

BAB 6

KESIMPULAN

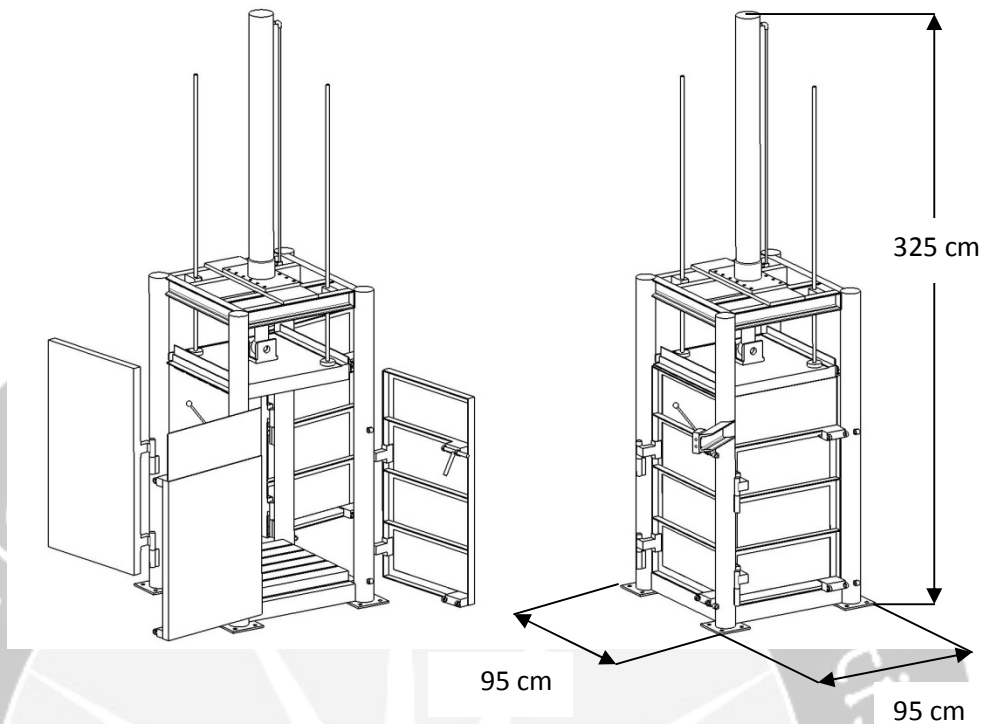
6.1. Kesimpulan

Berdasarkan pemilihan alternatif design, maka dipilih alternatif 2. Dengan gambar teknik seperti pada halaman lampiran. Hasil pembuatan disimpulkan bahwa:

- a. Didapat mesin press sampah plastik sesuai permintaan *Client* yaitu dengan spesifikasi:

Tabel 6.1. Spesifikasi Mesin Press Sampah Plastik

Dimensi Mesin Press	95x95x325 cm
Motor Penggerak	MITSUBISHI 6D14-1A
	Diesel 6 Cylinder
	6557 cc; 155 HP
Pompa Hidrolik	KP-75A
Selang Oli Hidrolik	DIN EN 853 2SN ½"
	WP 275 Bar
	Heftig
Control Valve	EB-4/1S-3/18L/c-4
	Max 150 Bar
	Fuji Hydraulic
Piston Hidrolik	Ø74x1420 mm
Tekanan Kerja	0-100 Bar
Kecepatan Produksi	180 kg/jam
Dimensi Output Produk	80x80x80 cm
Biaya Total Pembuatan	Rp. 31.358.000, -



Gambar 6.1. Rancangan Mesin Press Sampah Plastik

- b. Berdasarkan pengujian yang dilakukan, maka:
- Ukuran produk yang dihasilkan berupa balok sampah plastik yang padat berukuran $\pm 80 \times 80 \times 80 \text{ cm}$
 - Kecepatan produksi mesin ini yaitu ± 18 produk setiap harinya (6 jam kerja) atau $\pm 180 \text{ kg/jam}$.

6.2. Saran

Mesin ini sudah dapat berfungsi dengan baik, tetapi kecepatan produksi masih bermasalah karena belum dapat memenuhi permintaan *Client*. Mesin ini dapat memenuhi permintaan jika dilakukan perubahan pada *Control Valve*. Jika *Control Valve* diganti dengan yang lebih besar yaitu maksimal 200 Bar, maka mesin ini mampu memproduksi lebih dari 180 kg/jam dan dapat mencapai 200 kg/jam.

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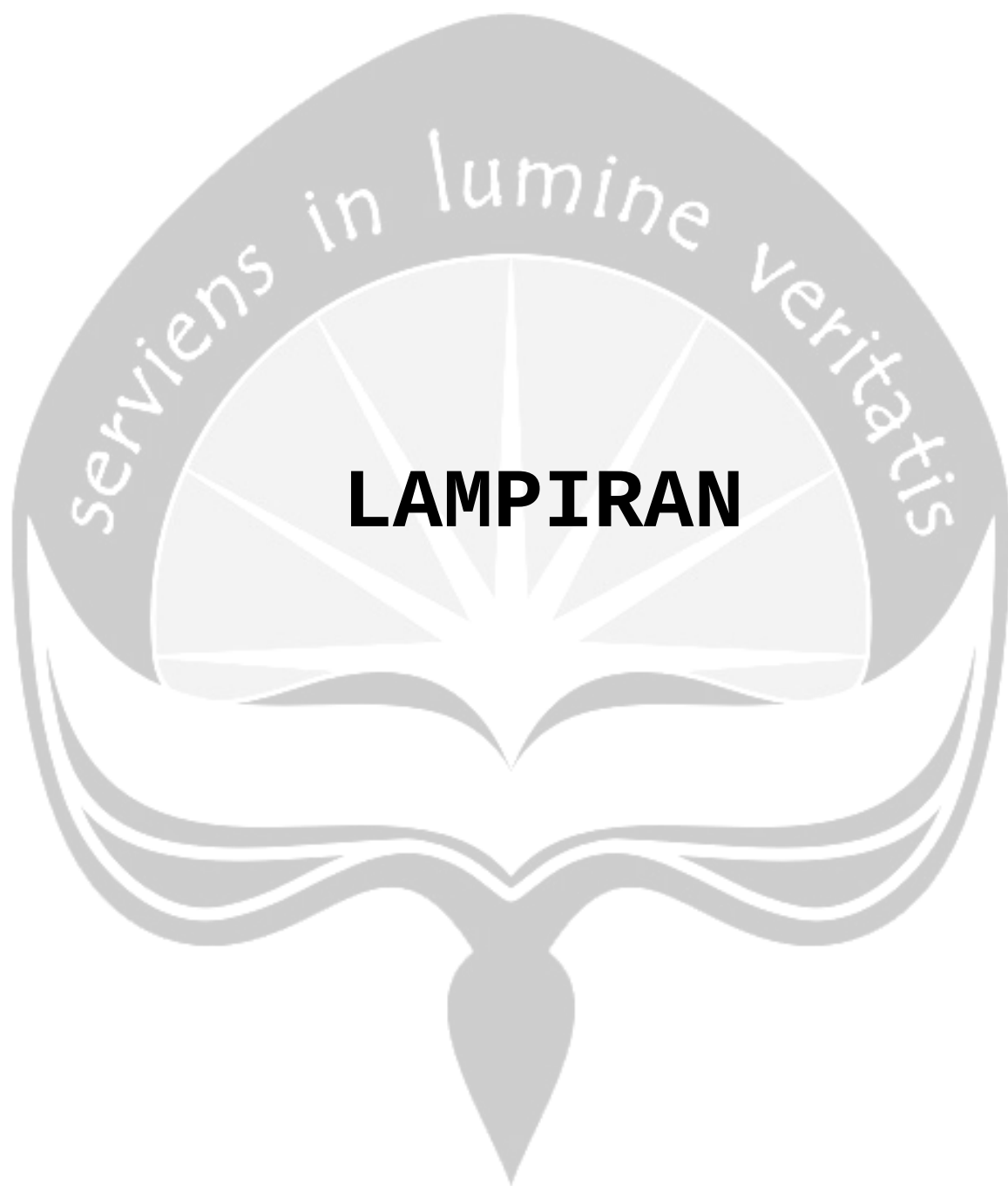
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Lampiran 1: Wawancara dengan *Client* untuk mendapatkan atribut design dan daftar tuntutan

Wawancara dilakukan di Perusahaan milik M. Christianto Cahyono di Labuan Dalem, Bandar Lampung hari Jumat tanggal 11 Juni 2010. Dibawah ini adalah ringkasan dari wawancara tersebut:

