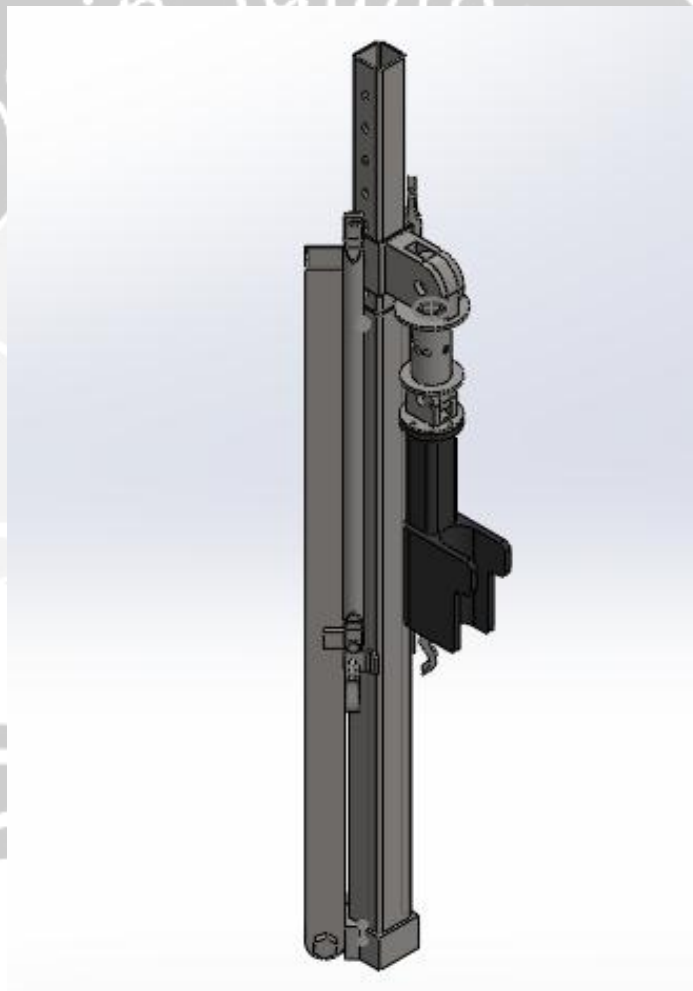


BAB 6

KESIMPULAN DAN SARAN

6.1. Kesimpulan

Berdasarkan pembahasan dan analisis yang telah dilakukan, maka didapatkan hasil rancangan alat latihan keakuratan tendangan Taekwondo dengan spesifikasi sebagai berikut :



Gambar 6.1. Rancangan Produk Kondisi Packing



Gambar 6.2. Rancangan Produk Kondisi Siap Digunakan

Table 6.1. Spesifikasi Desain Alat Latihan Keakuratan Tendangan Taekwondo

Sub-fungsi	Spesifikasi
Pengunci sambungan permanen	Las listrik
Pengunci sambungan non permanen statis	Mur-baut dan sistem poros
Pengunci sambungan non permanen dinamis	Pin
Bentuk kaki penyangga	V
Posisi kaki penyangga	Belakang
Mekanisme pemegang <i>KTF</i>	<i>Positioning</i> dan balut
Mekanisme pengatur posisi <i>KTF</i>	Engsel dengan pengunci pin
Pengatur ketinggian pemegang <i>KTF</i>	Pin
Pengatur ketinggian tiang	Pin
Material rangka dominan	<i>Square pipe</i>

Table 6.1. Lanjutan

Sub-fungsi	Spesifikasi
Jenis tiang	Ekstensi
Estimasi total biaya pembuatan	Rp 1.416.969,-
Berat Keseluruhan	17,5 kg
Dimensi kondisi siap digunakan	832 x 1595 x 2000 mm
Dimensi kondisi <i>packing</i>	166 x 251 x 1370 mm

Spesifikasi rancangan alat latihan keakuratan tendangan Taekwondo yang diperoleh diharapkan dapat memenuhi kriteria yang dicantumkan pada *customer requirement*, sehingga rancangan diharapkan dapat menjadi solusi alat latihan mandiri dalam mengurangi ketergantungan akan adanya *partner* pada latihan keakuratan tendangan Taekwondo.

6.2. Saran

Rancangan alat latihan keakuratan tendangan Taekwondo akan menjadi solusi yang lebih baik apabila dilakukan pengembangan lebih lanjut. Saran untuk pengembangan selanjutnya adalah pembuatan sistem otomasi yang dapat menggerakkan target sasaran. Dengan kondisi target sasaran yang dapat bergerak tentunya semakin mendekati kondisi pertandingan dan dapat menggantikan peran *partner* secara seutuhnya.

DAFTAR PUSTAKA

- Cross, N. (1994). *Engineering Design Methods*. Chicester: John Wiley & Sons.
- Daniel, A.P.D. (2016). Perancangan Mesin *Press* Sampah Residu. Yogyakarta: Fakultas Teknologi Industri, Universitas Atma Jaya Yogyakarta.
- David, O. and friends. (2009). *Measurement and Comparison of Taekwondo and Yongmudo Turning Kick Impact Force for Two Target Heights*. South Korea: Department of Physical Education, Seoul National University.
- Ferdinand, P.B. and Russell J. (1991). Mekanika untuk insinyur: Statika.
- Fajar,F., dkk. (2012). Analisis Permintaan Ikan Lele Dumbo Konsumsi di Kecamatan Losarang Kabupaten Indramayu. Bandung: Fakultas Perikanan dan Ilmu Kelautan, Unpad.
- Ignatius, H.S. (2013). Desain Alas Kaki dan *Mixed Reality Head Mount* sebagai Penunjang Kegiatan Ilmu Bela Diri Taekwondo. Bandung: Fakultas Seni Rupa dan Desain, ITB.
- Marthon, C.F. (2010). Pengaruh Latihan *Weight Training* dan *Pliometrik* Terhadap Kecepatan Tendangan *Ap Chagi* Taekwondoin Putra Usia 15-19 Tahun di PMS Surakarta. Surakarta: Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sebelas Maret Surakarta.
- Niken, P. dan Fitri, H. (2011). Perbaikan Rancangan *Body Protector* Sesuai Kebutuhan Atlet Persaudaraan Beladiri Shorinji Kempo Indonesia. University of Al Azhar Indonesia

Patrick, H. (2013). Perancangan Alat Bantu Latihan Beladiri Untuk Perkembangan Motorik Anak Usia 4-11 Tahun. Surabaya: Fakultas teknik, Universitas Surabaya.

Rozaini, N. (2003). Teknik Sampling. Sumatera Utara: Fakultas Kesehatan Masyarakat, Universitas Sumatera Utara.

Singarimbun, dkk. (1995). Metode Penelitian Survei. Jakarta : Pustaka LP3ES.

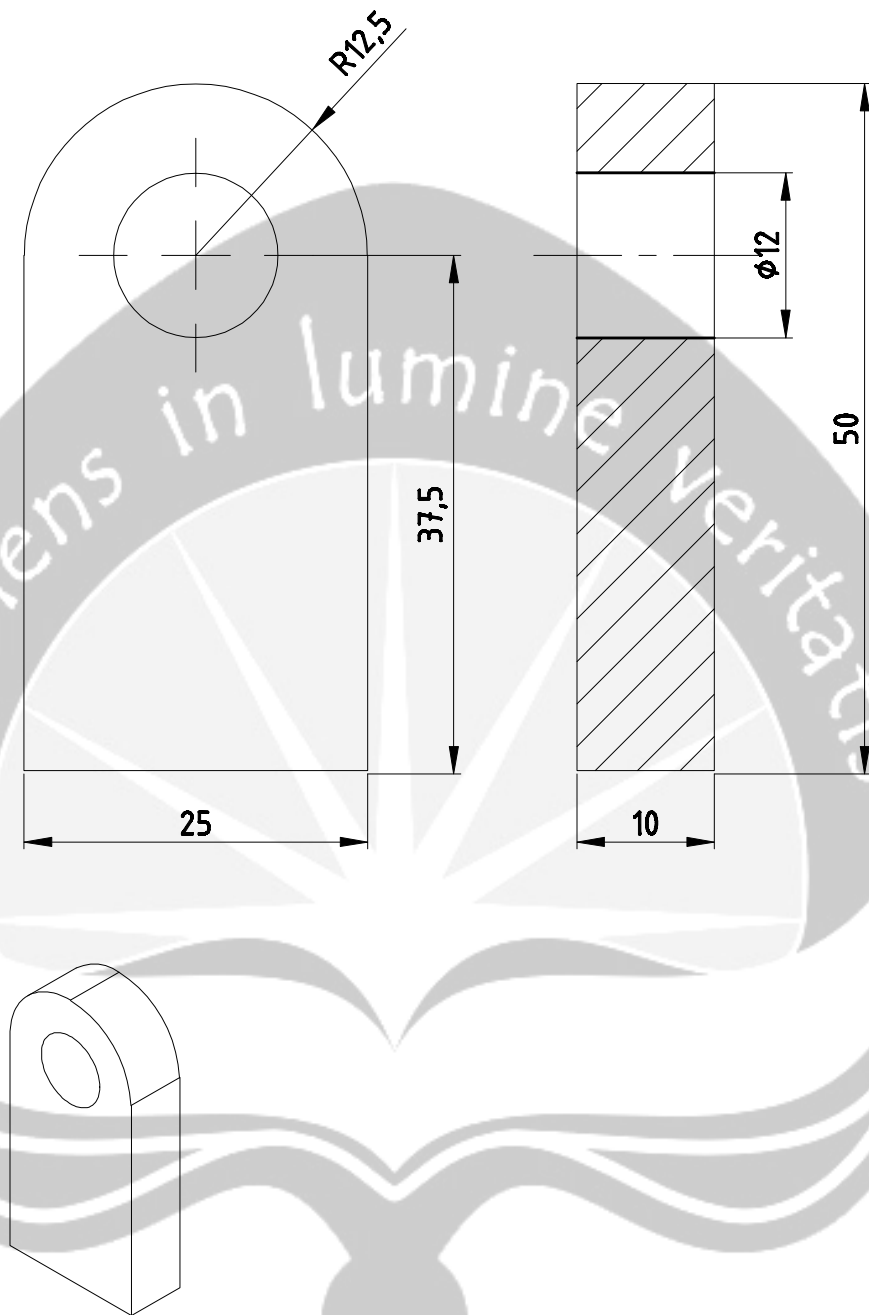
Priyono. (2016). Metode Penelitian Kuantitatif. Sidoarjo : Zifatama Publishing

Sudjarwo. (1995). Ilmu Kepelatihan. Surakarta: UNS Perss.

Suharno, H.P. (1978). Ilmu *Coaching* Umum. Yogyakarta : Yayasan Sekolah Tinggi Olahraga

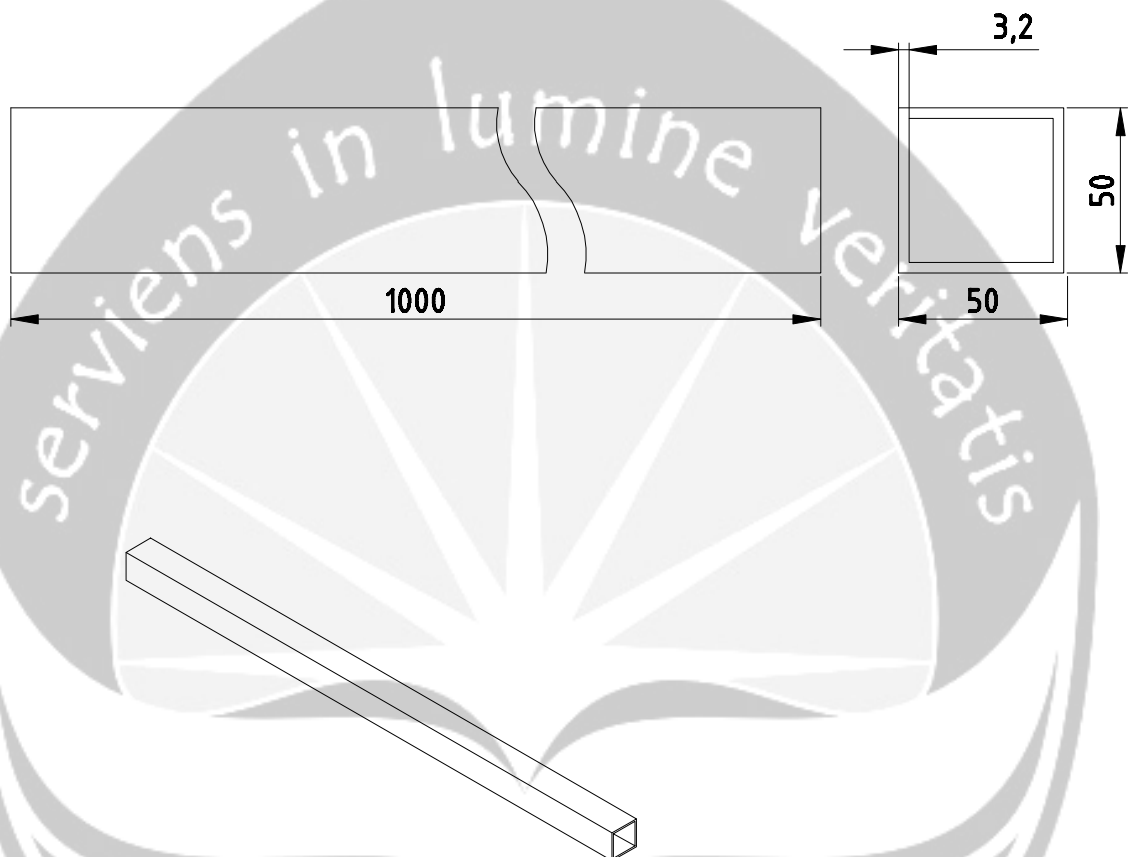
Uma, S. (2006). Metodologi Penelitian Untuk Bisnis. Jakarta : Salemba Empat

Yoyok, S. (2002). Dasar-Dasar Dalam Taekwondo. Surakarta: UNS Perss.



