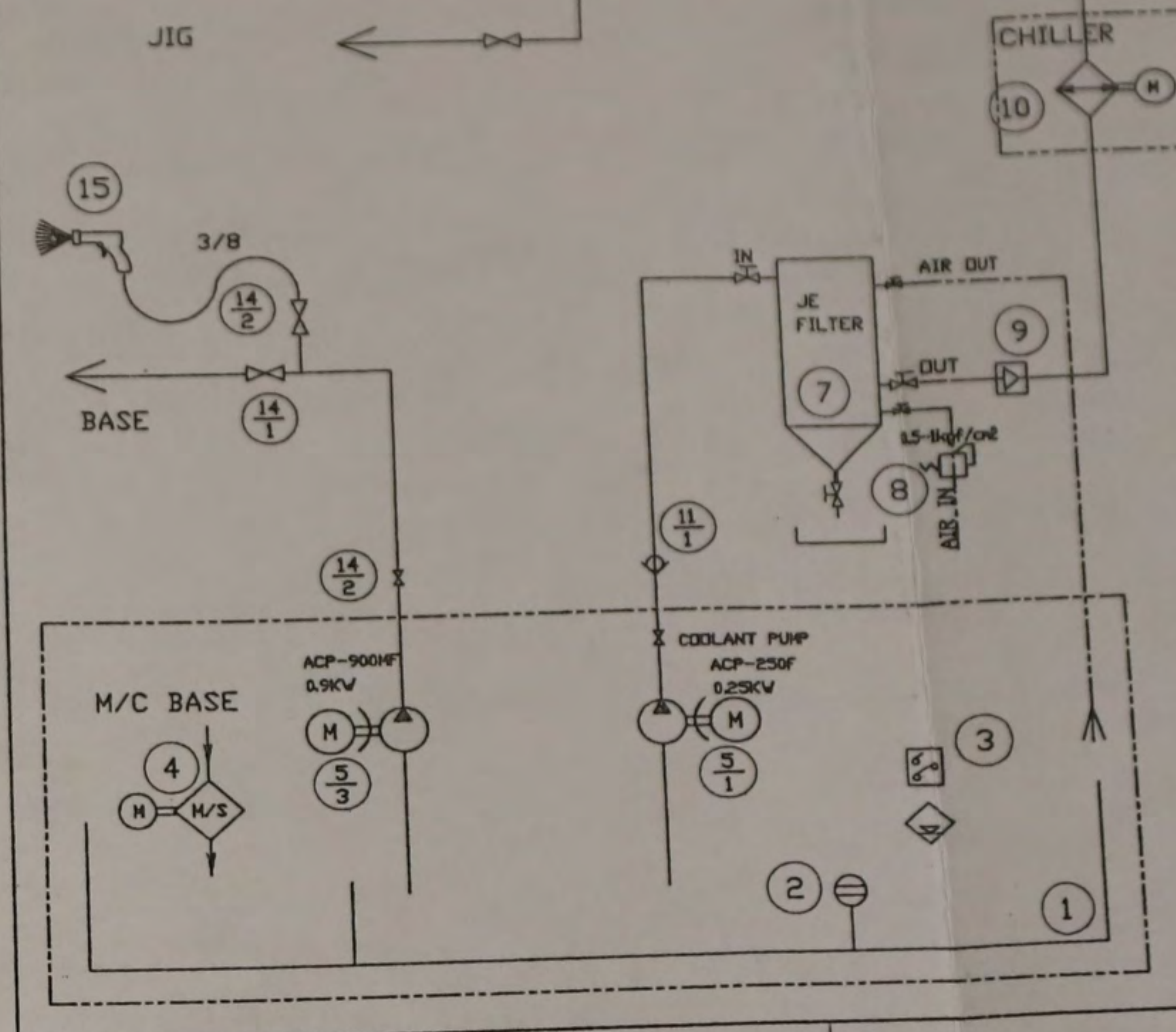


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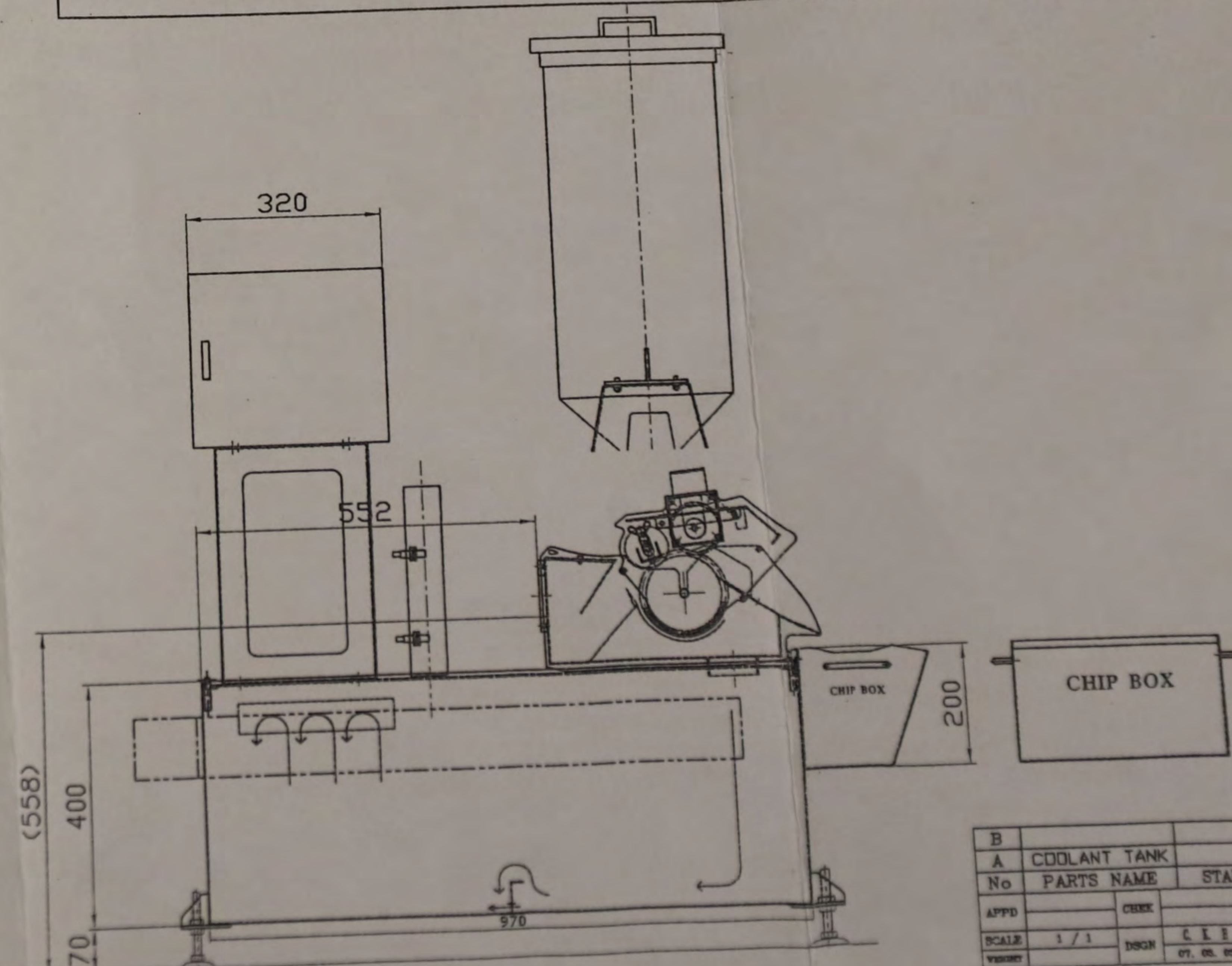
H1 (ROUGH)

H2 (FINISH)