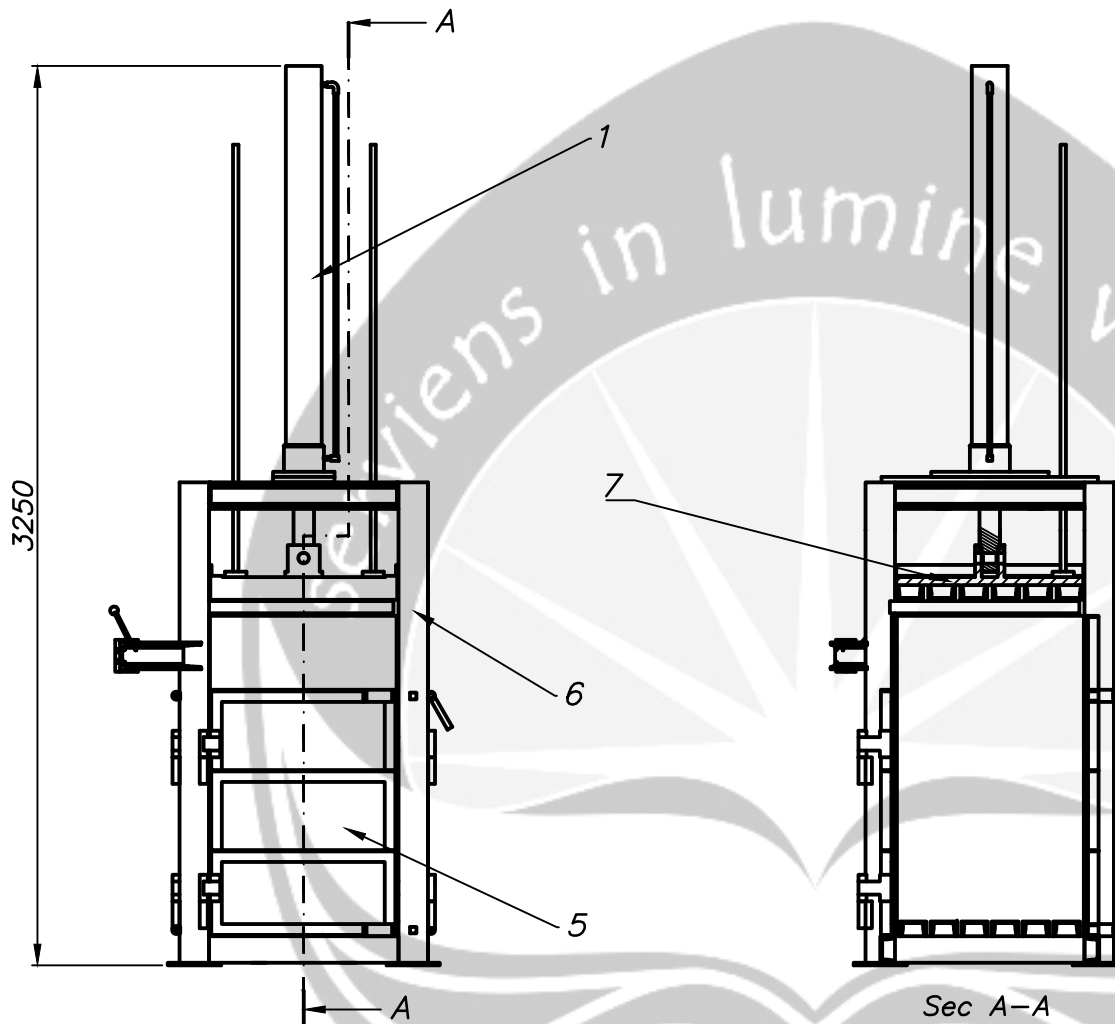
- a. Faktor apa sajakah yang penting pada mesin press?
Faktor keamanan, efisien, efektif, kecepatan produksi, pengoperasian dan perawatan.
- b. Faktor keamanan yang bagaimana yang diinginkan?
Ada pengatur tekanan hidrolik untuk pengaman mesin dan ada mekanisme pengaman agar operator tidak terjepit.
- c. Efisien yang bagaimana yang diinginkan?
Sedikit *input* (biaya produksi) tetapi menghasilkan banyak *output* (produk plastik press). Dan juga diinginkan siklus pengepressan cepat.
- d. Efektif yang bagaimana yang diinginkan?
Mampu memproduksi produk dengan dimensi 80x80x80 cm dan setiap produk beratnya 60 kg.
- e. Kecepatan produksi yang bagaimana yang diinginkan?
Kecepatan mencapai 200 kg/jam dan setiap produk hanya membutuhkan 5 langkah press.
- f. Pengoperasian yang bagaimana yang diinginkan?
Pengepressan mudah dioperasikan dan keluar-masuk mudah.
- g. Perawatan yang bagaimana yang diinginkan?
Perawatan mudah, tidak banyak yang mudah aus dan penggantian oli tidak terlalu sering atau berkala.

h. Permintaan apa sajakah yang diinginkan untuk mesin press sampah plastik ini?

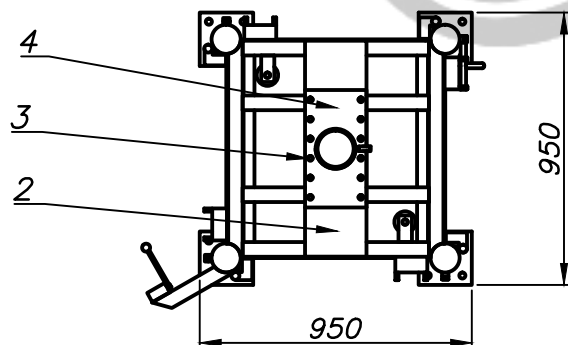
- Dimensi produk plastik 80x80x80 cm
- Tekanan press 150 Bar
- Biaya pembuatan mesin maksimal Rp. 20.000.000,-
- Mesin penggerak menggunakan *Diesel Engine*
- Menggunakan *Standard Part* agar mudah perawatan
- Kecepatan press rata-rata 200 kg/jam
- Keluar-masuk plastik mudah
- Konstruksi sederhana dan kokoh
- Ada katup pengaman tekanan oli hidrolik
- Operator tidak mungkin terjepit

i. Keinginan apa sajakah yang diinginkan untuk mesin press sampah plastik ini?

- Mudah dalam pengoperasian
- Mudah dalam perawatan
- Perawatan murah
- Umur pakai minimal 10 tahun
- Tahan terhadap korosi

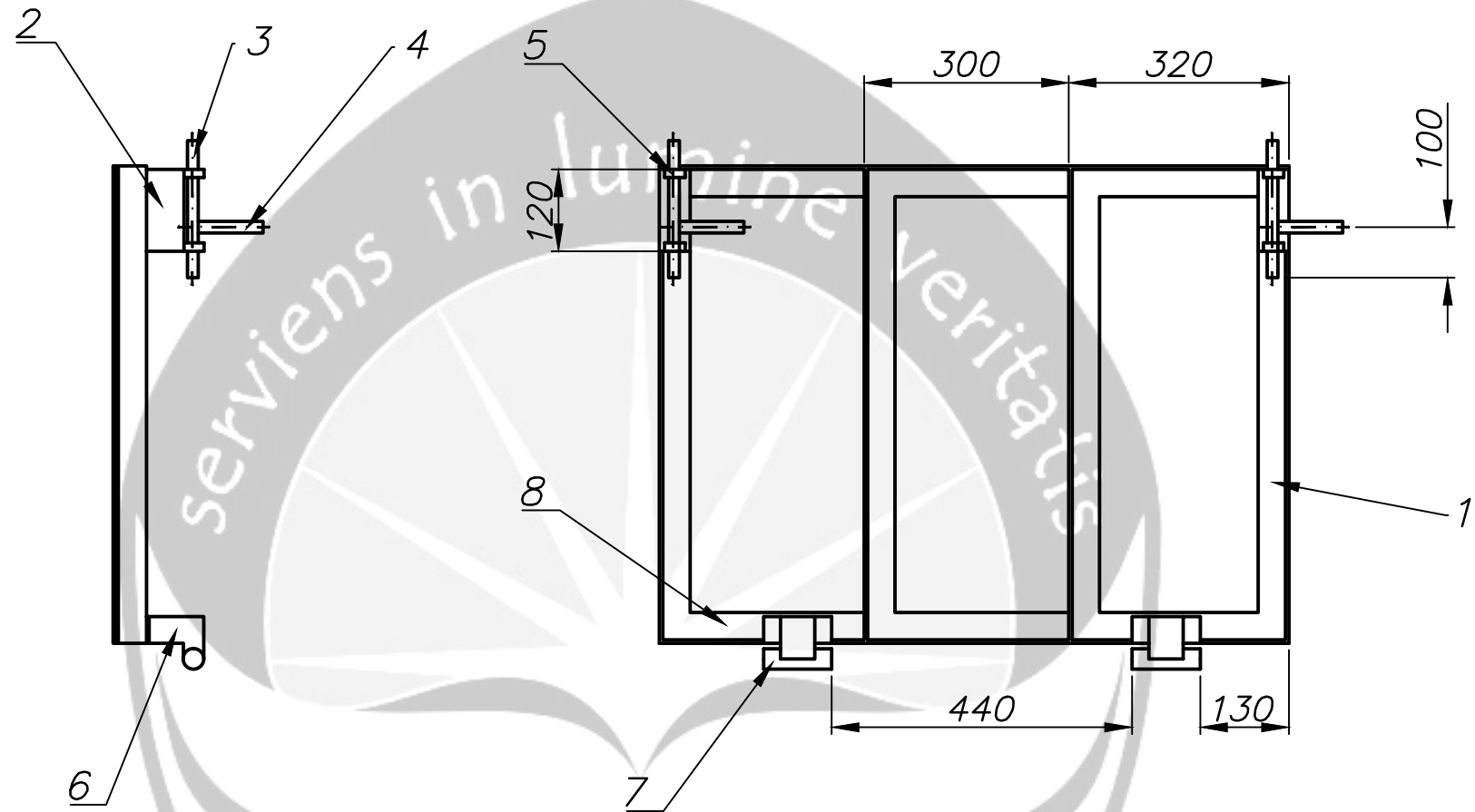


Description	Qty	No.	Dwg. No.
Hydraulic Actuator	1	1	Std. Part
Plat Sangga 1	1	2	1001
Bolt M18	12	3	Std. Part
Plat Sangga 2	1	4	1002
Sub Assy 1	4	5	1100
Sub Assy 2	1	6	1200
Sub Assy 3	1	7	1300