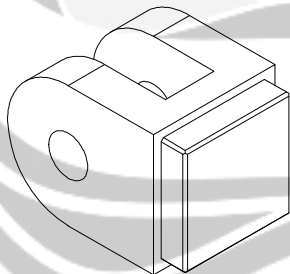
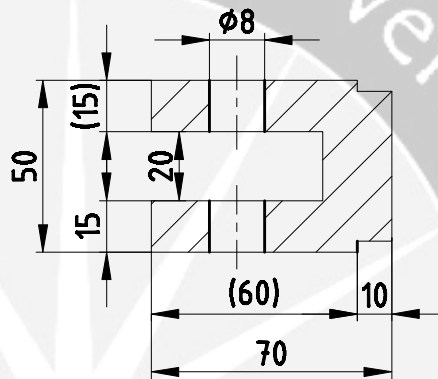
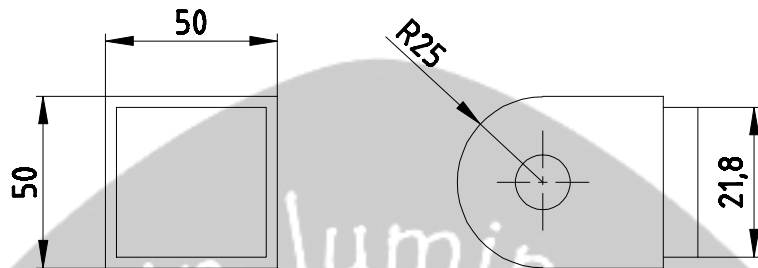
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Qty		Description					Item		Material		Dim. / Drw.No.		Remark		
SN 258440 - Middle							Dwn. 22.08.17		Timo		F : 4		Hard. HRc		
Nom.		0.5	>6	>30	>120	>400	>1000	Chk. .		DT :		Item		Operation	
Tol. ±		0.1	0.2	0.3	0.5	0.8	1.2	Val. .		Sc. : 1 : 2		.		N8 / (N6 /)	
Nom.		<10	>10	>50	>120	>400	Title		Cantolan Sikuk Kaki						
Dep. ±		1"	30"	20"	10"	Title		Cantolan Sikuk Kaki							
±		1.7	0.9	0.6	0.3	Title		Cantolan Sikuk Kaki							
Rev.		Description			Date		Name		Detail of: Sub Assembly Kaki						
							UAJY		Assy.		Drw. No.				
									.		.				
Origin:							Register:			Weight:			SN: NS:		



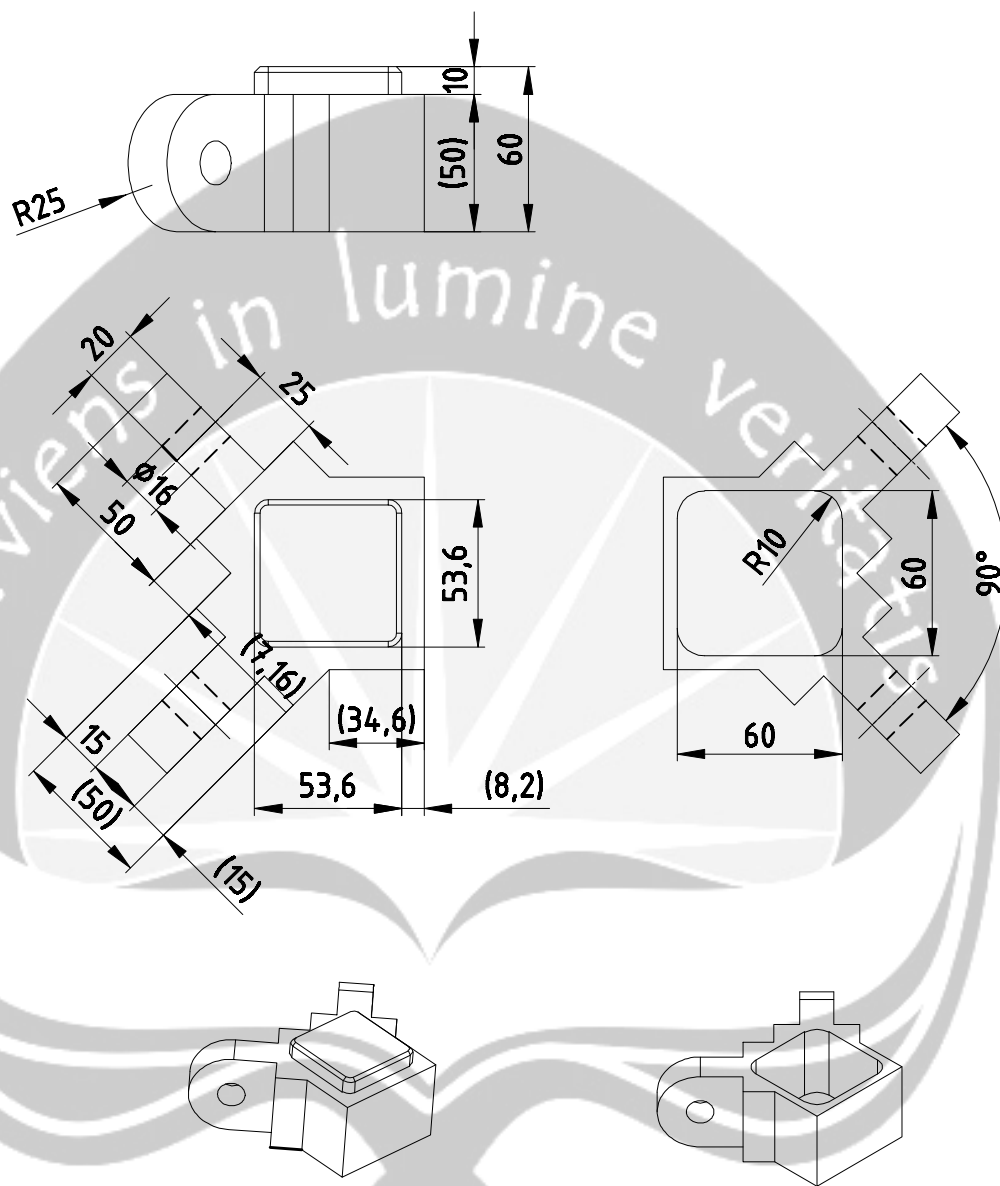
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2		Pipa Kaki Penyangga					1.2		.						
Qty		Description					Item		Material		Dim. / Drw.No.		Remark		
SN 258440 - Middle							Dwn. 22.08.17		Timo		F : 4		Hard. HRc		
Nom.		0.5	>6	>30	>120	>400	>1000					Item		Operation	
		6	30	120	400	1000	2000								
Tol. ±		0.1	0.2	0.3	0.5	0.8	1.2								
Nom.		<10	>10	>50	>120	>400									
		50	120	400											
Dep. ±		1"	30"	20"	10"										
		1.7	0.9	0.6	0.3										
Rev. Description Date Name							Title								
							Pipa Kaki Penyangga								
							Detail of: Sub Assembly Kaki								
							UAJY			Assy.			Drw. No.		
Origin:							Register:			Weight:			SN: NS:		



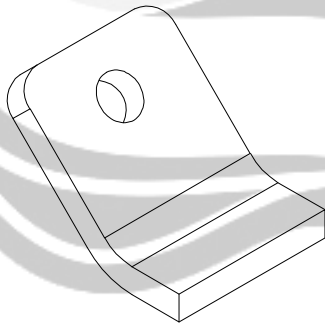
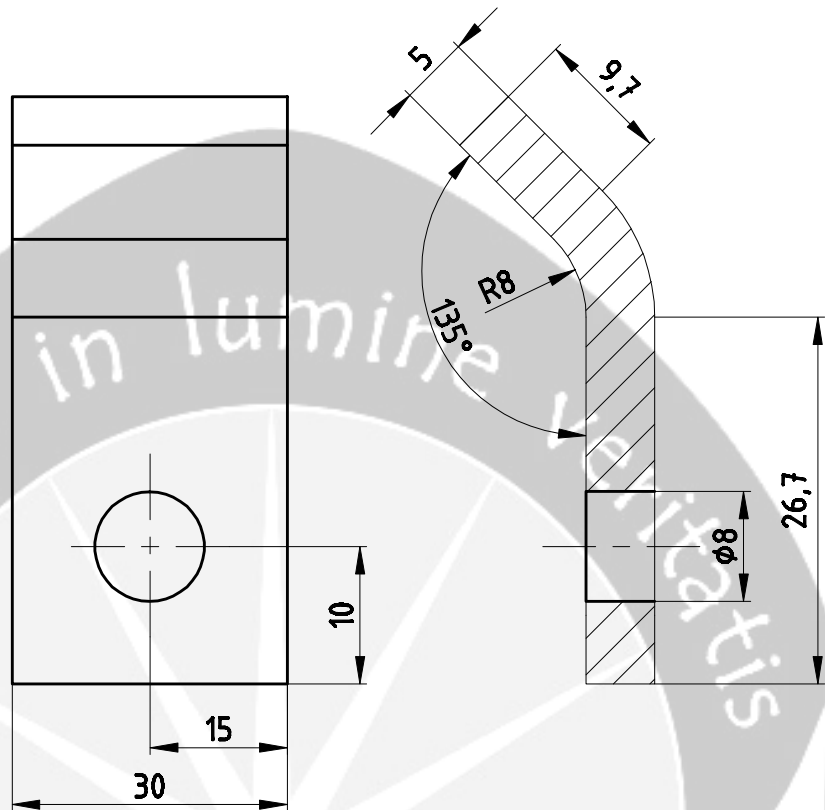
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2		Poros Kaki Penyangga					1.3		.									
Qty		Description					Item		Material		Dim. / Drw.No.		Remark					
SN 258440 - Middle							Dwn. 22.08.17		Timo		F : 4		Hard. HRc		Item		Operation	
Nom.		0.5		>6		>30		>120		>400		>1000						
		6		30		120		400		1000		2000						
Tol. ±		0.1		0.2		0.3		0.5		0.8		1.2						
Nom.		<10		>10		>50		>120		>400								
		10		50		120		400										
Dep. ±		1"		30"		20"		10"										
		1.7		0.9		0.6		0.3										
												</						



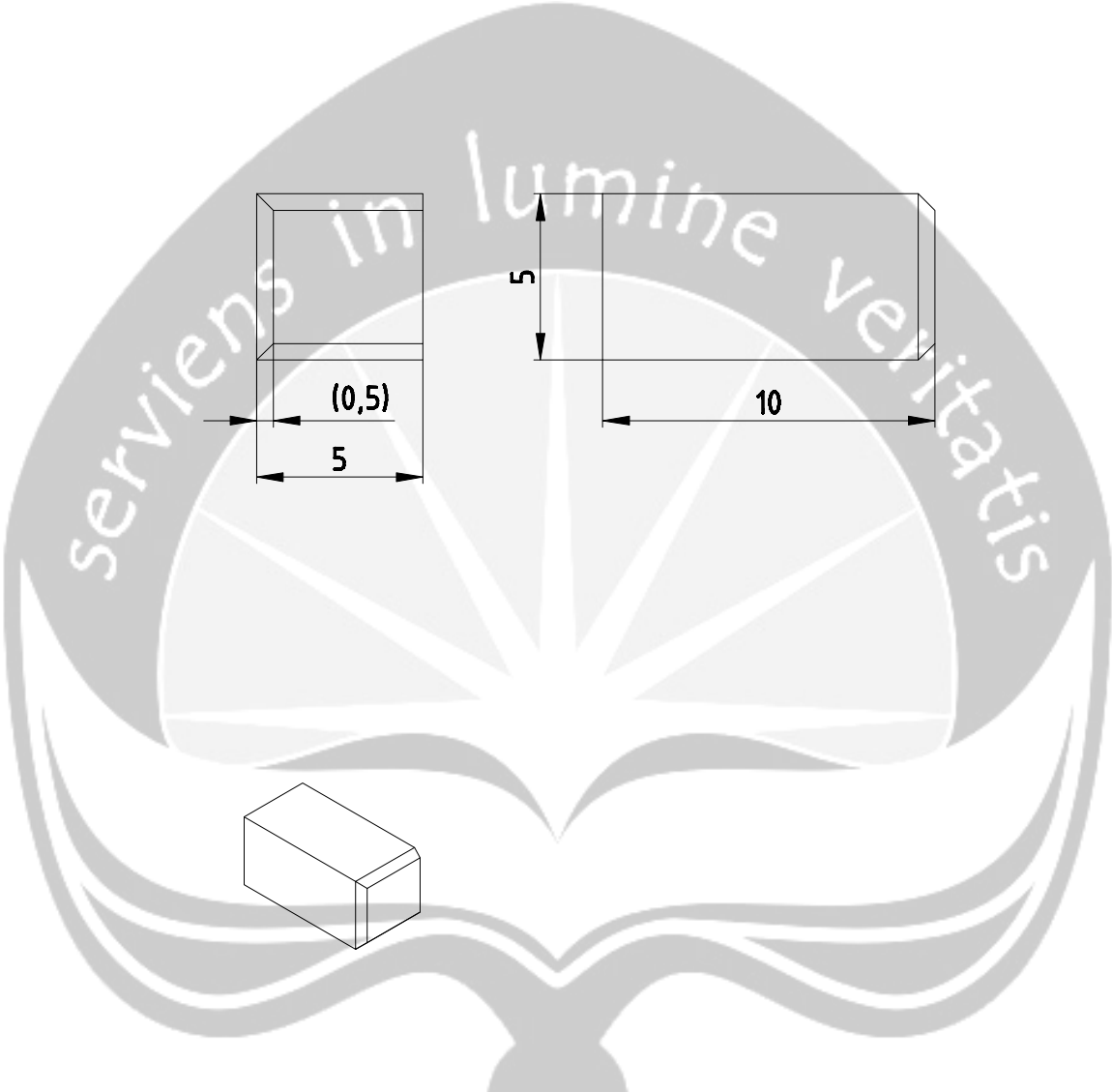
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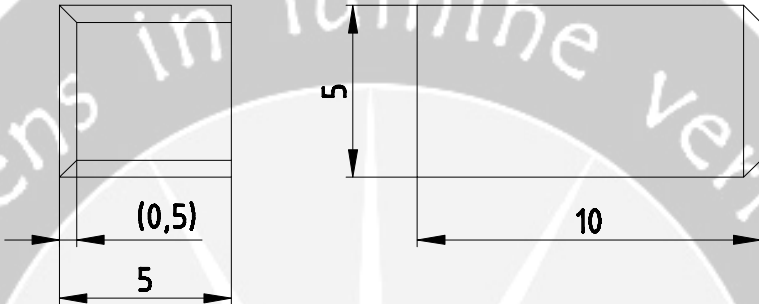
1		Dudukan Tiang					1.4		.							
Qty		Description					Item		Material		Dim. / Drw.No.		Remark			
SN 258440 - Middle							Dwn. 22.08.17		Timo		F : 4		Hard. HRC			
Nom.		0.5	>6	>30	>120	>400	>1000	Chk.		.		DT :		Item		
Tol. ±		0.1	0.2	0.3	0.5	0.8	1.2	Val.		.		Sc. :		.		
Nom.		<10	>10	>50	>120	>400	Title		Dudukan Tiang							
Dep. ±		1"	30"	20"	10"	0.3	Detail of: Sub Assembly Kaki									
±		1.7	0.9	0.6			UAJY		Assy.		Drw. No.					
Rev.		Description					Date		Name		.					
Origin:							Register:			Weight:			SN:		NS:	