JIG

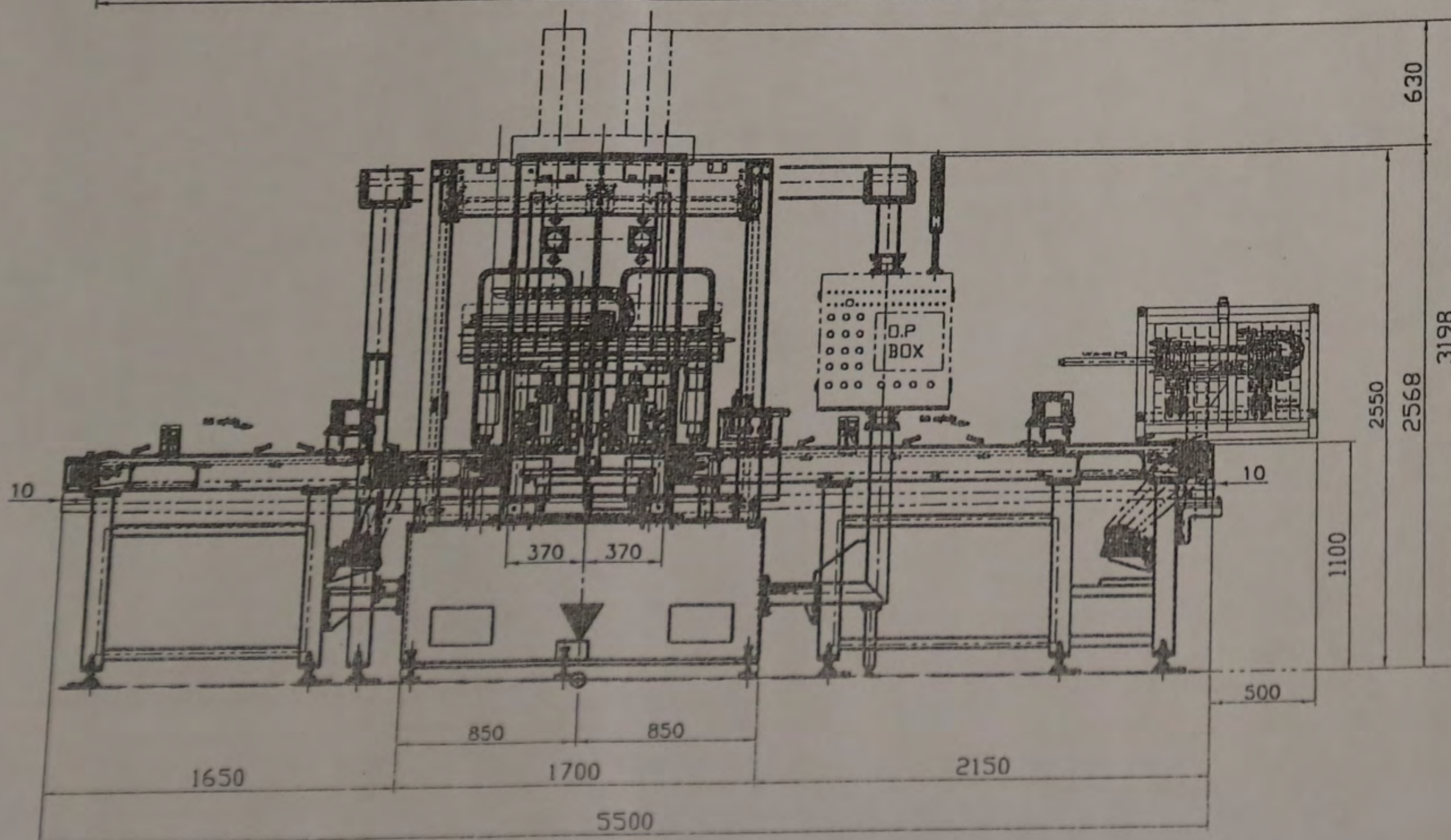
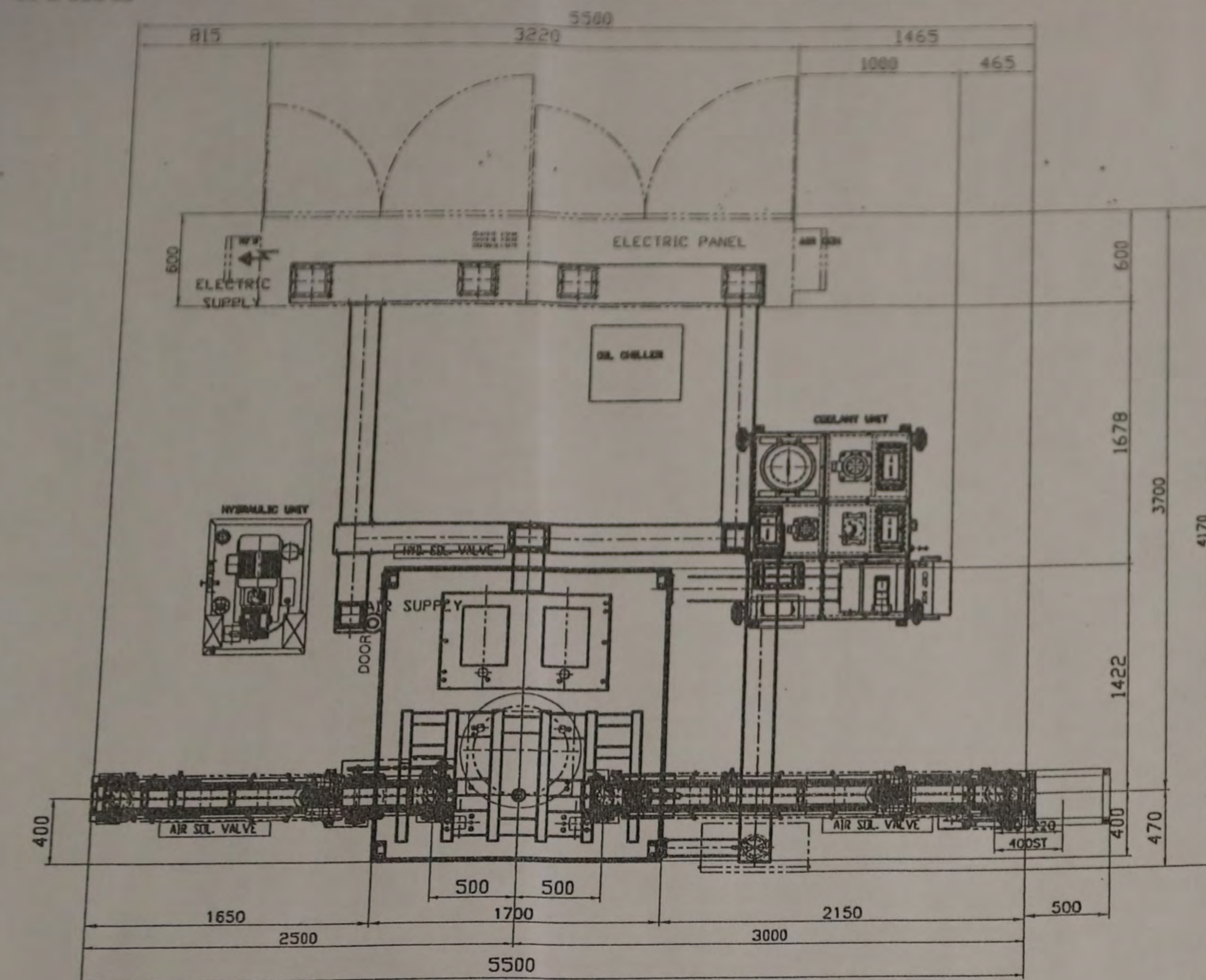


AC 400V 50Hz				
15	COOLANT GUN		1	
14	BALL VALVE	SP-15	2	
13				
12				
11	CHECK VALVE			
10	OIL COOLER	KOB-2050LINE TYPE	1	방열기 AC 400V
9	FLOW SENSOR	IFV510-04-B6	1	SMC DC 24V
8	Regulator	AR3000-03BG-1	1	SMC
7	JE FILTER	JE75-50SA-3D	1	J.E
6	COOLANT PUMP	ACP-900MF	1	A-EYUNG AC 400V
5	COOLANT PUMP	ACP-250F	1	A-EYUNG AC 400V
4	MAGNETIC SEPARATOR	MS-80PS	1	태초 유압기 AC 400V
3	FLOAT SWITCH		1	
2	LEVEL GAUGE		1	
1	COOLANT TANK	400L	1	
No	PARTS NAME	STANDARD	QTY	MAKER REMARK
APPD	CHECK	NAME OF SECTION	COOLANT CIRCUIT	
SCALE	DOGN	C.E.N	NAME	KT-31G-2
VERNOY		07.05.07		
USER	H-CZECH	DRAWING No.	06H-S464G10-000-2/2	
MFG.No	HA464-470	STANDARD No.		A3