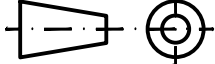
Sec A-A

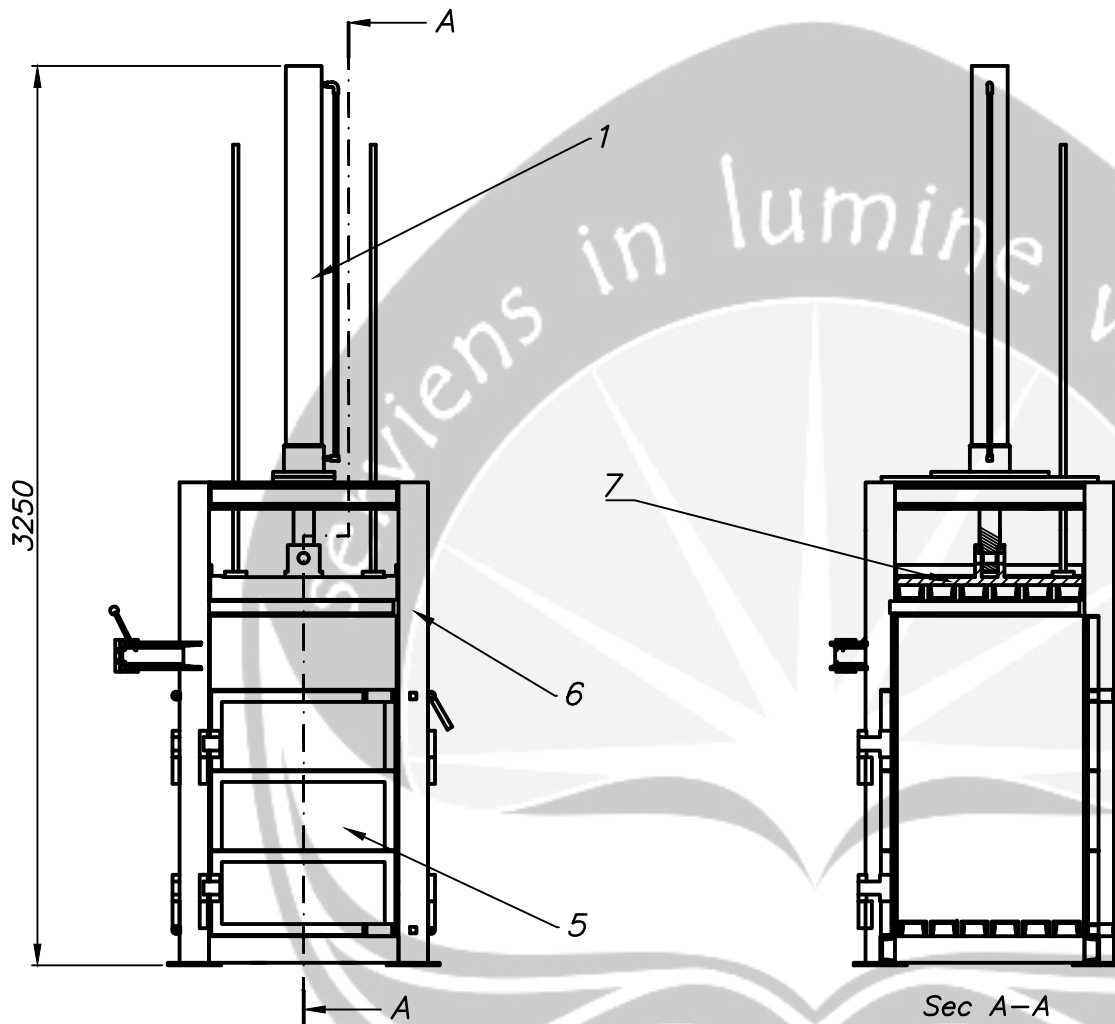
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Industrial Engineering UAJY	Operation	Dwg. Nr. 1000
Origin.	Rep.	Rep.by.
		SN. NS.



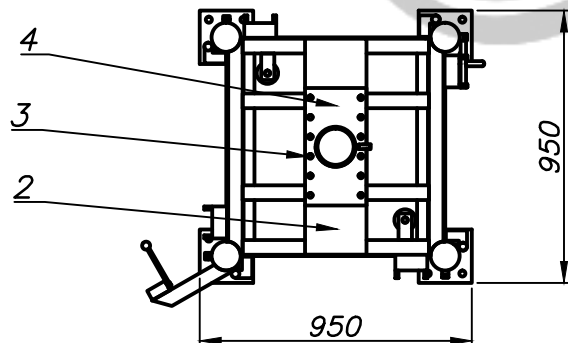
All Part Assembled by Arc Welding

Description	Qty	No.	Dwg. No.
Profil L45x690	4	1	1401
Block Ganjal Gagang	2	2	1102
Gagang 1	2	3	1103
Gagang 2	2	4	1104
Ring Gagang	4	5	1105
Block Ganjal Engsel	2	6	1106
Engsel Poros	2	7	1107
Profil L45x922	2	8	1405

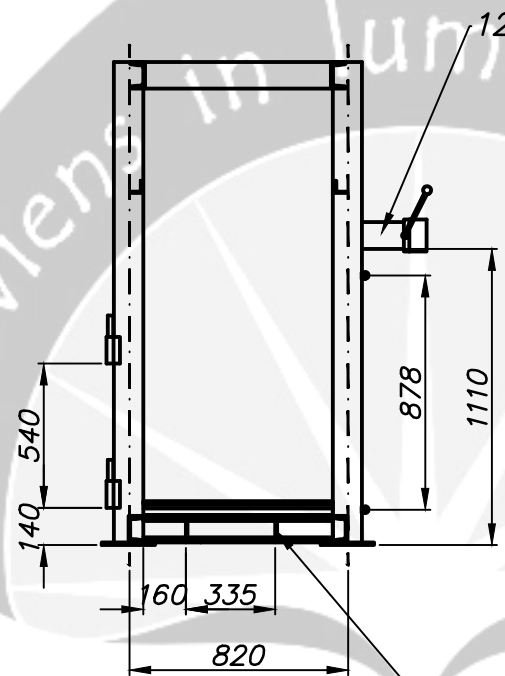
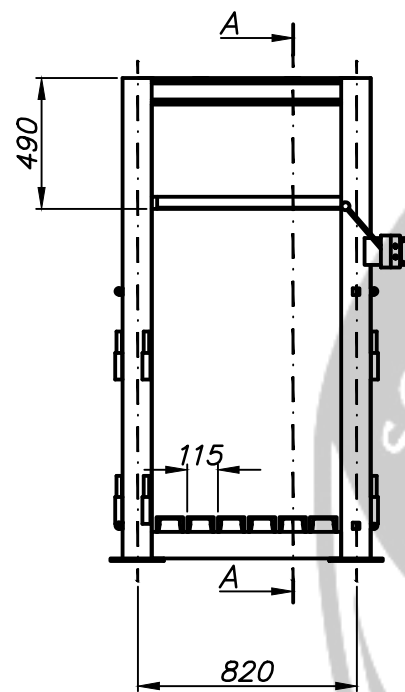
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Industrial Engineering UAJY			Operation Dwg. Nr. 1100
Origin.	Rep.	Rep.by.	SN. NS.



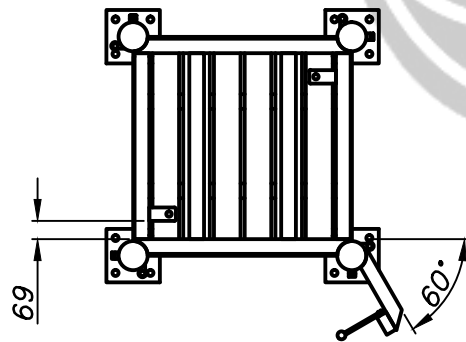
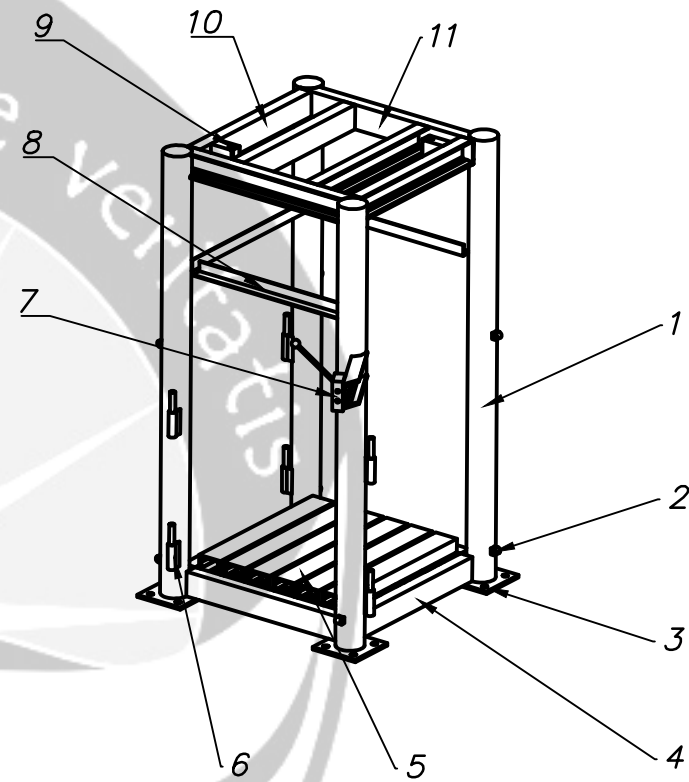
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Hydraulic Actuator	1	1	Std. Part
Plat Sangga 1	1	2	1001
Bolt M18	12	3	Std. Part
Plat Sangga 2	1	4	1002
Sub Assy 1	4	5	1100
Sub Assy 2	1	6	1200
Sub Assy 3	1	7	1300



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Origin.	Rep.	Rep.by.
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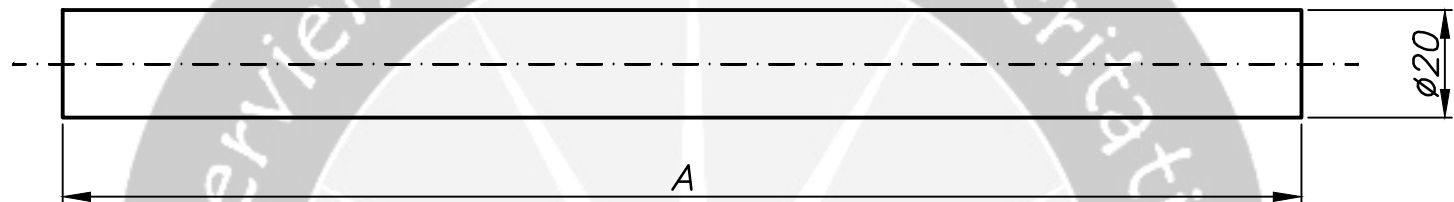
Sec A-A



Description	Qty	No.	Dwg. No.
Pillar	4	1	1201
Ring Gagang	8	2	1105
Plat Kaki	4	3	1202
Profil U100x710	4	4	1502
Profil U100x710	6	5	1502
Engsel	8	6	1203
Control Valve	1	7	Std. Part
Profil L45x710	3	8	1403
Guide 1	2	9	1204
Profil U100x697	4	10	1503
Profil U100x810	2	11	1504
Dudukan Valve	1	12	1205
Profil U100x710	2	13	1502