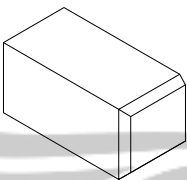


Break All Sharp Edges 0,3x45°

2		Cantolan Siku Tiang				2.1		.						
Qty		Description				Item		Material		Dim. / Drw.No.		Remark		
SN 258440 - Middle						Dwn. 22.08.17		Timo		F : 4		Hard. HRc		
Nom.		0.5	>6	>30	>120	>400	>1000			Item		Operation		
		6	30	120	400	1000	2000							
Tol. ±		0.1	0.2	0.3	0.5	0.8	1.2							
Nom.		<10	>10	>50	>120	>400								
		10	50	120	400									
Dep. ±		1"	30"	20"	10"									
		1.7	0.9	0.6	0.3									
Rev. Description Date Name						Title		Cantolan Siku Tiang						
						Detail of:		Sub Assembly Tiang						
						UAJY		Assy.		Drw. No.				
								.		.				
Origin:						Register:		Weight:		SN:		NS:		

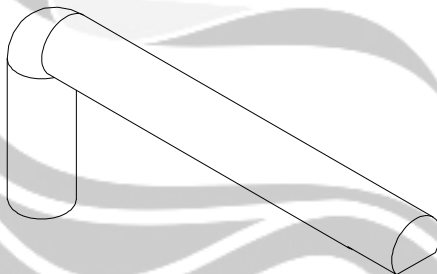
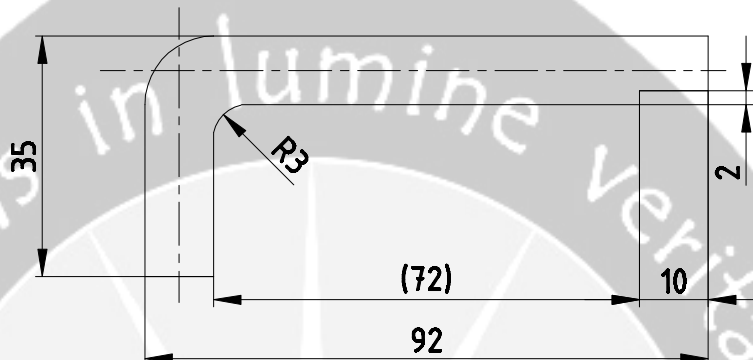






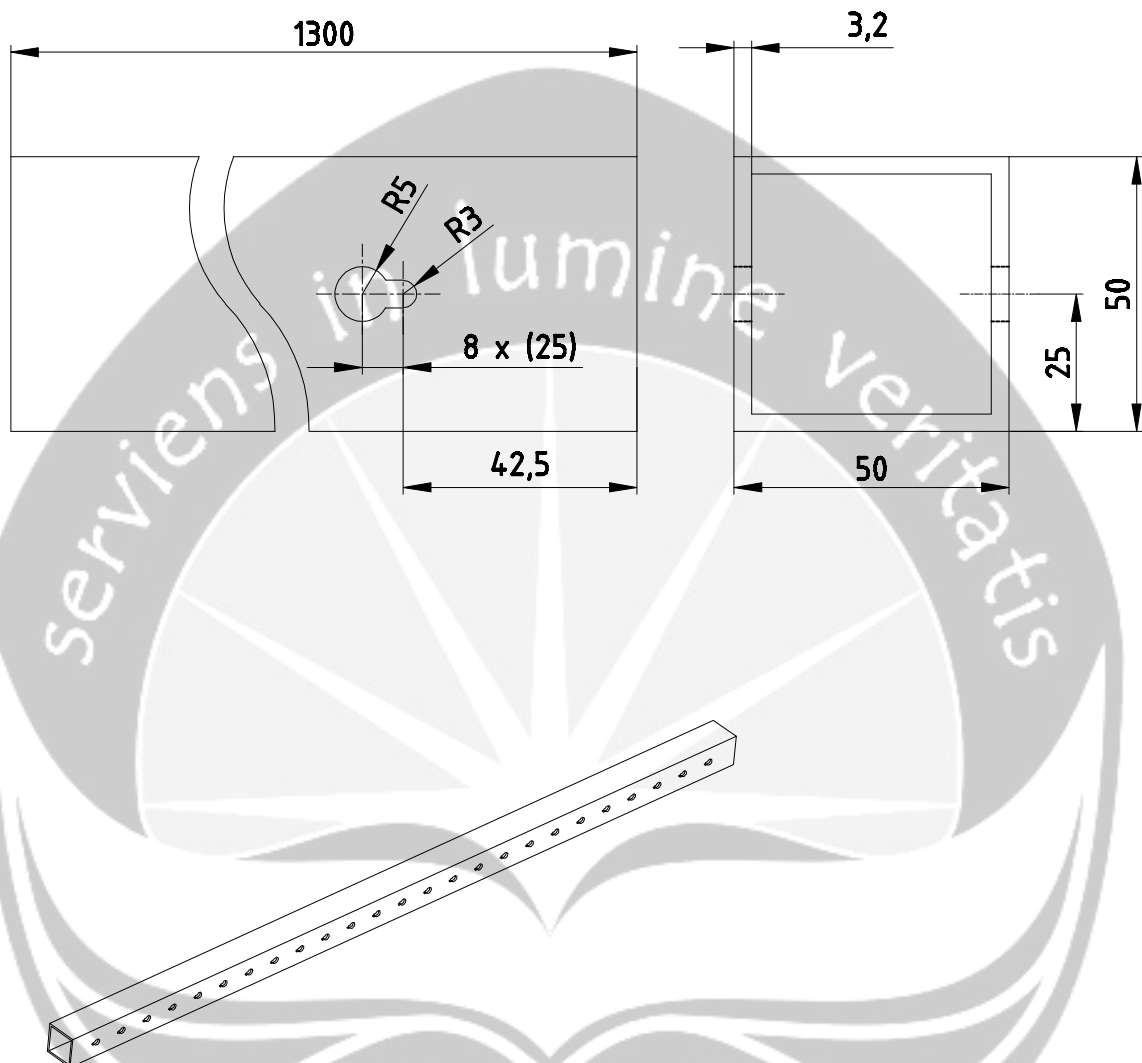
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1	Kepala Pin Tiang	2.2	.		
Qty	Description	Item	Material	Dim. / Drw.No.	Remark
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Nom.	0.5 6	>6 30	>30 120	>120 400	>400 1000
Tel. ±	0.1	0.2	0.3	0.5	0.8
Nom.	<10	>10 50	>50 120	>120 400	>2000 2000
Deg. ±	1°	30°	20°	10°	0.3
1/100 ±	1.7	0.9	0.6	0.3	0.3
		Title Kepala Pin Tiang			
Rev.		Detail of: Sub Assembly Tiang			
Description		Date		Name	
Origin:		Register:		Weight:	SN: NS:



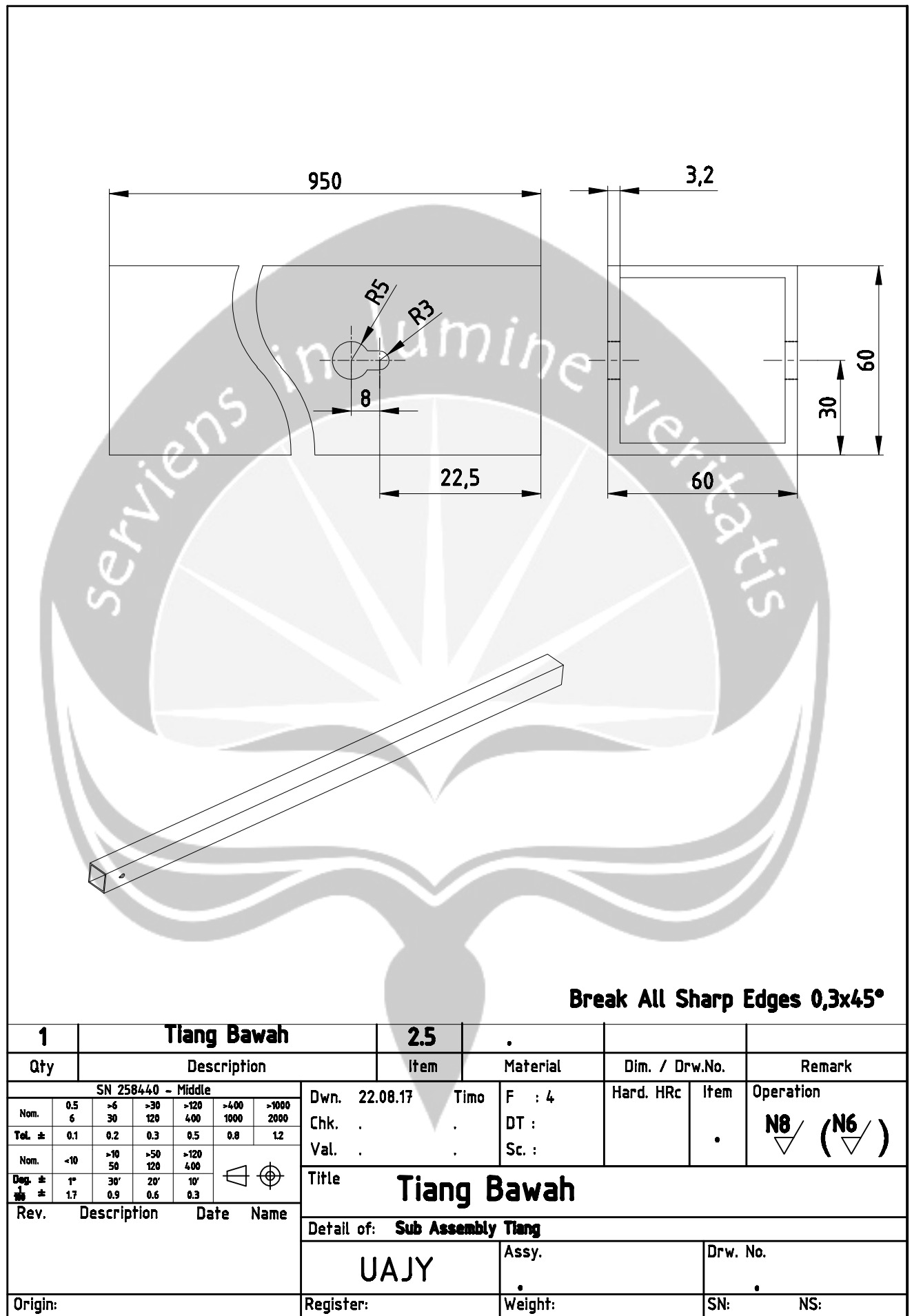
Break All Sharp Edges 0,3x45°

1		Pin Tiang					2.3		.									
Qty		Description					Item		Material		Dim. / Drw.No.		Remark					
SN 258440 - Middle							Dwn. 22.08.17		Timo		F : 4		Hard. HRc		Item		Operation	
Nom.		0.5		>6		>30		>120		>400		>1000						
		6		30		120		400		1000		2000						
Tol. ±		0.1		0.2		0.3		0.5		0.8		1.2						
Nom.		<10		>10		>50		>120										
				50		120		400										
Dep. ±		1°		30°		20°		10°										
		1.7		0.9		0.6		0.3										
Rev. Description Date Name							Title											
							Pin Tiang											
							Detail of: Sub Assembly Tiang											
							UAJY					Assy.			Drw. No.			
Origin:							Register:					Weight:			SN:		NS:	
															.		.	



