BAB 6
KESIMPULAN DAN SARAN

6.1. Kesimpulan

Mesin thermoforming yang dihasilkan dapat mengatasi kelemahan mesin *thermoforming* generasi 1 dan 2 sehingga dapat dimanfaatkan untuk kebutuhan kemasan makanan yang *costumized*. Mesin dapat dioperasikan oleh satu operator saja. Spesifikasi dari mesin *thermoforming* yang telah dirancang memiliki dimensi rangka yaitu 550 x 350 x 955 mm, dimensi area forming 350 x 250 mm mengikuti dimensi maksimum plastik yang ada sebesar 400 x 300 mm, membutuhkan daya 2000 watt, tekanan vakum sebesar 3 bar, dengan perkiraan biaya total pembuatan sebesar Rp. 15.728.873,00

6.2. Saran

Mesin *thermoforming* ini telah dirancang dan digambarkan kedalam pemodelan tiga dimensi yang sesuai dengan permintaan serta tuntutan fungsi dari konsumen. apabila pada langkah berikutnya akan dilakukan penelitian lanjutan, maka saran yang dapat disampaikan adalah ditambahkannya sistem *clamping* tambahanyang dapat diatur dimensinya supaya konsumen bisa menggunakan plastik dengan ukuran yang berbeda.

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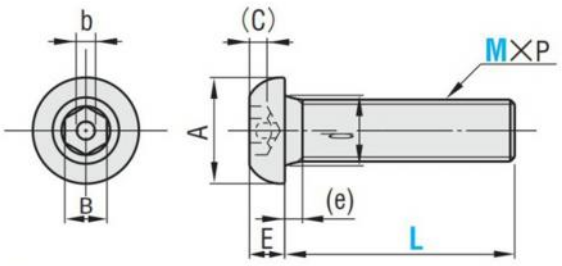
LAMPIRAN

Lampiran 1 : Katalog Bolt Untuk Cover Mesin

■Tamper Proof Button Head Cap Screws

IBNP



Projection in the socket is 0～0.5mm below the top of screw head.

M 1.4567/X3CrNiCu18-9-4

M×P (Coarse)	A	E	B	b	(C) (Min.)	d (Max.)	(e) (Max.)
3×0.5	5.7	1.65	2	1.0	1.04	3.6	1
4×0.7	7.6	2.2	2.5	1.1	1.3	4.7	1.4
5×0.8	9.5	2.75	3	1.3	1.56	5.7	1.6
6×1.0	10.5	3.3	4	1.6	2.08	6.8	2
8×1.25	14	4.4	5	2	2.6	9.2	2.5

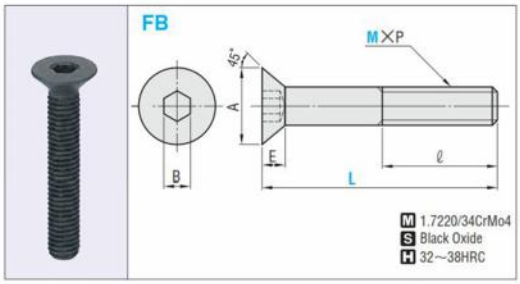
Catalog No. Type	M—L	Unit Price Qty.1～99	100～
IBNP	3— 6	0,48	0,42
	8	0,48	0,42
	10	0,48	0,42
	12	0,48	0,42
	16	0,48	0,42
	4— 8	0,52	0,48
	10	0,52	0,48
	12	0,52	0,48
	16	0,52	0,48
	20	0,55	0,50
	25	0,65	0,58
	30	0,68	0,60
	5—10	0,65	0,58
	12	0,65	0,58
	16	0,68	0,60
	20	0,75	0,65
	25	0,78	0,70
	30	0,90	0,80
	40	1,05	0,95

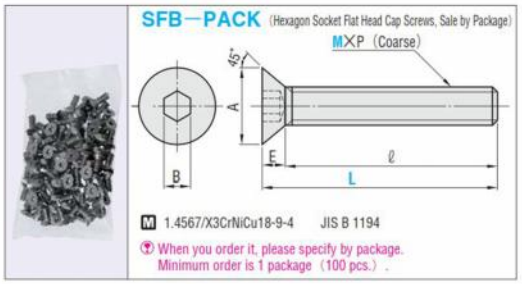
Catalog No. Type	M—L	Unit Price Qty.1～99	100～
IBNP	6—10	0,72	0,60
	12	0,72	0,60
	16	0,75	0,65
	20	0,80	0,72
	25	0,90	0,80
	30	0,95	0,85
	40	1,15	1,05
	50	1,35	1,20
	8—10	1,20	1,10
	12	1,20	1,10
	16	1,20	1,10
	20	1,30	1,15
	25	1,45	1,20
	30	1,55	1,30
	35	1,65	1,40
	40	1,70	1,50
	45	1,90	1,60
	50	2,05	1,70

Lampiran 2 : Katalog Bolt Untuk Shaft Bar Meja

Hexagon Socket Flat Head Cap Screws/Hexagon Socket Flat Head Cap Screws (Pack)
—Stainless Steel—

CAD Data





M×P	A	E	B	ℓ	Catalog No. Type M—L	Unit Price ＊Less	Unit Price ＊or More	＊Quantity
4×0.7	8	2.3	2.5	Full Thread	FB 4—10	0,05	0,04	200
					15			
					20			100
					25	0,06	0,05	
				14	30	0,07	0,06	
					35	0,11	0,10	
5×0.8	10	2.8	3.0	Full Thread	FB 5—10	0,05	0,04	100
					12			
					15			
					16			
					20			
					25	0,06	0,05	
					30	0,07	0,06	
				16	35	0,11	0,10	
					40	0,12	0,11	
6×1.0	12	3.3	4.0	Full Thread	FB 6—10	0,05	0,04	100
					12			
					15			
					16			
					20			
					25	0,06	0,05	
					30	0,07	0,06	
					35	0,11	0,10	
					40	0,12	0,11	
				18	45	0,13	0,12	
8×1.25	16	4.4	5.0	Full Thread	FB 8—15	0,08	0,07	100
					20			
					25	0,09	0,08	
					30			
					35	0,11	0,10	
					40	0,12	0,11	
				22	45	0,13	0,12	
					50	0,14	0,13	
10×1.5	20	5.5	6.0	Full Thread	FB 10—20	0,12	0,11	100

M×P (Coarse)	A Min.	A Max.	E (Max.)	B (Nominal)
3×0.5	5.54	6.72	1.86	2
4×0.7	7.53	8.96	2.48	2.5
5×0.8	9.43	11.2	3.1	3
6×1.0	11.34	13.44	3.72	4

Catalog No. Type	M—L	ℓ	Unit Price (100 Pcs. per Package) Qty.1～2	3～
SFB—PACK	3— 6	Full Thread	14,50	10,10
	8		14,50	10,10
	10		15,50	10,80
	12		16,50	11,50
	15		17,00	11,90
	4— 6		19,30	13,50
	8		16,80	11,70
	10		16,80	11,70
	12		17,50	12,30
	15		19,80	13,80
	5— 8		18,80	13,10
	10		18,80	13,10
	12		19,90	13,90
	15		20,10	14,10
	20		23,20	16,20
	6—10		23,60	16,50
	12		24,00	16,80
	15		25,00	17,50
	20		29,00	20,30

Lampiran 3 : Katalog Nut

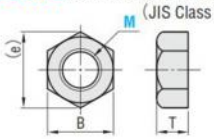
■Nuts

not compliant with RoHS.

(JIS Class 1)

LBNR (Right-Hand Thread)
LBNL (Left-Hand Thread)
SLBNR (SUS Right-Hand Thread)
SLBNL (SUS Left-Hand Thread)

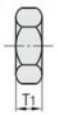
(JIS Class 1)



(JIS Class 3)

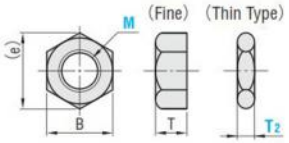
KNTR (Right-Hand Thread)
KNTL (Left-Hand Thread)
SKNTR (SUS Right-Hand Thread)

(JIS Class 3)



ANN (Right-Hand Fine Thread)
SANN (SUS Right-Hand Fine Thread)
TNTR (Thin Right-Hand Fine Thread)
STNTR (SUS Thin Right-Hand Fine Thread)

(Fine) (Thin Type)



ANN
M 1.0040/Ust.42.2
S Trivalent Chromate

LBNR · LBNL · KNTR · KNTL · TNTR
M 1.0040/Ust.42.2
S Bright Chromate (TNTR: Chromate Yellow)

SLBNR · SLBNL · SANN · SKNTR · STNTR
M 1.4301/X5CrNi18-10

Catalog No. Type	M	(Coarse) Pitch	B	(e)	T	T1	Unit Price LBNR Qty.1~99	Unit Price LBNR 100~	Unit Price LBNL Qty.1~99	Unit Price LBNL 100~	Unit Price SLBNR Qty.1~99	Unit Price SLBNR 100~	Unit Price SLBNL Qty.1~99	Unit Price SLBNL 100~	Unit Price KNTR Qty.1~99	Unit Price KNTR 100~	Unit Price KNTL Qty.1~99	Unit Price KNTL 100~	Unit Price SKNTR Qty.1~99	Unit Price SKNTR 100~
LBNR (Right-Hand Thread) LBNL (M3~M16) (Left-Hand Thread) SLBNR (M2.6~M16) (SUS Right-Hand Thread) SLBNL (M3~M16) (SUS Left-Hand Thread)	2.6	0.45	5	5.8	2	1.6	0,28	0,08	—	—	0,43	0,21	—	—	0,41	0,12	—	—	—	—
	3.0	0.5	5.5	6.4	2.4	1.8	0,28	0,08	1,05	0,31	0,43	0,21	1,12	0,33	0,41	0,12	0,98	0,29	0,90	0,47
	4.0	0.7	7	8.1	3.2	2.4	0,28	0,08	1,05	0,31	0,43	0,21	1,12	0,33	0,41	0,12	0,98	0,29	0,90	0,47
	5.0	0.8	8	9.2	4	3.2	0,28	0,08	1,05	0,31	0,43	0,21	1,12	0,33	0,50	0,12	0,98	0,29	1,00	0,50
	6.0	1.0	10	11.5	5	3.6	0,32	0,09	1,05	0,31	0,51	0,25	1,26	0,37	0,74	0,22	1,12	0,33	1,00	0,50
	8.0	1.25	13	15	6.5	5	0,36	0,10	1,05	0,31	0,60	0,30	1,54	0,46	0,78	0,23	1,26	0,37	1,30	0,59
	10.0	1.5	17	19.6	8	6	0,47	0,14	1,50	0,45	0,60	0,30	1,96	0,58	0,87	0,26	1,69	0,50	1,50	0,70
KNTR (Right-Hand Thread) KNTL (M3~M20) (Left-Hand Thread) SKNTR (SUS Right-Hand Thread)	12.0	1.75	19	21.9	10	7	0,84	0,25	1,80	0,54	0,85	0,43	2,52	0,75	0,92	0,27	2,25	0,67	1,70	0,90
	16.0	2.0	24	27.7	13	10	1,04	0,31	2,40	0,72	1,19	0,59	3,96	1,18	1,35	0,40	2,81	0,84	2,40	1,20
	20.0	2.5	30	34.6	16	12	1,04	0,31	—	—	—	—	—	—	3,00	0,90	3,37	1,01	3,10	1,80
	24.0	3.0	36	41.6	19	14	1,40	0,42	—	—	—	—	—	—	3,00	0,90	—	—	4,30	3,80

Catalog No. Type	M (Fine)	Existence of Specifications ANN	Existence of Specifications SANN	B	(e)	T	Unit Price ANN Qty.1~99	Unit Price ANN 100~	Unit Price SANN Qty.1~99	Unit Price SANN 100~
ANN (Right-Hand Fine Thread) SANN (SUS Right-Hand Fine Thread)	4—0.5	●	●	7	8.1	4	0,77	0,30	0,84	0,42
	5—0.5	●	●	8	9.2		0,77	0,30	0,84	0,42
	6—0.75	●	●	10	11.5		0,78	0,31	1,08	0,54
	8—0.75	●	●	13	15	5	0,78	0,31	1,35	0,67
	8—1.0	●	—			6	0,78	0,31	—	—
	10—1.0	●	●	17	19.6	6	0,80	0,32	1,80	0,90
	10—1.25	●	—			8	0,80	0,32	—	—
	12—1.0	●	●	19	21.9	6	0,80	0,32	2,40	1,20
	12—1.25	●	—			10	1,60	0,64	—	—
	12—1.5	●	—				1,60	0,64	—	—
	14—1.5	●	—	22	25.0	11	1,90	0,76	—	—
	16—1.5	●	●	24	27.7	8	3,20	1,28	3,60	1,80
	20—1.5	●	●	30	34.6	10	3,70	1,48	5,50	2,75

Catalog No. Type	M—P—T2	B	(e)	Unit Price TNTR Qty.1~99	Unit Price TNTR 100~	Unit Price STNTR Qty.1~99	Unit Price STNTR 100~
TNTR (Thin Right-Hand Fine Thread) STNTR (SUS Thin Right-Hand Fine Thread)	06—0.75—1.5	8	9.2	0,46	0,27	2,00	1,00
	06—0.75—2	9	10.4			2,00	1,00
	08—0.75—2	10	11.5	0,52	0,31	2,00	1,00
	10—0.75—2	14	16.2	0,59	0,35	2,80	1,40
	10—1.00—2	14	16.2			2,80	1,40
	10—1.00—3	14	16.2			2,80	1,40
	10—1.00—4	14	16.2			2,80	1,40
	12—1.00—2	14	16.2	0,65	0,39	5,00	4,00
	12—1.00—3	17	19.6			5,80	4,50
	12—1.00—4	17	19.6			5,80	4,50
	16—1.00—2.5	19	21.9	0,78	0,46	8,00	5,80

Order Example

Catalog No.
SLBNR10
ANN10—1.25
TNTR10—1.0—4

Delivery Time

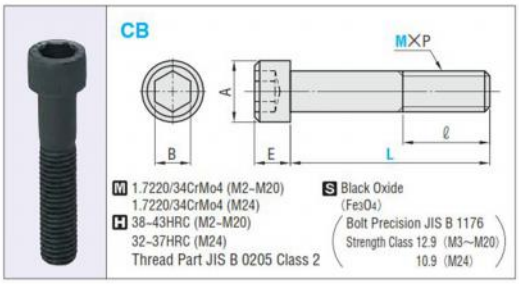
6 Days

on Stock

Lampiran 4 : Katalog Bolt untuk Sliding Bar Meja

Hexagon Socket Head Cap Screws

CAD Data



ℓ	Catalog No. Type M—L	Unit Price * Less	Unit Price * or More	* Quantity
Full Thread	CB 2- 5	0,20	0,15	1000
	8	0,25	0,20	
	10			
	12			
	15	0,30	0,25	
Full Thread	CB 2.5- 5	0,20	0,15	1000
	8	0,20	0,15	
	10	0,25	0,20	
Full Thread	CB 2.6- 5	0,20	0,15	1000
	8			
	10	0,25	0,20	
	12			
	15	0,30	0,25	
Full Thread	CB 3- 5	0,04	0,03	800
	6			
	8			600
	10			
	12			
	14			
	15			
	16			
	18			
	20			
18	22	0,05	0,04	
	25			
	30	0,07	0,06	200
	35			
	40	0,08	0,07	
	45	0,13	0,12	500
	50	0,20	0,19	
	55			
	60	0,60	0,59	
	65	0,65	0,64	
Full Thread	CB 4- 5	0,04	0,03	600
	6			
	8			400
	10			
	12			
	14			
	15			
	16			
	18			
	20			200
	22			
	25			
20	30	0,05	0,04	
	35	0,06	0,05	100
	40	0,07	0,06	
	45	0,08	0,07	
	50	0,09	0,08	
	55	0,18	0,17	400
	60	0,20	0,19	
	65	0,40	0,39	
	70	0,45	0,44	300
	75	0,50	0,49	
Full Thread	CB 5- 5	0,10	0,09	1000
	6			400
	8	0,04	0,03	600
	10			
	12			
	14			400
	15			
	16			
	18			
	20			

ℓ	Catalog No. Type M—L	Unit Price * Less	Unit Price * or More	* Quantity
Full Thread	CB 5- 22	0,04	0,03	400
	25			
	30	0,05	0,04	200
	35	0,06	0,05	
	40	0,07	0,06	
	45	0,08	0,07	
	50	0,09	0,08	
	55	0,10	0,09	
	60	0,12	0,11	
	65	0,13	0,12	
22	70	0,14	0,13	
	75	0,16	0,15	
	80	0,19	0,18	100
	85	0,30	0,29	
	90			
	95	0,50	0,49	
	100			
	110	0,65	0,64	
	120	0,75	0,74	
	130	0,85	0,84	
	140	0,95	0,94	
Full Thread	CB 6- 6	0,15	0,14	500
	8	0,05	0,04	400
	10	0,04	0,03	300
	12			
	14			
	15			200
	16			
	18			
	20	0,05	0,04	
	22			
	25			
24	30	0,06	0,05	
	35	0,07	0,06	100
	40	0,08	0,07	
	45	0,09	0,08	
	50	0,10	0,09	
	55	0,11	0,10	
	60	0,12	0,11	
	65	0,14	0,13	
	70	0,15	0,14	
	75	0,16	0,15	
	80	0,19	0,18	100
	85	0,20	0,19	
	90	0,21	0,20	
	95	0,25	0,24	
	100	0,28	0,27	
	110	0,40	0,38	
	120	0,80	0,78	
	130	1,00	0,98	
	140	1,30	1,28	
	150	1,50	1,48	
Full Thread	CB 8- 8	0,15	0,14	200
	10			
	12			
	15			
	16			
	18	0,08	0,07	100
	20			
	22			
	25			
	30			
28	35	0,09	0,08	
	40	0,10	0,09	
	45	0,11	0,10	

ℓ	Catalog No. Type M—L	Unit Price * Less	Unit Price * or More	* Quantity
28	CB 8- 50	0,12	0,11	100
	55	0,14	0,13	
	60	0,16	0,15	
	65	0,17	0,16	
	70	0,19	0,18	
	75	0,21	0,20	
	80	0,25	0,24	
	85	0,30	0,29	
	90	0,32	0,31	
	95	0,36	0,34	
	100			
	110	0,44	0,42	
	120	0,51	0,49	
	130	0,71	0,69	
	140	0,78	0,76	
	150	0,90	0,88	50
	160	1,20	1,18	
	200	2,45	2,43	
Full Thread	CB 10- 10	0,16	0,15	
	12			
	15	0,13	0,12	
	20	0,11	0,10	
	25	0,12	0,11	
	30	0,13	0,12	
	35	0,14	0,13	100
	40	0,15	0,14	
	45	0,16	0,15	
	50	0,18	0,17	
	55	0,20	0,19	
	60	0,23	0,22	
	65	0,25	0,24	
	70	0,26	0,25	
	75	0,30	0,29	
	80	0,33	0,32	
	85	0,37	0,35	
	90	0,39	0,37	
	95	0,43	0,41	50
32	100			
	110	0,51	0,49	
	120	0,60	0,58	
	130	0,71	0,69	
	140	0,79	0,77	
	150	0,88	0,86	
	160	1,54	1,52	
	170	1,74	1,72	
	180	1,93	1,91	20
	190	2,25	2,23	
	200	2,38	2,36	
	210	2,82	2,80	
Full Thread	CB 12- 15	0,25	0,24	
	20	0,20	0,19	
	25			
	30	0,21	0,20	100
	35	0,22	0,21	
	40	0,23	0,22	
	45	0,25	0,24	
	*50	0,27	0,26	
	55	0,30	0,29	
	60	0,33	0,32	
	65	0,35	0,33	50
	70	0,38	0,36	
	75	0,40	0,38	
	80	0,44	0,42	
	85	0,54	0,52	
	90	0,57	0,55	
	95	0,59	0,57	
	100			40
	110	0,69	0,67	
36	120	0,76	0,74	
	130	0,87	0,85	
	140	0,96	0,94	
	150	1,04	1,02	30
	160	1,21	1,19	
	170	1,32	1,30	
	180	1,44	1,42	
	190	1,54	1,52	
	200	1,68	1,66	
	210	1,90	1,88	20
	220	2,06	2,04	
	230	2,22	2,20	
	240	2,35	2,33	
	250	2,50	2,48	

ℓ	Catalog No. Type M—L	Unit Price * Less	Unit Price * or More	* Quantity
36	CB 12- 260	2,66	2,64	20
	270	7,10	7,00	
	280	7,60	7,50	
	290	8,10	8,00	
Full Thread	CB 16- 20	0,56	0,54	
	25			
	30	0,47	0,45	50
	35			
	40	0,48	0,46	
	45	0,50	0,48	
	50	0,54	0,52	
	55	0,59	0,57	40
	60	0,63	0,61	
	65	0,67	0,65	
	70	0,72	0,70	
	75	0,76	0,74	30
	80	0,80	0,78	
	85	0,85	0,83	
	90	0,89	0,87	
	95	0,95	0,93	25
	100			
	110	1,08	1,06	
	120	1,21	1,19	
	130	1,33	1,31	
	140	1,45	1,43	20
	150	1,57	1,55	
	160	1,76	1,74	
44	170	2,06	2,04	
	180	2,24	2,22	
	190	2,40	2,38	
	200	2,54	2,52	
	210	2,88	2,86	
	220	3,10	3,07	
	230	3,30	3,27	
	240	3,53	3,50	
	250	3,74	3,71	10
	260	3,90	3,87	
	270	7,10	7,00	
	280	7,60	7,50	
	290	8,10	8,00	
	300	8,20	8,10	
	310	8,40	8,30	
	320	8,60	8,50	
Full Thread	CB 20- 40	0,98	0,96	
	45	1,00	0,98	30
	50	1,03	1,01	
	55	1,09	1,07	25
	60	1,15	1,13	
	65	1,21	1,19	
	70	1,26	1,24	
	75	1,32	1,30	20
	80	1,38	1,36	
	85	1,48	1,46	
	90	1,55	1,53	
	95	1,63	1,61	
	100			15
	110	1,81	1,79	
	120	1,99	1,97	
	130	2,20	2,18	
	140	2,40	2,38	
52	150	2,66	2,64	
	160	3,01	2,98	
	170	3,24	3,21	
	180	3,46	3,43	
	190	3,80	3,77	10
	200	4,00	3,96	
	210	4,50	4,46	
	220	4,65	4,61	
	230	4,90	4,86	
	240	5,14	5,09	
	250	5,36	5,31	
Full Thread	CB 24- 50	2,08	2,06	20
	60	2,18	2,16	
	70	2,33	2,31	15
	80	2,46	2,43	
	90	2,62	2,59	
	100	2,84	2,81	
	110	3,07	3,03	
60	120	3,28	3,24	10
	130	3,50	3,47	
	140	3,64	3,61	
	150	3,92	3,89	

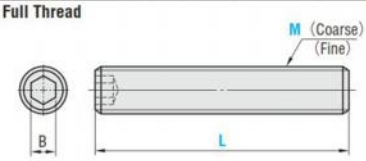
* ℓ part is based on JIS B 1176 (2000).