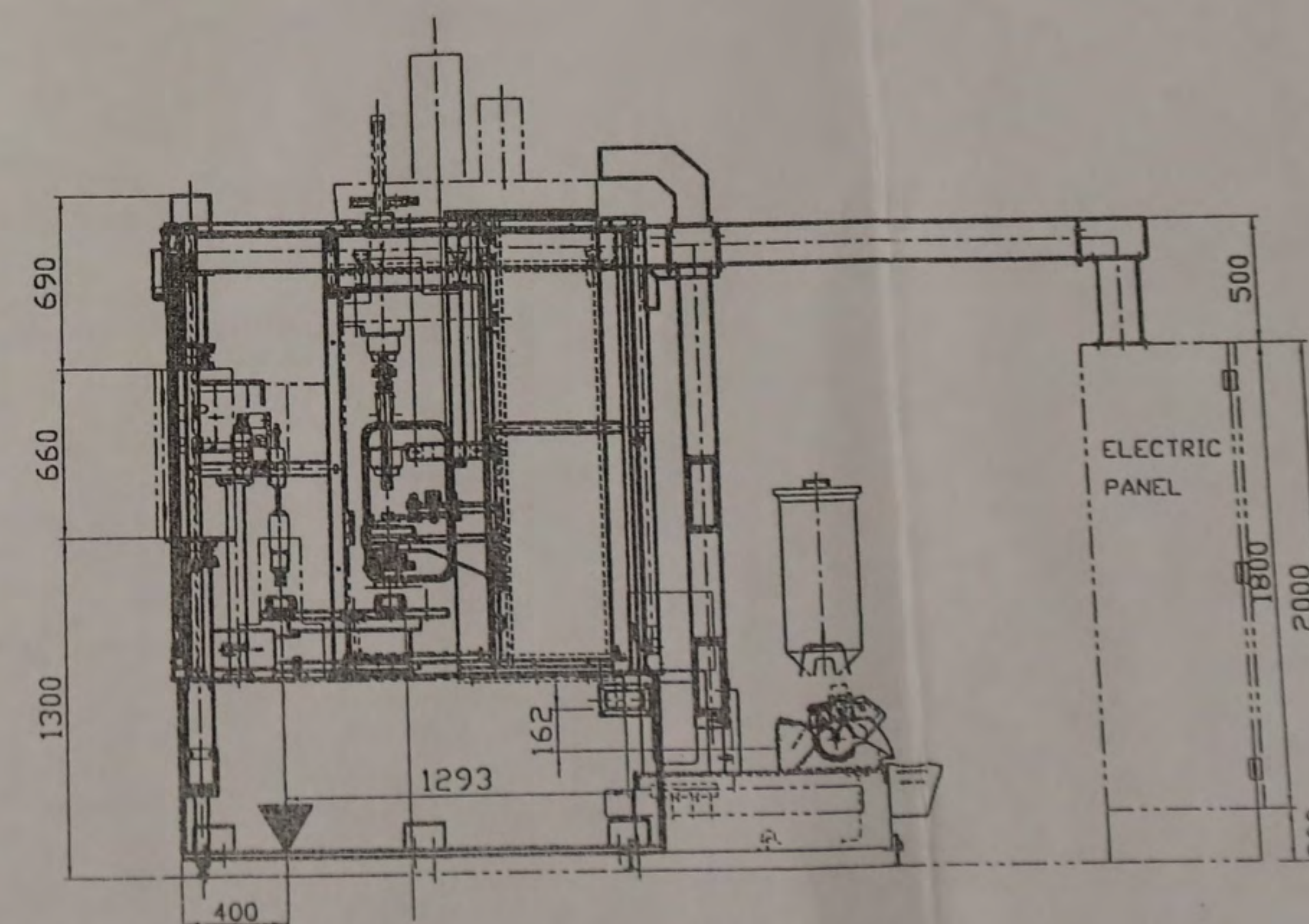
B				
A	COOLANT TANK		7	SS41
No	PARTS NAME	STANDARD	QTY	MAT'L REMARK
APPD	CHECK	NAME OF SECTION	COOLANT UNIT	
SCALE	1/1	DOGN	C.E.N	NAME
VERNOY		07.05.07		KT-31G-2
USER	H-CZECH	DRAWING No.	06H-S464G10-000	

KUKJE



HONING M/C

NO	OP NO	WORK	KUKJE	
1	ZC40/43-70	1ST, 2ND	HS464	LH⇒RH
2	ZC45/48-90	3RD I/P, 4TH I/P	HS466	LH⇒RH
3	ZC53/57/58G-90	5TH OP, 6TH O/P, RVS	HS470	LH⇒RH