All Part Assembled by Arc Welding

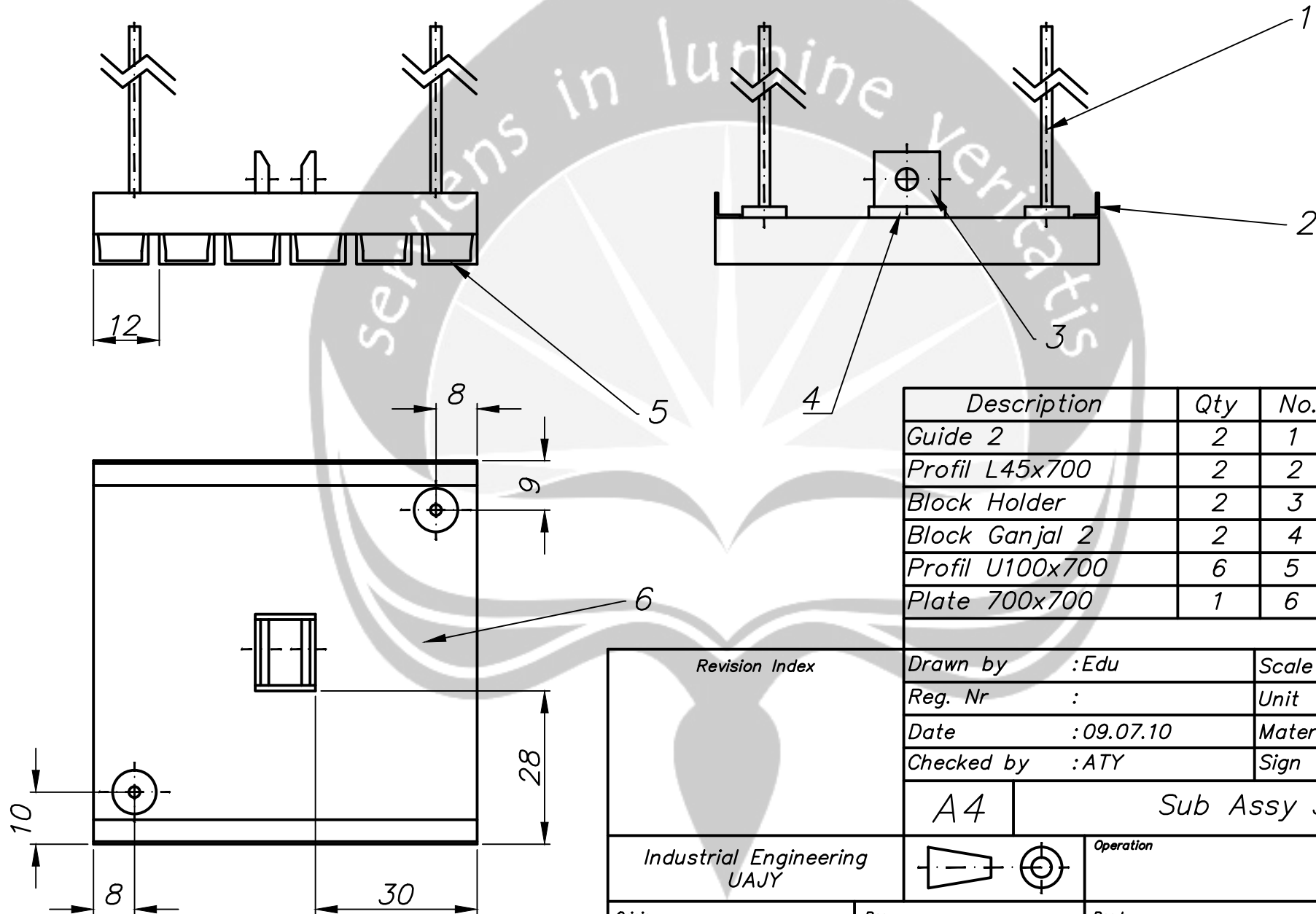
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		Dwg. Nr. 1200
Origin.	Rep.	Rep.by.
		SN. NS.



Deskripsi	A	Dwg.No.
Gagang 1	130	1103
Gagang 2	200	1104

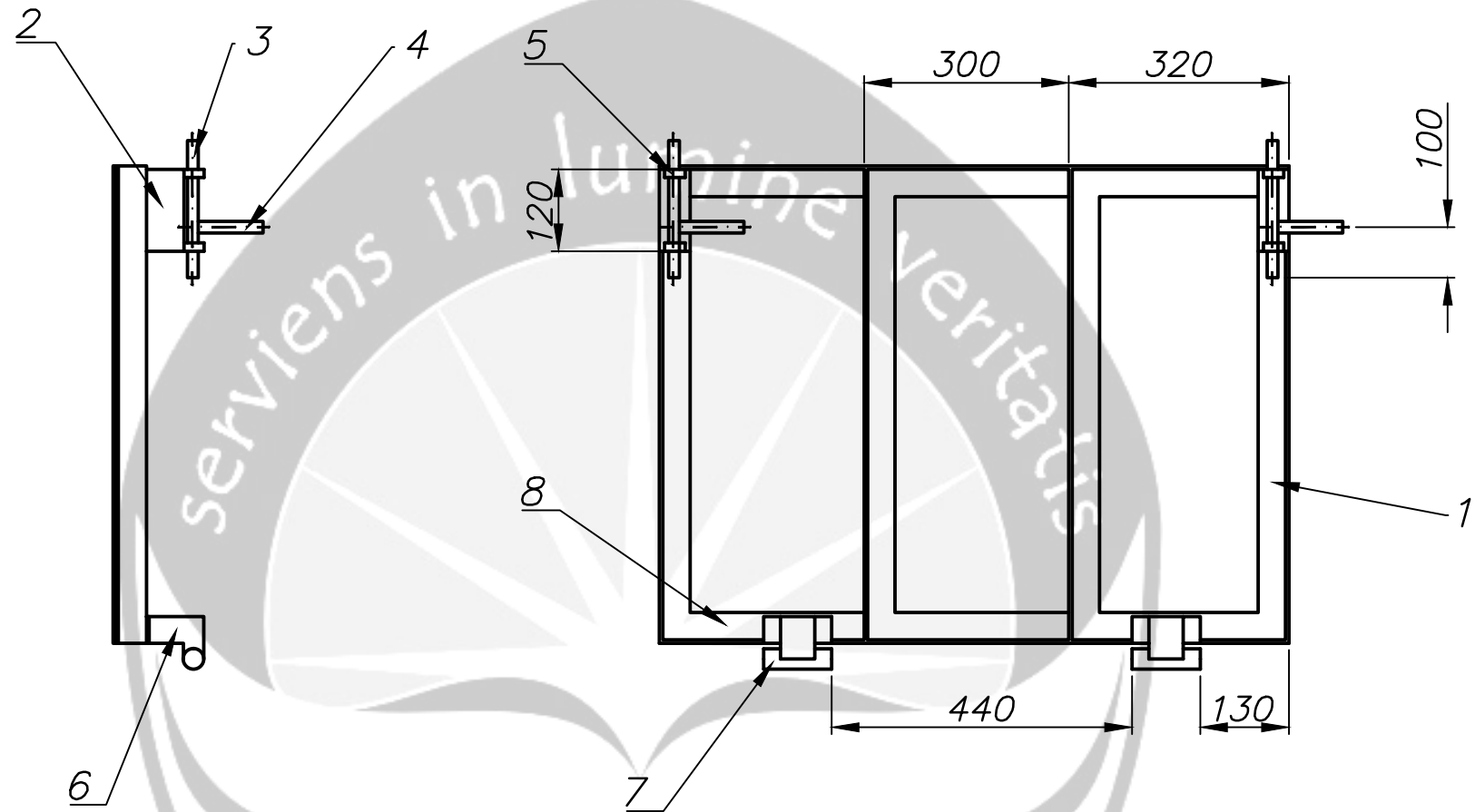
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Origin.	Rep.	Rep.by.	SN. NS.

All Part Assembled by Arc Welding



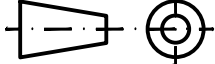
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Block Ganjal 2	2	4	1303
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Plate 700x700	1	6	1304

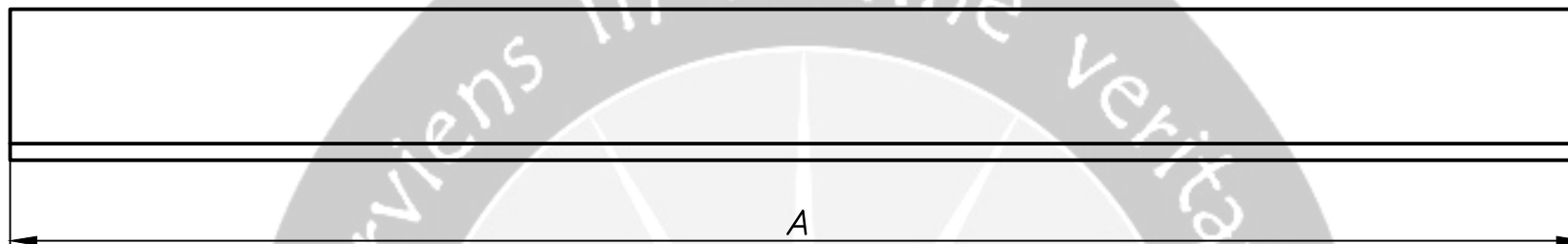
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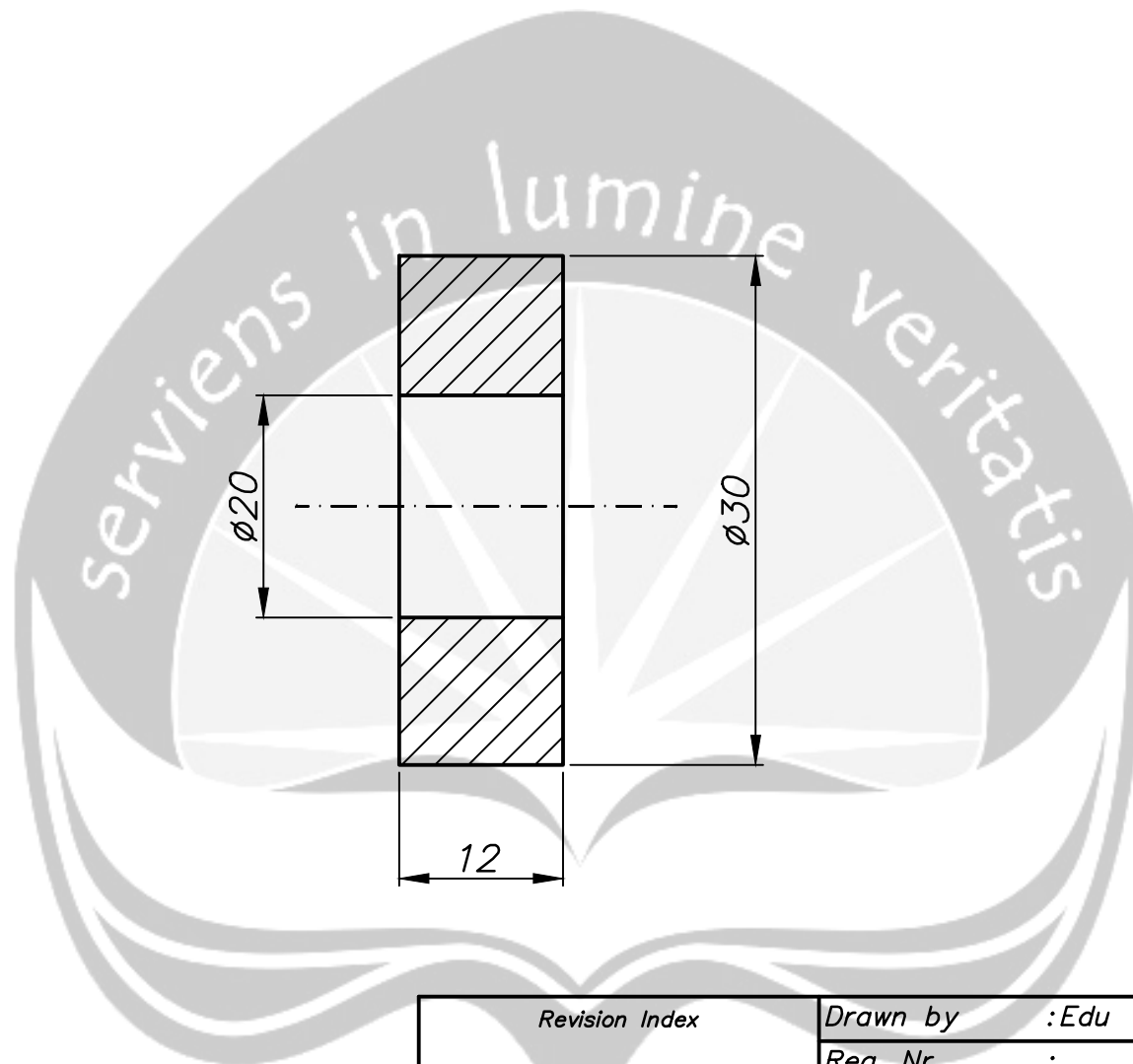
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Block Ganjal Gagang	2	2	1102
Gagang 1	2	3	1103
Gagang 2	2	4	1104
Ring Gagang	4	5	1105
Block Ganjal Engsel	2	6	1106
Engsel Poros	2	7	1107
Profil L45x922	2	8	1405