Lampiran 5 : Katalog Bolt untuk Stopper Bar Meja

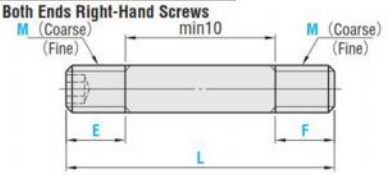
■Length Specified Screws with Hexagon Sockets

Type				M	S
Full Thread		Both End Right-hand Screws			
Screw gauge class 2 used		Screw gauge class 2 used			
Coarse	Fine	Coarse	Fine		
FABB	FABBP	FWBB	FWBBP	1.1191/C45E (Ck45)	Black Oxide
FABBN	—	FWBBN	—		Electroless Nickel Plating
FABBS	FABBSP	FWBBS	FWBBSP	1.4301/X5CrNi18-10	—

Full Thread



Both Ends Right-Hand Screws

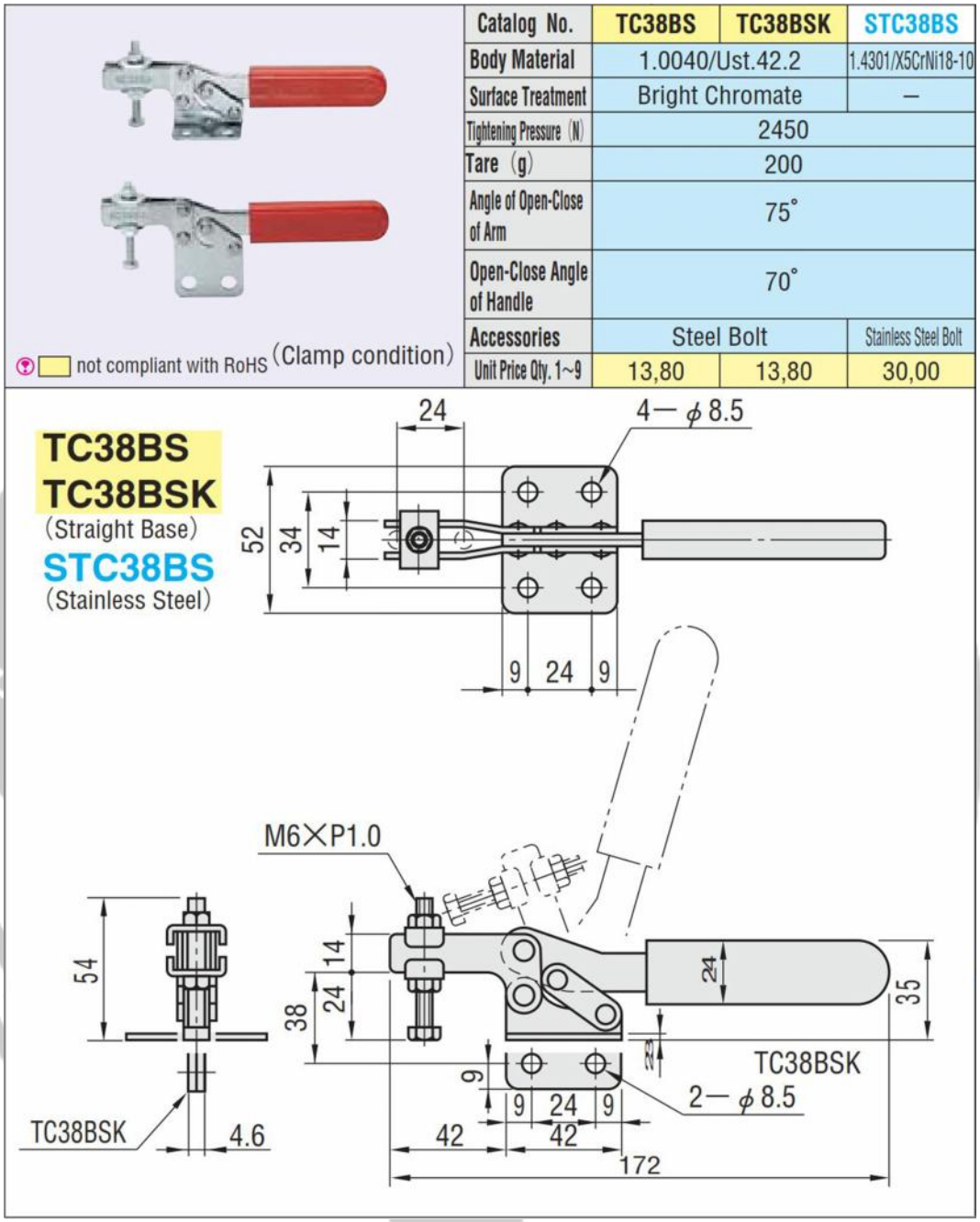


Catalog No. Type	M	Thread Pitch (Coarse)	Thread Pitch (Fine)	L 1 mm Increment	B	Unit Price Qty.1～9 L20～100 FABB	FABBN	FABBS	FABBP	FABBSP	L101～200 FABB	FABBN	FABBS	FABBP	FABBSP	L201～400 FABB	FABBN	FABBS	FABBP	FABBSP
(Coarse) FABB FABBN FABBS (Fine) FABBP FABBSP	5	0.8	0.5	20～250	2.5	14,00	14,50	15,00	16,90	17,90	17,00	17,50	18,00	19,70	20,50	20,00	20,50	21,50	25,90	24,00
	6	1	0.75		3.0	14,00	14,50	15,00	16,90	18,00	17,00	17,50	18,00	19,70	20,80	20,00	20,50	21,50	23,50	24,20
	8	1.25	1	20～400	4.0	14,50	15,00	15,50	16,80	17,80	18,00	18,50	19,00	20,00	21,10	20,00	20,50	21,50	24,80	24,50
	10	1.5	1.25		5.0	14,00	14,50	15,00	16,10	17,30	17,00	17,50	18,00	18,50	19,50	19,00	19,50	20,50	22,60	22,50
	12	1.75	1.25		6.0	14,50	15,00	15,50	16,30	17,60	18,00	18,50	19,00	19,00	20,10	20,00	20,50	21,50	23,40	23,80
	16	2	1.5		8.0	15,00	15,50	16,00	17,40	18,90	19,00	19,50	20,00	21,20	22,50	22,00	22,50	23,00	26,70	27,00
	20	2.5	1.5		10.0	15,50	16,00	16,50	18,20	19,50	20,00	20,50	21,00	22,40	24,00	24,00	24,50	25,00	29,30	30,00

Catalog No. Type	M	Thread Pitch (Coarse)	Thread Pitch (Fine)	1 mm Increment L	E	F	B	Unit Price Qty.1～9 L20～100 FWBB	FWBBN	FWBBS	FWBBP	FWBBSP	L101～200 FWBB	FWBBN	FWBBS	FWBBP	FWBBSP	L201～400 FWBB	FWBBN	FWBBS	FWBBP	FWBBSP
(Coarse) FWBB FWBBN FWBBS (Fine) FWBBP FWBBSP	5	0.8	0.5	20～250	0～100	0～100	2.5	15,00	15,80	16,10	16,90	17,90	18,10	18,50	18,90	17,50	18,90	21,50	22,00	22,50	22,50	24,00
	6	1	0.75				3.0	15,00	15,90	16,20	17,00	18,80	18,10	18,50	18,90	18,60	21,00	21,50	22,00	22,50	25,10	26,30
	8	1.25	1	20～400			4.0	15,50	16,35	16,70	17,20	18,90	19,10	19,40	19,80	19,60	21,50	22,50	23,00	23,50	25,50	27,00
	10	1.5	1.25				5.0	14,50	15,40	15,80	16,90	20,50	18,10	18,50	18,90	19,00	23,20	20,00	21,00	22,00	23,40	25,50
	12	1.75	1.25				6.0	15,00	15,70	16,10	17,60	21,50	18,10	19,40	19,80	21,00	25,40	22,20	22,80	23,30	25,30	28,90
	16	2	1.5				8.0	15,50	16,70	17,10	18,40	25,00	20,50	21,50	22,00	22,00	30,80	24,20	25,50	26,80	27,90	33,50
	20	2.5	1.5				10.0	16,50	17,70	18,10	19,50	27,50	22,50	23,60	24,10	23,00	31,50	27,00	28,00	29,00	31,00	38,90

E≦M×5 F≦M×5 When E=0 (F=0), threads are not machined on the dimension E (F) side.

Lampiran 6 : Katalog Toogle Clamp



Catalog No.	TC38BS	TC38BSK	STC38BS
Body Material	1.0040/Ust.42.2		1.4301/X5CrNi18-10
Surface Treatment	Bright Chromate		–
Tightening Pressure (N)	2450		
Tare (g)	200		
Angle of Open-Close of Arm	75°		
Open-Close Angle of Handle	70°		
Accessories	Steel Bolt		Stainless Steel Bolt
Unit Price Qty. 1~9	13,80	13,80	30,00

not compliant with RoHS (Clamp condition)

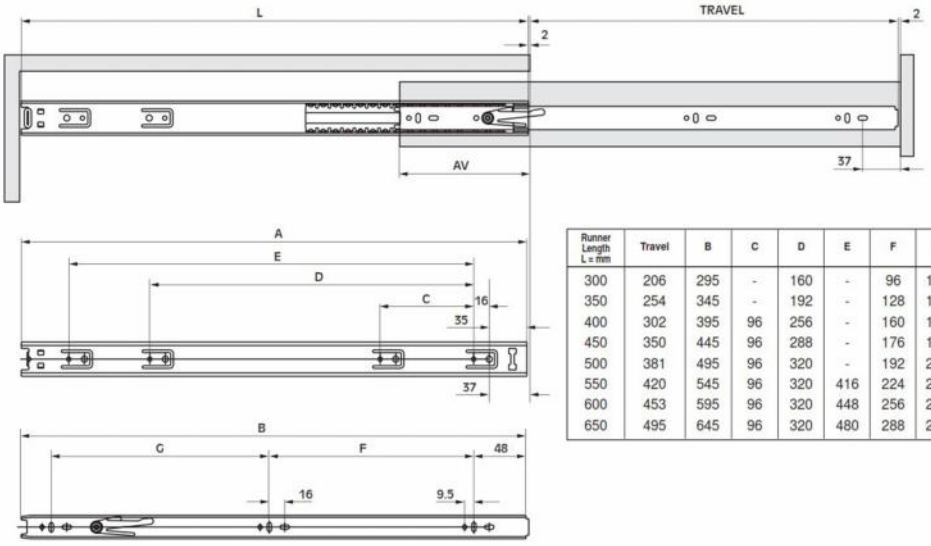
Lampiran 7 : Katalog Linear Drawer Slider

135 35 mm ball bearing runners

Technical details

- Fastened to drawer with chipboard screws
- Sliding on steel ball bearings
- Greater side-to-side stability
- Unlocking device

Mounting hole position



Runner Length L = mm	Travel	B	C	D	E	F	G	AV
300	206	295	-	160	-	96	128	94
350	254	345	-	192	-	128	144	96
400	302	395	96	256	-	160	160	98
450	350	445	96	288	-	176	192	100
500	381	495	96	320	-	192	224	119
550	420	545	96	320	416	224	224	130
600	453	595	96	320	448	256	256	147
650	495	645	96	320	480	288	288	155

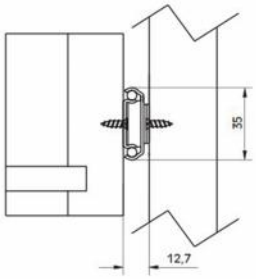
Product codes

Runner 135
Length
54.5135.0_.300.00
54.5135.0_.350.00
54.5135.0_.400.00
54.5135.0_.450.00
54.5135.0_.500.00
54.5135.0_.550.00
54.5135.0_.600.00
54.5135.0_.650.00

7 = Zincate
3 = Black

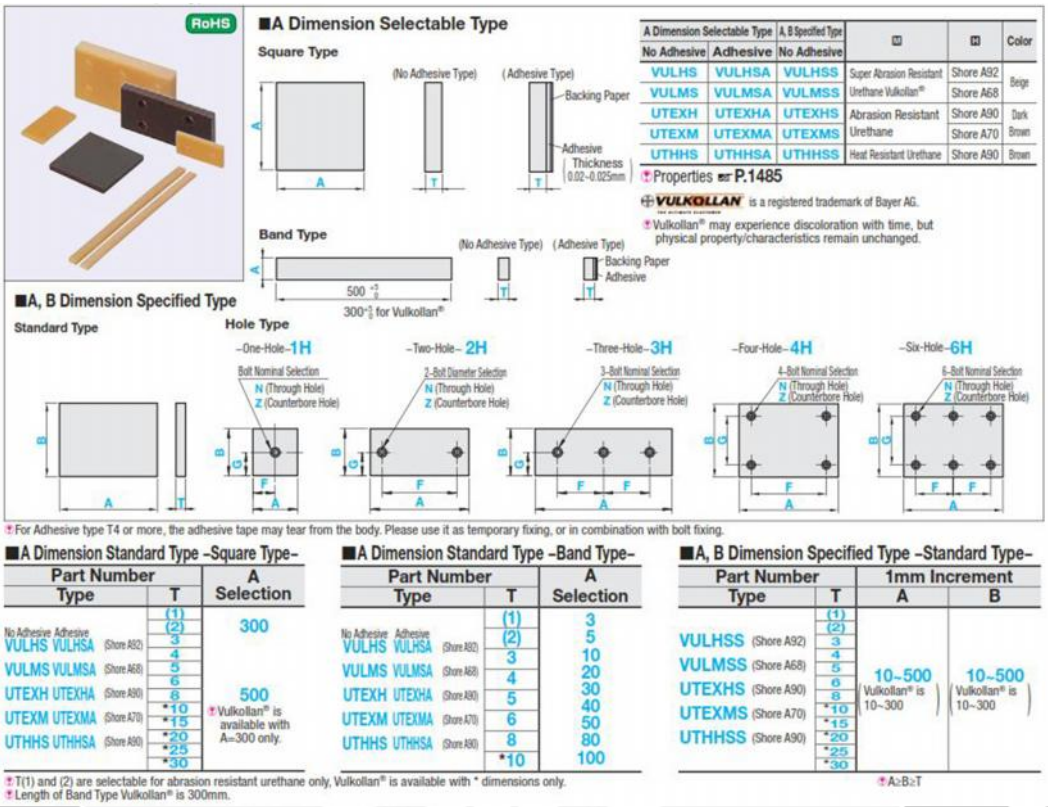
Pair packaging: 20 per box

Dimension scheme



Screws for this slide series are illustrated on page 37

Lampiran 8 : Katalog Rubber Band Type



A Dimension Selectable Type		A, B Specified Type			
No Adhesive	Adhesive	No Adhesive			Color
VULHS	VULHSA	VULHSS	Super Abrasion Resistant Urethane Vulkollan®	Shore A92	Beige
VULMS	VULMSA	VULMSS		Shore A68	
UTEXH	UTEXHA	UTEXHS	Abrasion Resistant Urethane	Shore A90	Dark Brown
UTEXM	UTEXMA	UTEXMS		Shore A70	
UTHHS	UTHHSA	UTHHSS	Heat Resistant Urethane	Shore A90	Brown

Properties ☞P.1485

VULKOLLAN is a registered trademark of Bayer AG.

Vulkollan® may experience discoloration with time, but physical property/characteristics remain unchanged.

For Adhesive type T4 or more, the adhesive tape may tear from the body. Please use it as temporary fixing, or in combination with bolt fixing.

■A Dimension Standard Type -Square Type-

Part Number Type	T	A Selection
No Adhesive Adhesive VULHS VULHSA (Shore A92)	(1)	300
	(2)	
	3	
	4	
VULMS VULMSA (Shore A68)	5	
	6	
UTEXH UTEXHA (Shore A90)	8	500
	*10	Vulkollan® is available with A=300 only.
UTEXM UTEXMA (Shore A70)	*15	
	*20	
UTHHS UTHHSA (Shore A90)	*25	
	*30	

■A Dimension Standard Type -Band Type-

Part Number Type	T	A Selection
No Adhesive Adhesive VULHS VULHSA (Shore A92)	(1)	3
	(2)	5
	3	10
VULMS VULMSA (Shore A68)	4	20
UTEXH UTEXHA (Shore A90)	5	30
	6	40
UTEXM UTEXMA (Shore A70)	8	50
UTHHS UTHHSA (Shore A90)	*10	80
		100

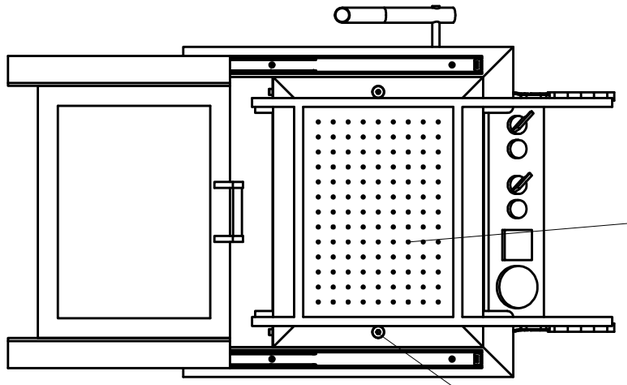
■A, B Dimension Specified Type -Standard Type-

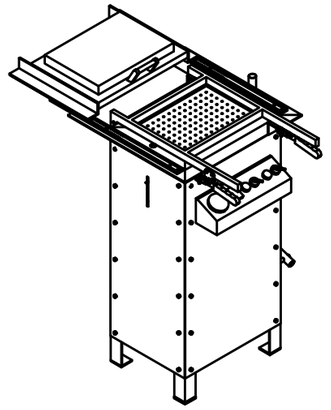
Part Number Type	T	1mm Increment A	1mm Increment B
VULHSS (Shore A92)	(1)	10~500 Vulkollan® is 10~300	10~500 Vulkollan® is 10~300
	(2)		
	3		
	4		
VULMSS (Shore A68)	5		
	6		
UTEXHS (Shore A90)	8		
	*10		
UTEXMS (Shore A70)	*15		
	*20		
UTHHSS (Shore A90)	*25		
	*30		

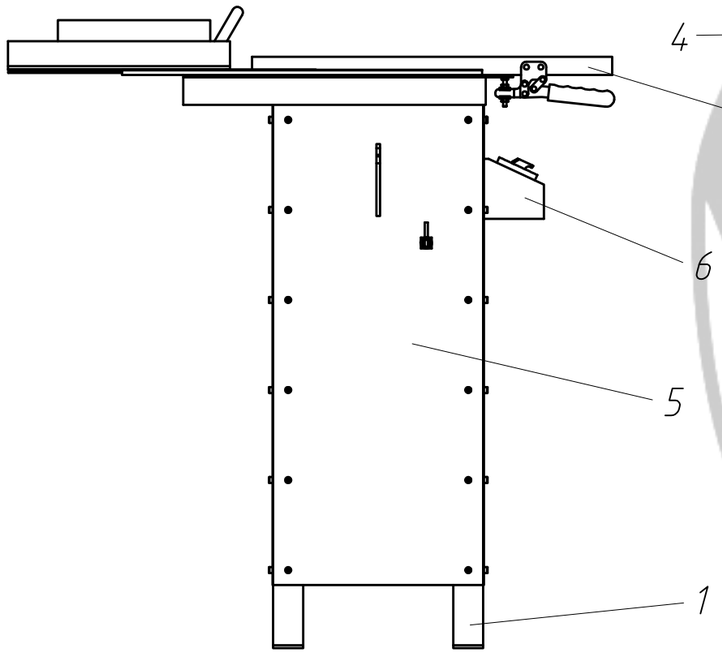
T(1) and (2) are selectable for abrasion resistant urethane only, Vulkollan® is available with * dimensions only.

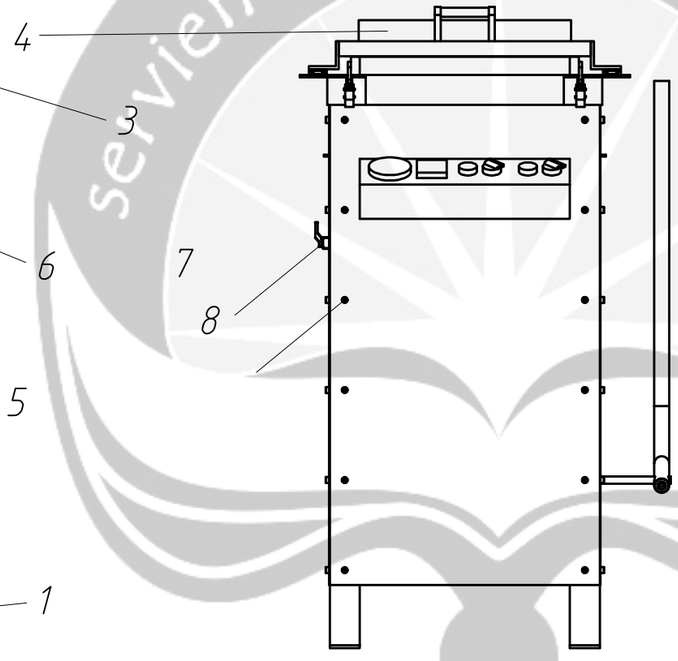
Length of Band Type Vulkollan® is 300mm.