CHAMFER	HARDNESS	APPRO	CHECK	NAME OF SECTION	H/C LAYOUT
C	HRC				
TOLERANCE (CUTTING)					
DIMENSION	1ST	2ND	3RD	SCALE	1 / 20
LIMIT				DRG	C L H
0.5 - 1	0.05	0.1	0.2	NAME	KT-31F-2
1 - 5	0.1	0.2	0.5	USER	HMMC
5 - 10	0.15	0.3	0.8	DATE	06H-S464A00-000
10 - 100	0.2	0.5	1.2	REV	
100 - 315					
SYN	REVISION	DATE	DSG	APP	

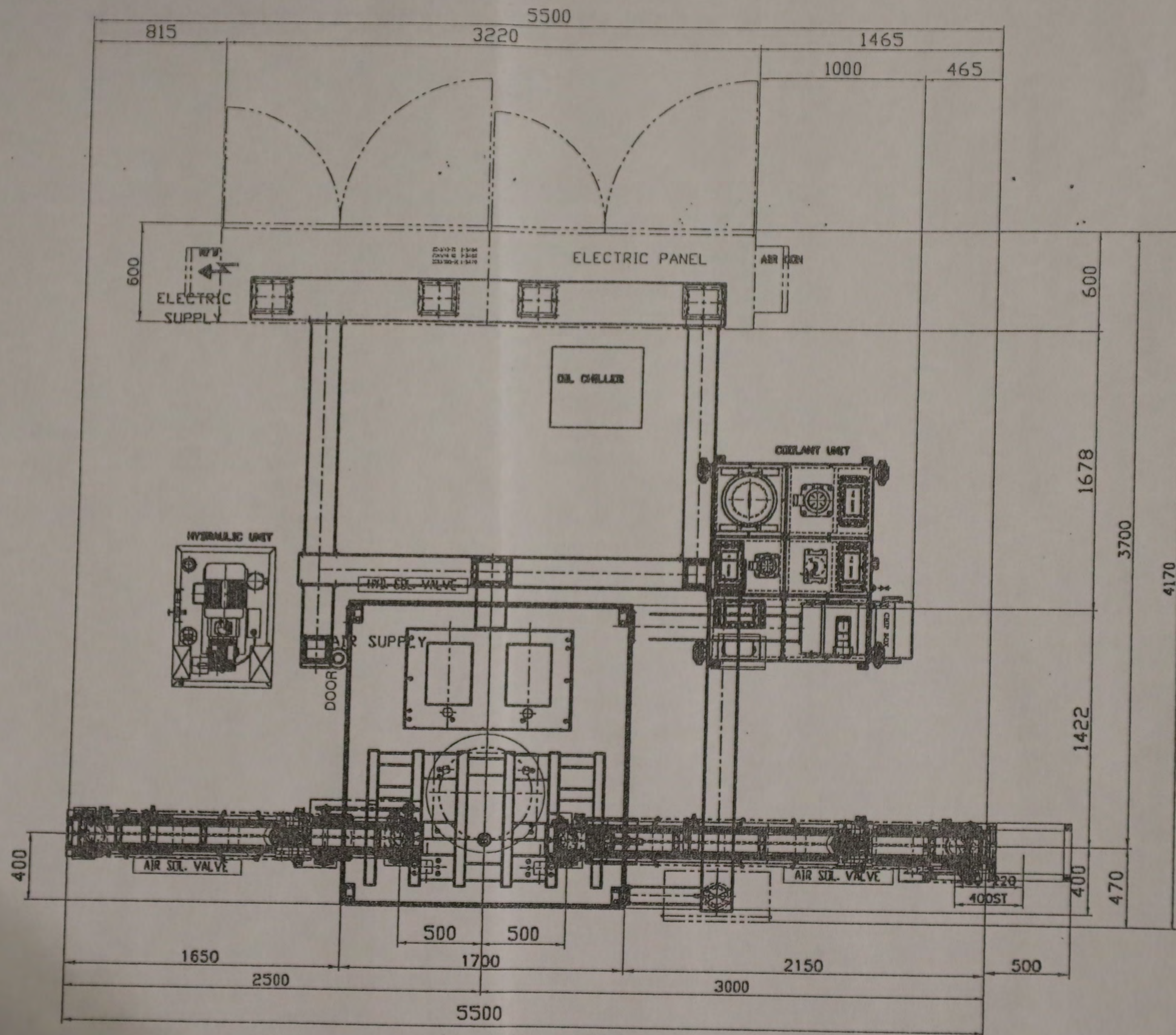
465

600
1678
3700
4170
1422

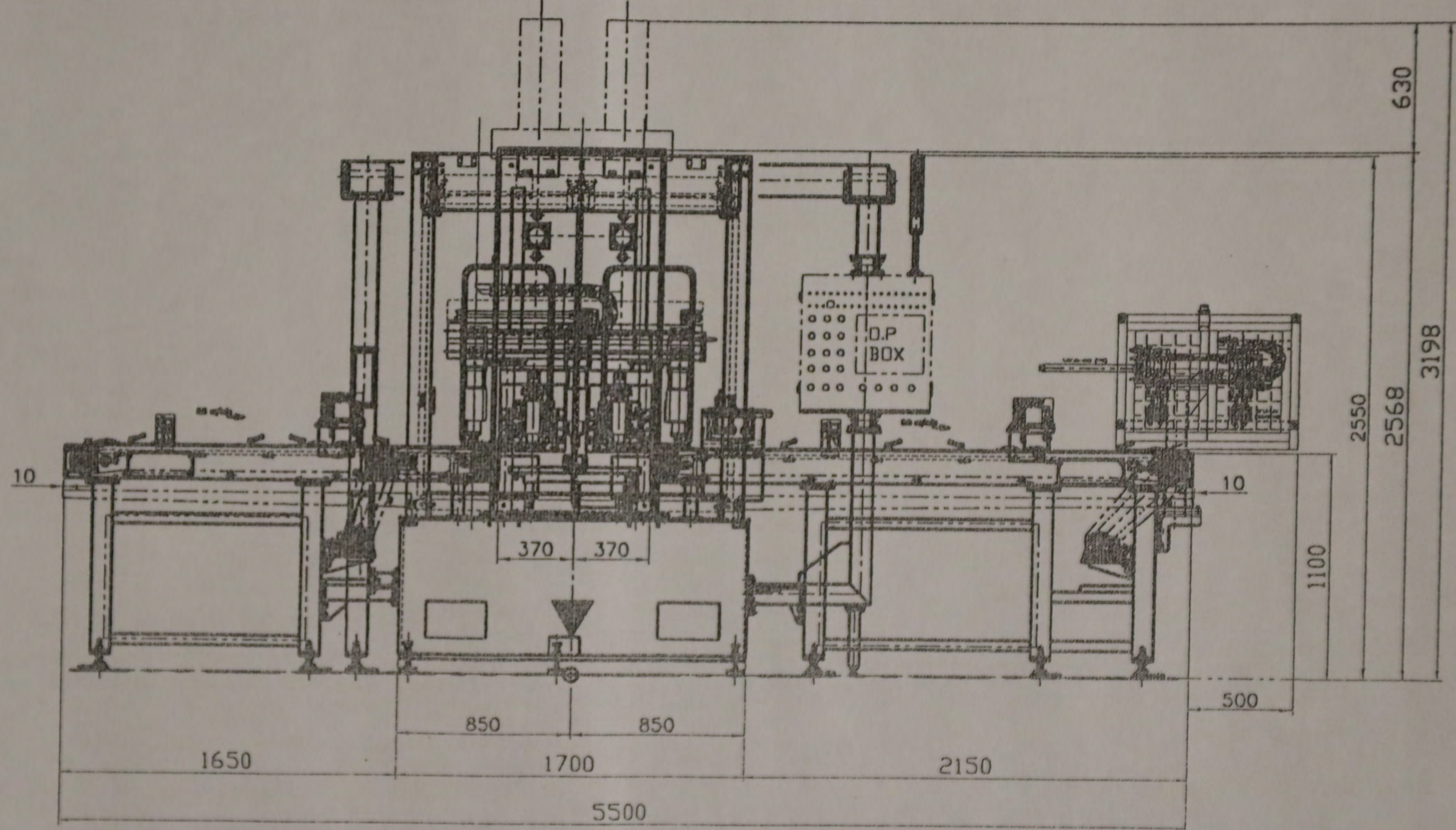
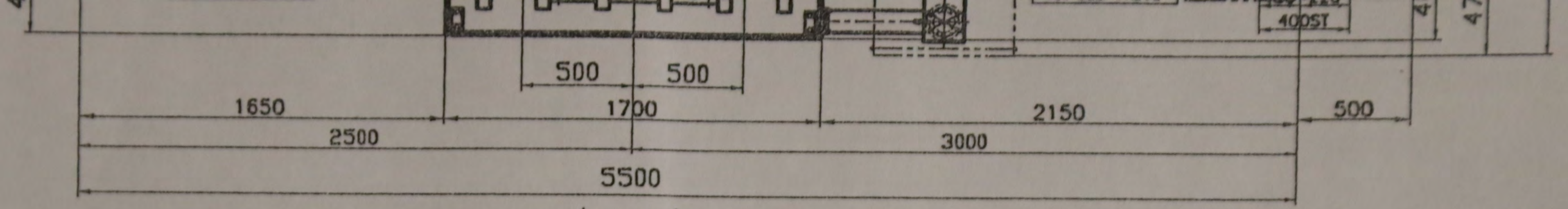
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