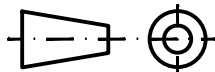
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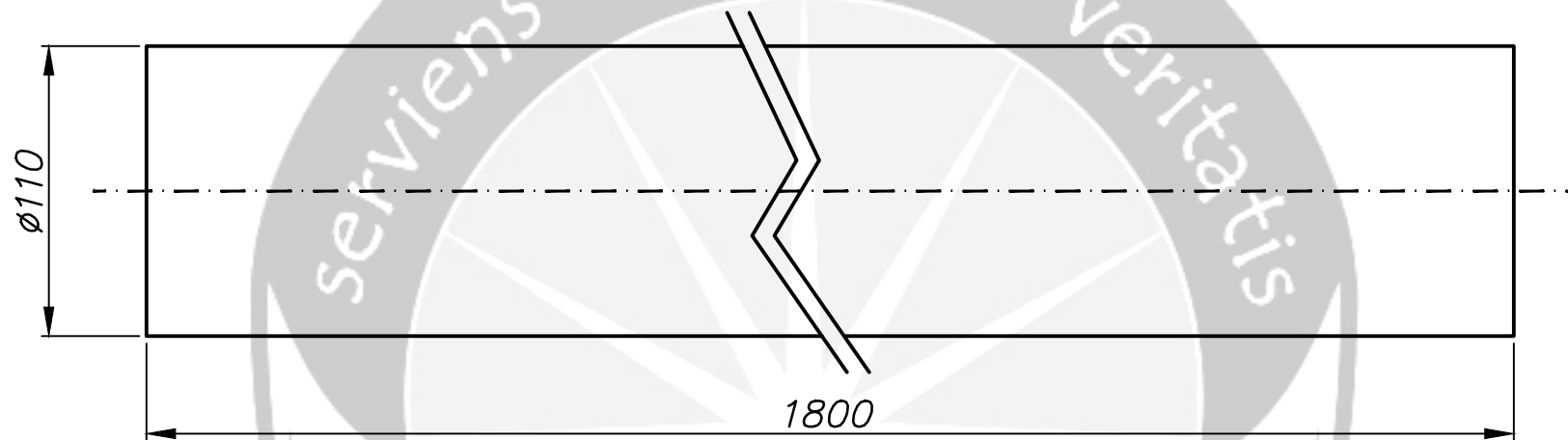


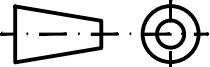
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710	3	1403
1200	6	1404
922	2	1405

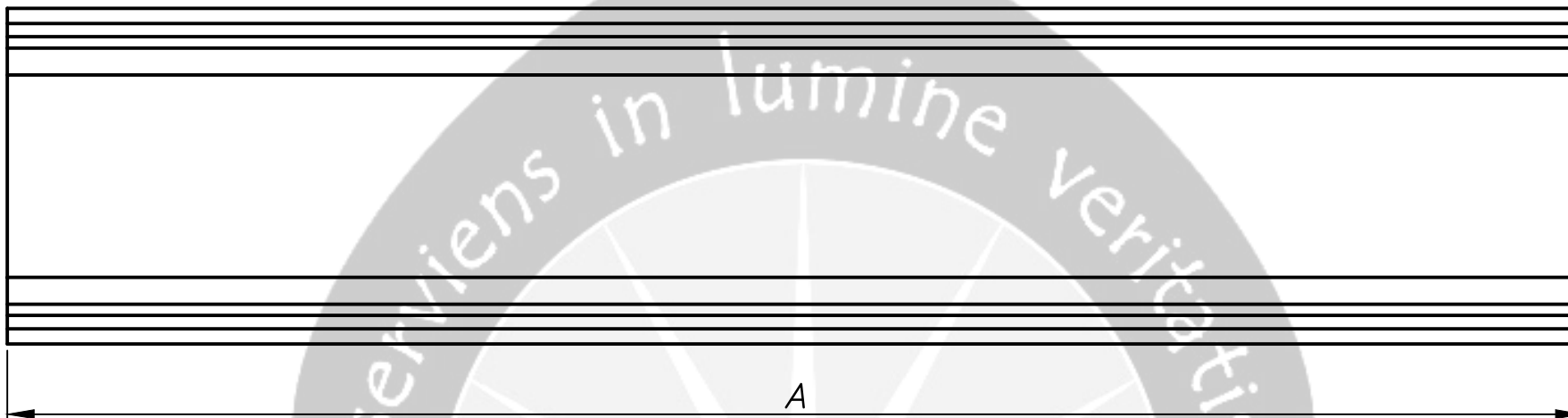
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Origin.	Rep.		Rep.by.	SN. NS.