A≥B≥T



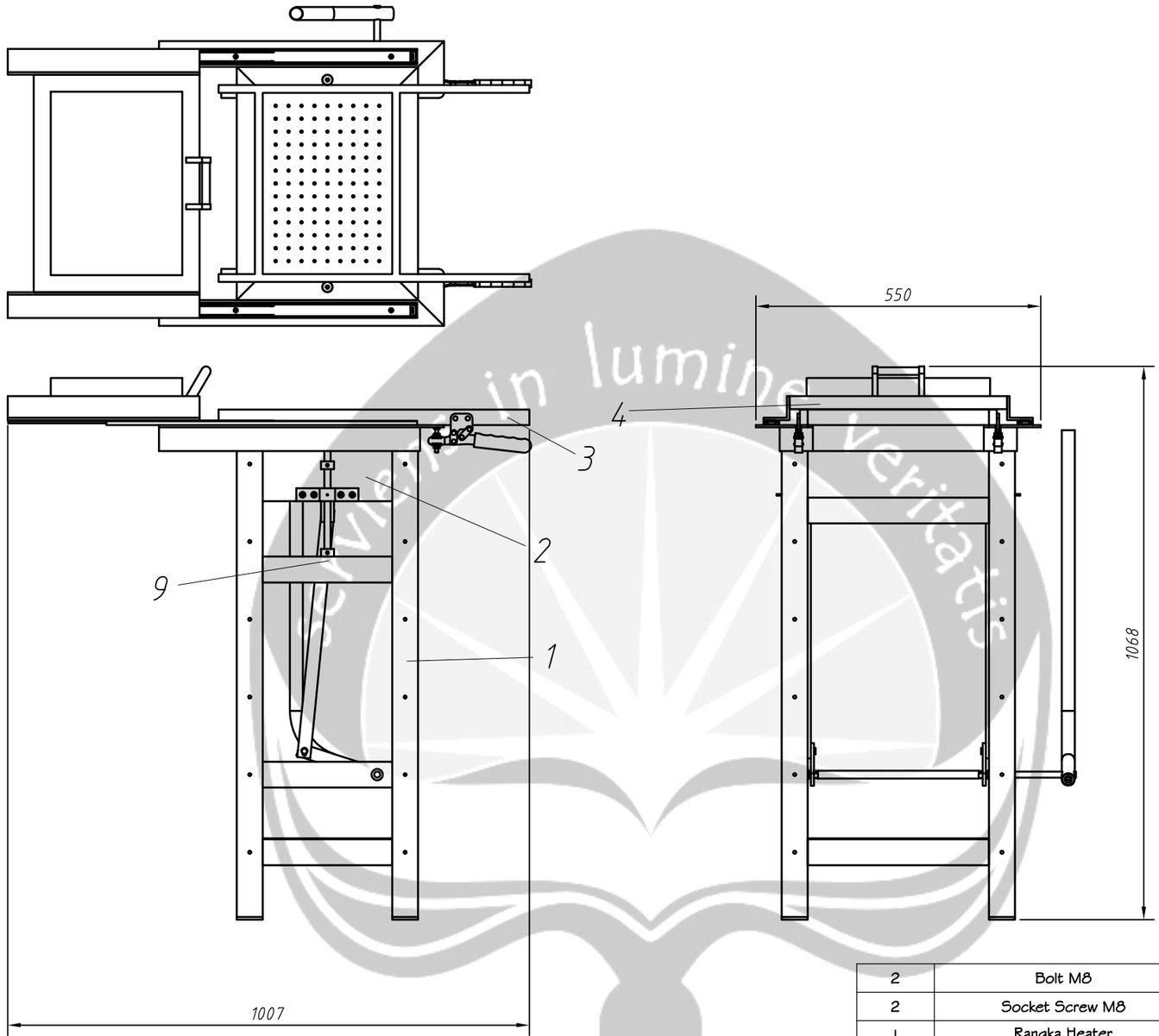


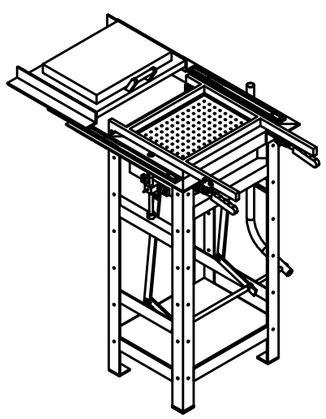




Pieces	Description	Item	Material	Dimension	Remarks
2	Socket Screw M8	9	-	-	Purchased
48	Bolt M6	8	-	-	Purchased
1	Kran Vakum	7	-	-	Purchased
1	Panel Box	6	-	-	-
1	Cover	5	-	-	-
1	Rangka Heater	4	-	-	-
1	Penjepit Plastik	3	-	-	-
1	Area Meja Vakum	2	-	-	-
1	Frame	1	-	-	-

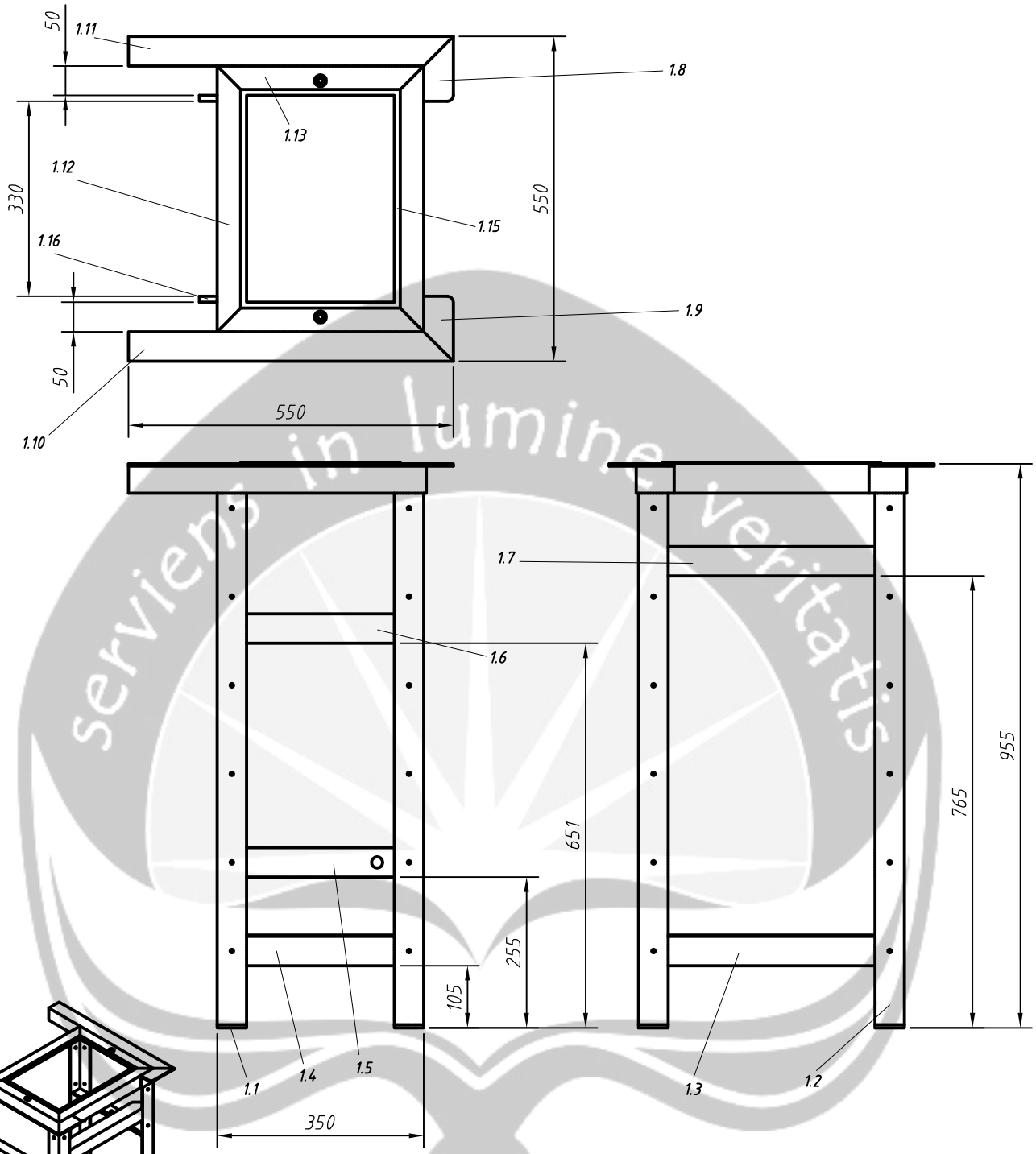
Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:10	
	Reg. Nr. : 14160116	Unit : mm	
	Date : 16-12-2016	Material :	
	Checked by : T.B.Hanandoko, ST., MT	Sign :	
	A3	Mesin Thermoforming	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 0
Origin.	Rep.	Rep. by.	SN. NS.





Pieces	Description	Item	Material	Dimension	Remarks
2	Bolt M8	9	-	-	Purchased
2	Socket Screw M8	8	-	-	Purchased
1	Rangka Heater	4	-	-	-
1	Penjepit Plastik	3	-	-	-
1	Area Meja Vakum	2	-	-	-
1	Frame	1	-	-	-

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:10	
	Reg. Nr. : 14160811 6	Unit : mm	
	Date : 16-12-2016	Material :	
	Checked by : T.B.Hanandoko, ST., MT	Sign :	
	A3	Assy No Cover	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 0
Origin.	Rep.	Rep. by.	SN. NS.



1 Pc

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:10	
	Reg. Nr. : 14160811 6	Unit : mm	
	Date : 06-12-2016	Material :	
	Checked by : T.B.Hanandoko, ST., MT	Sign :	
	A4	Frame	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 1
Origin.	Rep.	Rep. by.	SN. NS.

Pieces	Description	Item	Material	Dimension	Remarks
4	Alas Kaki Frame	1.1	MS Sheet #5	50x50	-
4	Rangka Tegak	1.2	L profil	50x50x4	-
2	Penyangga Bawah A	1.3	L profil	50x50x4	-
2	Penyangga Bawah B	1.4	L profil	50x50x4	-
2	Penyangga Shaft	1.5	MS #4	-	-
2	Penyangga Rel Meja	1.6	L profil	50x50x4	-
1	Penyangga Panel Box	1.7	L profil	50x50x4	-
1	Penyangga Clamp A	1.8	L profil	50x50x4	-
1	Penyangga Clamp B	1.9	L profil	50x50x4	-
2	Penyangga Heater A	1.10	L profil	50x50x4	-
2	Penyangga Heater B	1.11	L profil	50x50x4	-
2	Frame Atas A	1.12	L profil	50x50x4	-
2	Frame Atas B	1.13	L profil	50x50x4	-
1	Tatakan Bawah	1.14	MS Sheet #2	-	-
1	Karet	1.15	MISUMI Band Type UTHHS-4-20	-	Purchased
2	Stand Clamping	1.16	MS	-	-

Revision Index

Drawn by : Rizky Adi Setiawan
Reg. Nr. : 14160811 6
Date : 06-12-2016
Checked by : T.B.Hanandoko, ST., MT

Scale : 1:10
Unit : mm
Material :
Sign :

A4

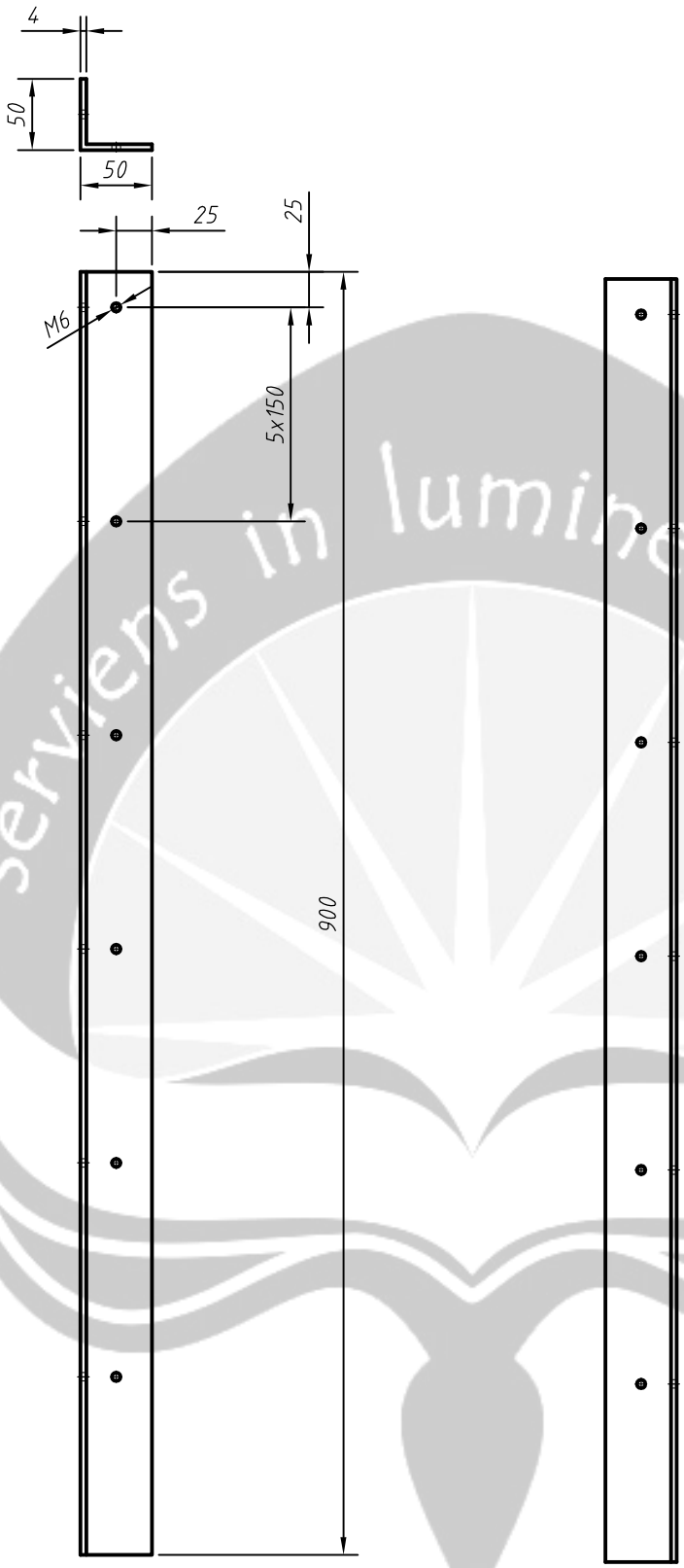
Part List Frame

INDUSTRIAL ENGINEERING
UAJY

Operation

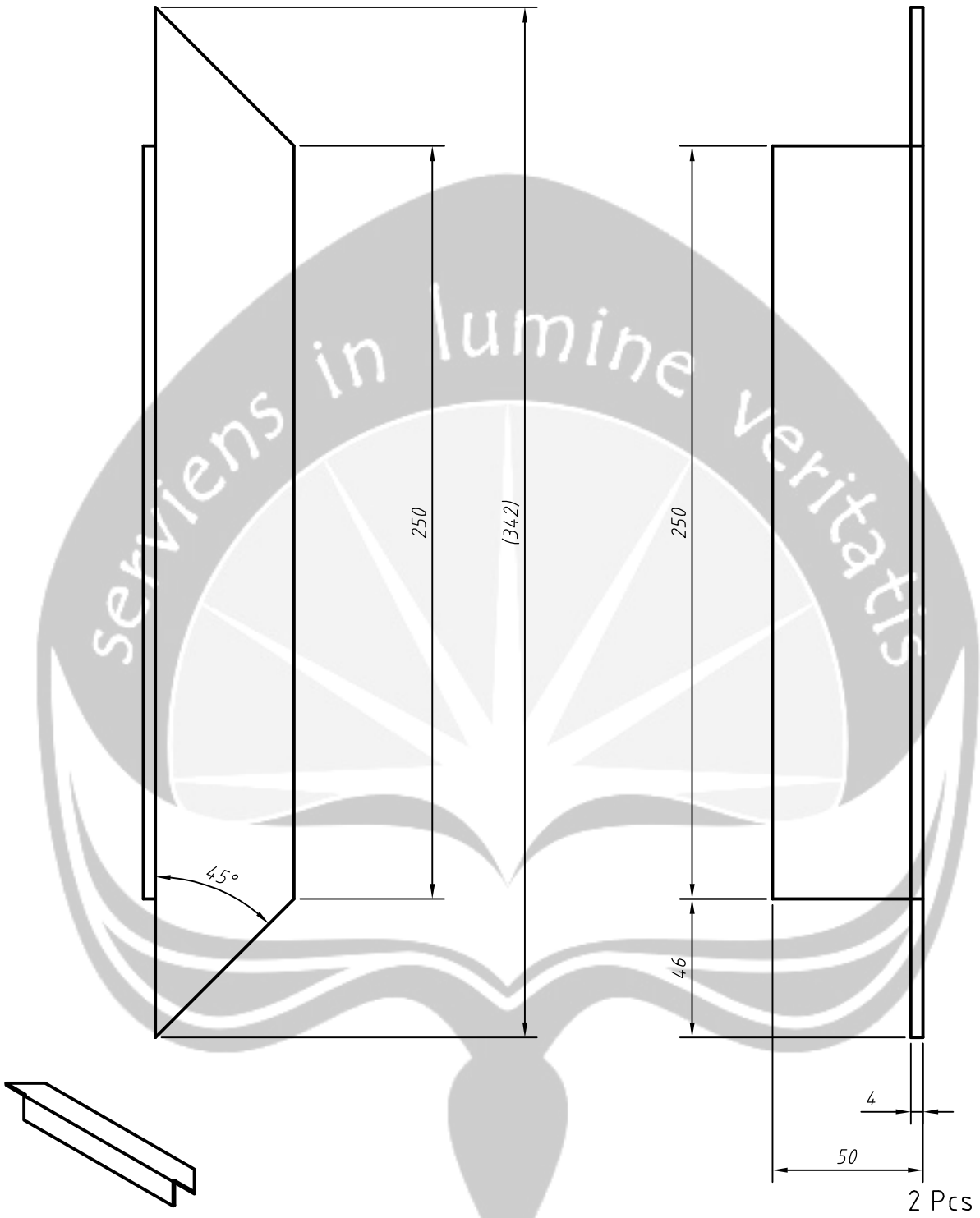
Dwg. Nr. 1

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



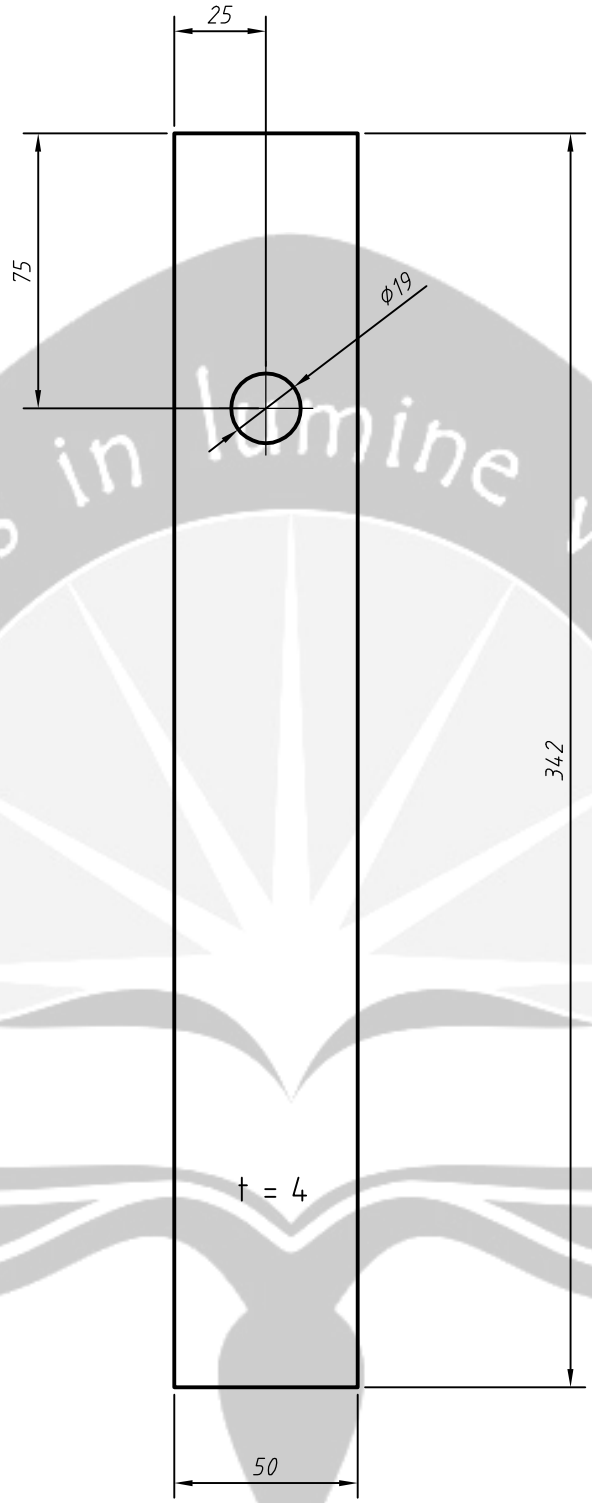
4 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:5
	Reg. Nr. : 14160811 6	Unit : mm
	Date : 06-12-2016	Material : L profil 50x50
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A4	Rangka Tegak
INDUSTRIAL ENGINEERING UAJY		Operation / Dwg. Nr. 1.1
Origin.	Rep.	Rep. by. / SN. NS.



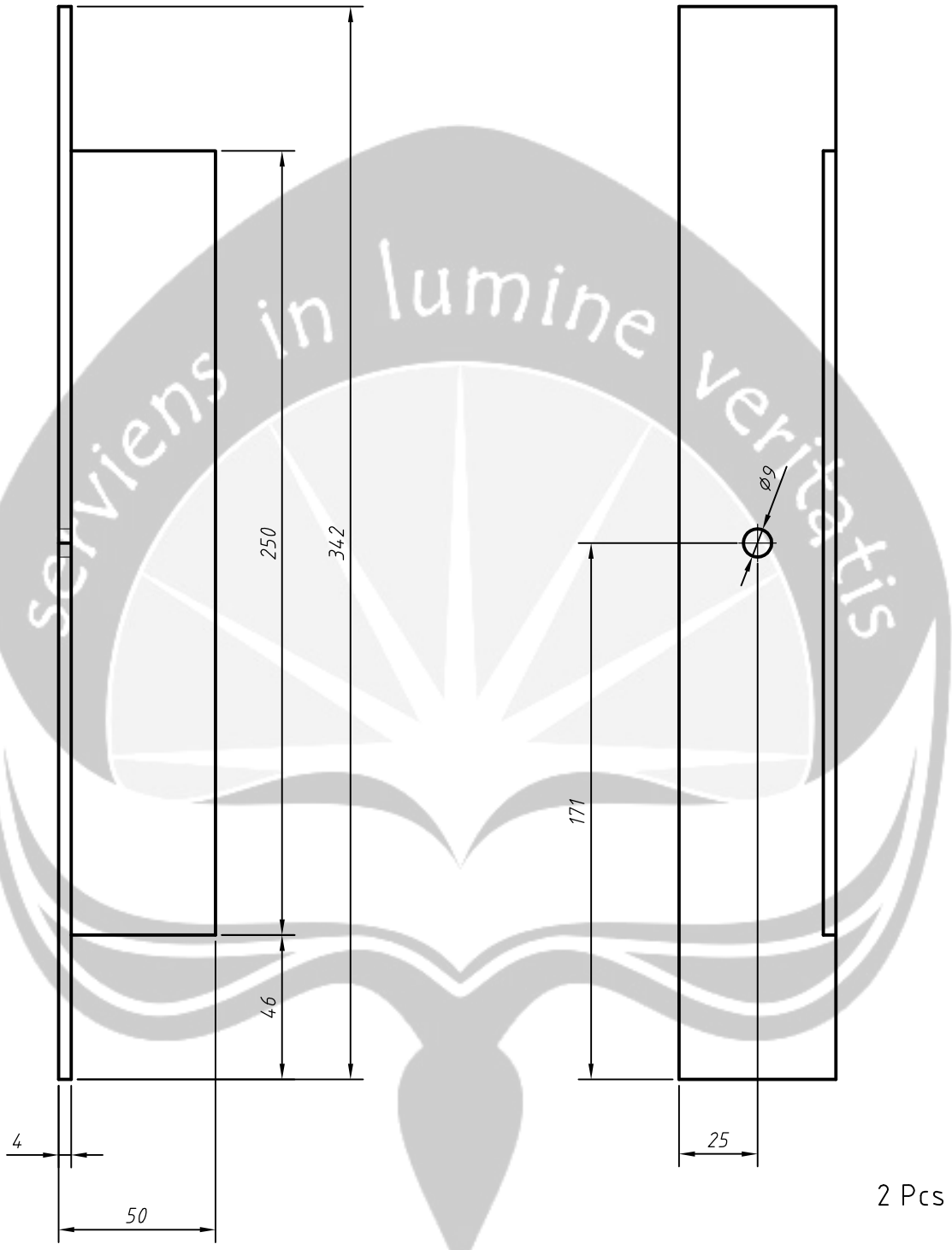
Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:2
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 06-12-2016		Material : L profil 50x50
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Penyangga Bawah B	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 1.2
Origin.	Rep.	Rep. by.	SN. NS.

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:2
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 06-12-2016		Material : L profil 50x50
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Penyangga Bawah A	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 1.3
Origin.	Rep.	Rep. by.	SN. NS.



2 Pcs

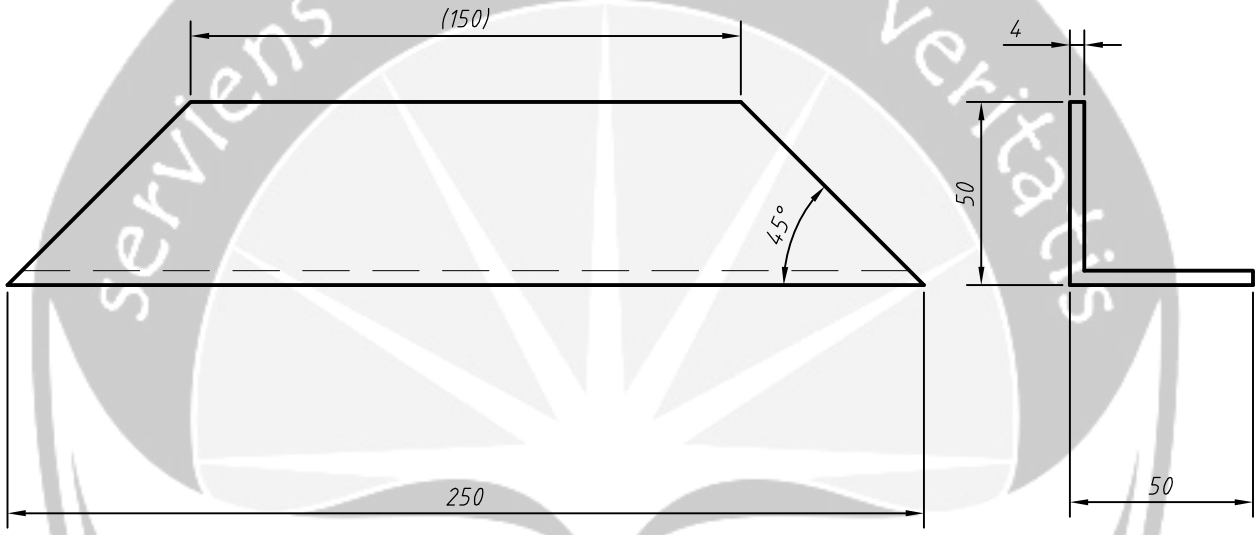
Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:2
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 06-12-2016		Material : MS #4
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Penyangga Shaft	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 1.4
Origin.	Rep.	Rep. by.	SN. NS.