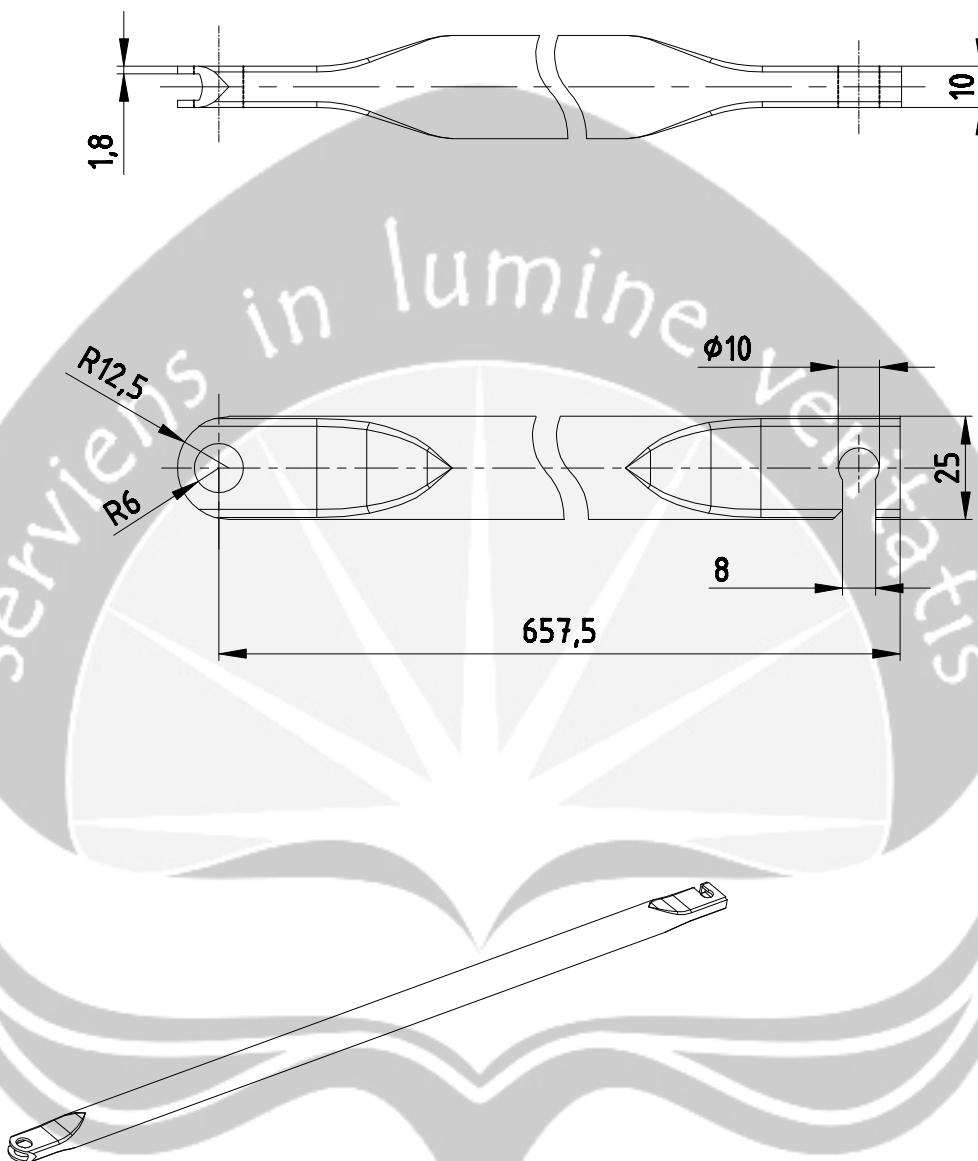
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1	Tiang Atas						2.4	.				
Qty	Description						Item	Material	Dim. / Drw.No.	Remark		
SN 258440 - Middle							Dwn. 22.08.17	Timo	F : 4	Hard. HRc	Item	Operation
Nom.	0.5	>6	>30	>120	>400	>1000	Chk.	.	DT :			N8 / (N6 /)
Tol. ±	0.1	0.2	0.3	0.5	0.8	1.2	Val.	.	Sc. :		.	
Nom.	<10	>10	>50	>120	400							
Dep. ±	1°	30°	20°	10°			Title Tiang Atas					
±	1.7	0.9	0.6	0.3								
Rev.	Description		Date	Name								
					Detail of: Sub Assembly Tiang							
					UAJY			Assy.		Drw. No.		
								.		.		
Origin:					Register:			Weight:		SN: NS:		



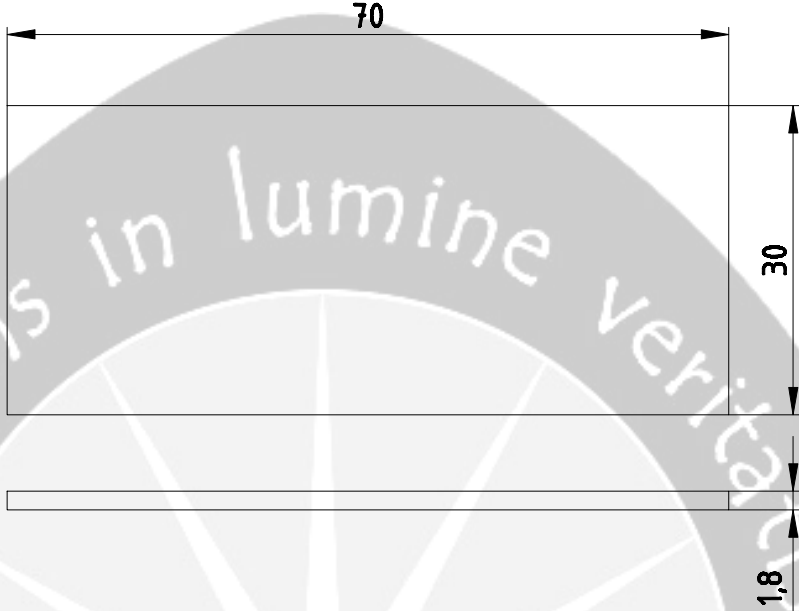
Break All Sharp Edges 0,3x45°

1	Plat Penyesuai Tiang	2.6	.		
Qty	Description	Item	Material	Dim. / Drw.No.	Remark
SN 258440 - Middle		Dwn. 22.08.17	Timo	F : 4	Hard. HRc
Nom.	0.5 6	>6 30	>30 120	>120 400	>400 1000
Tel. ±	0.1	0.2	0.3	0.5	0.8
Nom.	<10	>10 50	>50 120	>120 400	>2000 2000
Deg. ±	1°	30°	20°	10°	0.3
1/100 ±	1.7	0.9	0.6	0.3	0.3
Rev. Description Date Name		Title Plat Penyesuai Tiang			
		Detail of: Sub Assembly Tiang			
		UAJY	Assy. .	Drw. No. .	
Origin:		Register:	Weight:	SN:	NS:



Break All Sharp Edges 0,3x45°

2		Siku Penyangga				3		.					
Qty		Description				Item		Material		Dim. / Drw.No.		Remark	
SN 258440 - Middle						Dwn. 22.08.17		Timo		F : 4		Hard. HRC	
Nom.		0.5	>6	>30	>120	>400	>1000			Item		Operation	
6		30	120	400	1000	2000							
Tol. ±		0.1	0.2	0.3	0.5	0.8			DT :				
Nom.		<10	>10	>50	>120	4.00			Sc. :		.		
10		50	120								N8 / (N6 /)		
Dep. ±		1"	30"	20"	10"								
1/100 ±		1.7	0.9	0.6	0.3								
Rev.		Description		Date		Name		Title					
								Siku Penyangga					
								Detail of: Sub Assembly Siku					
								UAJY		Assy.		Drw. No.	
										.		.	
Origin:				Register:				Weight:				SN: NS:	

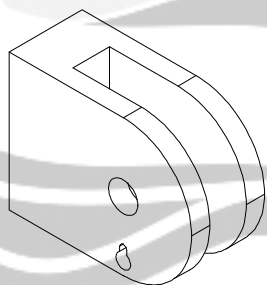


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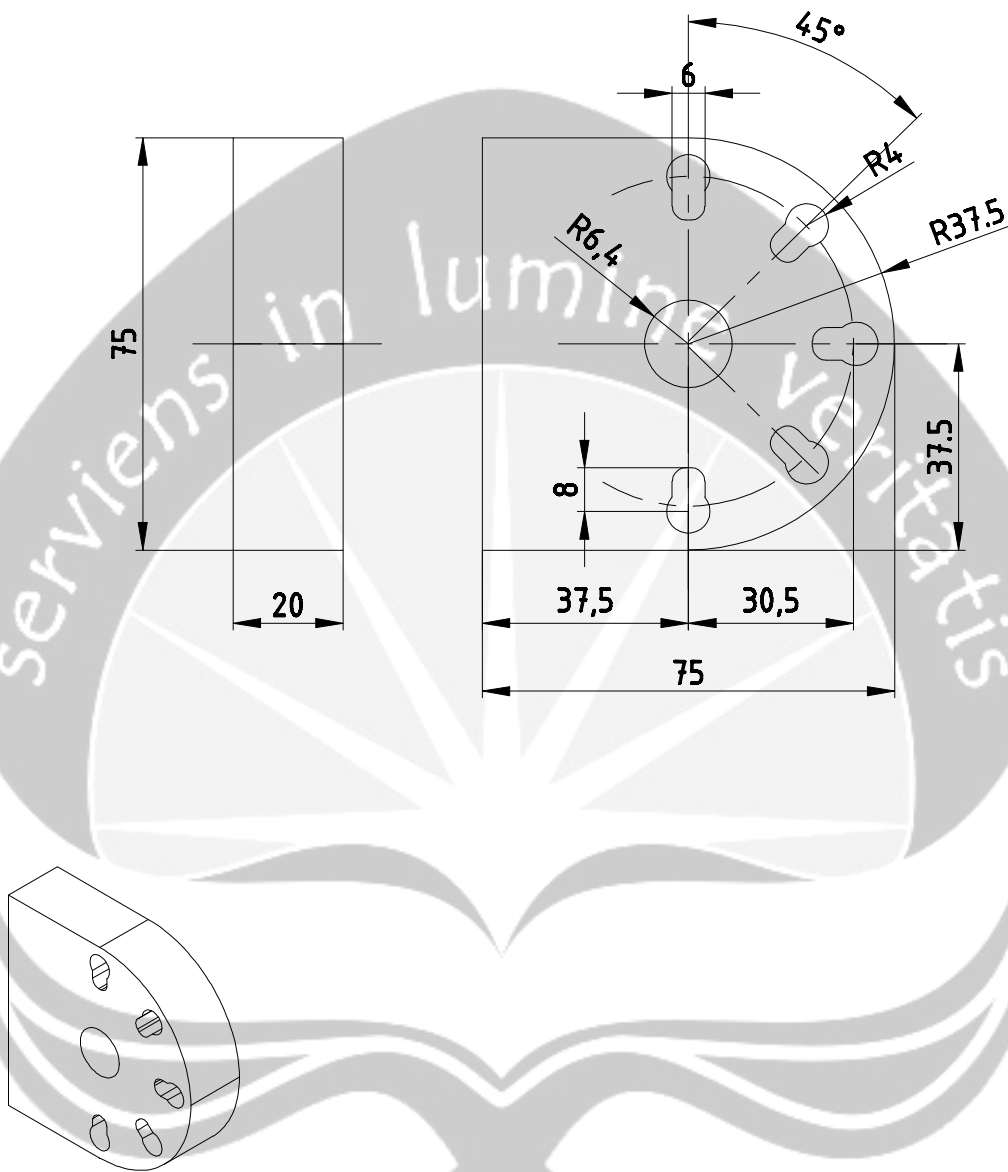
4	Plat Pemegang Tiang	4.1	.		
Qty	Description	Item	Material	Dim. / Drw.No.	Remark
SN 258440 - Middle		Dwn. 22.08.17	Timo	F : 4	Hard. HRc
Nom.	0.5 6	>6 30	>30 120	>120 400	>400 1000
Tel. ±	0.1	0.2	0.3	0.5	0.8
Nom.	<10	>10 50	>50 120	>120 400	>400 2000
Deg. ±	1°	30°	20°	10°	0.3
1/100 ±	1.7	0.9	0.6	0.3	0.3
Rev. Description Date Name		Title Plat Pemegang Tiang			
		Detail of: Sub Assembly Lengan			
		UAJY	Assy. .	Drw. No. .	
Origin:		Register:	Weight:	SN:	NS:

Break All Sharp Edges 0,3x45°

1	Lengan Pemegang Tiang	4.2	.		
Qty	Description	Item	Material	Dim. / Drw.No.	Remark
SN 258440 - Middle		Dwn. 22.08.17	Timo	F : 4	Hard. HRc
Nom.	0.5 6	>6 30	>30 120	>400 1000	>1000 2000
Tel. ±	0.1	0.2	0.3	0.5	0.8 1.2
Nom.	<10	>10 50	>50 120	>120 400	
Deg. ±	1°	30°	20°	10°	
1/100 ±	1.7	0.9	0.6	0.3	
Rev. Description Date Name		Title Lengan Pemegang Tiang			
		Detail of: Sub Assembly Lengan			
		UAJY	Assy. .	Drw. No. .	
Origin:		Register:	Weight:	SN:	NS:

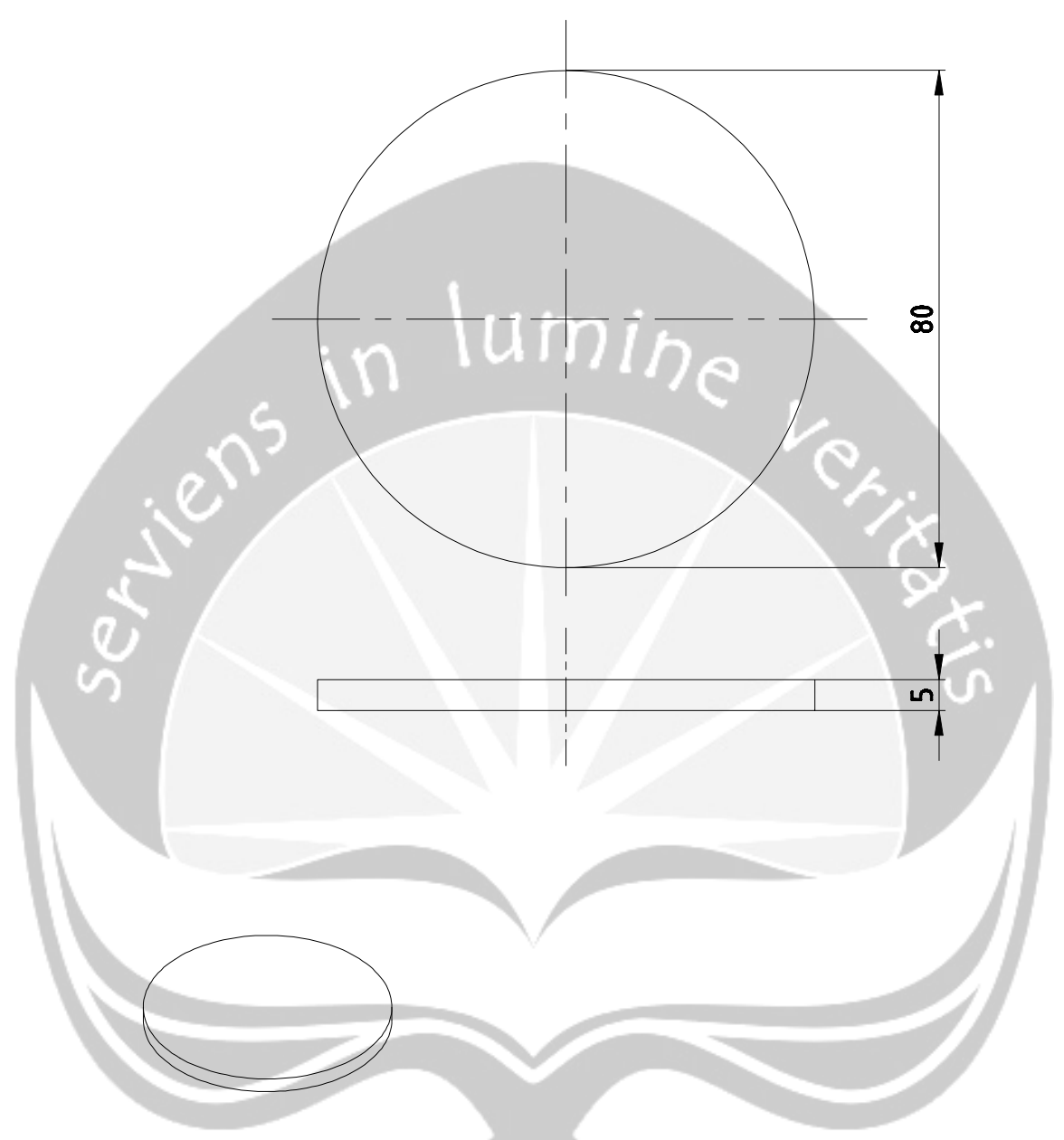


1	Lengan A						4.3	.				
Qty	Description						Item	Material	Dim. / Drw.No.		Remark	
SN 258440 - Middle							Dwn. 22.08.17	Time	F : 4	Hard. HRC	Item	Operation
Nom.	0.5	>6	>30	>120	>400	>1000	Chk.	.	DT :			
Tol. ±	0.1	0.2	0.3	0.5	0.8	1.2	Val.	.	Sc. :			N8 / (N6 /)
Nom.	<10	>10	>50	>120	4.00		 					
Dep. ±	1"	30"	20"	10"	0.3							
1/16	1.7	0.9	0.6				Title Lengan A					
Rev.	Description						Detail of: Sub Assembly Lengan					
							UAJY		Assy.		Drw. No.	
Origin:							Register:		Weight:		SN: NS:	



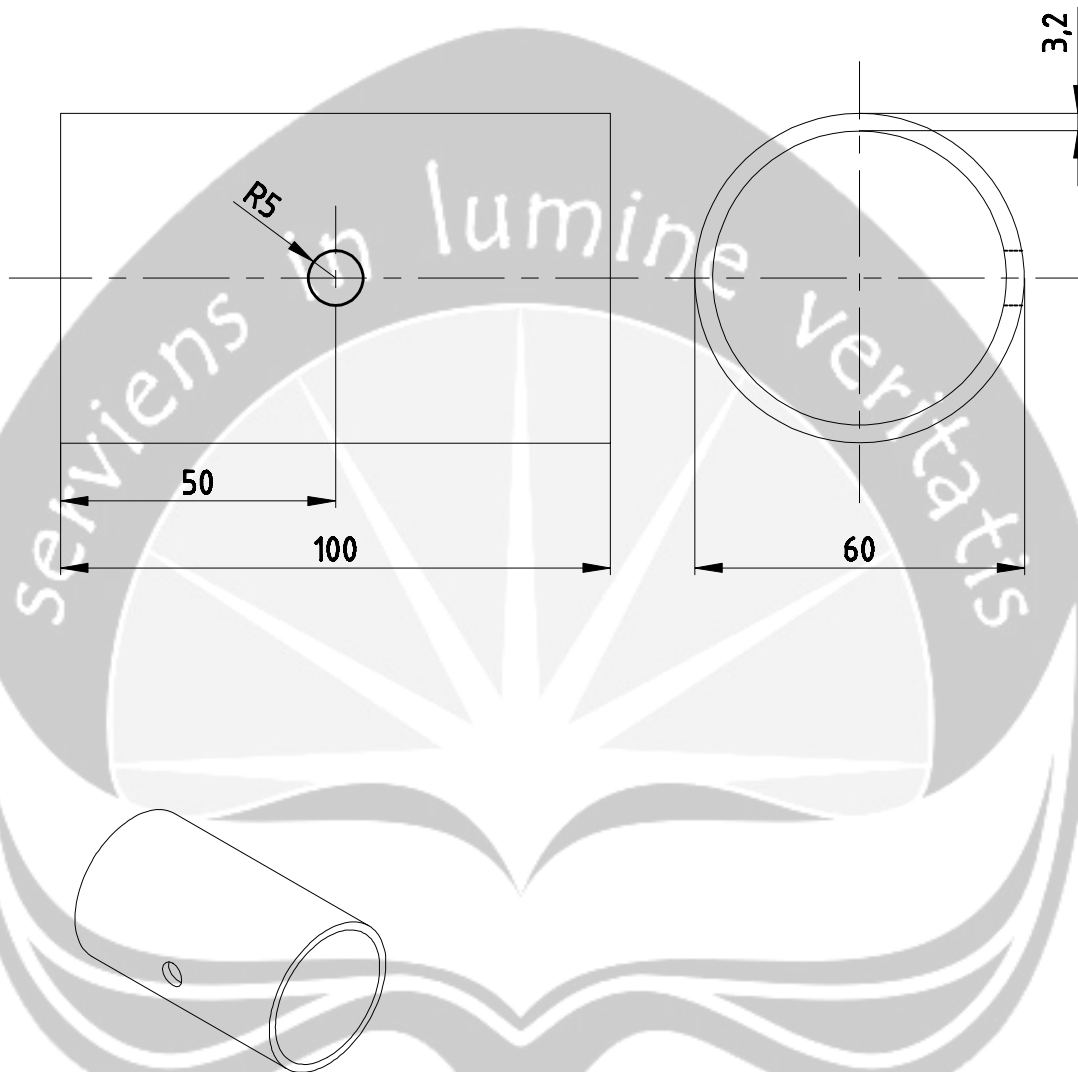
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SN 258440 - Middle							Dwn. 22.08.17		Timo		F : 4		Hard. HRc		Item		Operation		
Nom.		0.5		>6		>30		>120		>400		>1000							
		6		30		120		400		1000		2000							
Tol. ±		0.1		0.2		0.3		0.5		0.8		1.2							
Nom.		<10		>10		>50		>120		>400									
				50		120		400											
Dep. ±		1"		30"		20"		10"											
		1.7		0.9		0.6		0.3											
Rev.		Description					Date		Name		Title								
											Lengan B								
							Detail of:		Sub Assembly Lengan										
							UAJY					Assy.			Drw. No.				
												.			.				
Origin:							Register:					Weight:				SN:		NS:	



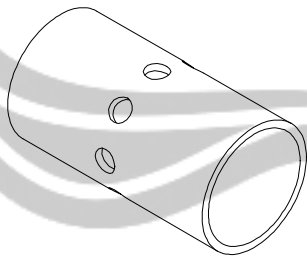
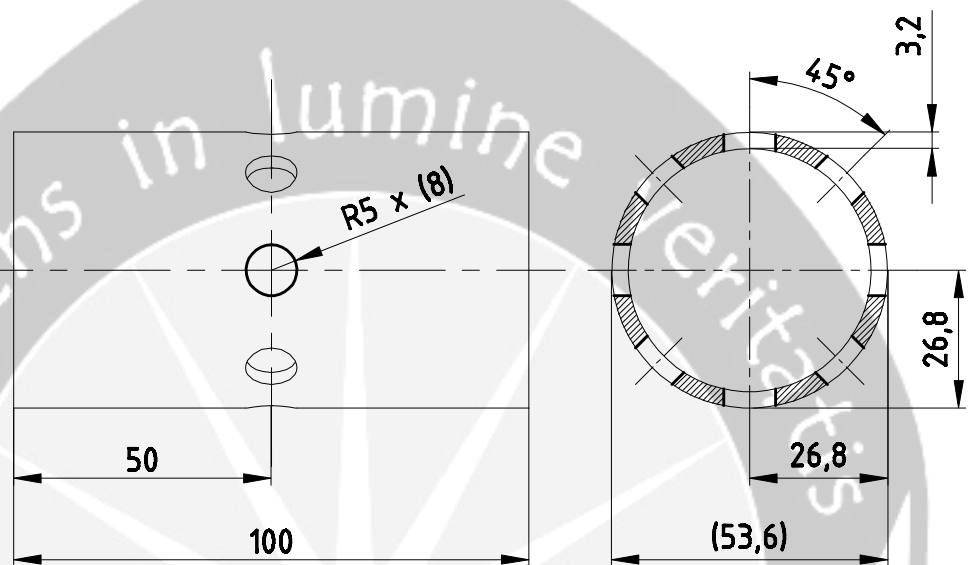
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1	Lengan C	4.5	.																																												
Qty	Description	Item	Material	Dim. / Drw.No.	Remark																																										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="7">SN 258440 - Middle</th> </tr> <tr> <td>Nom.</td> <td>0.5 6</td> <td>>6 30</td> <td>>30 120</td> <td>>120 400</td> <td>>400 1000</td> <td>>1000 2000</td> </tr> <tr> <td>Tol. ±</td> <td>0.1</td> <td>0.2</td> <td>0.3</td> <td>0.5</td> <td>0.8</td> <td>1.2</td> </tr> <tr> <td>Nom.</td> <td><10</td> <td>>10 50</td> <td>>50 120</td> <td>>120 400</td> <td colspan="2"></td> </tr> <tr> <td>Dep. ±</td> <td>1°</td> <td>30°</td> <td>20°</td> <td>10°</td> <td colspan="2"></td> </tr> <tr> <td>1/100 ±</td> <td>1.7</td> <td>0.9</td> <td>0.6</td> <td>0.3</td> <td colspan="2"></td> </tr> </table>		SN 258440 - Middle							Nom.	0.5 6	>6 30	>30 120	>120 400	>400 1000	>1000 2000	Tol. ±	0.1	0.2	0.3	0.5	0.8	1.2	Nom.	<10	>10 50	>50 120	>120 400			Dep. ±	1°	30°	20°	10°			1/100 ±	1.7	0.9	0.6	0.3			Dwn. 22.08.17 Chk. . Val. .	Timo DT : Sc. :	F : 4 Hard. HRc Item	Operation N8 / (N6 /)
SN 258440 - Middle																																															
Nom.	0.5 6	>6 30	>30 120	>120 400	>400 1000	>1000 2000																																									
Tol. ±	0.1	0.2	0.3	0.5	0.8	1.2																																									
Nom.	<10	>10 50	>50 120	>120 400																																											
Dep. ±	1°	30°	20°	10°																																											
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UAJY	Assy. .	Drw. No. .																																													
Origin:		Register:	Weight:	SN:	NS:																																										