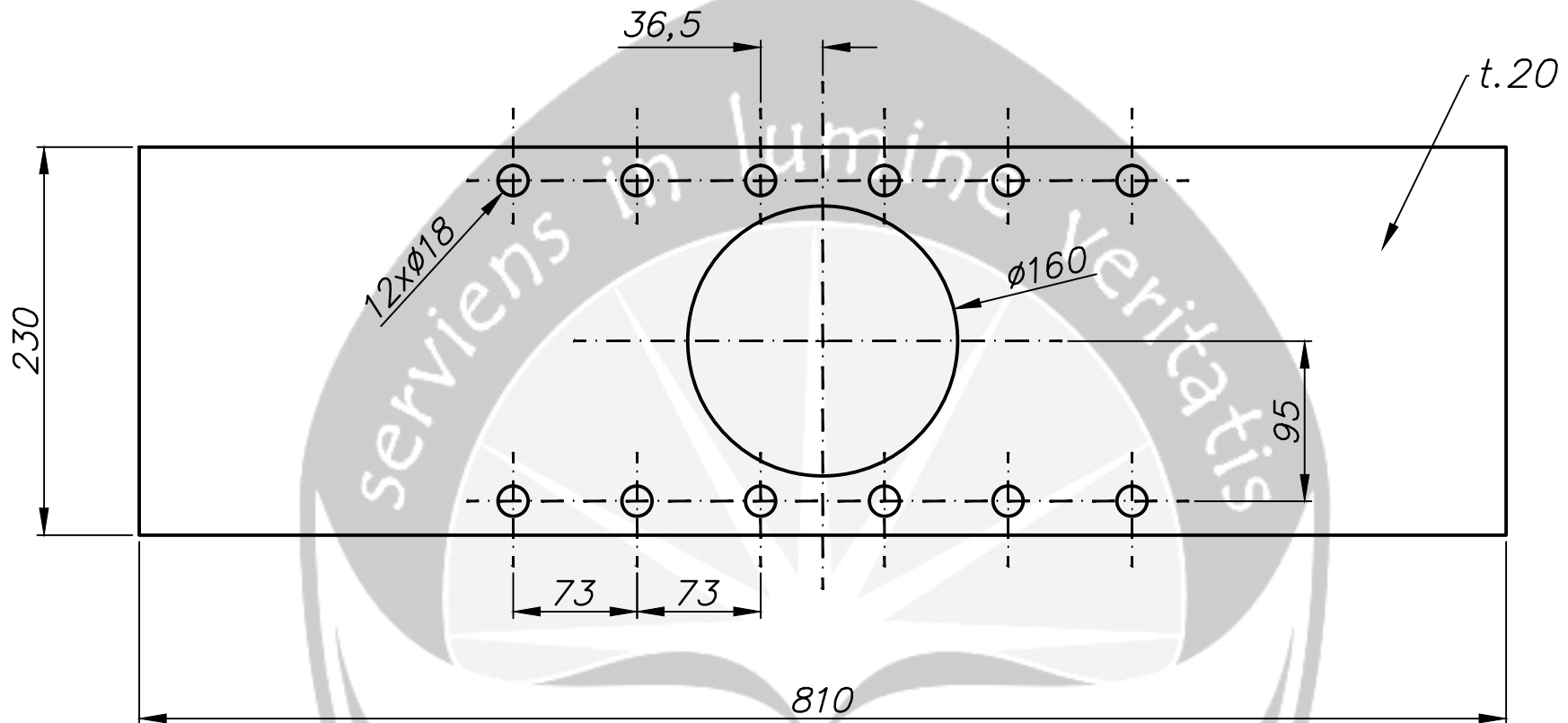


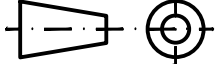
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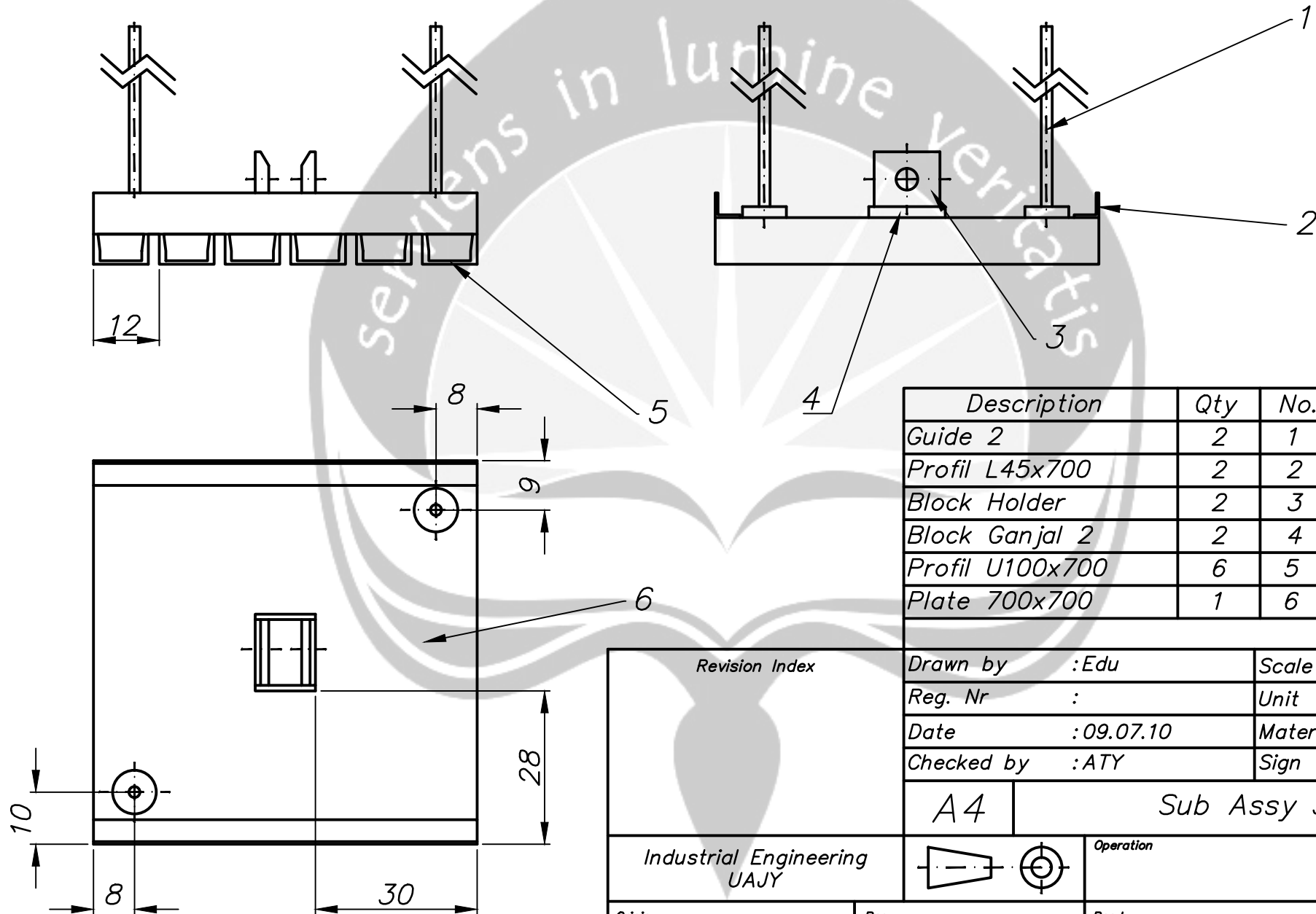
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697	4	1503
810	2	1504

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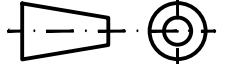


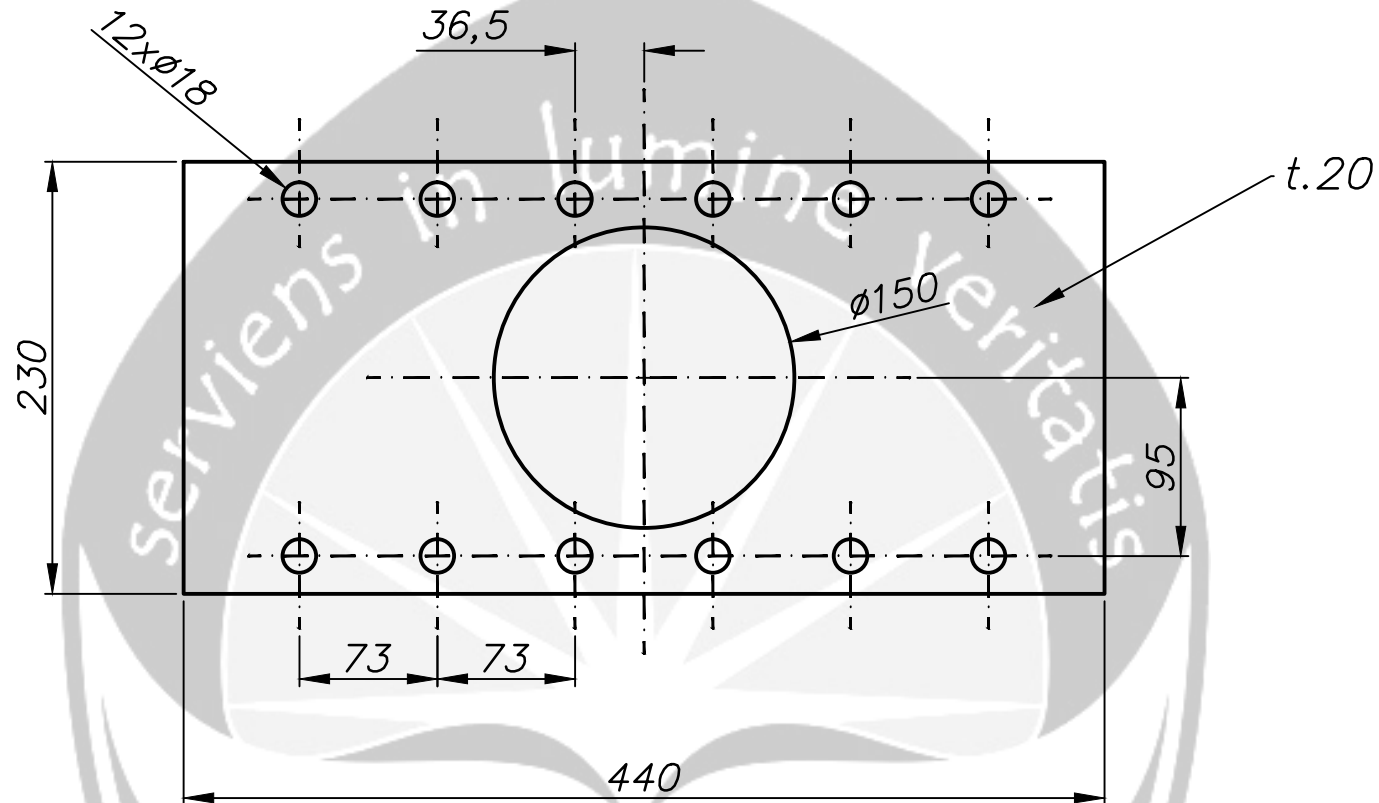
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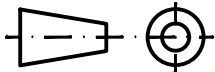
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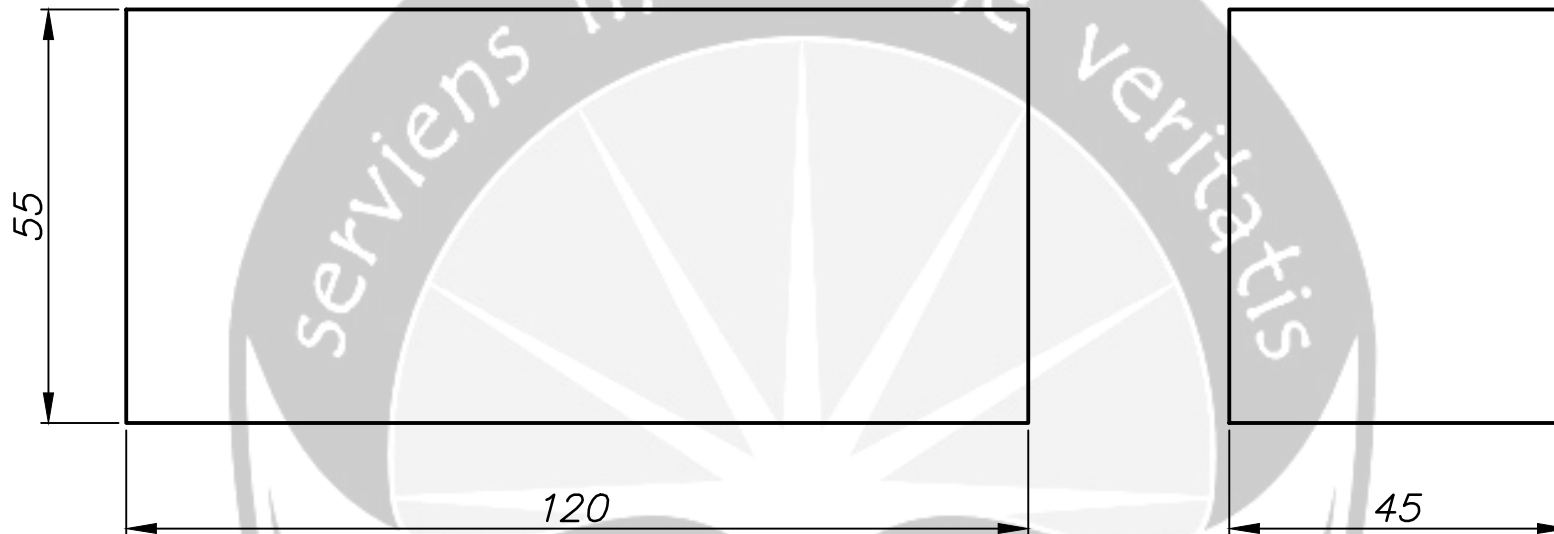


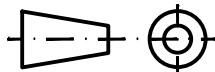
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Block Ganjal 2	2	4	1303
Profil U100x700	6	5	1501
Plate 700x700	1	6	1304