2 Pcs

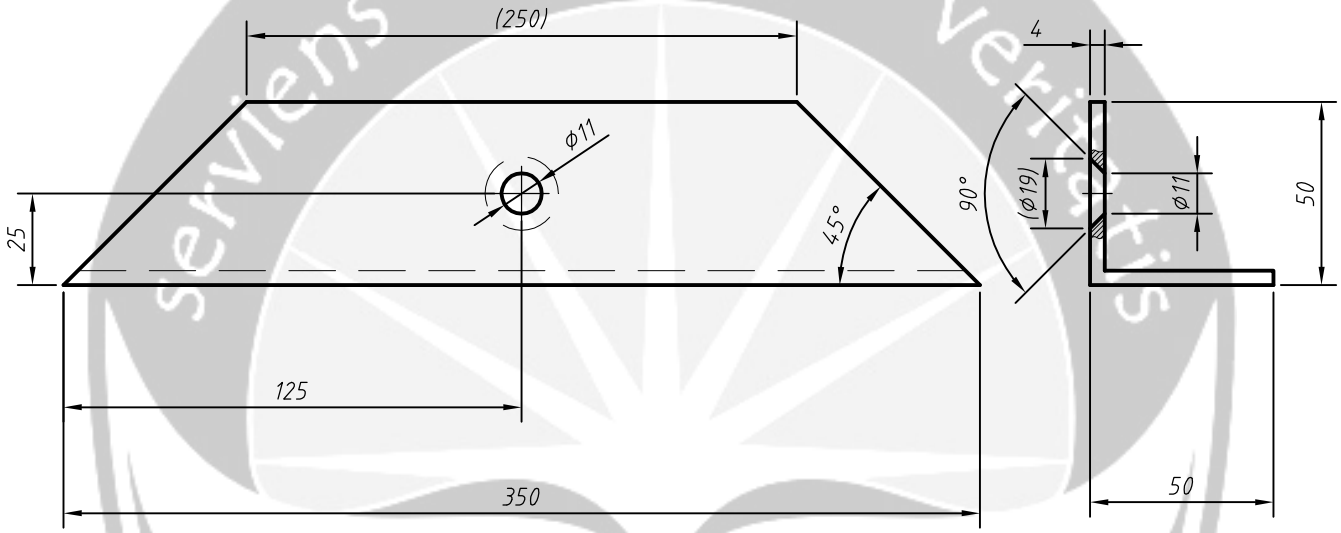
Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:2
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 06-12-2016		Material : L profil 50x50
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Penyangga Rel Meja	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 1.5
Origin.	Rep.	Rep. by.	SN. NS.

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:2
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 06-12-2016		Material : L profil 50x50
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Penyangga Panel Box	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 1.6
Origin.	Rep.	Rep. by.	SN. NS.



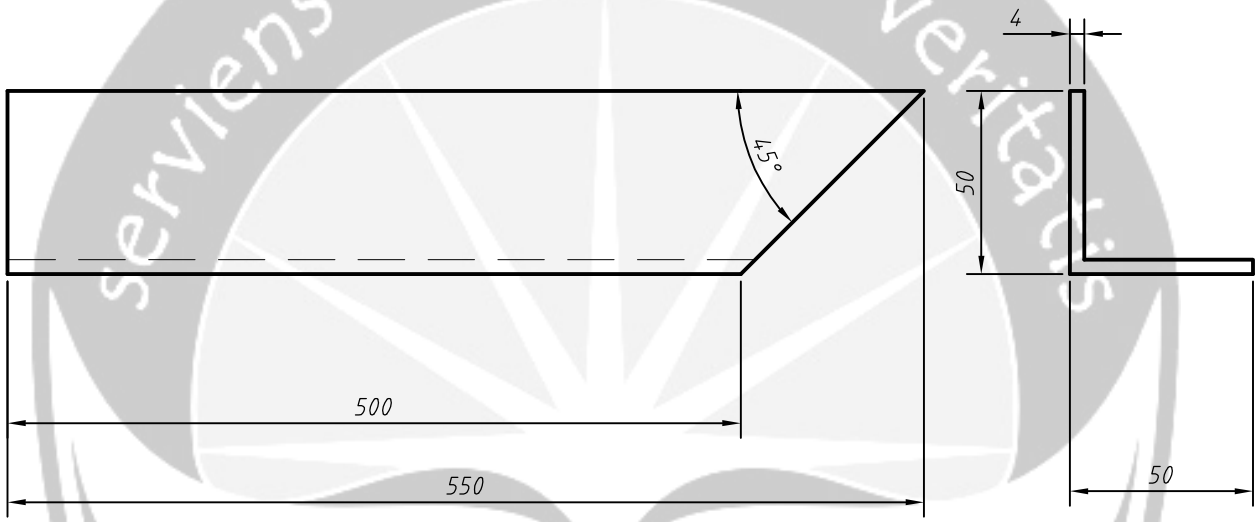
2 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:2
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 06-12-2016		Material : L profil 50x50
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Frame Atas A	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 1.7
Origin.	Rep.	Rep. by.	SN. NS.



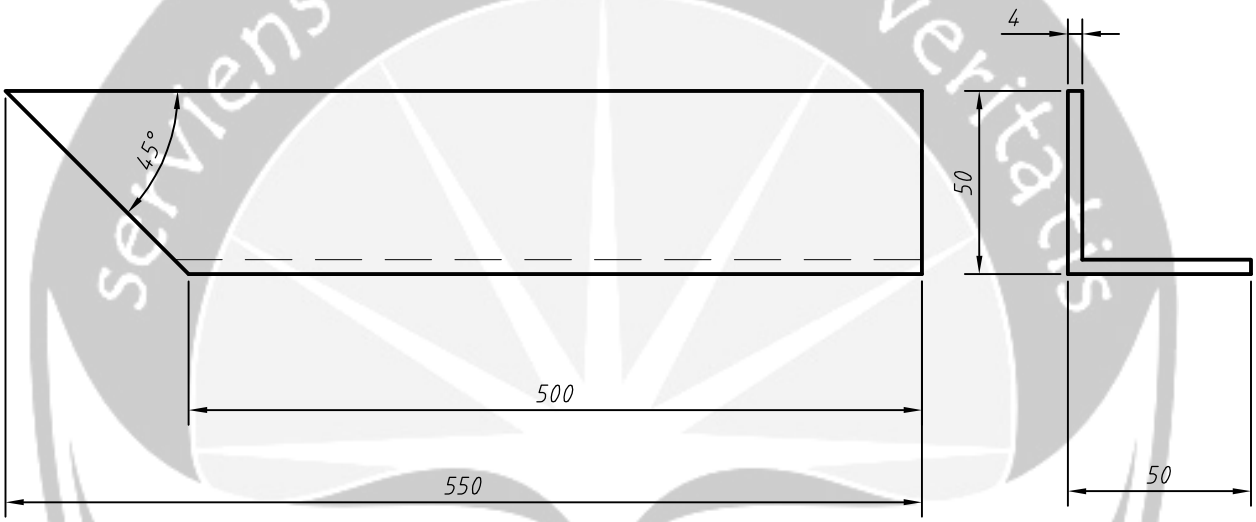
2 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:2
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 06-12-2016		Material : L profil 50x50
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Frame Atas B	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 1.8
Origin.	Rep.	Rep. by.	SN. NS.



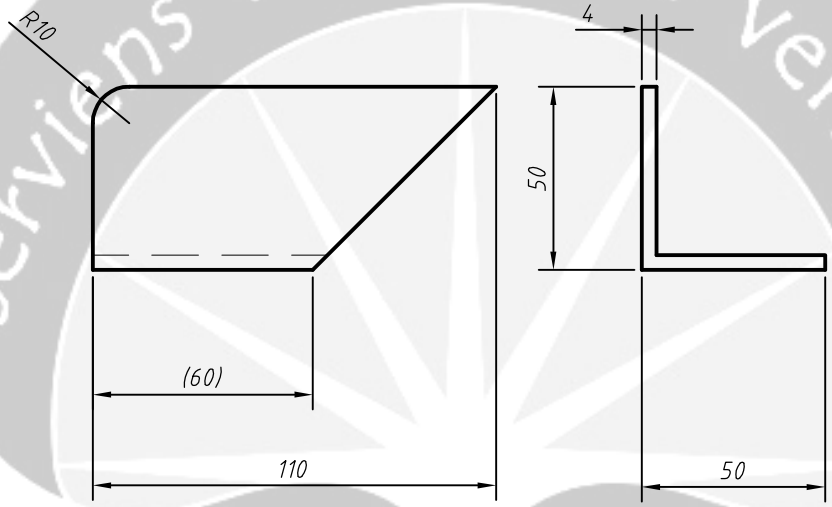
1 Pc

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:2
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 06-12-2016		Material : L profil 50x50
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Penyangga Heater A	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 1.9
Origin.	Rep.	Rep. by.	SN. NS.



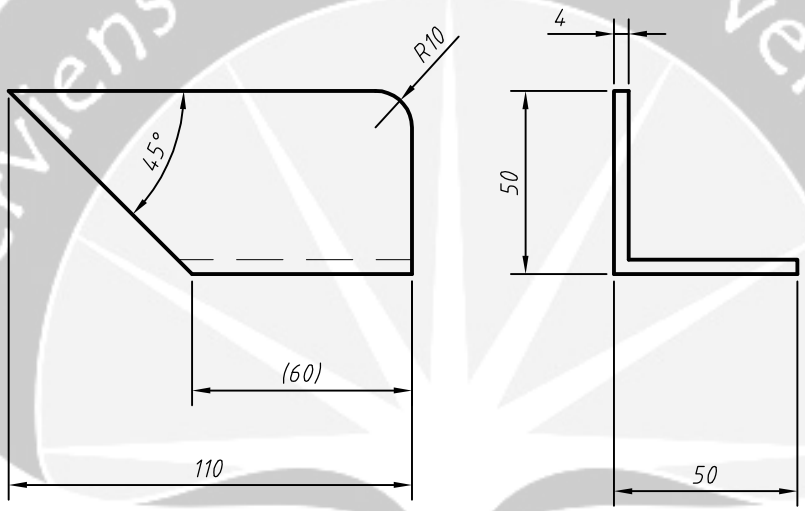
1 Pc

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:2
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 06-12-2016		Material : L profil 50x50
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Penyangga Heater B	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 1.10
Origin.	Rep.	Rep. by.	SN. NS.



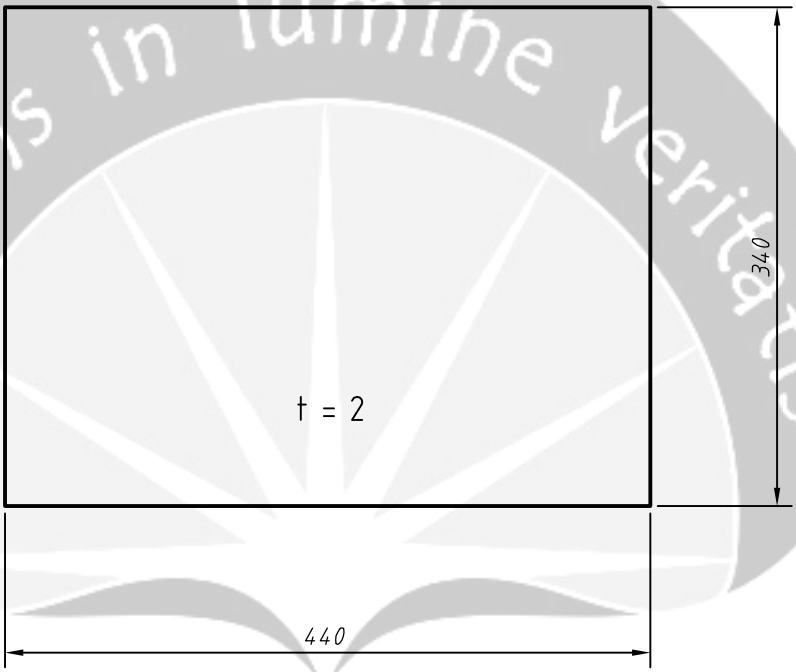
1 Pc

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:2
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 06-12-2016		Material : L profil 50x50
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Penyangga Clamp A	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 1.11
Origin.	Rep.	Rep. by.	SN. NS.



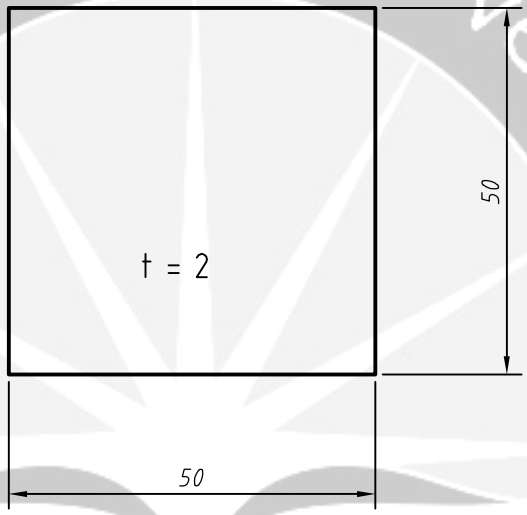
1 Pc

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:2
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 06-12-2016		Material : L profil 50x50
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Penyangga Clamp B	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 1.12
Origin.	Rep.	Rep. by.	SN. NS.



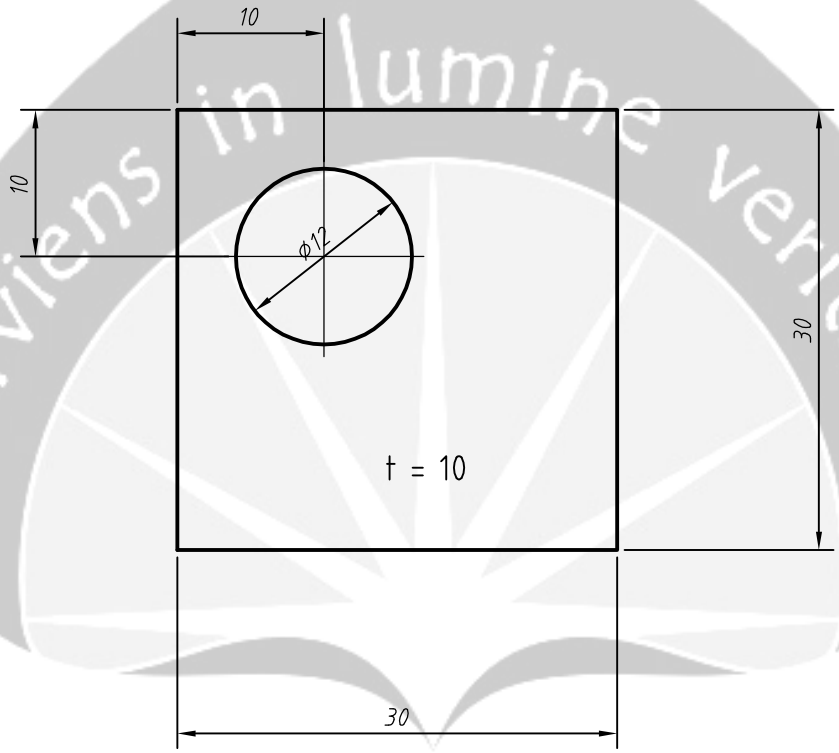
1 Pc

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:5
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 06-12-2016		Material : MS Sheet #2
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Tatakan Bawah	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 1.13
Origin.	Rep.	Rep. by.	SN. NS.



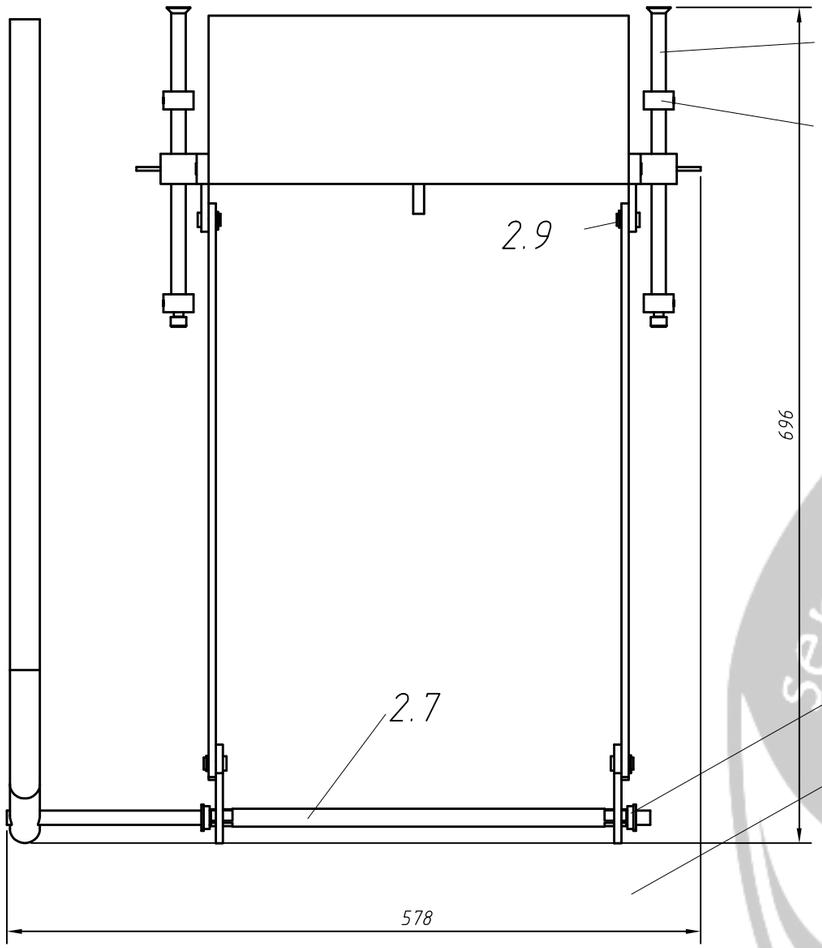
4 Pcs

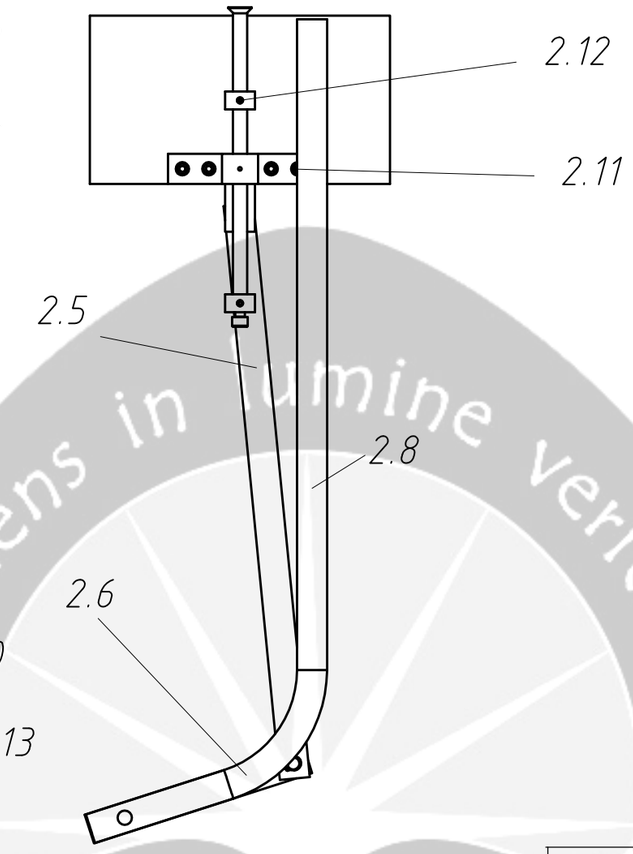
Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:1
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 06-12-2016		Material : MS Sheet #5
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Alas Kaki Frame	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 1.14
Origin.	Rep.	Rep. by.	SN. NS.

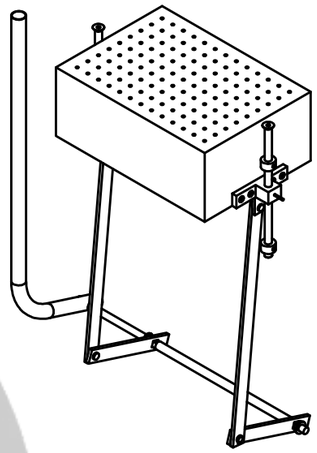


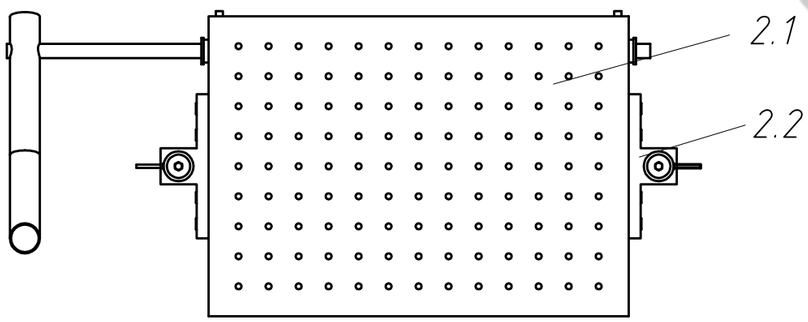
2 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 2:1
	Reg. Nr. : 14160811 6	Unit : mm
	Date : 06-12-2016	Material : MS
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A4	Stand Clamping
INDUSTRIAL ENGINEERING UAJY		Operation / Dwg. Nr. 1.15
Origin.	Rep.	Rep. by. / SN. NS.