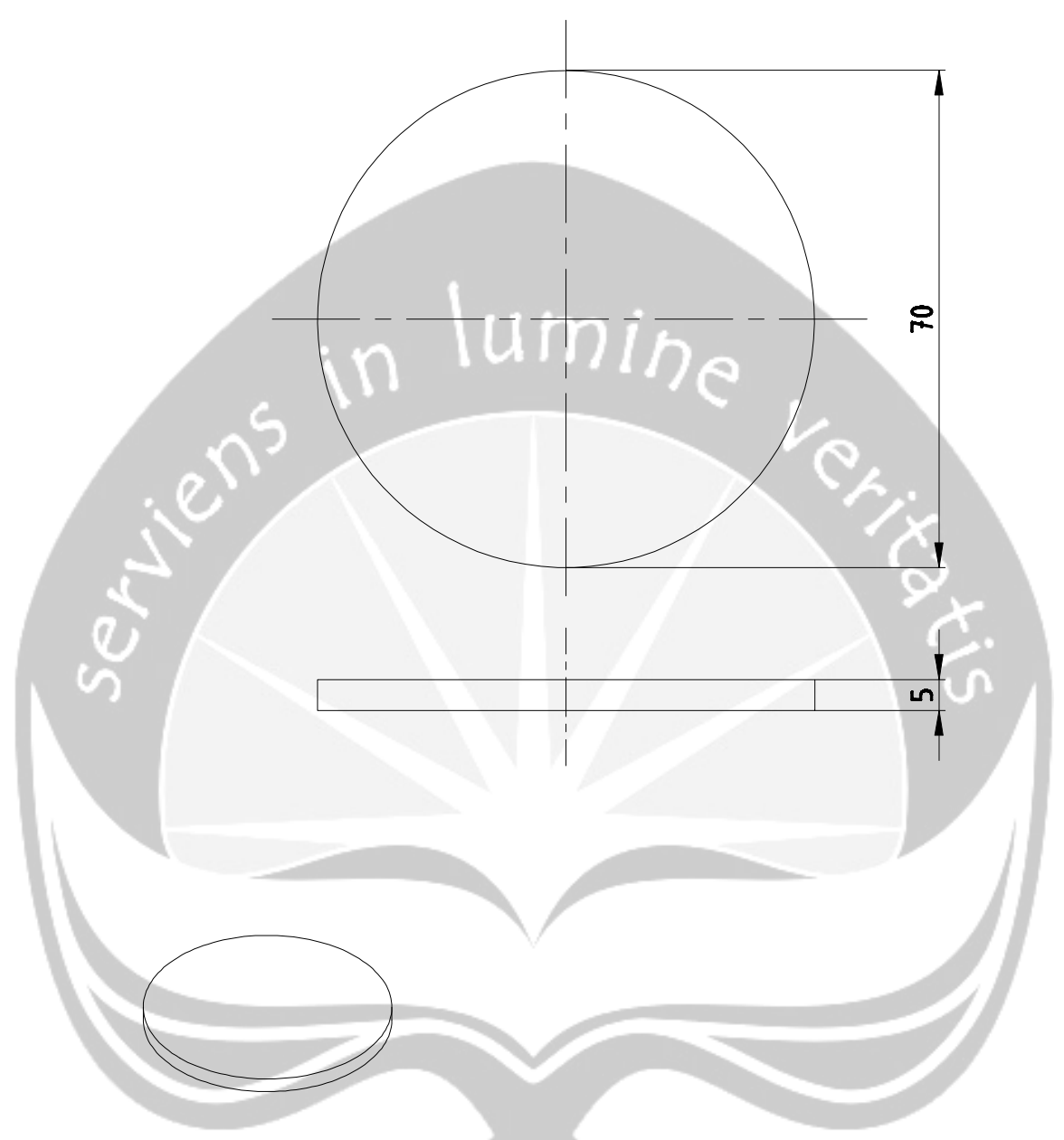
Break All Sharp Edges 0,3x45°

1	Lengan D		4.6	.		
Qty	Description		Item	Material	Dim. / Drw.No.	Remark
SN 258440 - Middle			Dwn. 22.08.17	Timo	F : 4	Hard. HRc
Nom.	0.5 6	>6 30	>30 120	>120 400	>400 1000	>1000 2000
Tol. ±	0.1	0.2	0.3	0.5	0.8	1.2
Nom.	<10	>10 50	>50 120	>120 400		
Dep. ±	1°	30°	20°	10°		
1/100 ±	1.7	0.9	0.6	0.3		
Rev. Description Date Name			Title Lengan D			
			Detail of: Sub Assembly Lengan			
			UAJY		Assy.	Drw. No.
					.	.
Origin:			Register:		Weight:	SN: NS:



Break All Sharp Edges 0,3x45°

1	Lengan E		4.7	.		
Qty	Description		Item	Material	Dim. / Drw.No.	Remark
SN 258440 - Middle			Dwn. 22.08.17	Timo	F : 4	Hard. HRc
Nom.	0.5 6	>6 30	>30 120	>120 400	>400 1000	>1000 2000
Tol. ±	0.1	0.2	0.3	0.5	0.8	1.2
Nom.	<10	>10 50	>50 120	>120 400		
Dep. ±	1°	30°	20°	10°		
1/100 ±	1.7	0.9	0.6	0.3		
Rev. Description Date Name			Title Lengan E			
			Detail of: Sub Assembly Lengan			
			UAJY		Assy.	Drw. No.
					.	.
Origin:			Register:		Weight:	SN: NS:

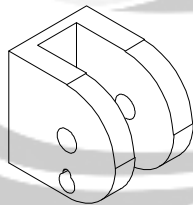
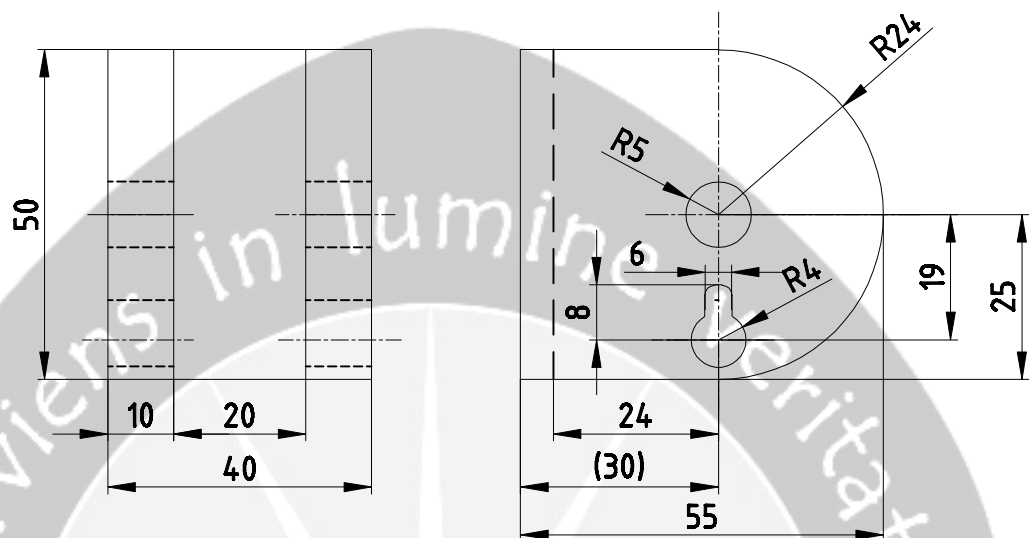


Break All Sharp Edges 0,3x45°

1	Lengan F	4.8	.																																												
Qty	Description	Item	Material	Dim. / Drw.No.	Remark																																										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="7">SN 258440 - Middle</th> </tr> <tr> <td style="text-align: center;">Nom.</td> <td style="text-align: center;">0.5 6</td> <td style="text-align: center;">>6 30</td> <td style="text-align: center;">>30 120</td> <td style="text-align: center;">>120 400</td> <td style="text-align: center;">>400 1000</td> <td style="text-align: center;">>1000 2000</td> </tr> <tr> <td style="text-align: center;">Tol. ±</td> <td style="text-align: center;">0.1</td> <td style="text-align: center;">0.2</td> <td style="text-align: center;">0.3</td> <td style="text-align: center;">0.5</td> <td style="text-align: center;">0.8</td> <td style="text-align: center;">1.2</td> </tr> <tr> <td style="text-align: center;">Nom.</td> <td style="text-align: center;"><10</td> <td style="text-align: center;">>10 50</td> <td style="text-align: center;">>50 120</td> <td style="text-align: center;">>120 400</td> <td colspan="2"></td> </tr> <tr> <td style="text-align: center;">Dep. ±</td> <td style="text-align: center;">1°</td> <td style="text-align: center;">30°</td> <td style="text-align: center;">20°</td> <td style="text-align: center;">10°</td> <td colspan="2"></td> </tr> <tr> <td style="text-align: center;">1/100 ±</td> <td style="text-align: center;">1.7</td> <td style="text-align: center;">0.9</td> <td style="text-align: center;">0.6</td> <td style="text-align: center;">0.3</td> <td colspan="2"></td> </tr> </table>		SN 258440 - Middle							Nom.	0.5 6	>6 30	>30 120	>120 400	>400 1000	>1000 2000	Tol. ±	0.1	0.2	0.3	0.5	0.8	1.2	Nom.	<10	>10 50	>50 120	>120 400			Dep. ±	1°	30°	20°	10°			1/100 ±	1.7	0.9	0.6	0.3			Dwn. 22.08.17 Chk. . Val. .	Timo DT : Sc. :	F : 4 Hard. HRc Item	Operation N8 / (N6 /)
SN 258440 - Middle																																															
Nom.	0.5 6	>6 30	>30 120	>120 400	>400 1000	>1000 2000																																									
Tol. ±	0.1	0.2	0.3	0.5	0.8	1.2																																									
Nom.	<10	>10 50	>50 120	>120 400																																											
Dep. ±	1°	30°	20°	10°																																											
1/100 ±	1.7	0.9	0.6	0.3																																											
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UAJY	Assy. .	Drw. No. .																																													
Origin:		Register:	Weight:	SN:	NS:																																										



F.ENG.2-3/010814

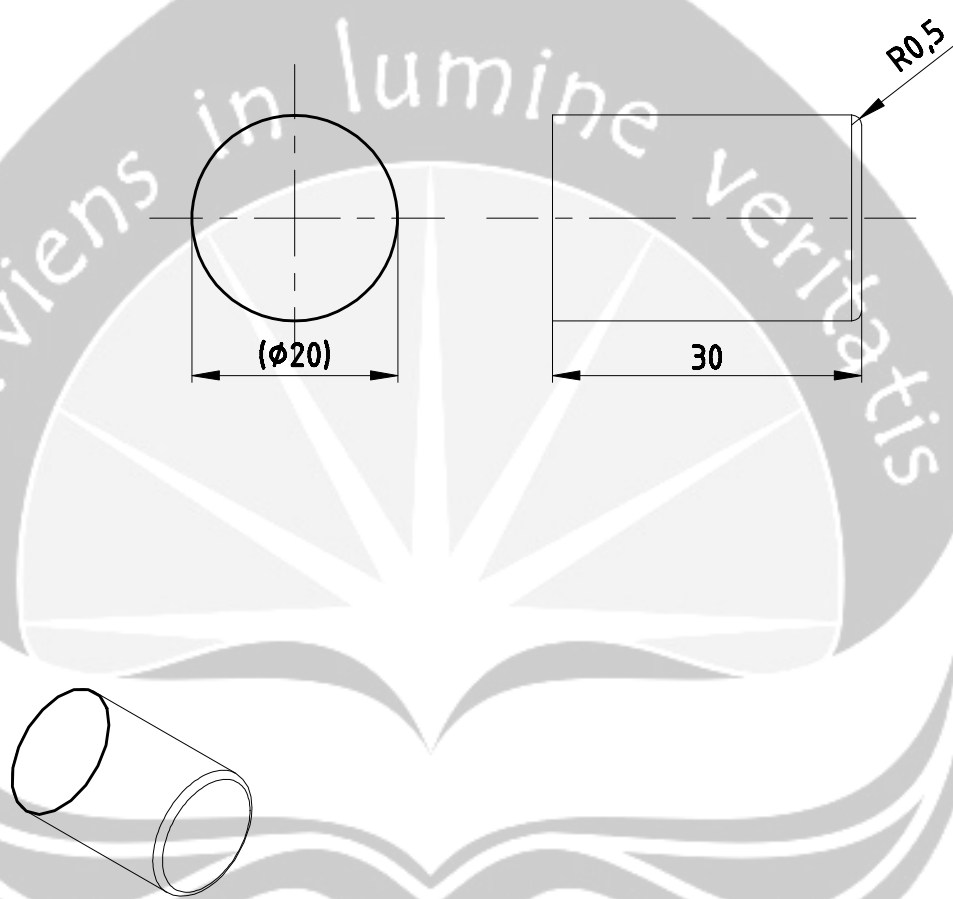


Break All Sharp Edges 0,3x45°

1		Lengan H					4.10		.						
Qty		Description					Item		Material		Dim. / Drw.No.		Remark		
SN 258440 - Middle							Dwn. 22.08.17		Timo		F : 4		Hard. HRc		
Nom.		0.5	>6	>30	>120	>400	>1000	.		DT :		Item		Operation	
Tol. ±		0.1	0.2	0.3	0.5	0.8	1.2	.		Sc. :		.		N8 / (N6 /)	
Nom.		<10	>10	>50	>120	>400	.								
Dep. ±		1°	30°	20°	10°			Title		Lengan H					
1/2 ±		1.7	0.9	0.6	0.3			Detail of: Sub Assembly Lengan							
Rev. Description Date Name							UAJY		Assy.		Drw. No.				
									.		.				
Origin:							Register:			Weight:			SN: NS:		

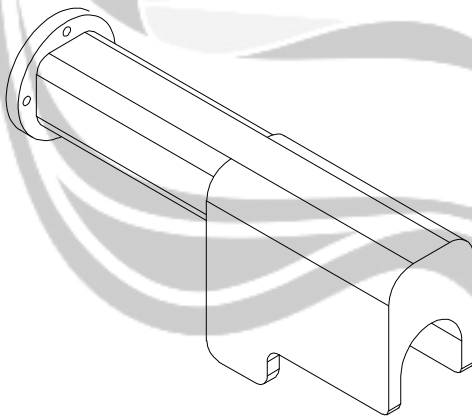
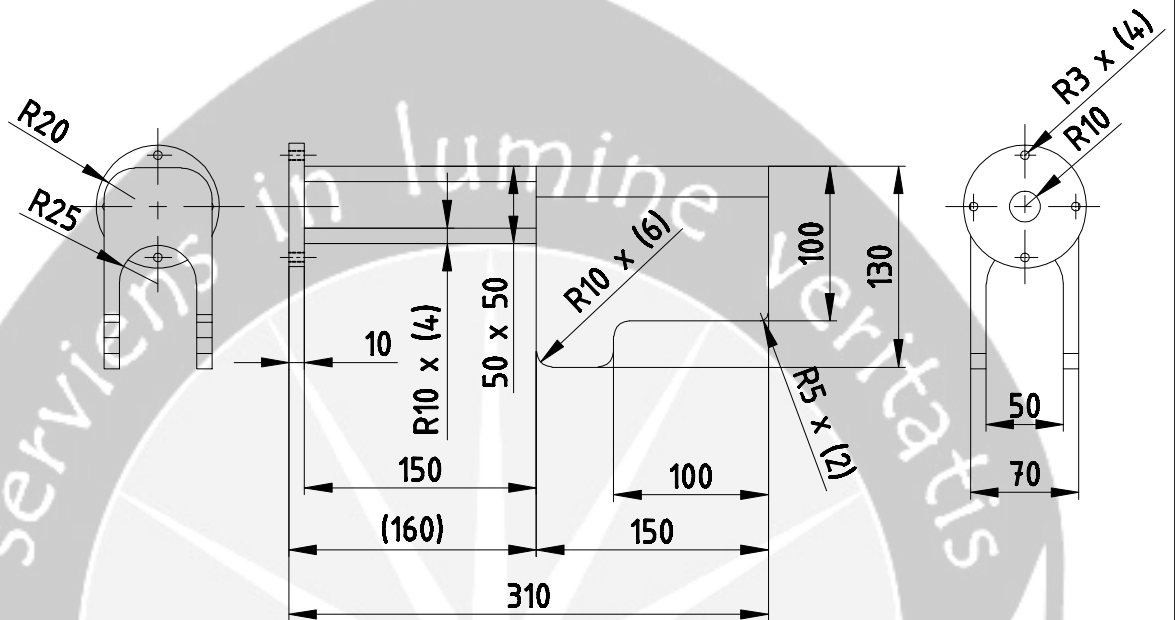
Break All Sharp Edges 0,3x45°