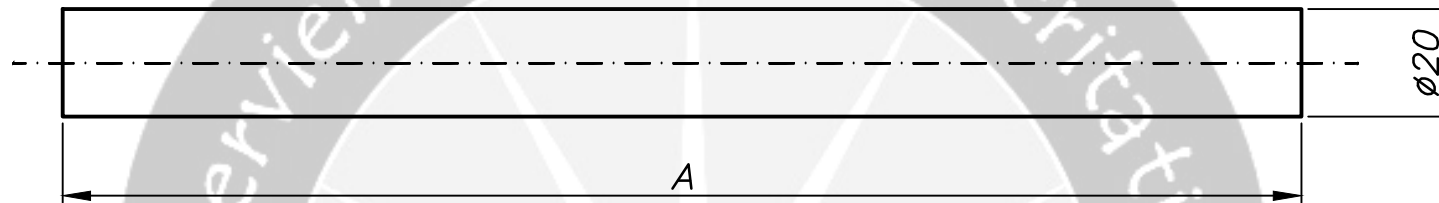
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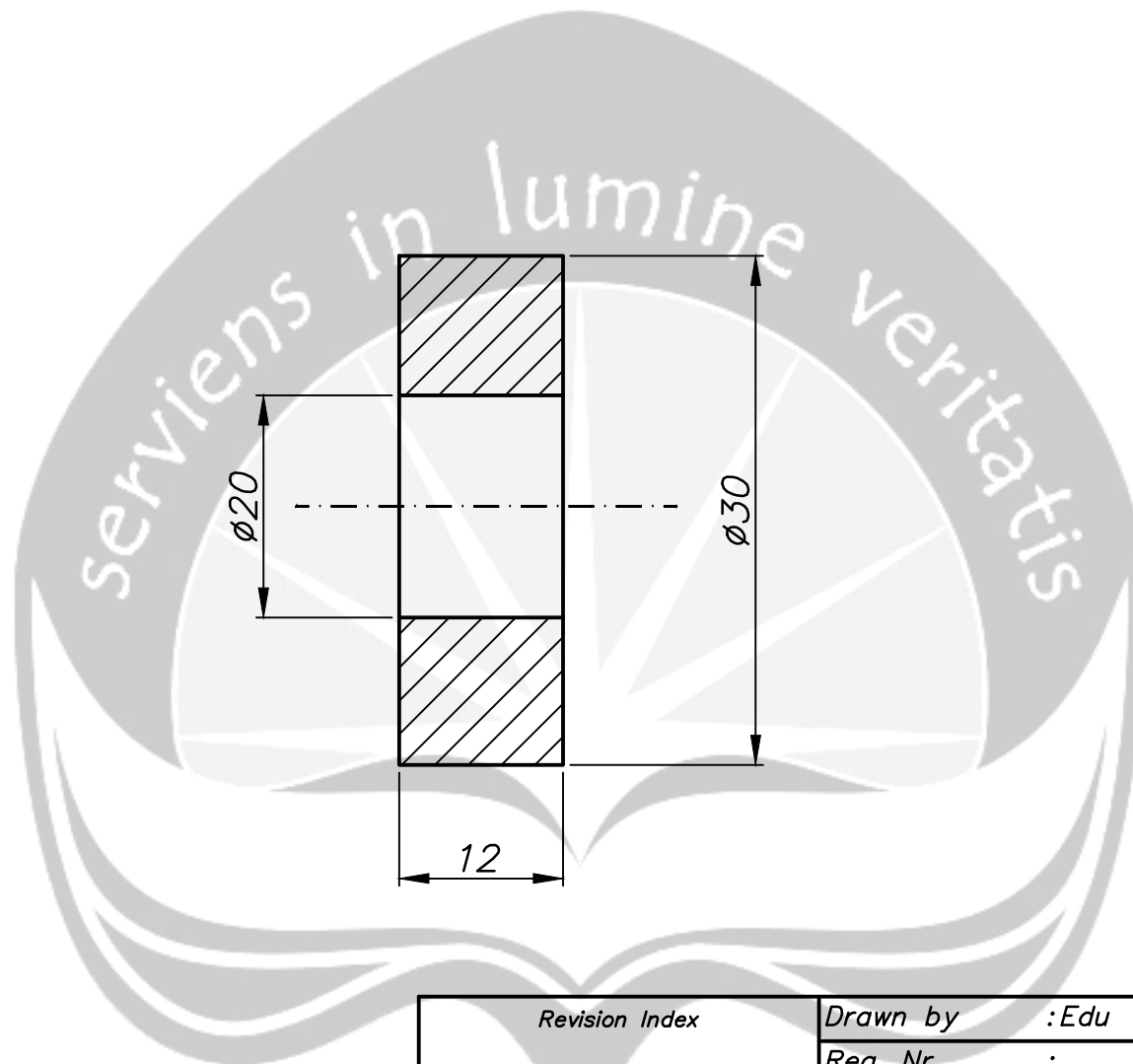


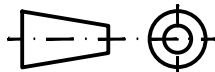
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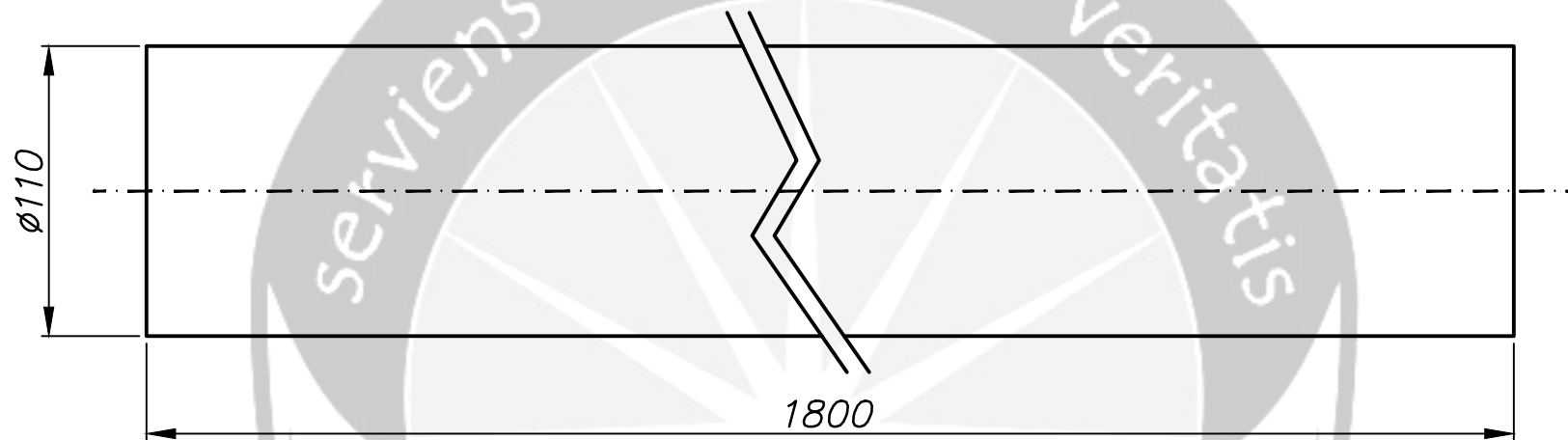


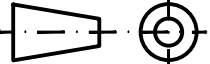
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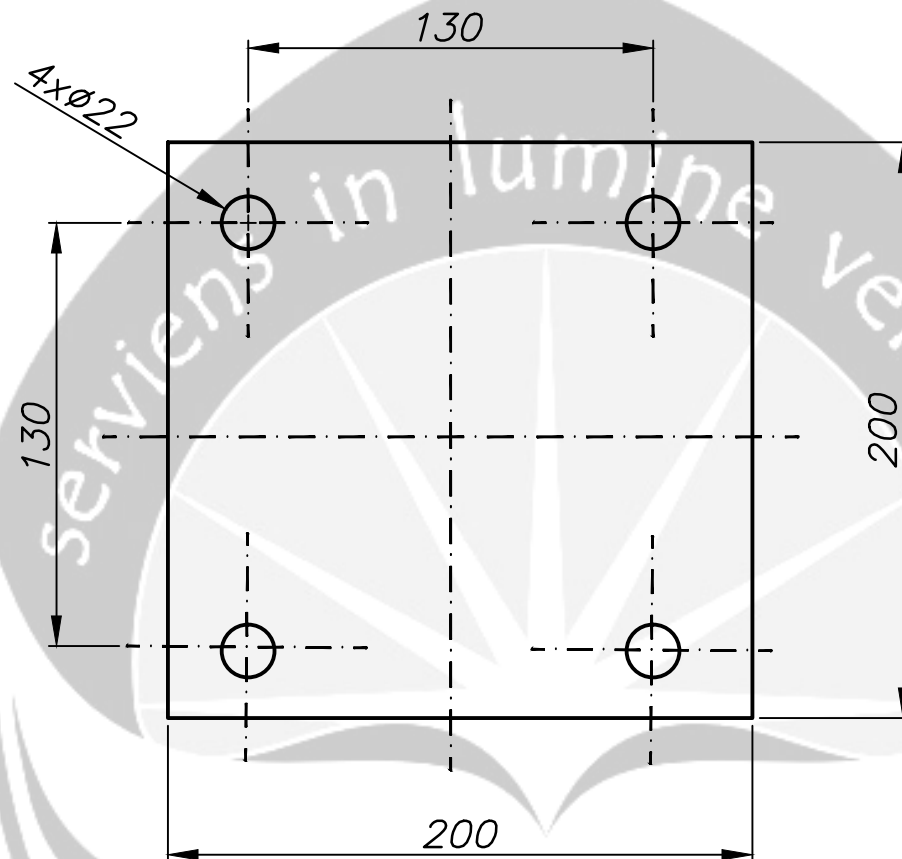
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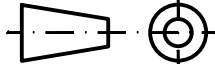