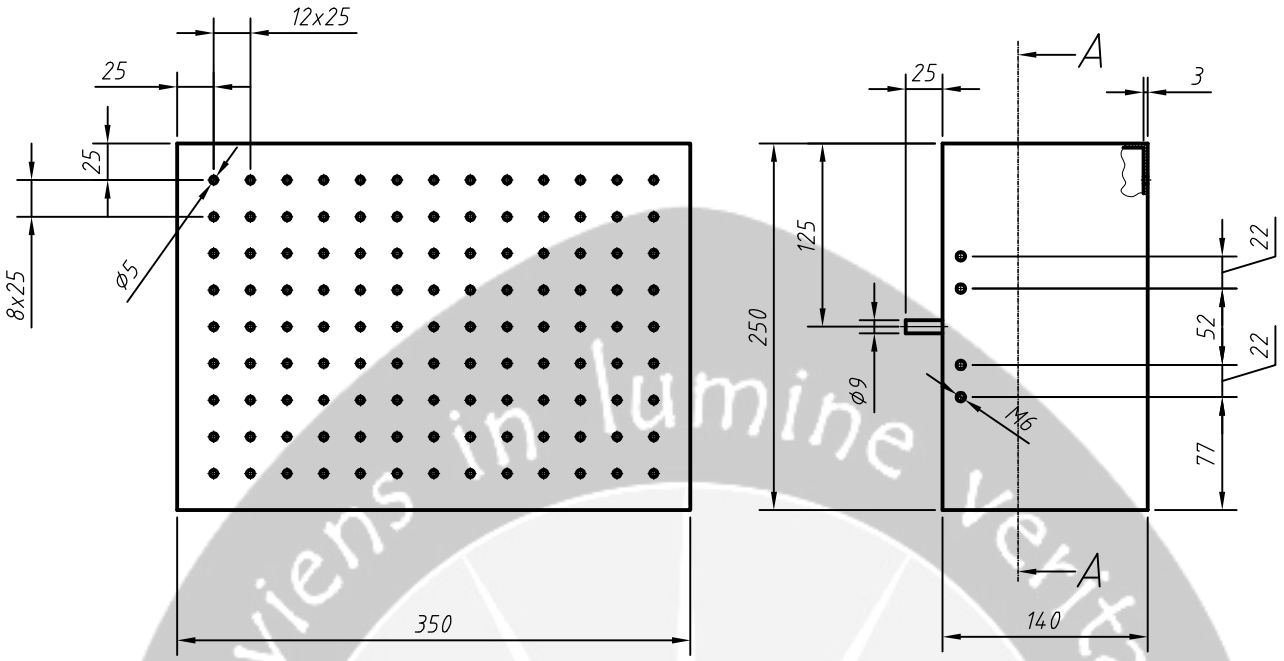


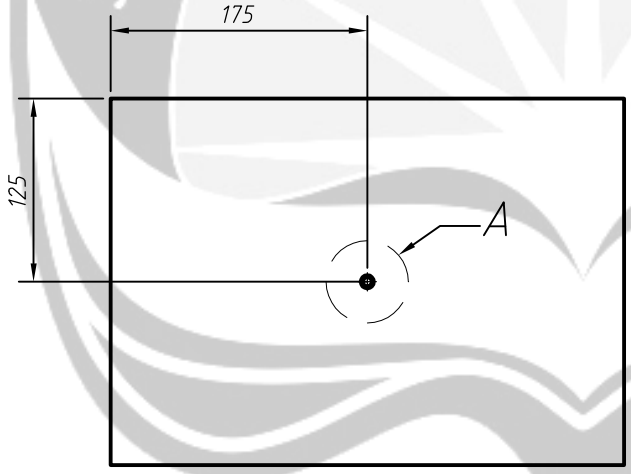




Pieces	Description	Item	Material	Dimension	Remarks
2	Nut M12	2.13	-	-	Purchased
4	Socket Set Screw M5	2.12	-	-	Purchased
8	Inbus Screw M6	2.11	-	-	Purchased
1	Bush Shaft Pengangkat Meja	2.10	Brass	-	-
4	Pin Engsel	2.1.9	Brass	-	-
1	Assy Tuas	2.8	MS	-	-
1	Shaft Pengangkat Meja	2.7	MS	-	-
2	Engsel Bawah	2.6	MS	-	-
2	Engsel Atas	2.5	MS	-	-
4	Stopper Bar Meja	2.4	MS	-	-
2	Shaft Bar Meja	2.3	MS	-	-
2	Assy Sliding Bar Meja	2.2	MS	-	-
1	Meja Vakum	2.1	MS #3	-	-

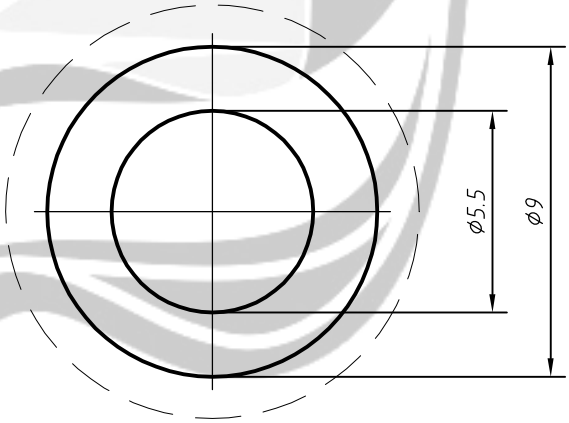
Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:1	
	Reg. Nr. : 14160811 6	Unit : mm	
	Date : 01-12-2016	Material :	
	Checked by : T.B.Hanandoko, ST., MT	Sign :	
	A3	Area Meja Vakum	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 2
Origin.	Rep.	Rep. by.	SN. NS.





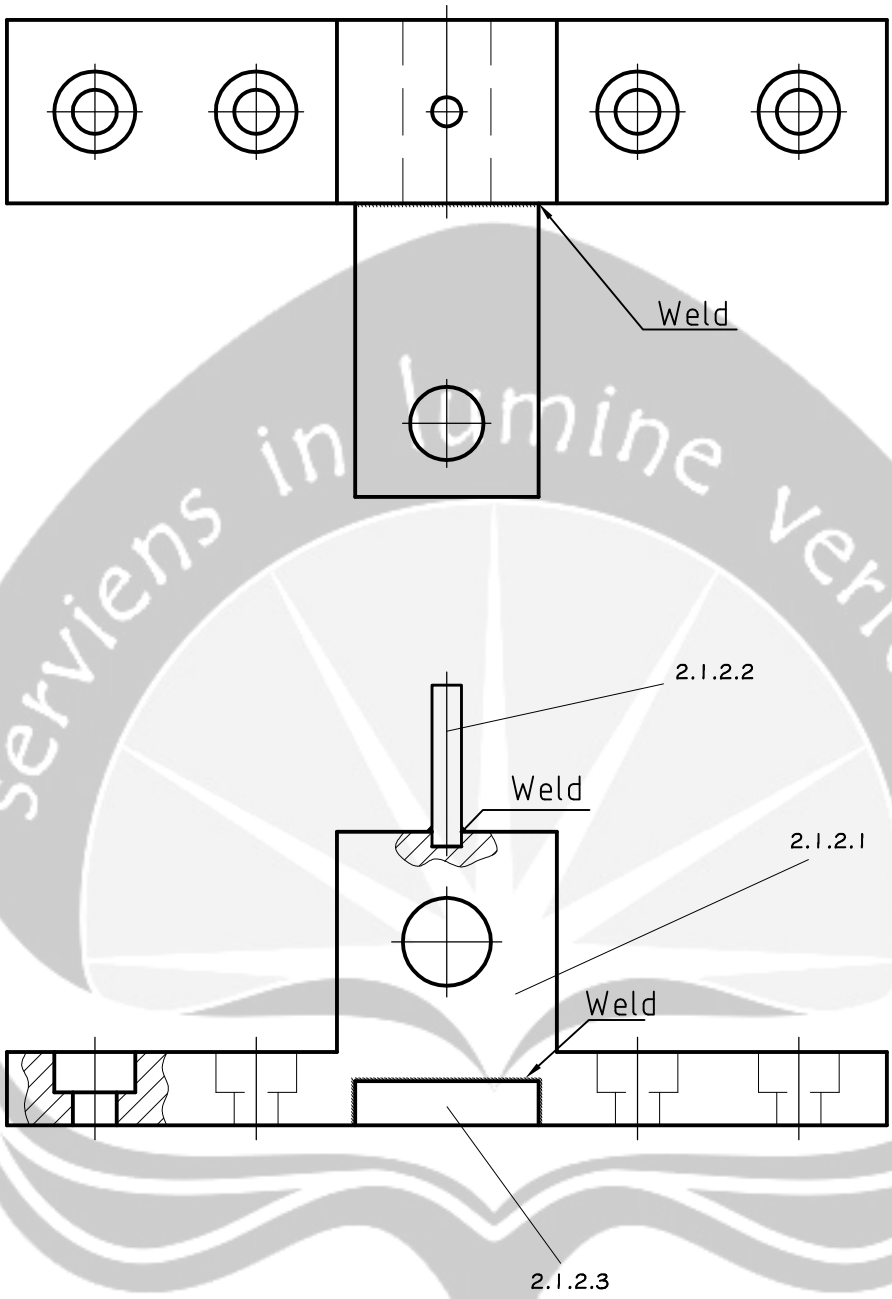
Section A-A
Skala : 1 : 5

Detail. A
Skala 5 : 1



1 Pc

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:5
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 29-11-2016		Material : MS #3
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Meja Vakum	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 2.1
Origin.	Rep.	Rep. by.	SN. NS.

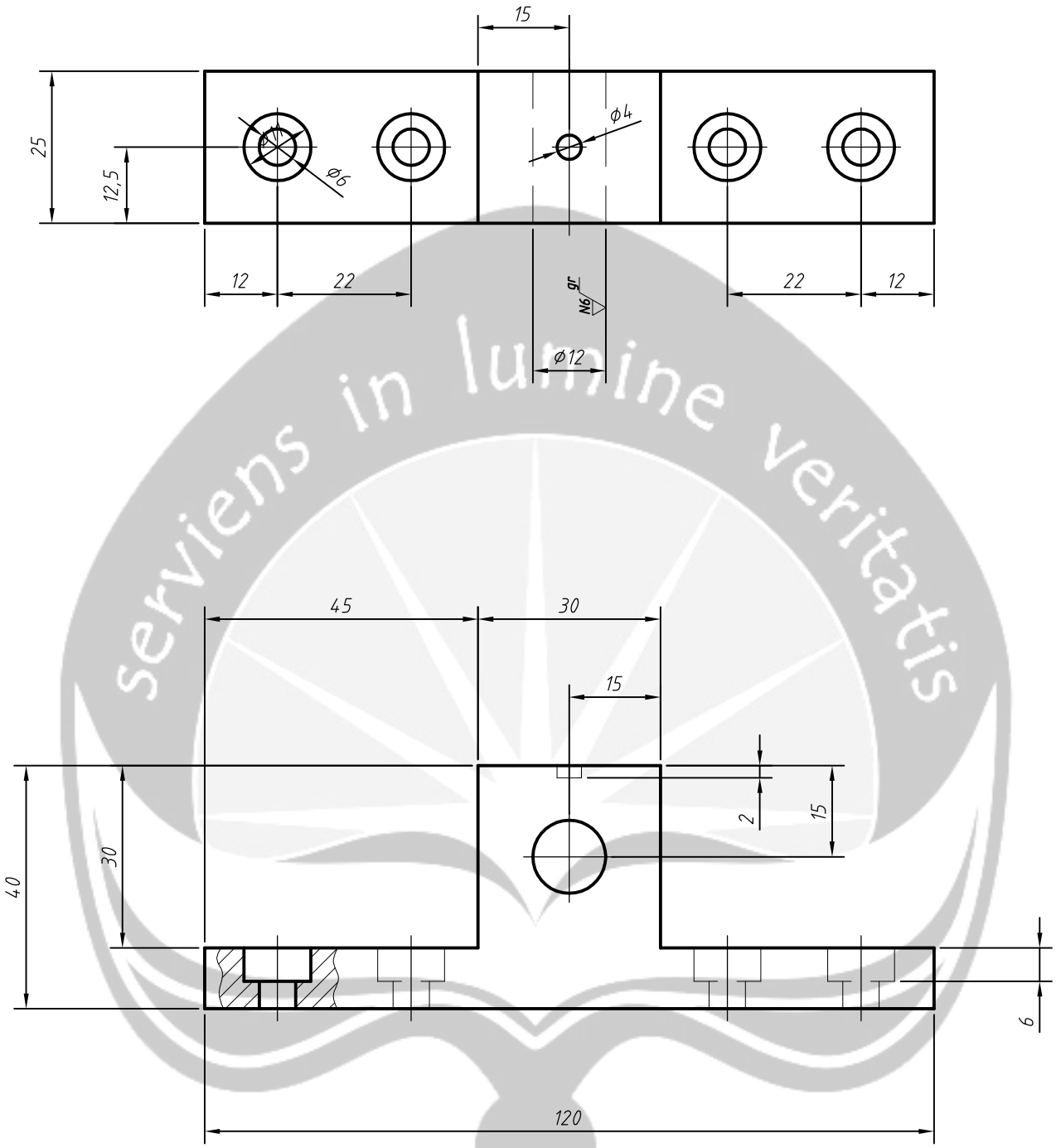


2 Pcs

Pieces	Description	Item	Material	Dimension	Remarks
1	Plat 40mm	2.1.2.3	MS	-	-
1	Pin Sliding Bar Meja	2.1.2.2	MS	-	-
1	Sliding Bar Meja	2.1.2.1	MS	-	-

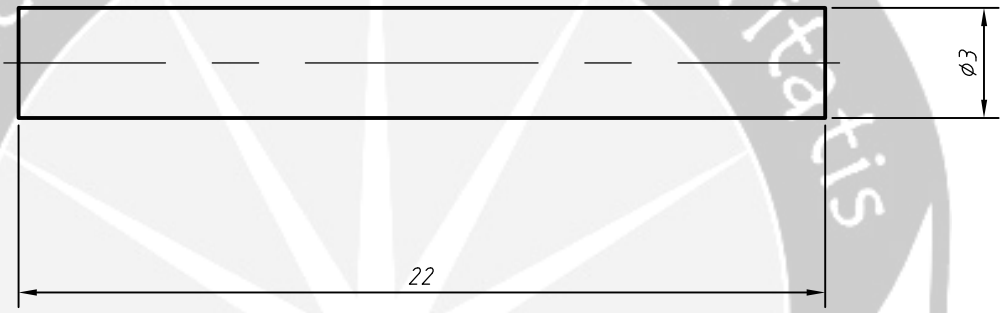
Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:1
	Reg. Nr. : 14160811 6	Unit : mm
	Date : 29-11-2016	Material : MS
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A4	Assy Sliding bar Meja

INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 2.2
Origin.	Rep.	Rep. by.	SN. NS.



2 Pcs

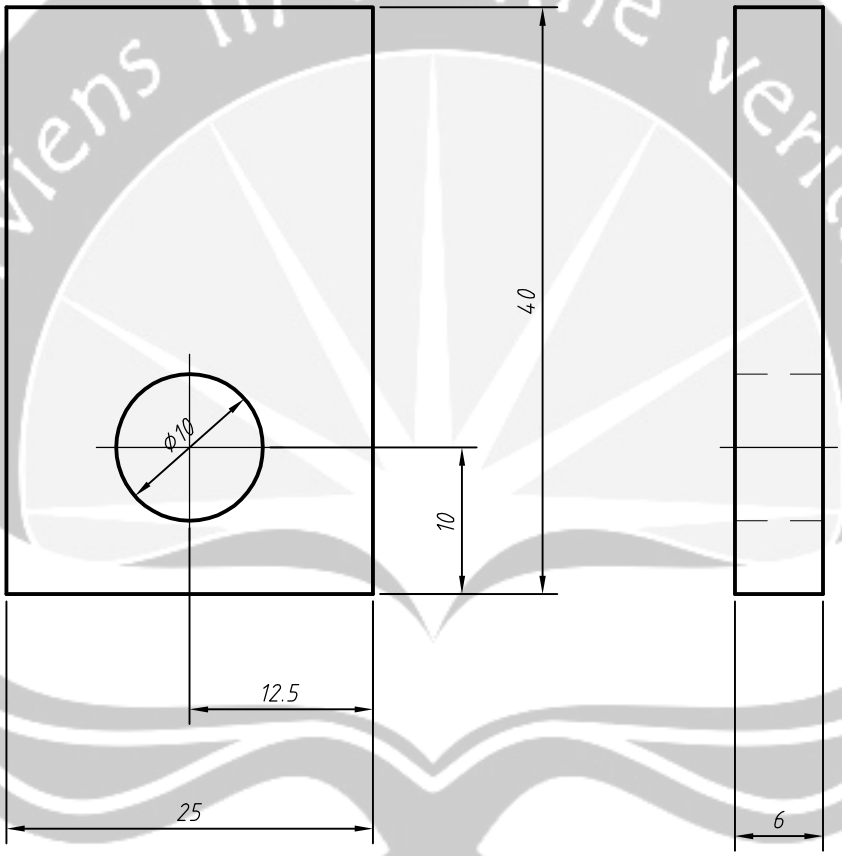
Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:1
	Reg. Nr. : 14160811 6	Unit : mm
	Date : 29-11-2016	Material : MS
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A4	Sliding bar Meja
INDUSTRIAL ENGINEERING UAJY		Operation / Dwg. Nr. 2.2.1
Origin.	Rep.	Rep. by. / SN. NS.



Chamfer all sharp 0,2x45°

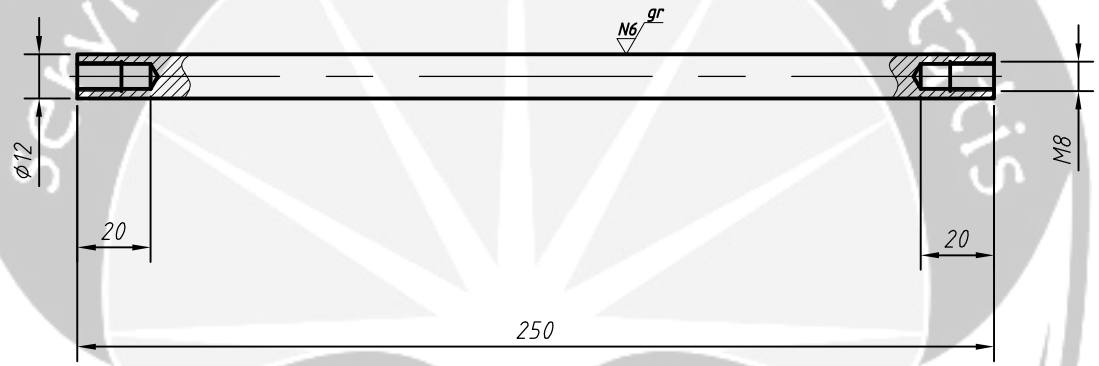
2 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 5:1	
	Reg. Nr. : 14160811 6	Unit : mm	
	Date : 29-11-2016	Material : MS	
	Checked by : T.B.Hanandoko, ST., MT	Sign :	
	A4	Pin Sliding bar Meja	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 2.2.2
Origin.	Rep.	Rep. by.	SN. NS.



2 Pcs

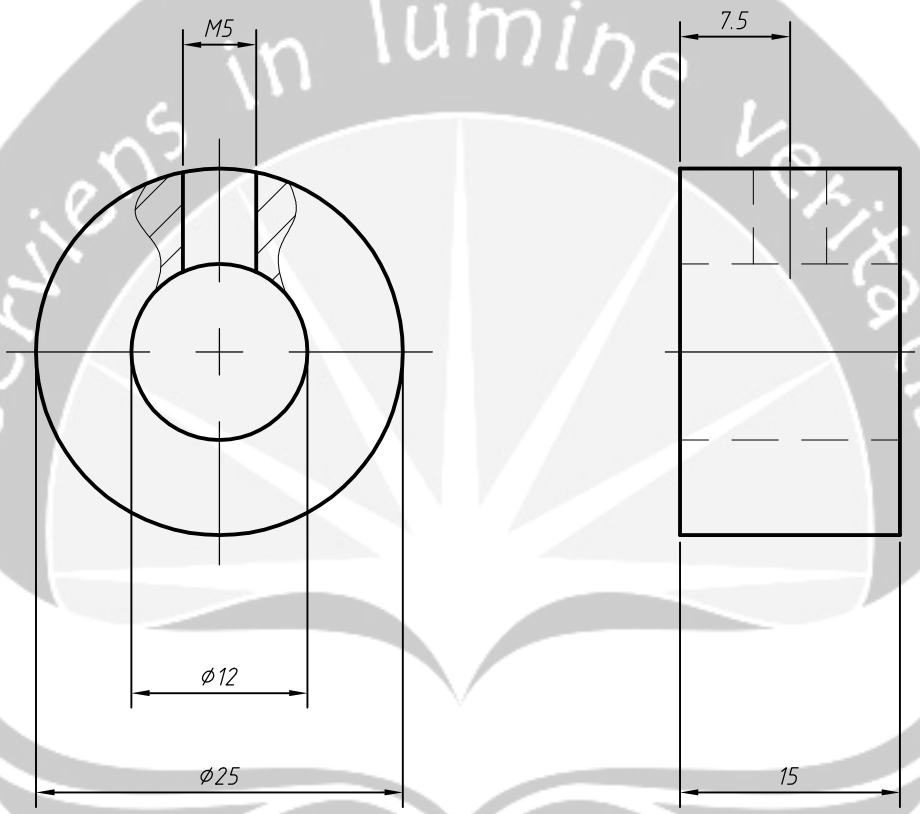
Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 2:1
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 29-11-2016		Material : MS
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Plat 40mm	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 2.2.3
Origin.	Rep.	Rep. by.	SN. NS.



Chamfer all sharp 0,2x45°

2 Pcs

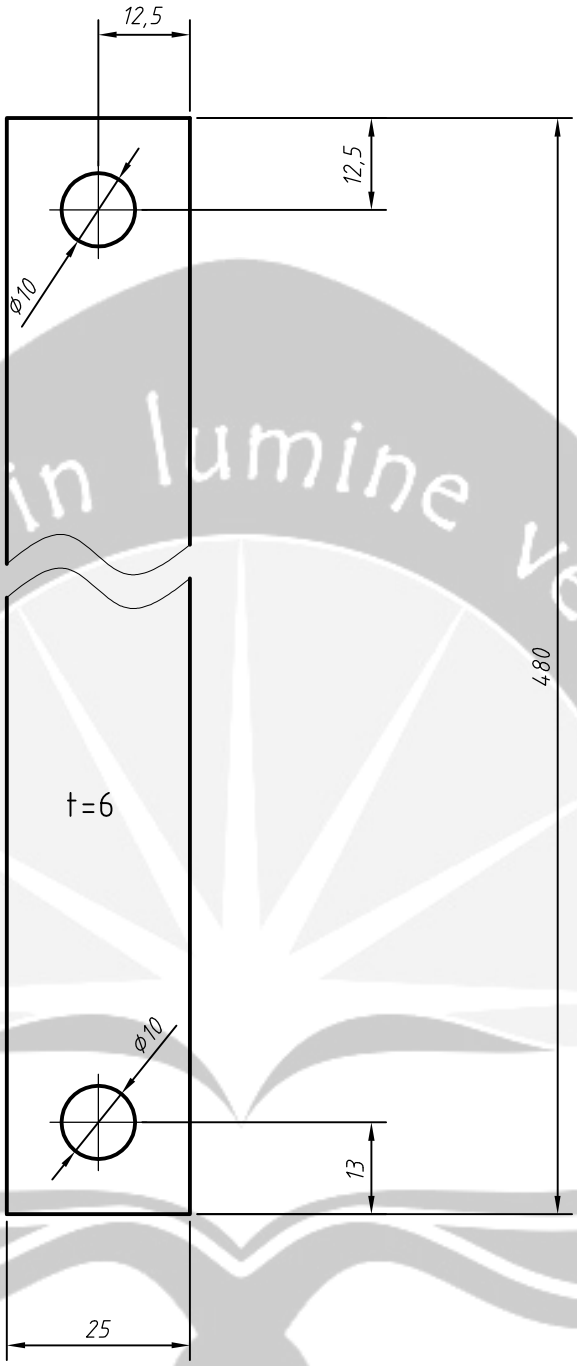
Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:2
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 29-11-2016		Material : MS
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Shaft Bar Meja	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 2.3
Origin.	Rep.	Rep. by.	SN. NS.