1	Lengan I	4.11	.		
Qty	Description	Item	Material	Dim. / Drw.No.	Remark
SN 258440 - Middle		Dwn. 22.08.17	Timo	F : 4	Hard. HRc
Nom.	0.5 6	>6 30	>30 120	>400 1000	>1000 2000
Tel. ±	0.1	0.2	0.3	0.5	0.8 1.2
Nom.	<10	>10 50	>50 120	>120 400	
Dep. ±	1°	30°	20°	10°	
1/100 ±	1.7	0.9	0.6	0.3	
		Title Lengan I			
Rev. Description Date Name		Detail of: Sub Assembly Lengan			
UAJY		Assy.		Drw. No.	
Origin:		Register:		Weight:	SN: NS:



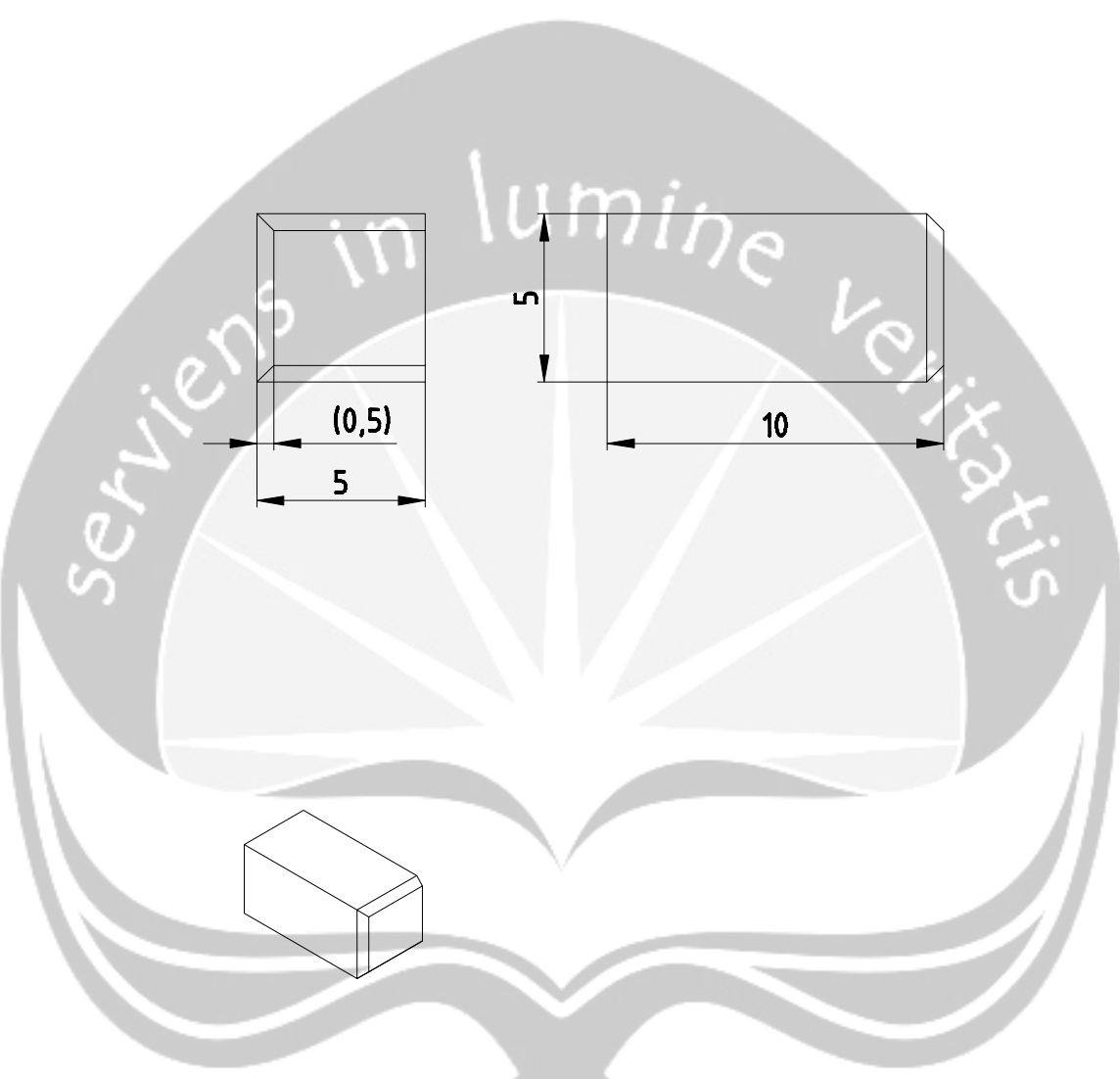
Break All Sharp Edges 0,3x45°

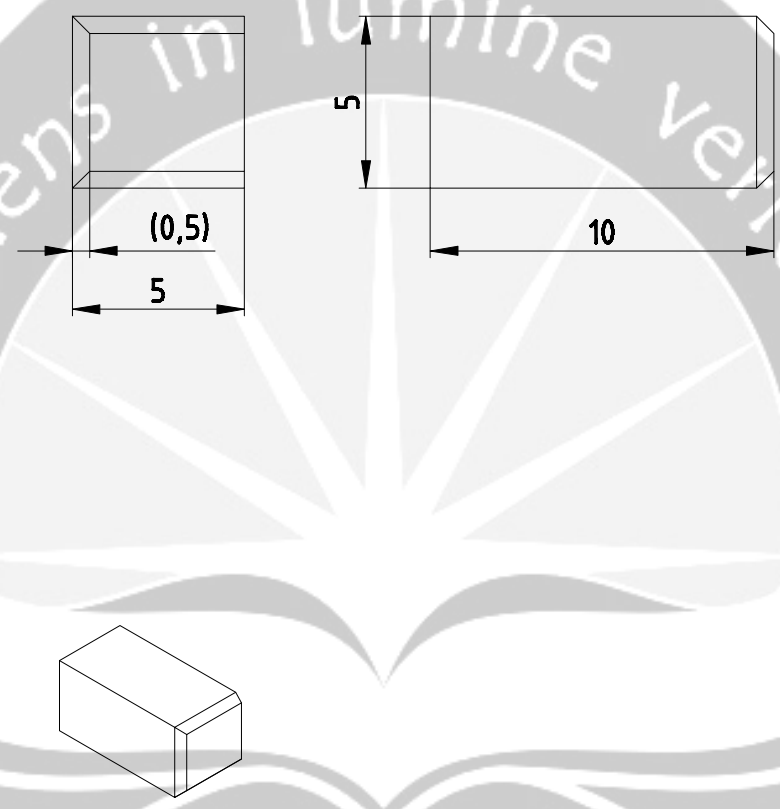
1	Lengan J	4.12	.		
Qty	Description	Item	Material	Dim. / Drw.No.	Remark
SN 258440 - Middle		Dwn. 22.08.17	Timo	F : 4	Hard. HRc
Nom.	0.5 6	>6 30	>30 120	>400 1000	>1000 2000
Tol. ±	0.1	0.2	0.3	0.5	0.8
Nom.	<10	>10 50	>50 120	>120 400	>400 1000
Dep. ±	1°	30°	20°	10°	0.3
1/100 ±	1.7	0.9	0.6	0.3	0.1
Rev. Description Date Name		Title Lengan J			
		Detail of: Sub Assembly Lengan			
		UAJY	Assy. .	Drw. No. .	
Origin:		Register:	Weight:	SN:	NS:



Break All Sharp Edges 0,3x45°

1		Karet Holder					4.13		.						
Qty		Description					Item		Material		Dim. / Drw.No.		Remark		
SN 258440 - Middle							Dwn. 22.08.17		Timo		F : 4		Hard. HRc		
Nom.		0.5	>6	>30	>120	>400	>1000	Chk. .		DT :		Item		Operation	
Tol. ±		0.1	0.2	0.3	0.5	0.8	1.2	Val. .		Sc. :		.		N8 / (N6 /)	
Nom.		<10	>10	>50	>120	>400									
Dep. ±		1"	30"	20"	10"										
±		1.7	0.9	0.6	0.3										
Rev. Description Date Name							Title								
							Karet Holder								
							Detail of: Sub Assembly Lengan								
							UAJY		Assy.		Drw. No.				
							.		.		.				
Origin:							Register:			Weight:		SN: NS:			





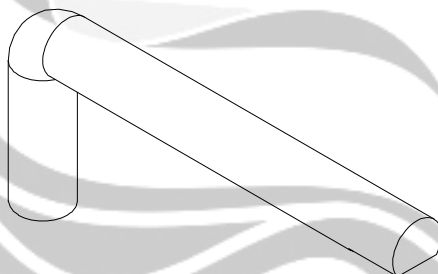
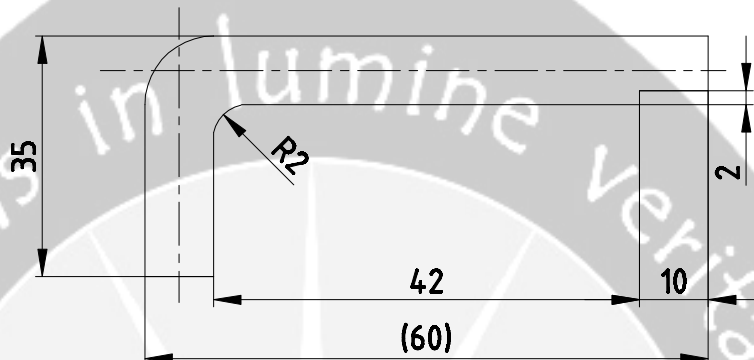
Break All Sharp Edges 0,3x45°

2	Kepala Pin Lengan	4.14	.		
Qty	Description	Item	Material	Dim. / Drw.No.	Remark

SN 258440 - Middle							Dwn. 22.08.17	Timo	F : 4	Hard. HRc	Item	Operation
Nom.	0.5 6	>6 30	>30 120	>120 400	>400 1000	>1000 2000	Chk. .	.	DT :		.	N8 / (N6 /)
Tol. ±	0.1	0.2	0.3	0.5	0.8	1.2	Val. .	.	Sc. :		.	
Nom.	<10	>10 50	>50 120	>120 400								
Deg. ±	1°	30°	20°	10°								
1/100 ±	1.7	0.9	0.6	0.3								

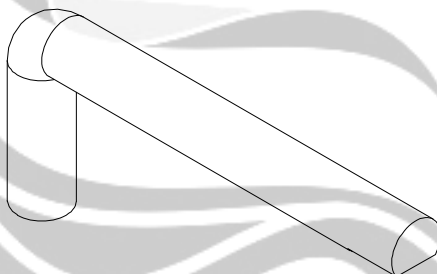
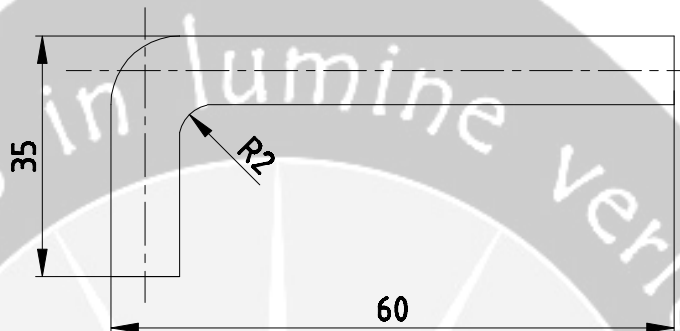
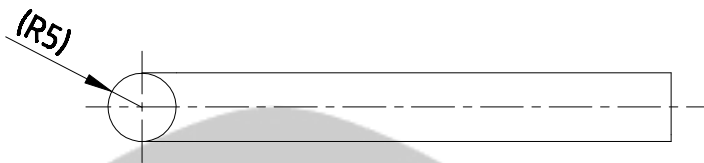
Rev.	Description	Date	Name

Title Kepala Pin Lengan		
Detail of: Sub Assembly Lengan		
UAJY	Assy. .	Drw. No. .
Origin:	Register:	Weight:
		SN: NS:



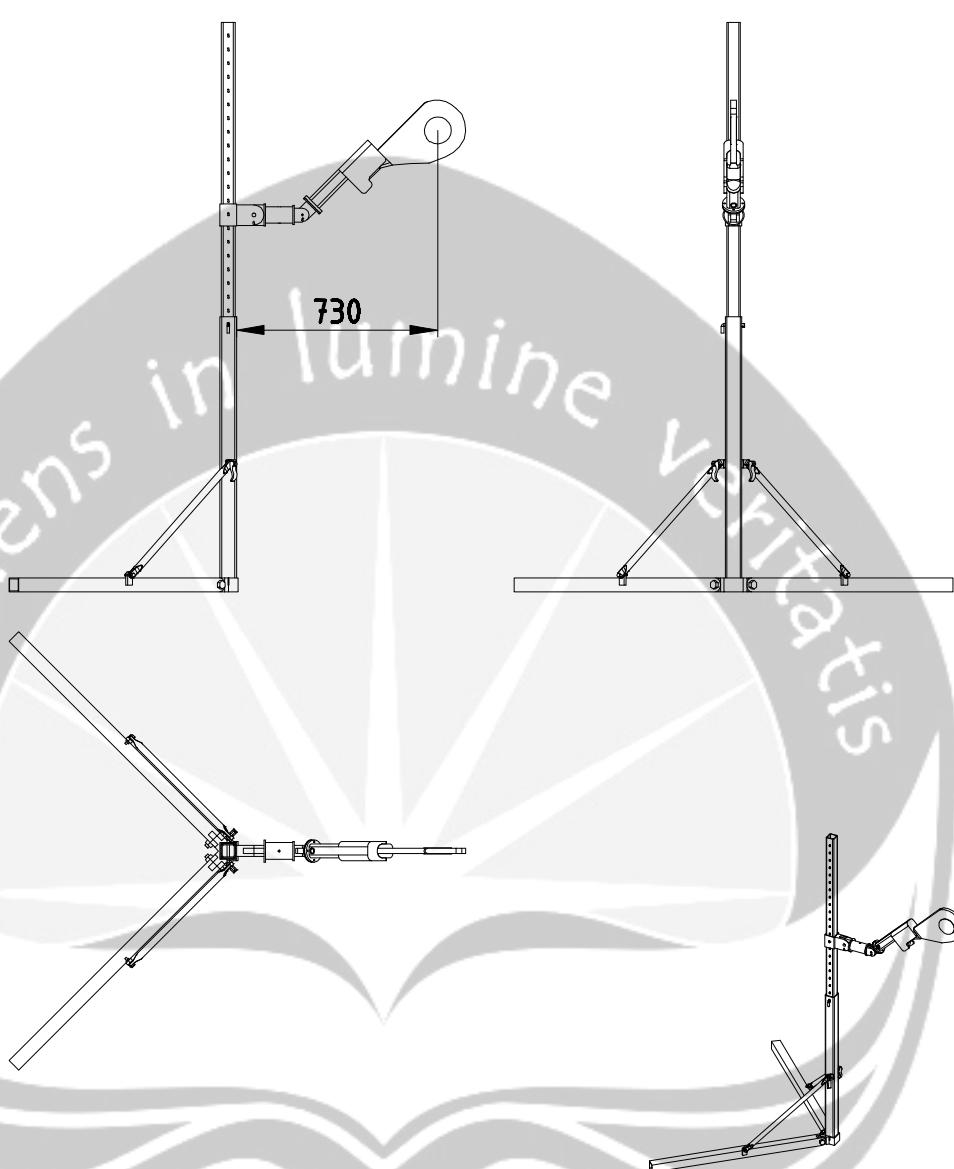
Break All Sharp Edges 0,3x45°

2		Pin Lengan 1					4.15		.										
Qty		Description					Item		Material		Dim. / Drw.No.		Remark						
SN 258440 - Middle							Dwn. 22.08.17		Timo		F : 4		Hard. HRc		Item		Operation		
Nom.		0.5	>6	>30	>120	>400	>1000												
Tol. ±		0.1	0.2	0.3	0.5	0.8	1.2												
Nom.		<10	>10	>50	>120	>400													
Dep. ±		1"	30"	20"	10"														
1/16 ±		1.7	0.9	0.6	0.3														
Rev. Description Date Name							Title Pin Lengan 1												
							Detail of: Sub Assembly Lengan												
							UAJY					Assy. .			Drw. No. .				
Origin:							Register:				Weight:				SN:		NS:		



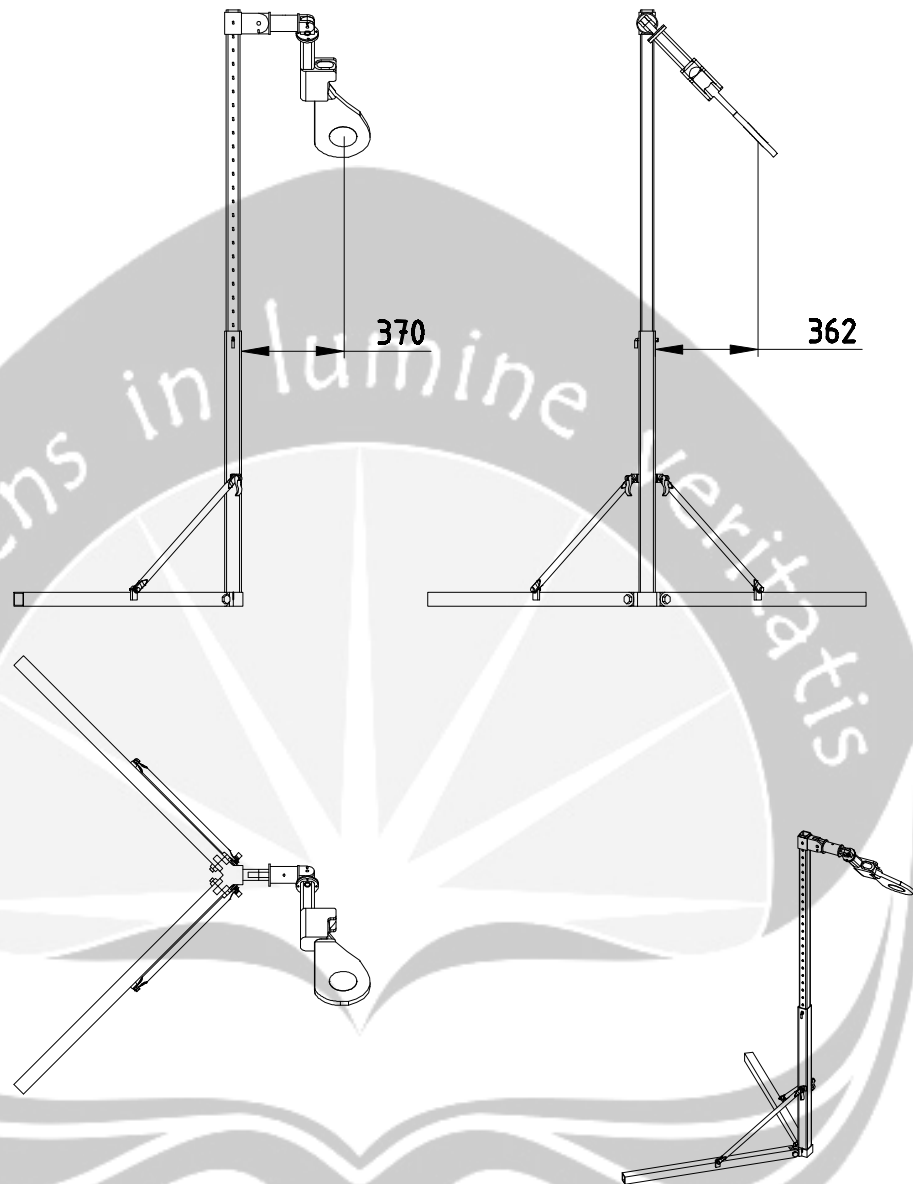
Break All Sharp Edges 0,3x45°

2		Pin Lengan 2					4.16		.										
Qty		Description					Item		Material		Dim. / Drw.No.		Remark						
SN 258440 - Middle							Dwn. 22.08.17		Timo		F : 4		Hard. HRc		Item		Operation		
Nom.		0.5	>6	>30	>120	>400	>1000												
Tol. ±		0.1	0.2	0.3	0.5	0.8	1.2												
Nom.		<10	>10	>50	>120	400													
Dep. ±		1"	30"	20"	10"														
1/100 ±		1.7	0.9	0.6	0.3														
Rev. Description Date Name							Title												
							Pin Lengan 2												
							Detail of: Sub Assembly Lengan												
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Origin:							Register:					Weight:			SN: NS:				



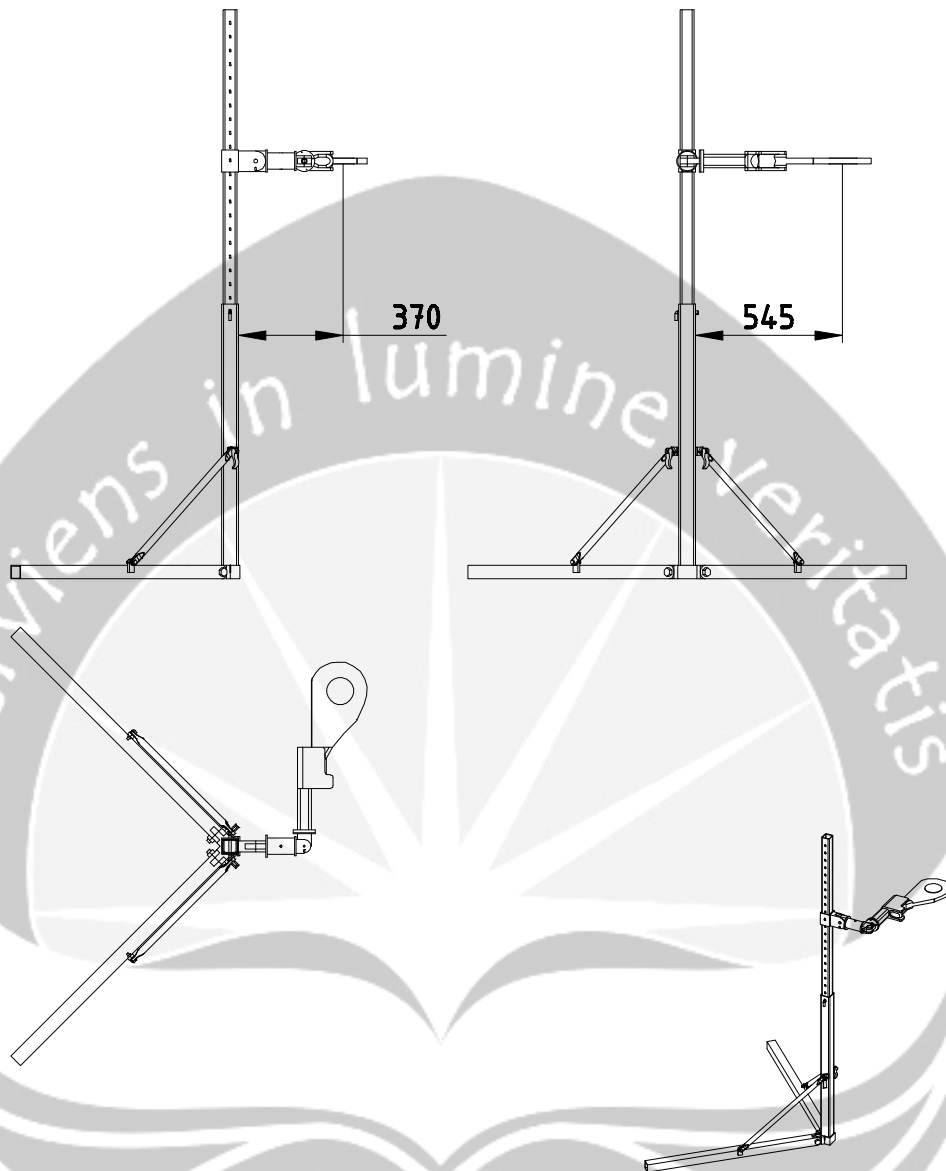
Break All Sharp Edges 0,3x45°

-	Assembly Dolyo Chagi	-	.		
Qty	Description	Item	Material	Dim. / Drw.No.	Remark
SN 258440 - Middle		Dwn. 22.08.17	Timo	F : 4	Hard. HRc
Nom.	0.5 6	>6 30	>30 120	>120 400	>400 1000
Tel. ±	0.1	0.2	0.3	0.5	0.8
Nom.	<10	>10 50	>50 120	>120 400	>1000 2000
Deg. ±	1°	30°	20°	10°	0.3
1/100 ±	1.7	0.9	0.6	0.3	0.3
Rev. Description Date Name		Title Assembly Dolyo Chagi			
		Detail of: Alat Latihan Keakuratan Tendangan Taekwondo			
		UAJY	Assy. .	Drw. No. .	
Origin:		Register:	Weight:	SN:	NS:



Break All Sharp Edges 0,3x45°

-		Assembly Deol O Chagi					-		.					
Qty		Description					Item		Material		Dim. / Drw.No.		Remark	
SN 258440 - Middle							Dwn. 22.08.17	Timo	F : 4	Hard. HRc	Item	Operation N8 / (N6 /) ▽ (▽)		
Nom.	0.5	>6	>30	>120	>400	>1000								
	6	30	120	400	1000	2000								
Tol. ±	0.1	0.2	0.3	0.5	0.8	1.2								
Nom.	<10	>10	>50	>120	>400									
		50	120	400										
Dep. ±	1"	30"	20"	10"										
	1.7	0.9	0.6	0.3										
Rev. Description Date Name							Title							
							Assembly Deol O Chagi							
							Detail of: Alat Latihan Keakuratan Tendangan Taekwondo							
							UAJY		Assy.		Drw. No.			
Origin:							Register:		Weight:		SN:		NS:	



Break All Sharp Edges 0,3x45°

-	Assembly Ap Chagi						-	.				
Qty	Description						Item	Material	Dim. / Drw.No.	Remark		
SN 258440 - Middle							Dwn. 22.08.17	Timo	F : 4	Hard. HRc	Item	Operation
Nom.	0.5	>6	>30	>120	>400	>1000	Chk.	.	DT :			
Tol. ±	0.1	0.2	0.3	0.5	0.8	1.2	Val.	.	Sc. :		.	N8 / (N6 /)
Nom.	<10	>10	>50	>120	>400		Title Assembly Ap Chagi					
Dep. ±	1"	30"	20"	10"								
1/10 ±	1.7	0.9	0.6	0.3			Detail of: Alat Latihan Keakuratan Tendangan Taekwondo					
Rev. Description Date Name							UAJY		Assy.		Drw. No.	
Origin:							Register:		Weight:		SN:	NS:



Wadah Pemberat Tanah atau Kerikil