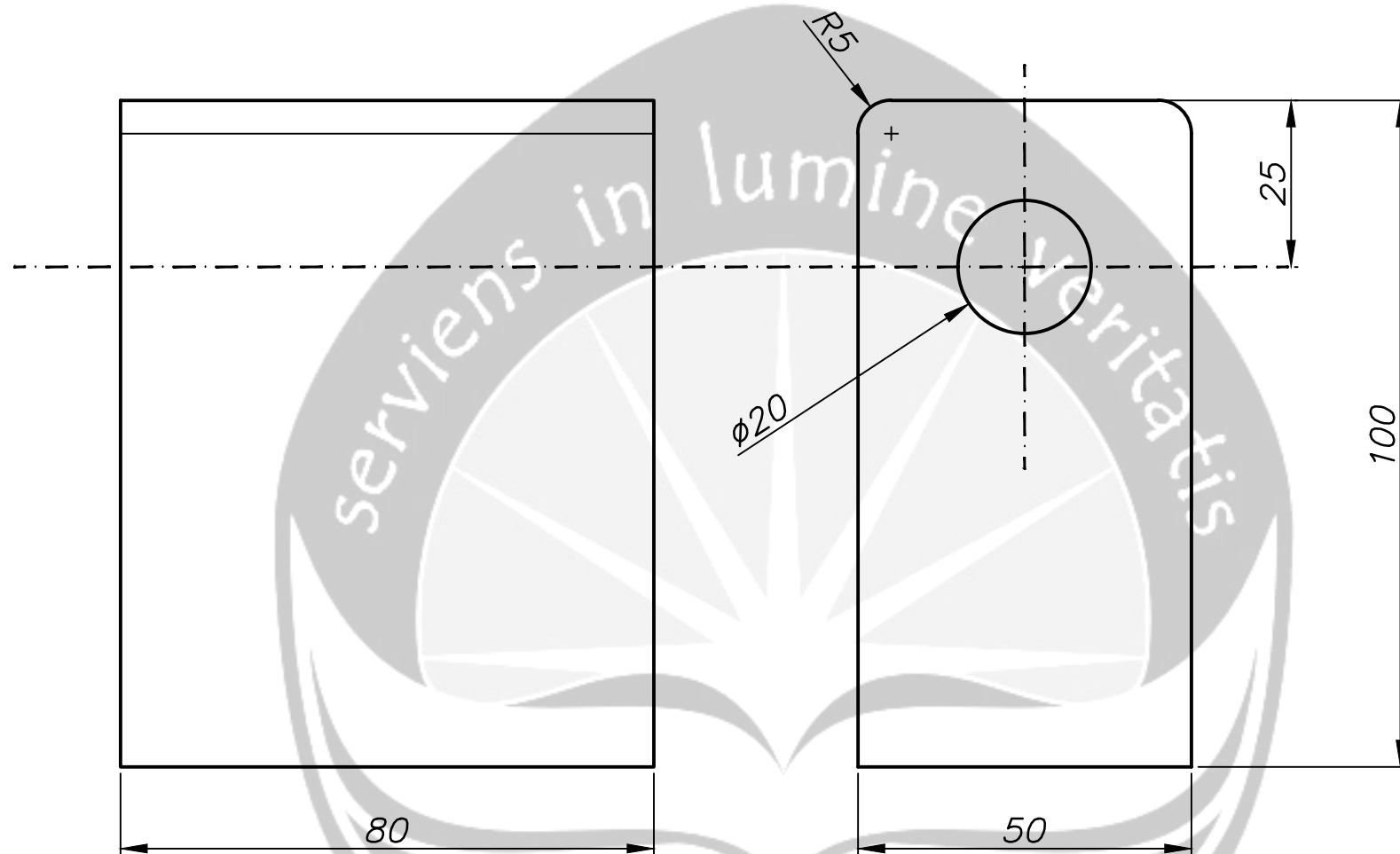
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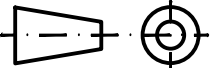


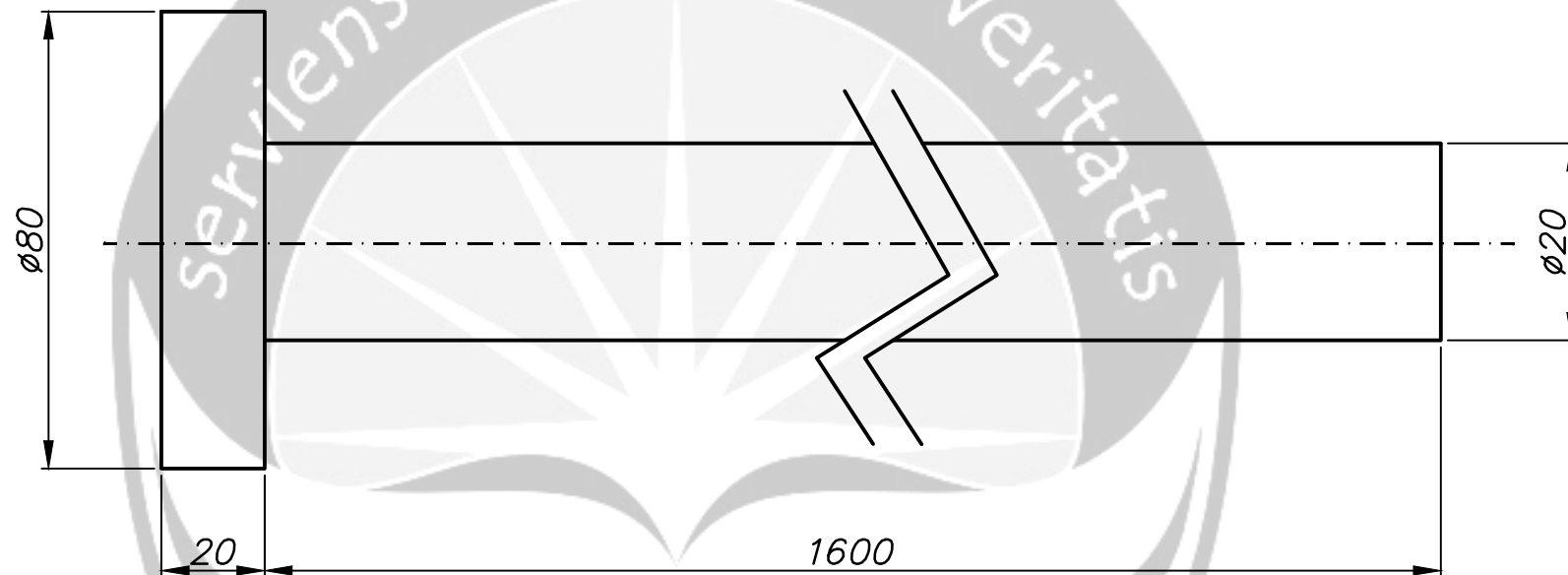
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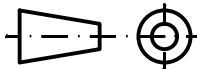


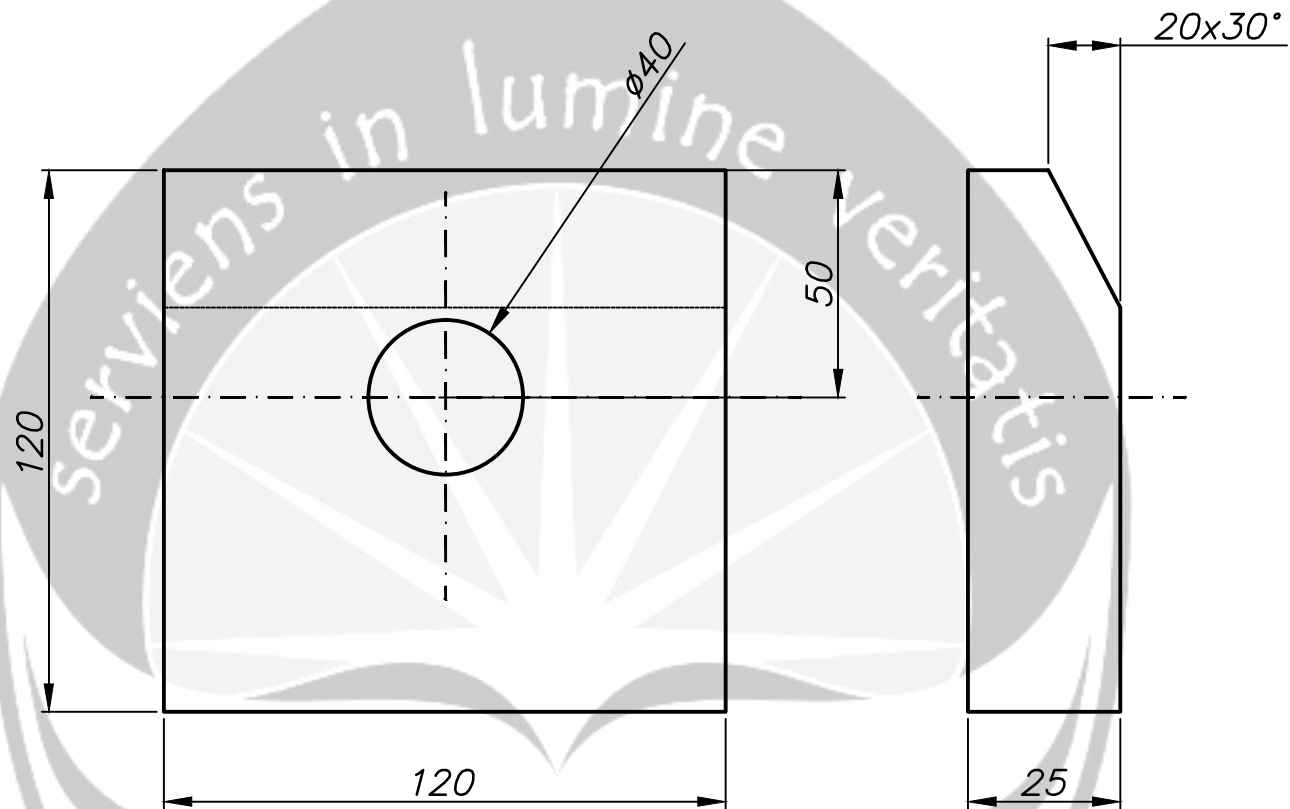
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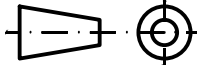


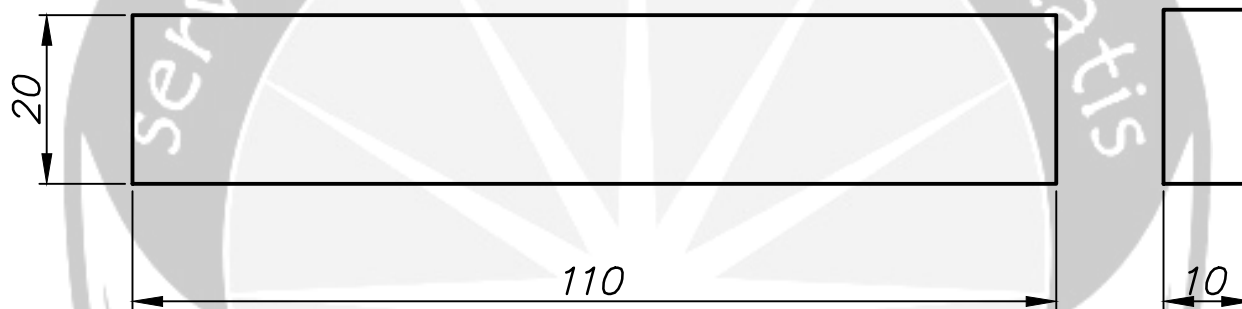
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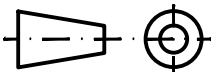


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