Chamfer all sharp 0,2x45°

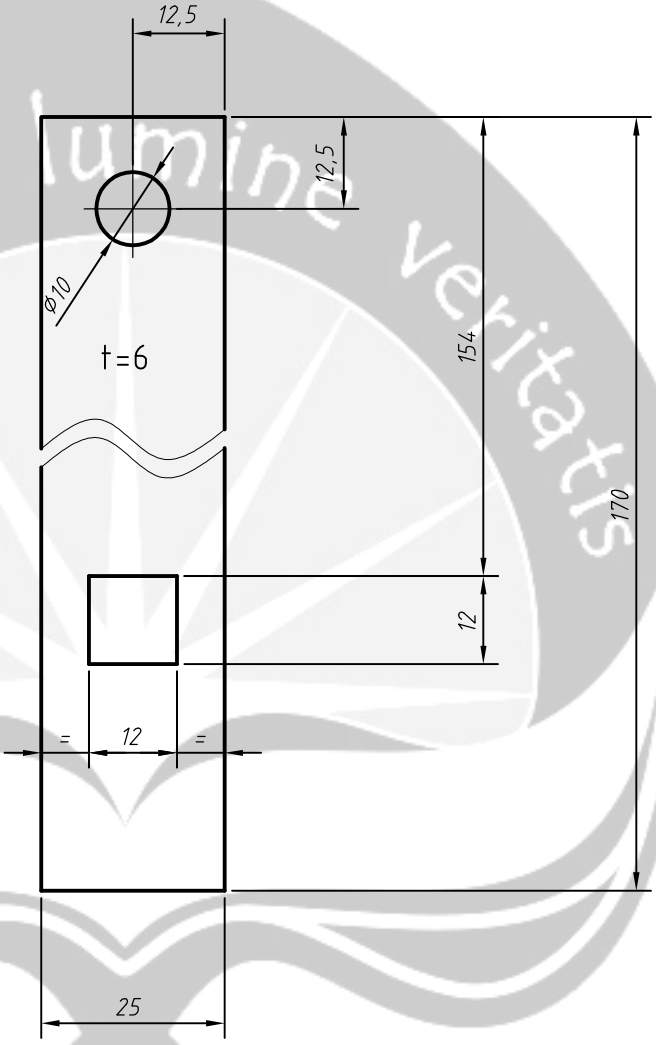
4 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 2:1	
	Reg. Nr. : 14160811 6	Unit : mm	
	Date : 29-11-2016	Material : MS	
	Checked by : T.B.Hanandoko, ST., MT	Sign :	
	A4	Stopper Bar Meja	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 2.4
Origin.	Rep.	Rep. by.	SN. NS.



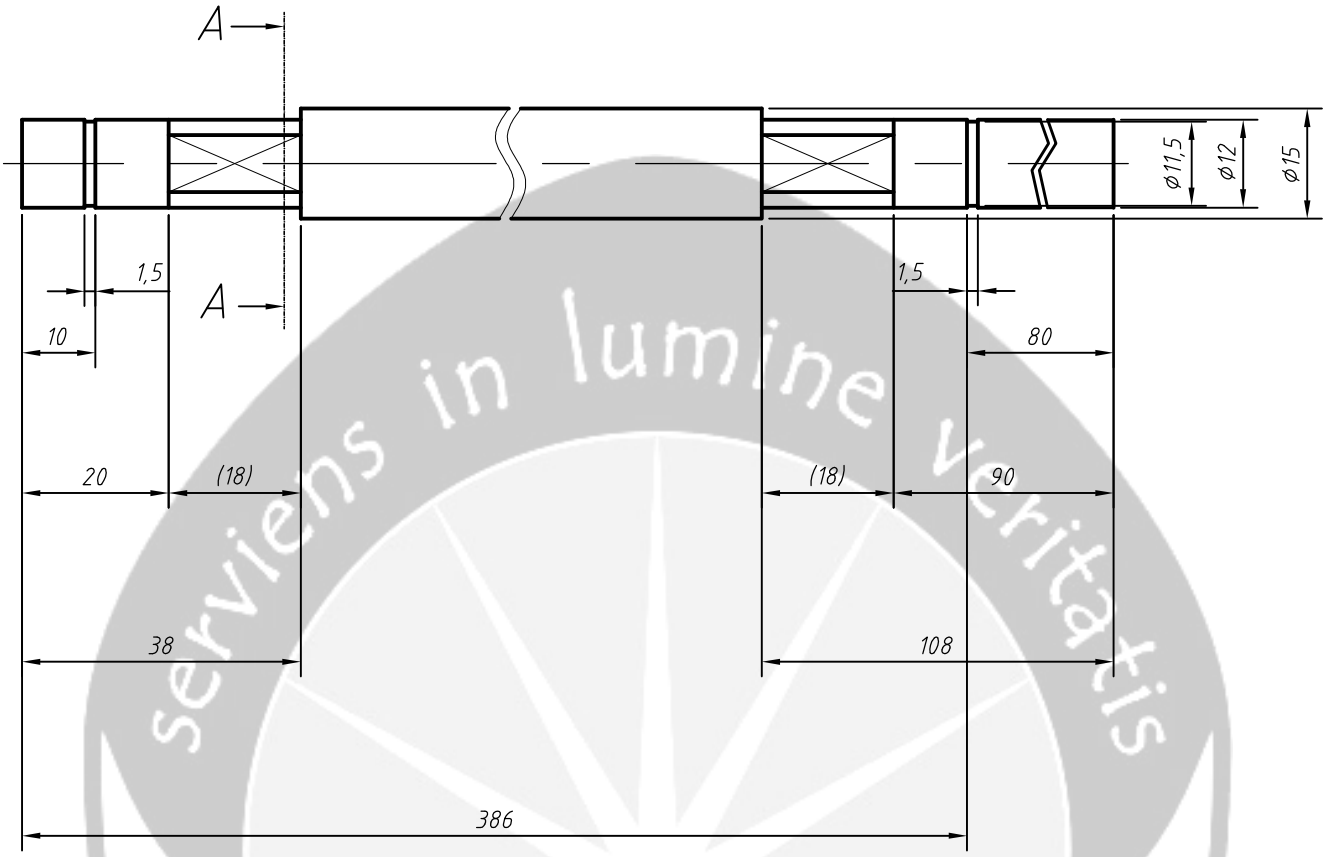
2 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:1
	Reg. Nr. : 14160811 6	Unit : mm
	Date : 29-11-2016	Material : MS #6
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A4	Engsel Atas
INDUSTRIAL ENGINEERING UAJY		Operation / Dwg. Nr. 2.5
Origin.	Rep.	Rep. by. / SN. NS.

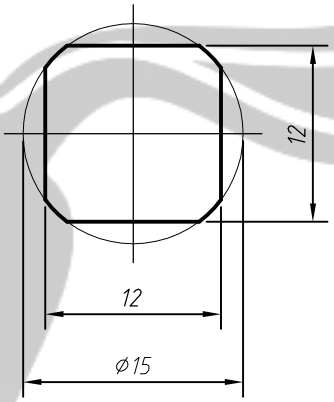


2 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:1
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 30-11-2016		Material : MS #6
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Engsel Bawah	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 2.6
Origin.	Rep.	Rep. by.	SN. NS.



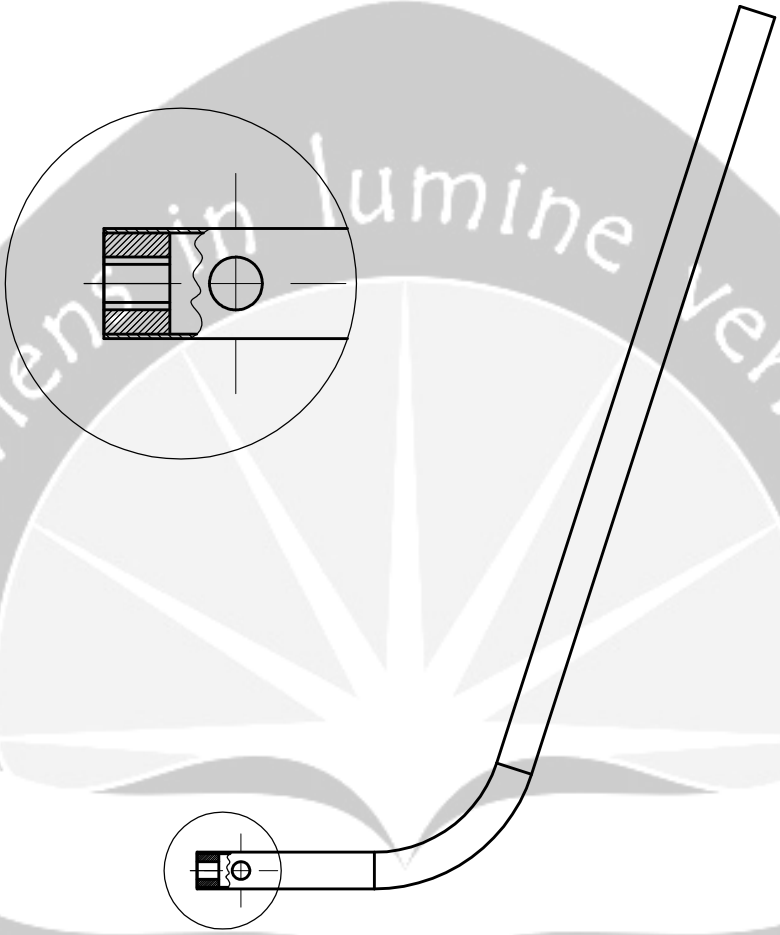
Section A-A
Skala : 2 : 1



Chamfer all sharp 0,2x45°

1 Pc

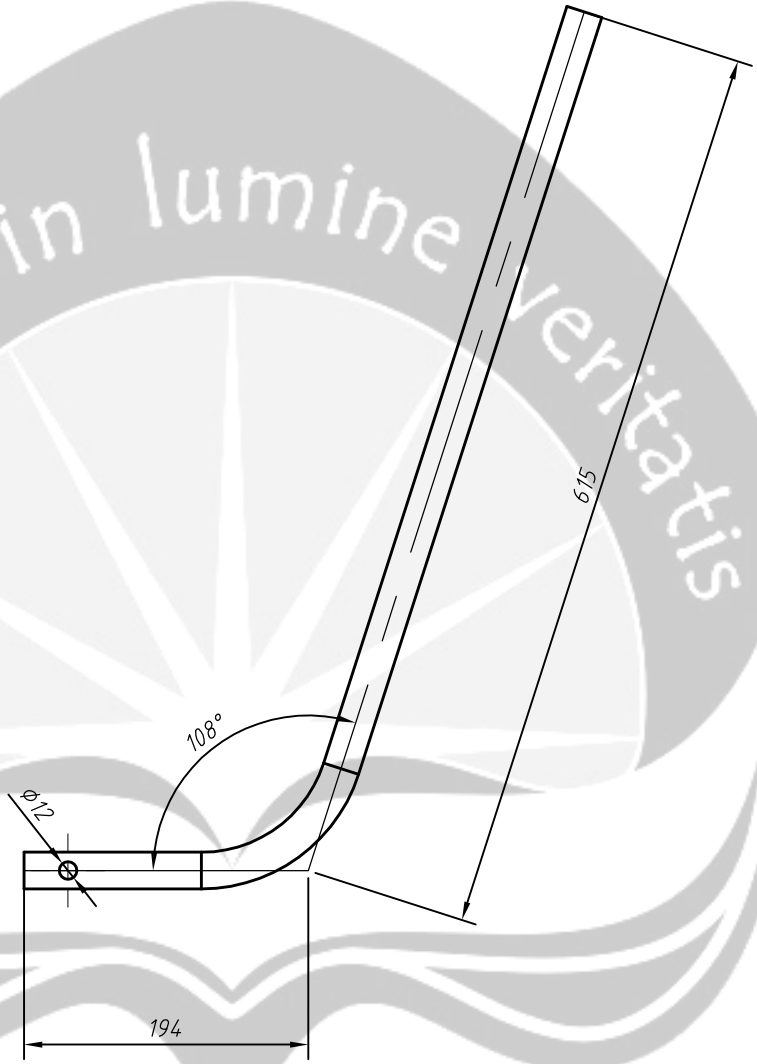
Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:1
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 30-11-2016		Material : MS
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Shaft Pengangkat Meja	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 2.7
Origin.	Rep.	Rep. by.	SN. NS.



1 Pc

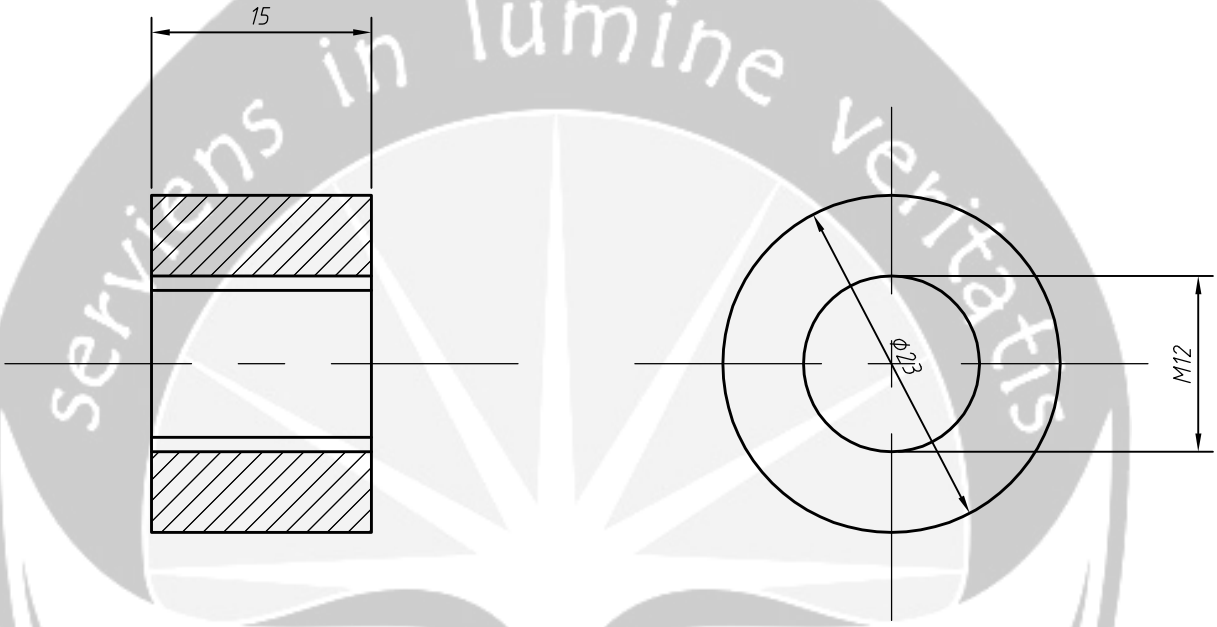
1	Stoper	2.1.8.2	MS	-	-
1	Tuas	2.1.8.1	St.St Tube	-	-
Pieces	Description	Item	Material	Dimension	Remarks

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:1
	Reg. Nr. : 14160811 6	Unit : mm
	Date : 30-11-2016	Material :
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A4	Assy Tuas
INDUSTRIAL ENGINEERING UAJY		Operation / Dwg. Nr. 2.8
Origin.	Rep.	Rep. by. / SN. NS.



Chamfer all sharp 0,2x45° 1 Pc

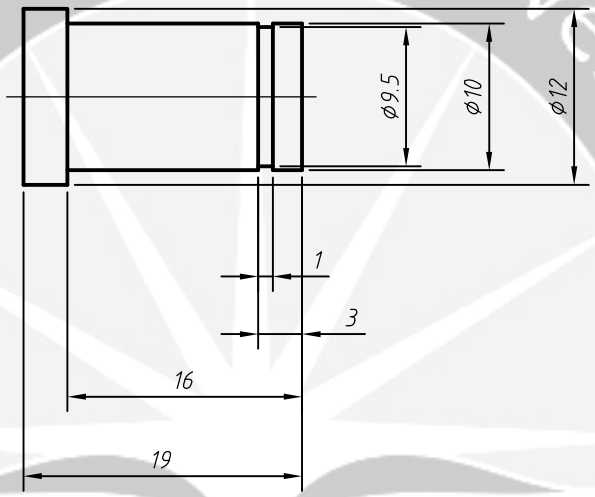
Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:1	
	Reg. Nr. : 14160811 6	Unit : mm	
	Date : 30-11-2016	Material : St.St Tube	
	Checked by : T.B.Hanandoko, ST., MT	Sign :	
	A4	Tuas	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 2.8.1
Origin.	Rep.	Rep. by.	SN. NS.



Chamfer all sharp 0,2x45°

1 Pc

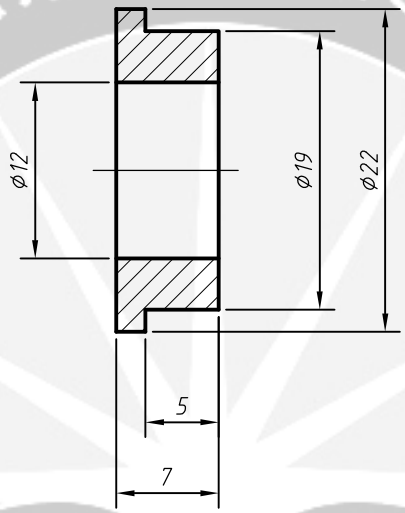
Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:1
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 30-11-2016		Material : MS
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Stoper	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 2.8.2
Origin.	Rep.	Rep. by.	SN. NS.



Chamfer all sharp 0,2x45°

4 Pcs

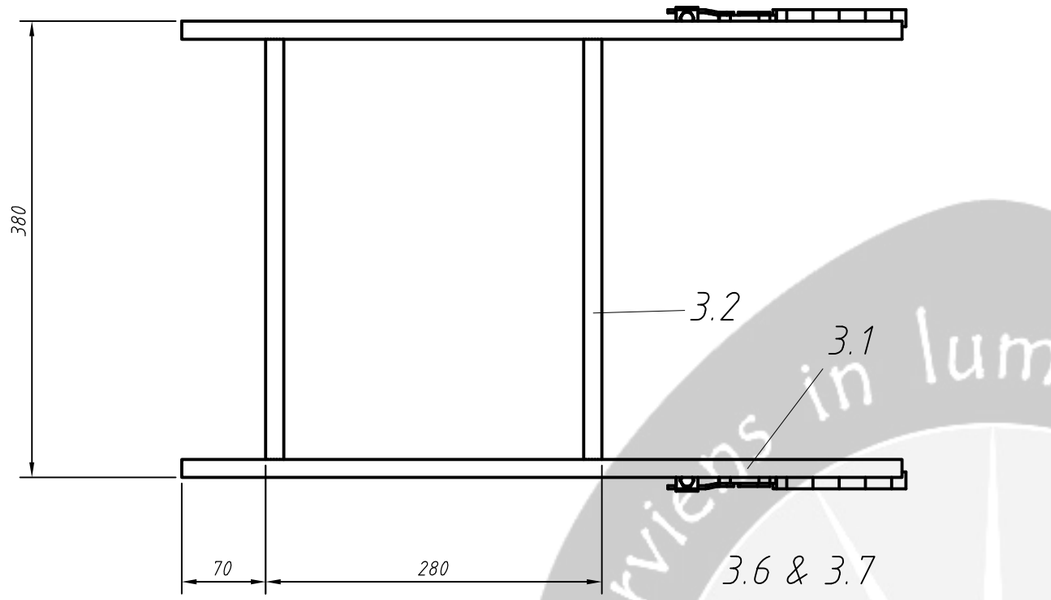
Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 2:1
	Reg. Nr. : 14160811 6	Unit : mm
	Date : 01-12-2016	Material : Brass
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A4	Pin Engsel
INDUSTRIAL ENGINEERING UAJY		Operation / Dwg. Nr. 2.9
Origin.	Rep.	Rep. by. / SN. NS.

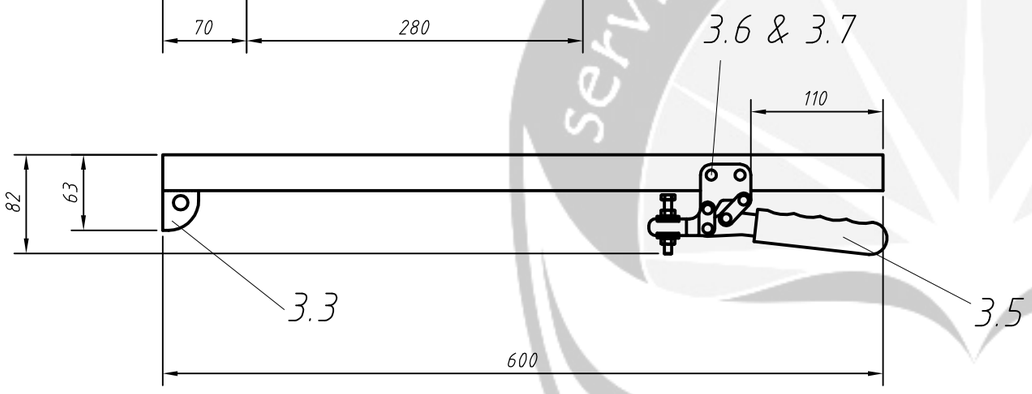


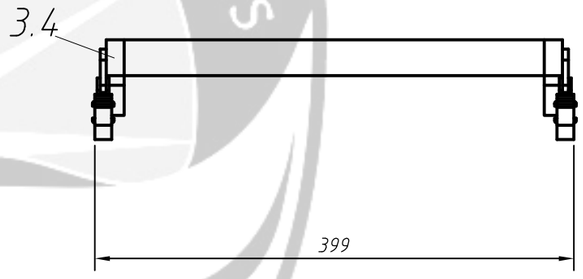
Chamfer all sharp 0,2x45°

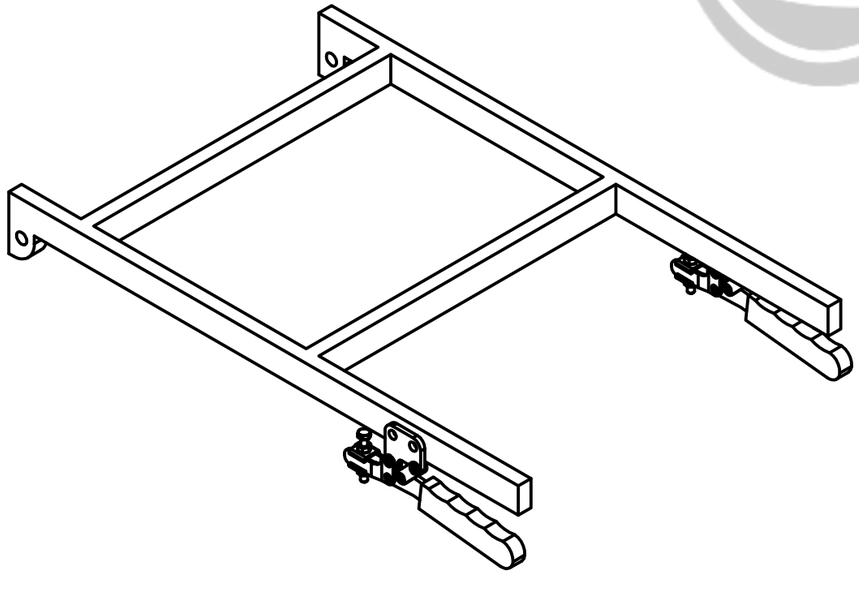
2 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 2:1
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 01-12-2016		Material : Brass
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Bush Shaft Pengangkat Meja	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 2.10
Origin.	Rep.	Rep. by.	SN. NS.