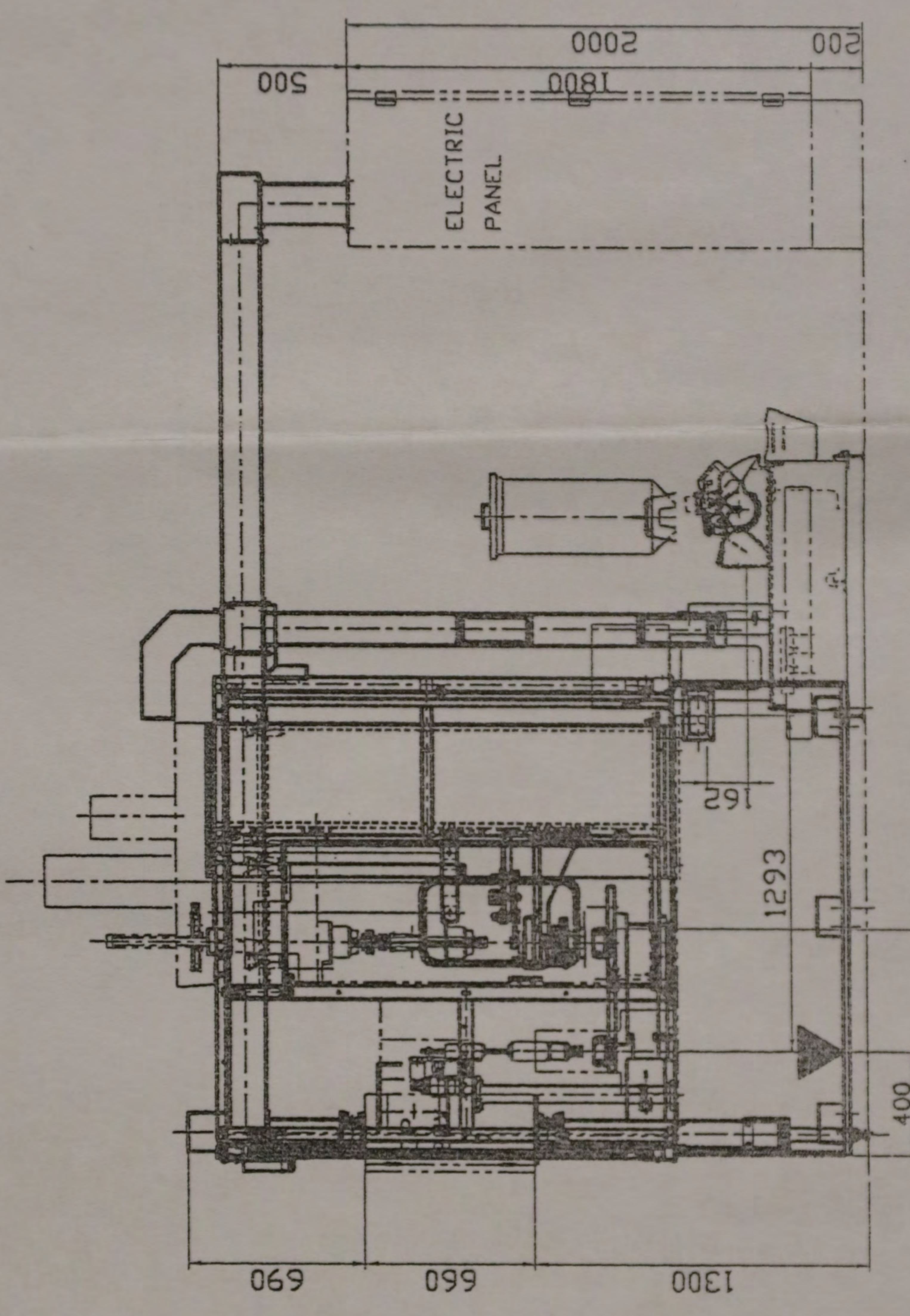
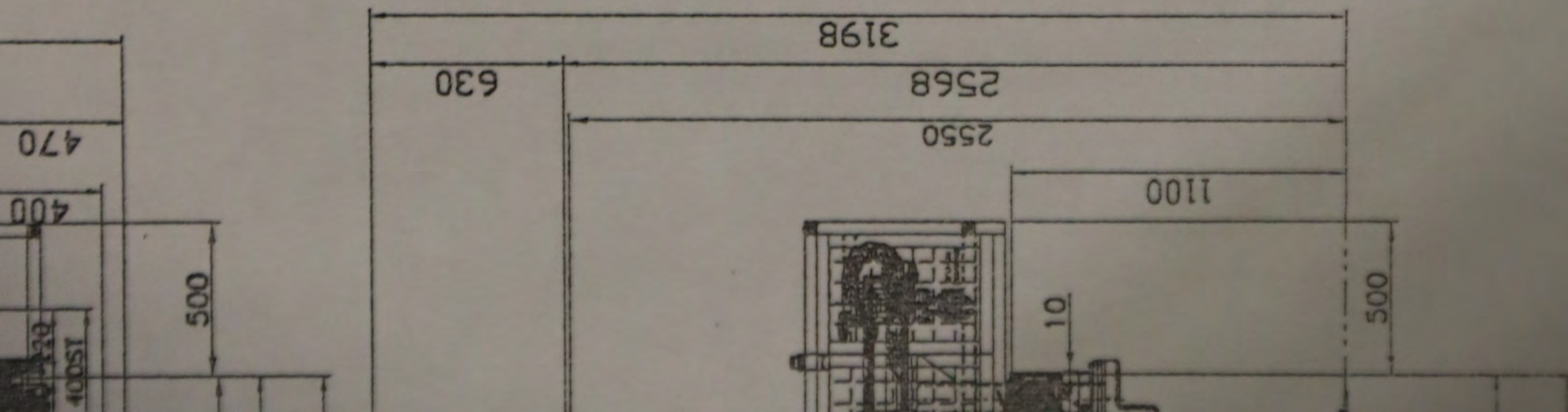
NO	OP NO	WORK	KUKJE	
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2	ZC45/48-90	3RD I/P, 4TH I/P	HS466	LH⇒RH
3	ZC53/57/58G-90	5TH OP , 6TH O/P, RVS	HS470	LH⇒RH