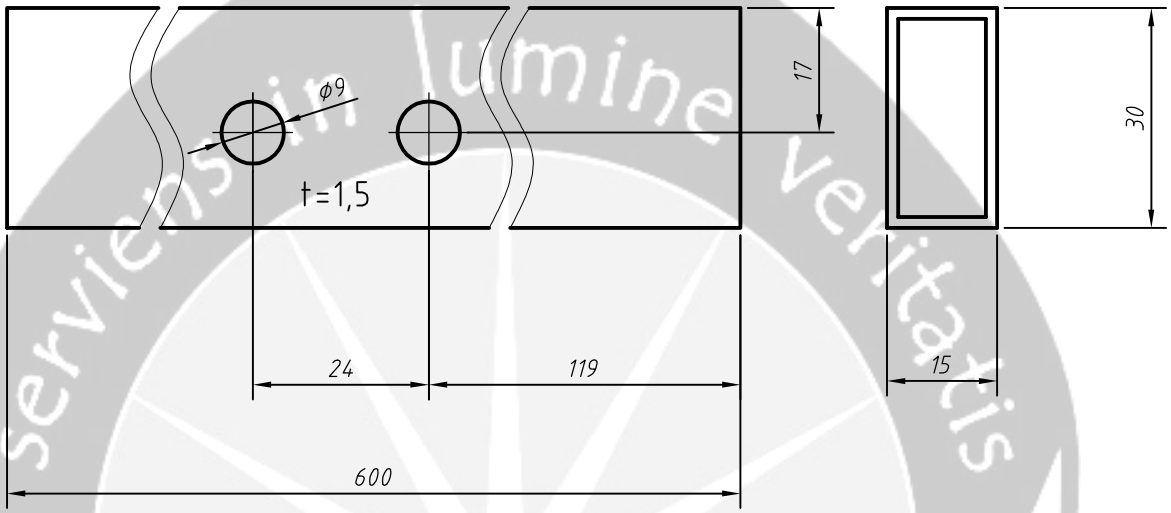






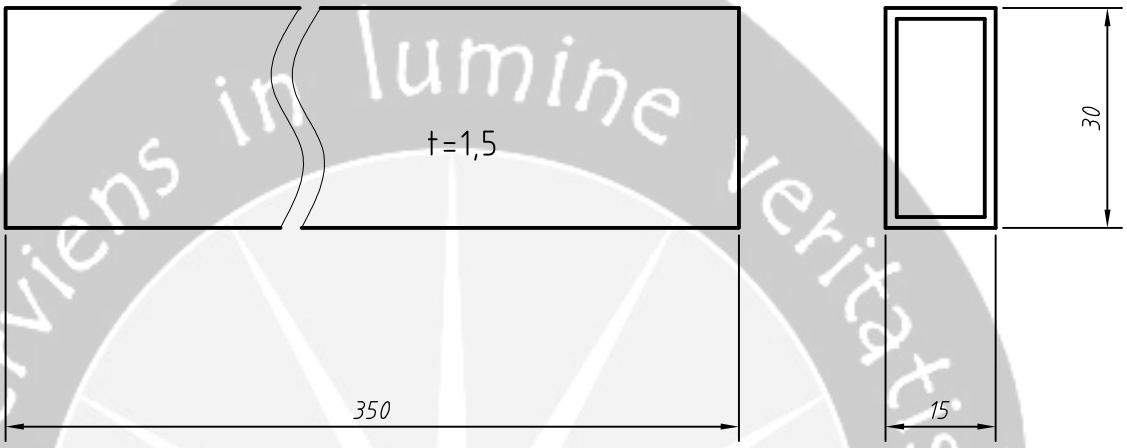
Pieces	Description	Item	Material	Dimension	Remarks
4	Nut M8	3.7	-	-	Purchased
4	Bolt M8	3.6	-	-	Purchased
2	Toogle Clamp	3.5	-	-	Purchased
4	Tutup Clamp	3.4	MS #1	-	-
2	Clamp Stand	3.3	MS	-	-
2	Clamp Hollow 350mm	3.2	Rec. Hollow 15x30x1.5	-	-
2	Clamp Hollow 600mm	3.1	Rec. Hollow 15x30x1.5	-	-

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:5
	Reg. Nr. : 14160816	Unit : mm
	Date : 04-12-2016	Material :
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A3	Penjepit Plastik
INDUSTRIAL ENGINEERING UAJY		Operation / Dwg. Nr. 3
Origin.	Rep.	Rep. by. / SN. NS.



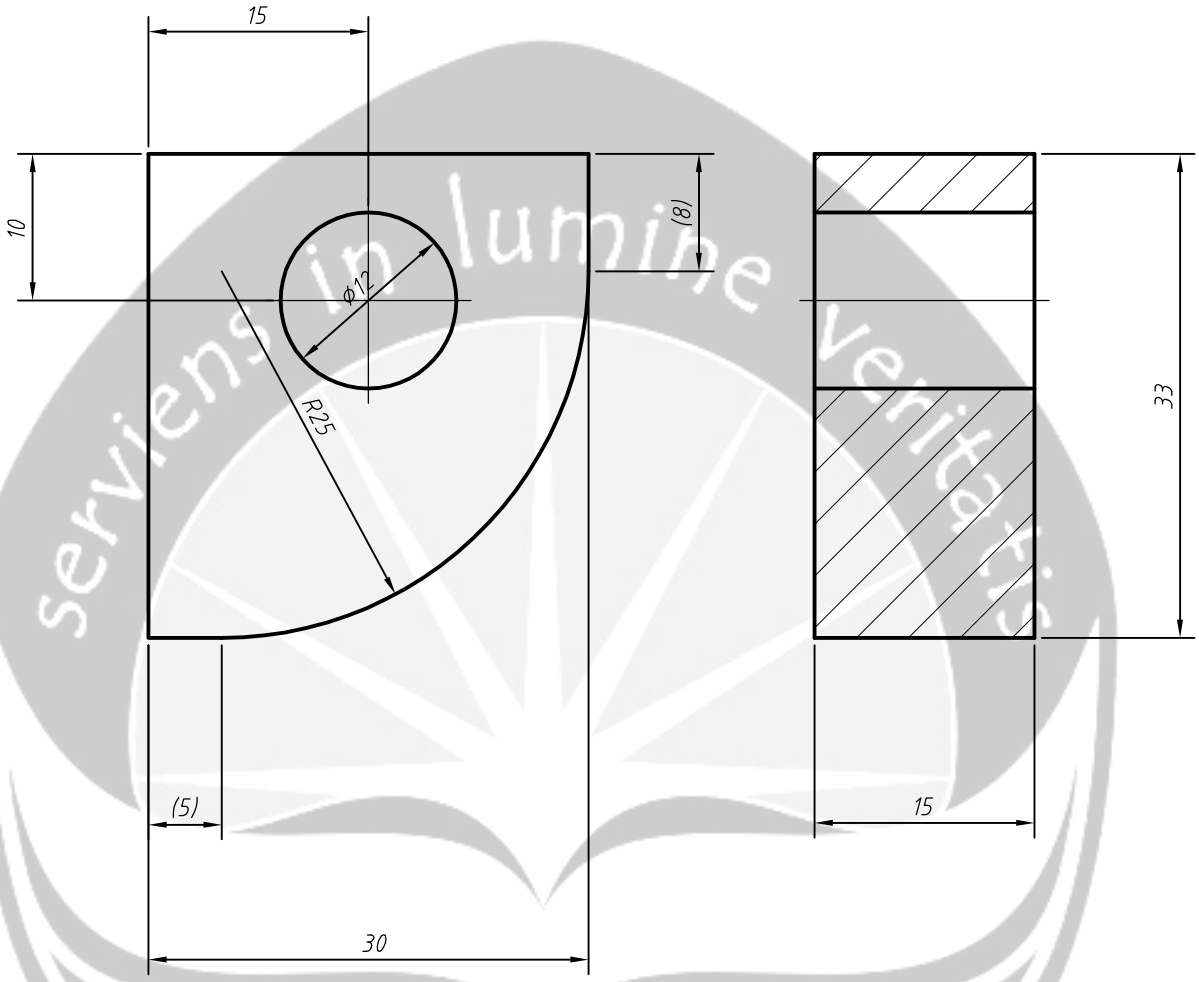
2 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:1	
	Reg. Nr. : 14160811 6	Unit : mm	
	Date : 04-12-2016	Material : Rec. Hollow 15x30	
	Checked by : T.B.Hanandoko, ST., MT	Sign :	
	A4	Clamp Hollow 600mm	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 3.1
Origin.	Rep.	Rep. by.	SN. NS.



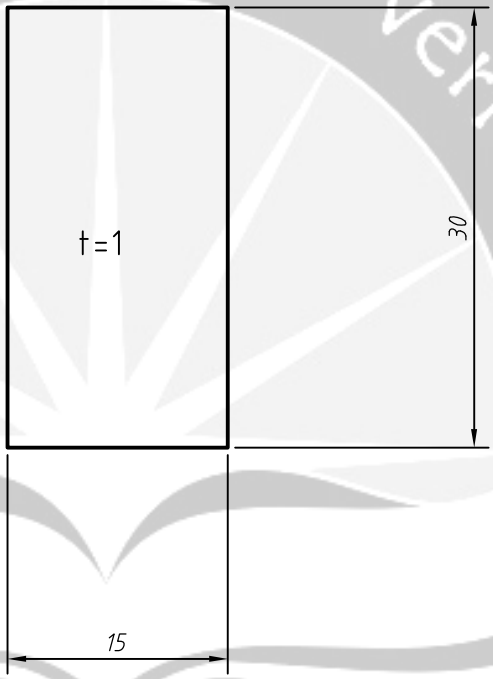
2 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:1
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 04-12-2016		Material : Rec. Hollow 15x30
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Clamp Hollow 350mm	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 3.2
Origin.	Rep.	Rep. by.	SN. NS.



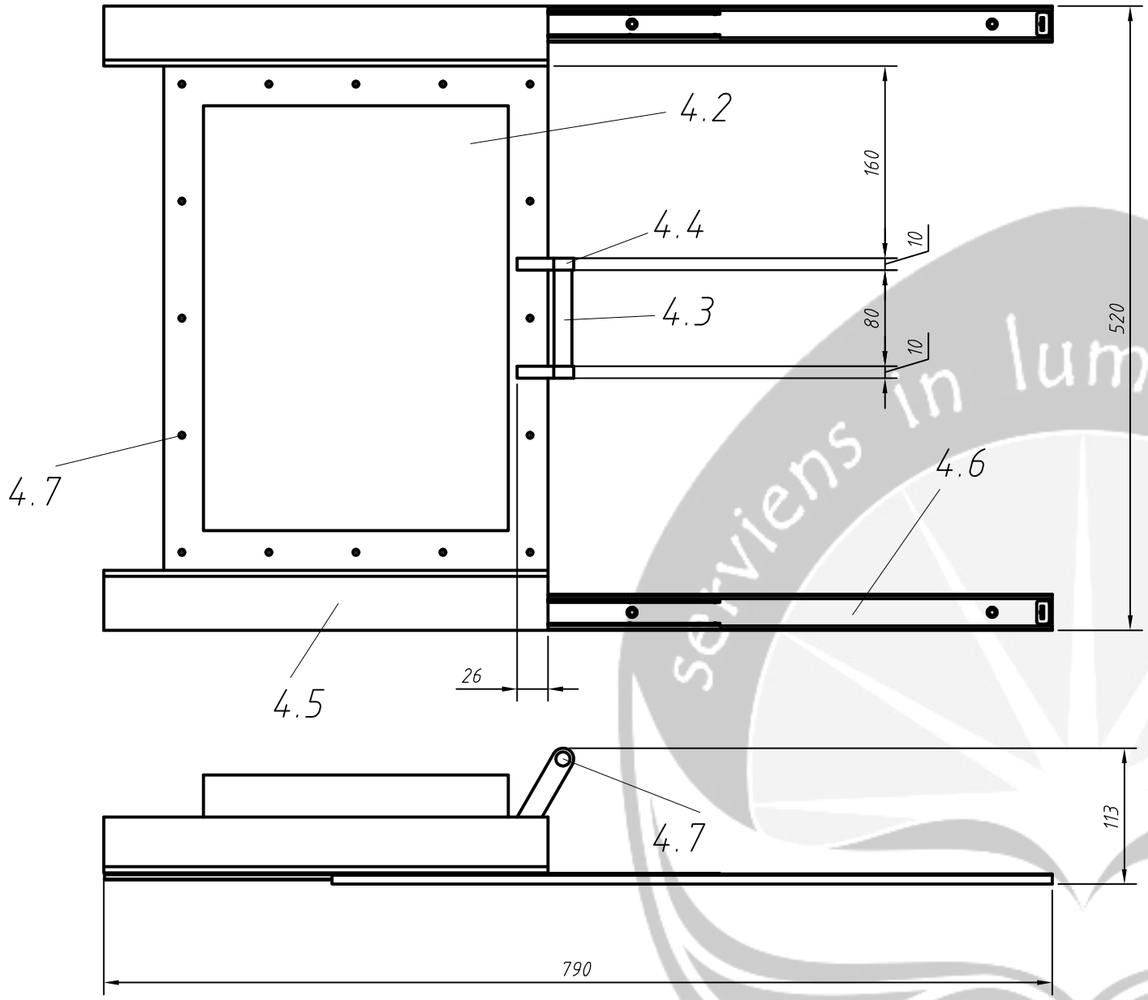
2 Pcs

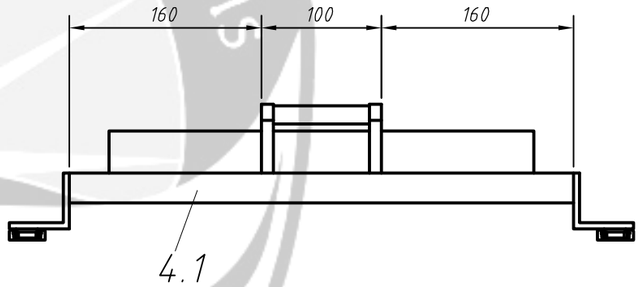
Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 2:1	
	Reg. Nr. : 14160811 6	Unit : mm	
	Date : 04-12-2016	Material : MS	
	Checked by : T.B.Hanandoko, ST., MT	Sign :	
	A4	Clamp Stand	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 3.3
Origin.	Rep.	Rep. by.	SN. NS.

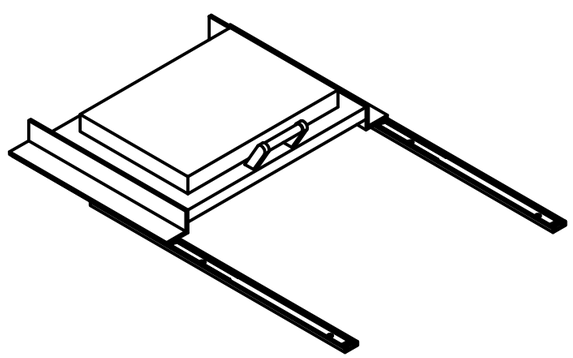


4 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 2:1
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 04-12-2016		Material : MS #1
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Tutup Hollow	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 3.4
Origin.	Rep.	Rep. by.	SN. NS.

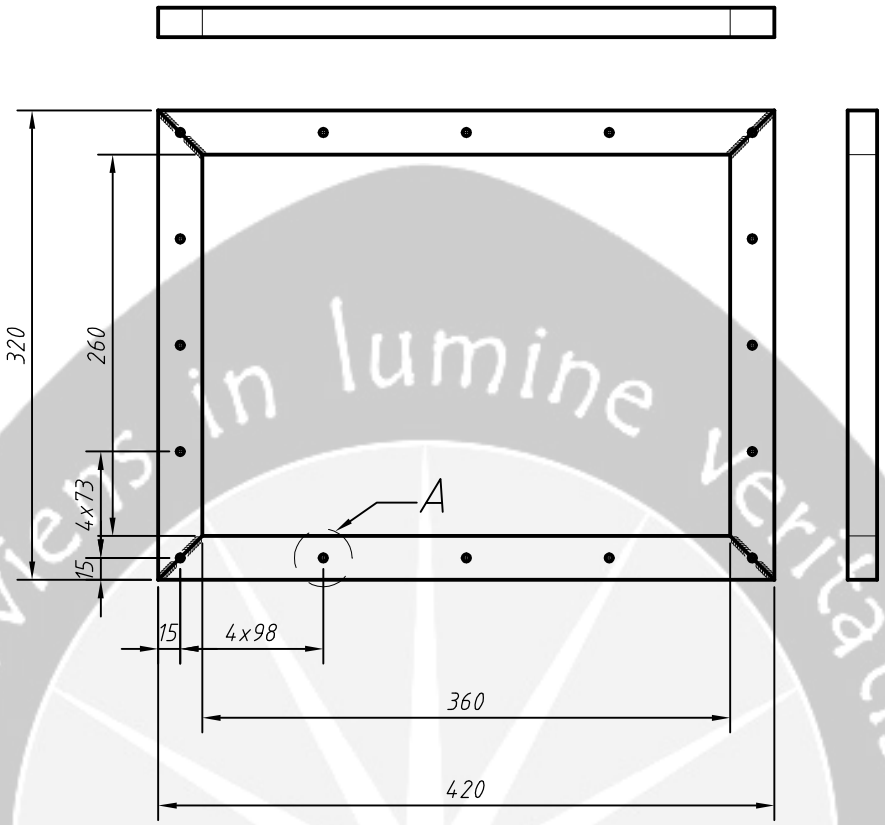




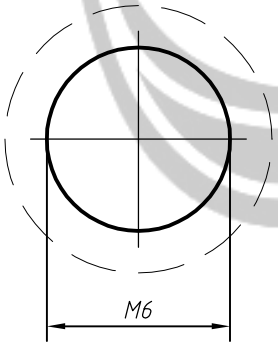


Pieces	Description	Item	Material	Dimension	Remarks
18	Bolt M6	4.7	-	-	Purchased
2	Linear Drawer Slider	4.6	-	-	Purchased
2	Support Heater Slider	4.5	L Profil 50x50x4	-	-
2	Base Handle	4.4	MS	-	-
1	Handle	4.3	Wood	-	-
1	Cover Heater	4.2	MS Sheet #1,5	-	-
1	Rangka Bawah Heater	4.1	Rec. Hollow 20x30x2	-	-

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:5
	Reg. Nr. : 141608116	Unit : mm
	Date : 04-12-2016	Material :
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A3	Rangka Heater
INDUSTRIAL ENGINEERING UAJY		Operation / Dwg. Nr. 4
Origin.	Rep.	Rep. by. / SN. NS.



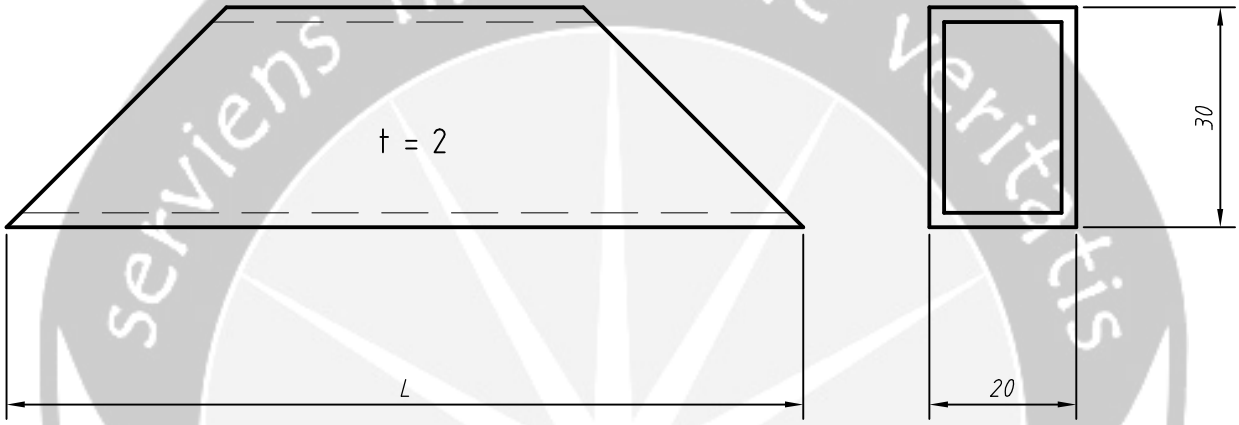
Detail. A
Skala 5 : 1



1 Pc

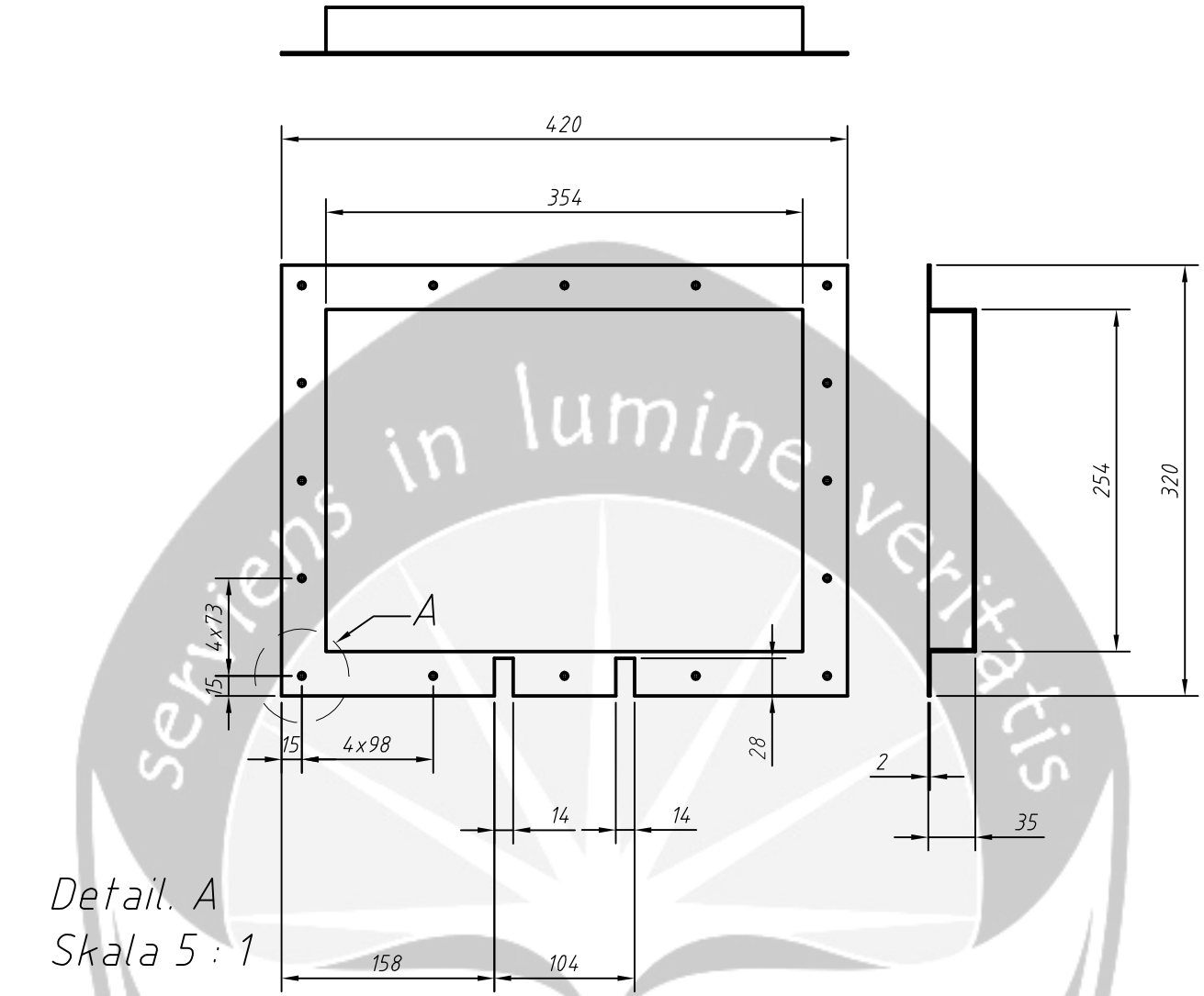
Pieces	Description	Item	Material	Dimension	Remarks
2	420 Heater Hollow	4.1.2	Rectangular Hollow	20x30x2	-
2	320 Heater Hollow	4.1.1	Rectangular Hollow	20x30x2	-

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:5
	Reg. Nr. : 14160811 6	Unit : mm
	Date : 04-12-2016	Material :
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A4	Rangka Bawah Heater
INDUSTRIAL ENGINEERING UAJY		Operation / Dwg. Nr. 4.1
Origin.	Rep.	Rep. by. / SN. NS.