KUKJE

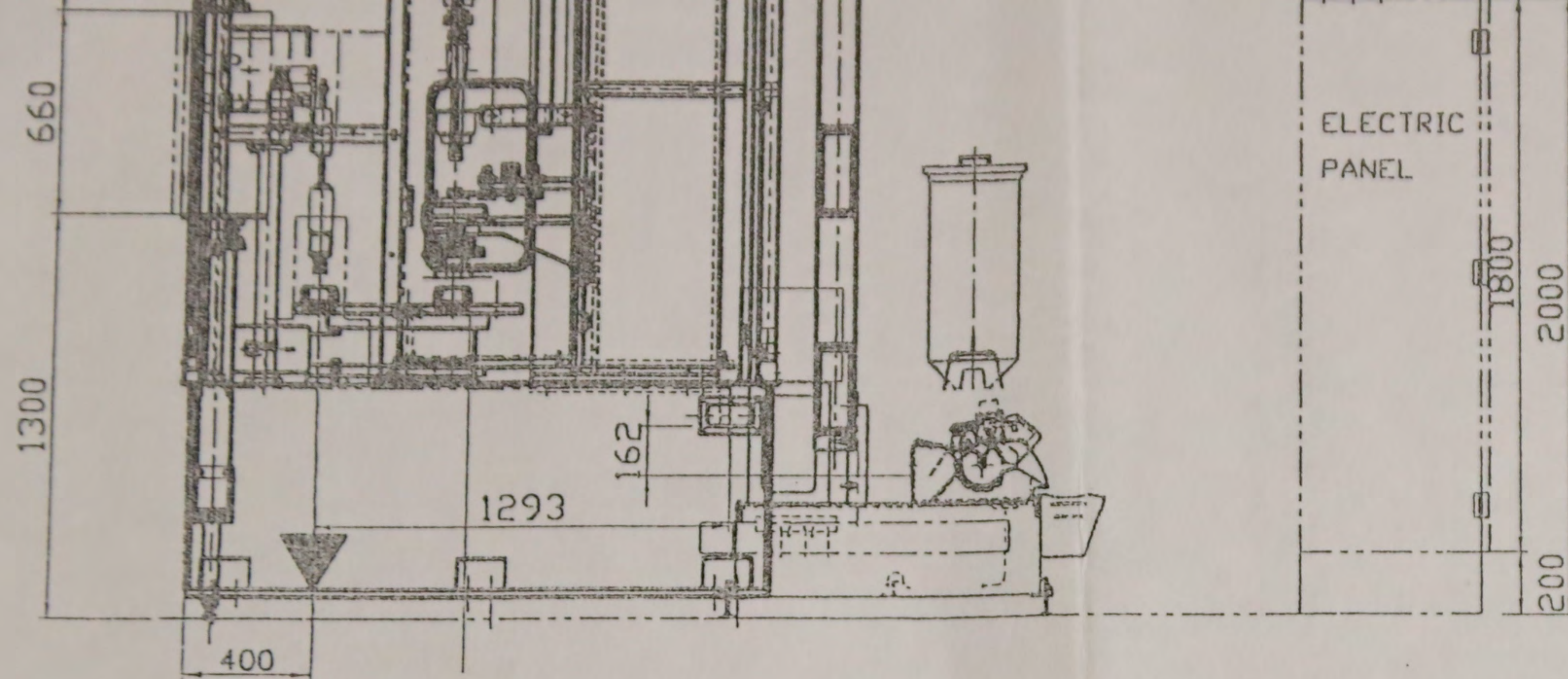


NO	
1	ZC4
2	ZC4
3	ZC5





B		A		0		1		S	
No		PARTS NAME		STANDARD		QTY		MAT'L	
APPD		CHECK		NAME OF SECTION		N/C LAYOUT		REMARK	
SCALE		1 / 20		C K H		KT-31F-2		06H-S464A00-000	
FACIT		USER		HMMC		DRAWING No.		STANDARD	
DATE		DATE		DATE		DATE		DATE	
REVISION		REVISION		REVISION		REVISION		REVISION	
SYN		SYN		SYN		SYN		SYN	
TOLERANCE (CUTTING)		TOLERANCE (CUTTING)		TOLERANCE (CUTTING)		TOLERANCE (CUTTING)		TOLERANCE (CUTTING)	
DIMENSION LIMITS		DIMENSION LIMITS		DIMENSION LIMITS		DIMENSION LIMITS		DIMENSION LIMITS	
0.5 ~ 3		0.5 ~ 3		0.5 ~ 3		0.5 ~ 3		0.5 ~ 3	
3 ~ 30		3 ~ 30		3 ~ 30		3 ~ 30		3 ~ 30	
30 ~ 120		30 ~ 120		30 ~ 120		30 ~ 120		30 ~ 120	
120 ~ 315		120 ~ 315		120 ~ 315		120 ~ 315		120 ~ 315	
HARDNESS HRC		HARDNESS HRC		HARDNESS HRC		HARDNESS HRC		HARDNESS HRC	
1ST		1ST		1ST		1ST		1ST	
2ND		2ND		2ND		2ND		2ND	
3RD		3RD		3RD		3RD		3RD	
0.1		0.1		0.1		0.1		0.1	
0.2		0.2		0.2		0.2		0.2	
0.3		0.3		0.3		0.3		0.3	
0.5		0.5		0.5		0.5		0.5	
1.2		1.2		1.2		1.2		1.2	



					B									
					A		0		0		1		S	
					No		PARTS NAME		STANDARD		Q'TY		MAT'L	
					CHAMFER C		HARDNESS HRC		APPD		CHK		NAME OF SECTION	
					TOLERANCE(CUTTING)				SCALE		C K H		H/C LAYOUT	
					DIMENSION LIMITS		1ST ±		2ND ±		3RD ±		NAME	
					0.6 ~ 1		0.05		0.1		0.2		KT-31F-2	
					3 ~ 30		0.1		0.2		0.5			
					30 ~ 120		0.15		0.5		0.8			
					120 ~ 315		0.2		0.6		1.2			
SYN					REVISION		DATE		DSGN		APPD		USER	
													HMMC	
													DRAWING No.	
													06H-S464A00-000	
													STANDARD	