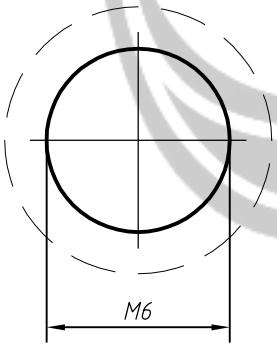


No. Item	L	Qty
4.1.1	320	2
4.1.2	420	2

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:1
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 04-12-2016		Material : Rec. Hollow 20x30
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	320 - 420 Heater Hollow	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr.
Origin.	Rep.	Rep. by.	SN. NS.

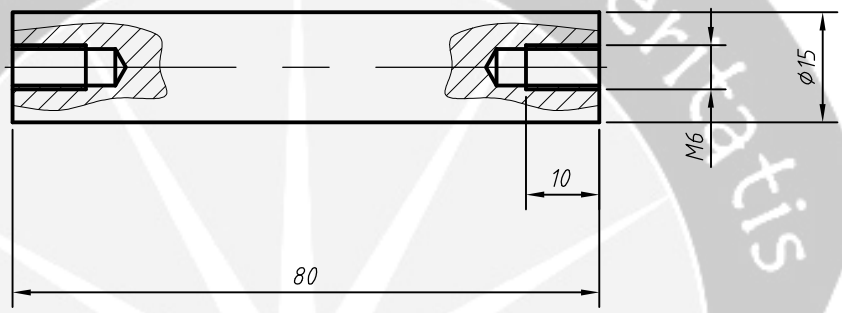


Detail. A
Skala 5 : 1



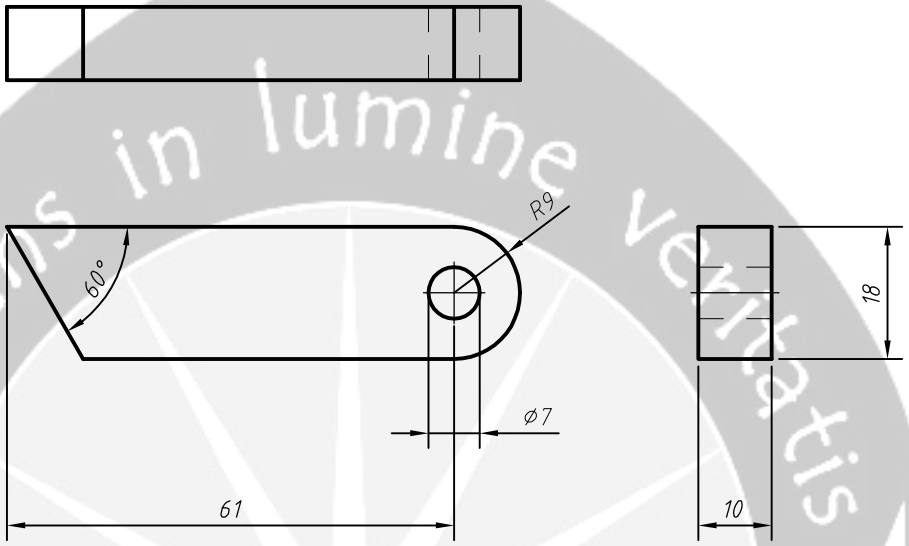
1 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:5
	Reg. Nr. : 14160811 6	Unit : mm
	Date : 04-12-2016	Material : MS Sheet #2
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A4	Cover Heater
INDUSTRIAL ENGINEERING UAJY		Operation / Dwg. Nr. 4.2
Origin.	Rep.	Rep. by. / SN. NS.



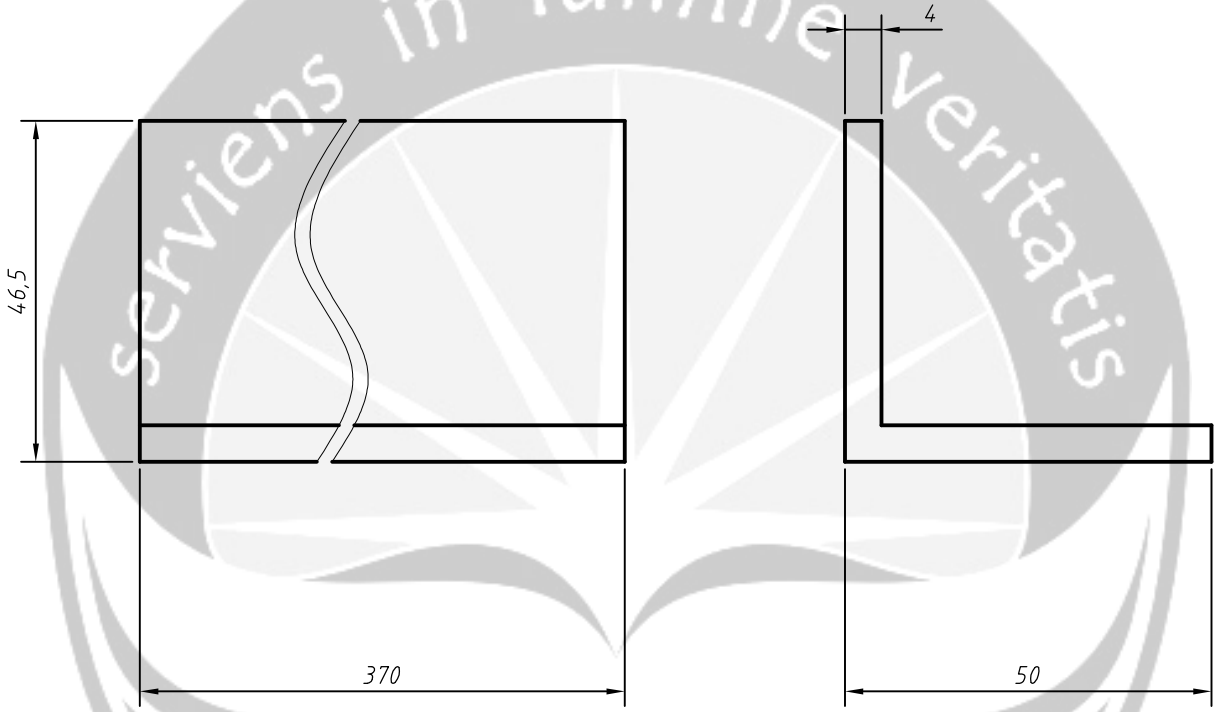
1 Pc

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:1
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 04-12-2016		Material : Wood
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Handle	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 4.3
Origin.	Rep.	Rep. by.	SN. NS.



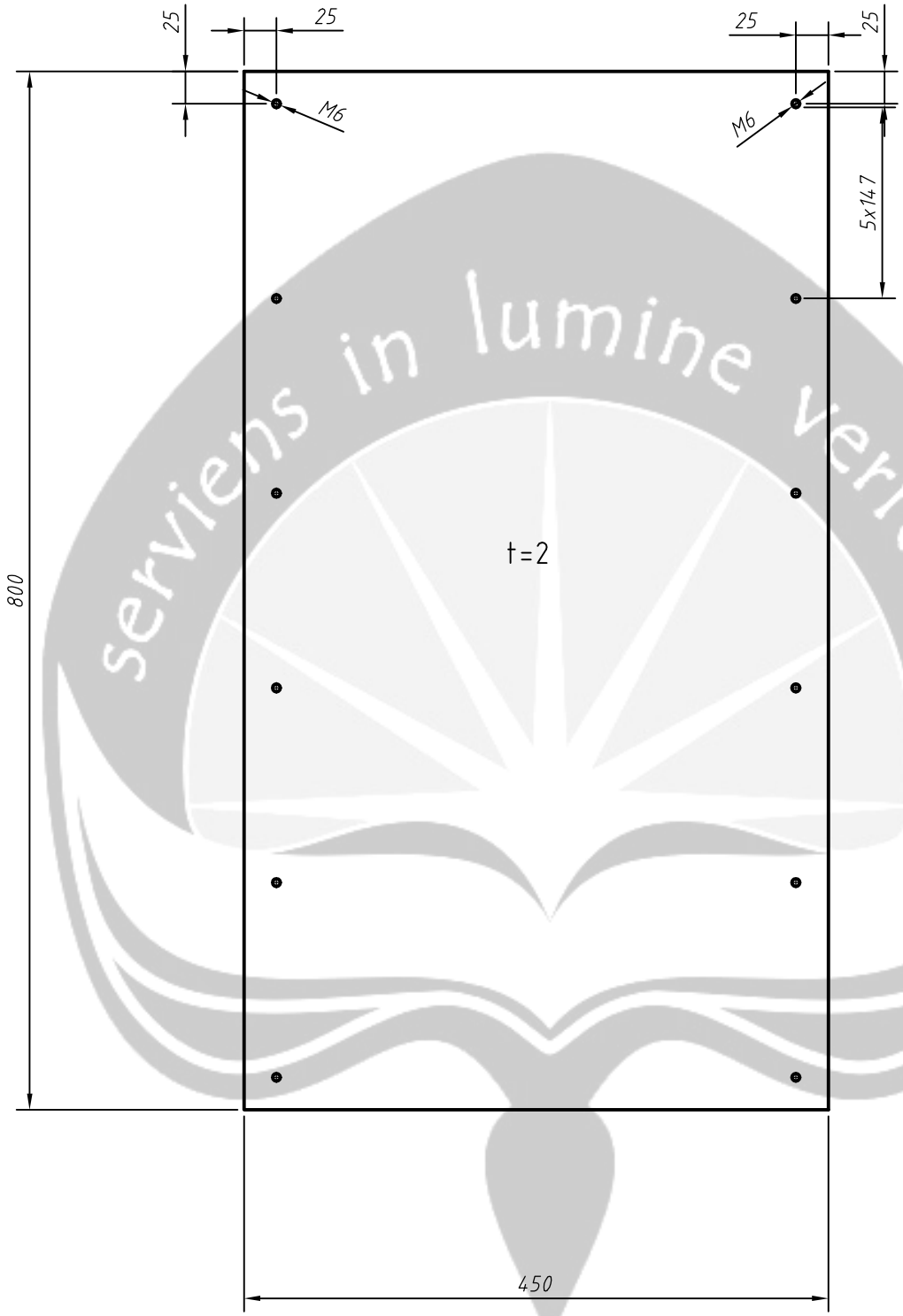
2 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan		Scale : 1:1
	Reg. Nr. : 14160811 6		Unit : mm
	Date : 04-12-2016		Material : MS
	Checked by : T.B.Hanandoko, ST., MT		Sign :
	A4	Base Handle	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 4.4
Origin.	Rep.	Rep. by.	SN. NS.



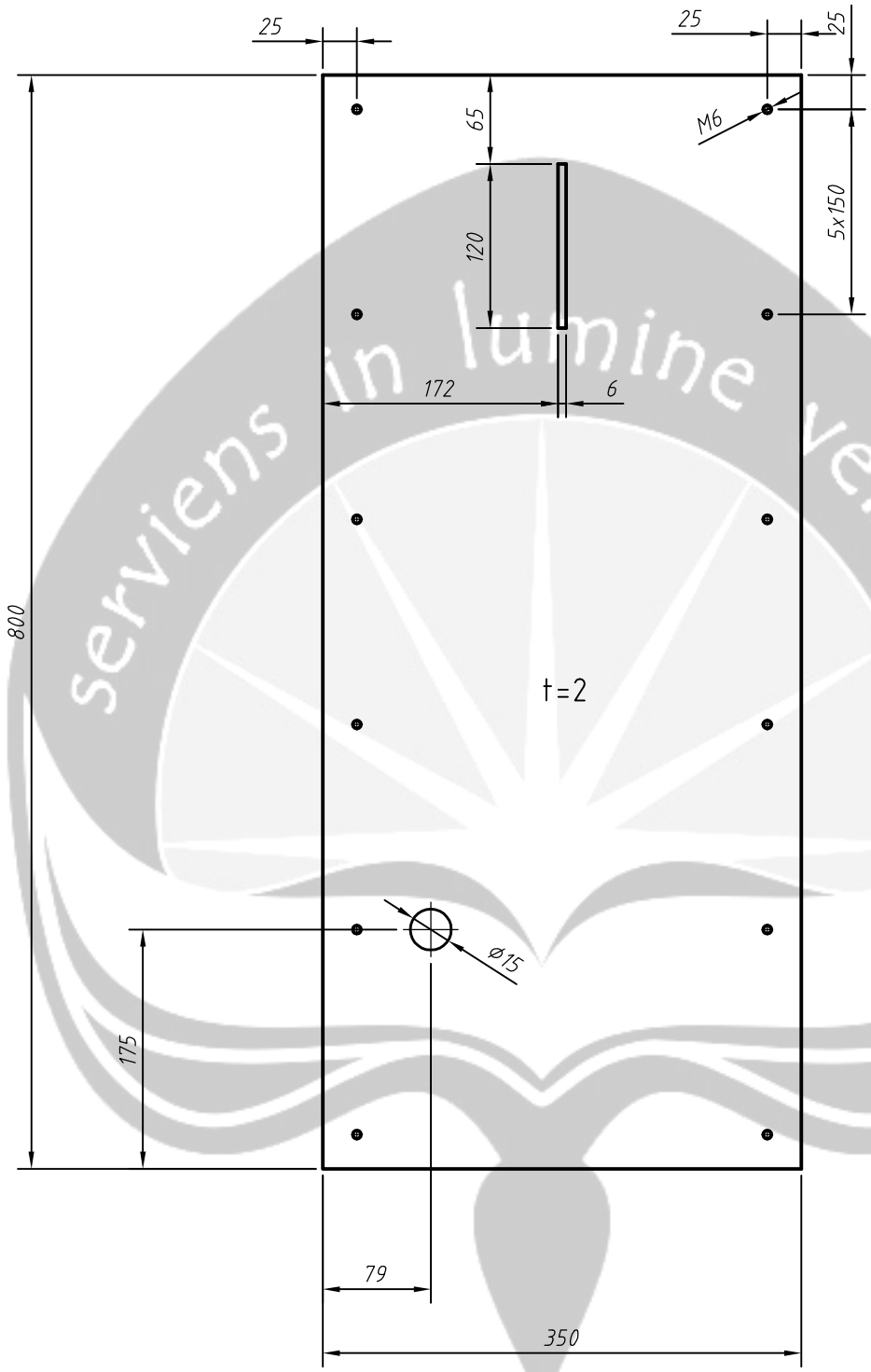
2 Pcs

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:1
	Reg. Nr. : 14160811 6	Unit : mm
	Date : 04-12-2016	Material : L Profil 50x50
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A4	Support Heater Slider
INDUSTRIAL ENGINEERING UAJY		Operation / Dwg. Nr. 4.5
Origin.	Rep.	Rep. by. / SN. NS.



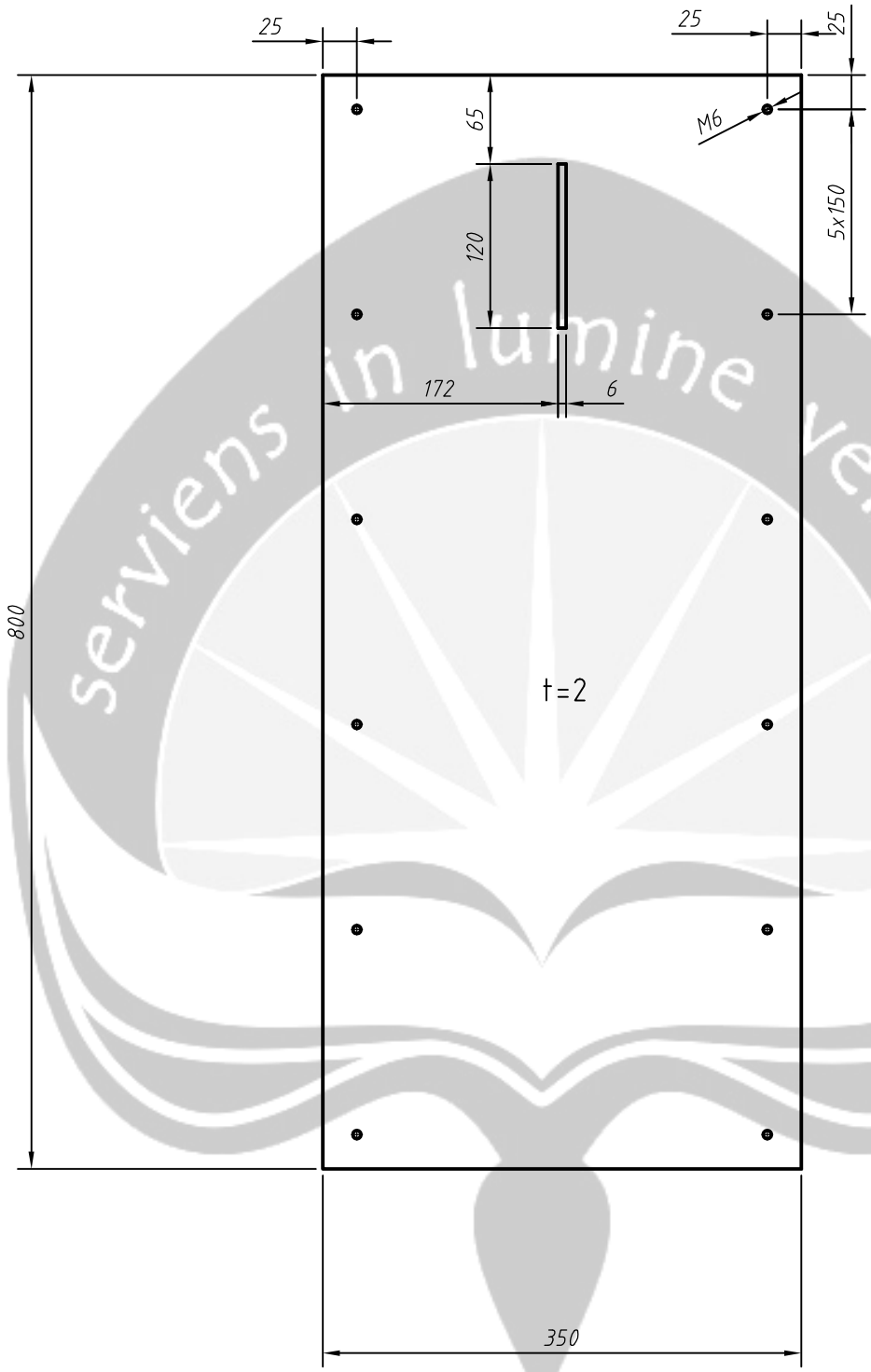
1 Pc

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:1
	Reg. Nr. : 14160811 6	Unit : mm
	Date : 10-12-2016	Material : MS Sheet #2
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A4	Cover Depan
INDUSTRIAL ENGINEERING UAJY		Operation / Dwg. Nr. 5.1
Origin.	Rep.	Rep. by. / SN. NS.



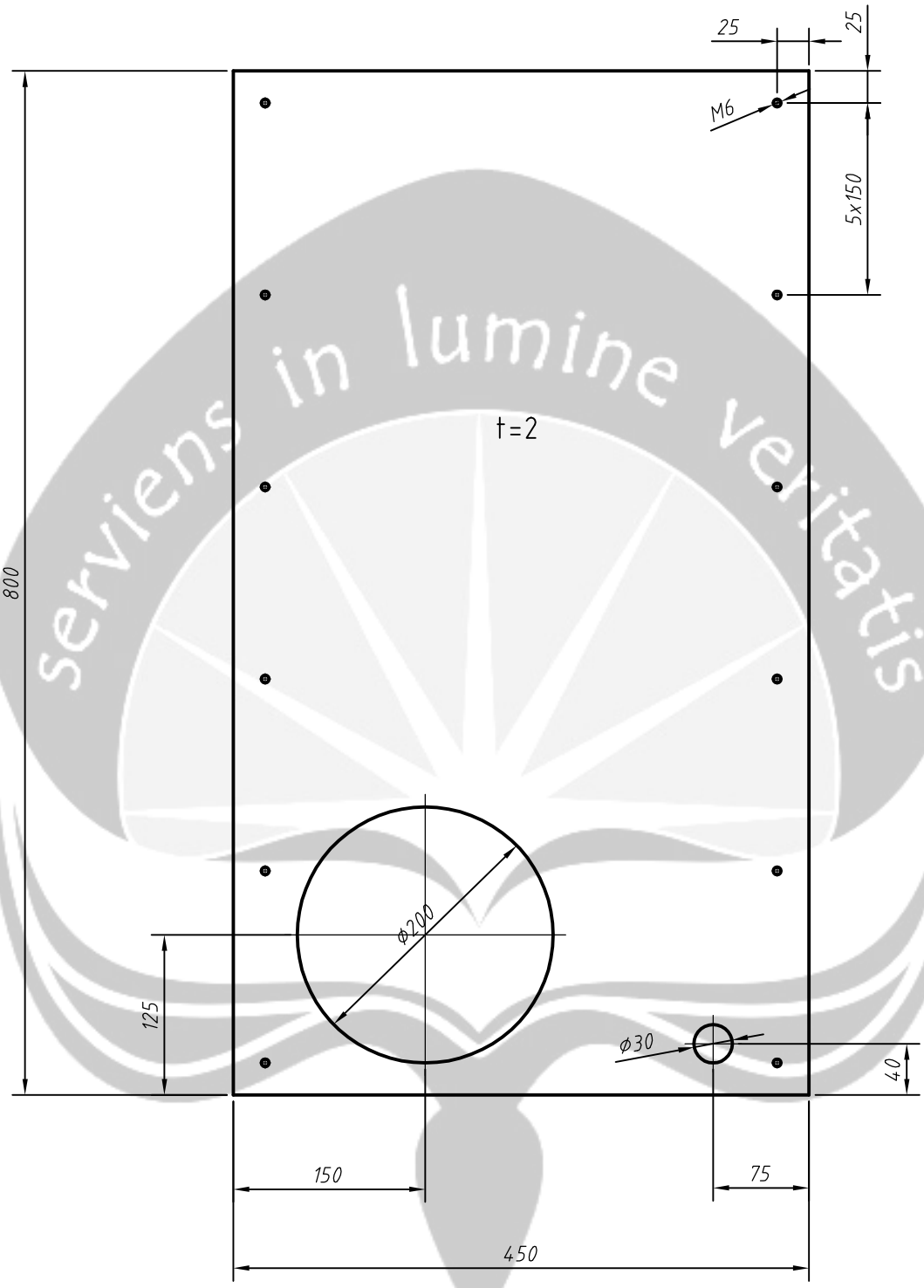
1 Pc

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:1	
	Reg. Nr. : 14160811 6	Unit : mm	
	Date : 10-12-2016	Material : MS Sheet #2	
	Checked by : T.B.Hanandoko, ST., MT	Sign :	
	A4	Cover Samping Kanan	
INDUSTRIAL ENGINEERING UAJY		Operation	Dwg. Nr. 5.2
Origin.	Rep.	Rep. by.	SN. NS.



1 Pc

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:1
	Reg. Nr. : 14160811 6	Unit : mm
	Date : 10-12-2016	Material : MS Sheet #2
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A4	Cover Samping Kiri
INDUSTRIAL ENGINEERING UAJY		Operation / Dwg. Nr. 5.3
Origin.	Rep.	Rep. by. / SN. NS.



1 Pc

Revision Index	Drawn by : Rizky Adi Setiawan	Scale : 1:1
	Reg. Nr. : 14160811 6	Unit : mm
	Date : 10-12-2016	Material : MS Sheet #2
	Checked by : T.B.Hanandoko, ST., MT	Sign :
	A4	Cover Belakang
INDUSTRIAL ENGINEERING UAJY		Operation / Dwg. Nr. 5.4
Origin.	Rep.	Rep. by. / SN. NS.