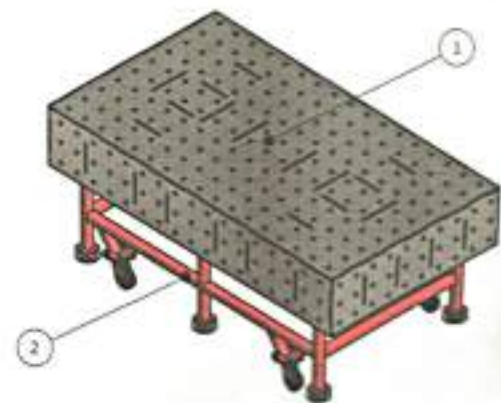
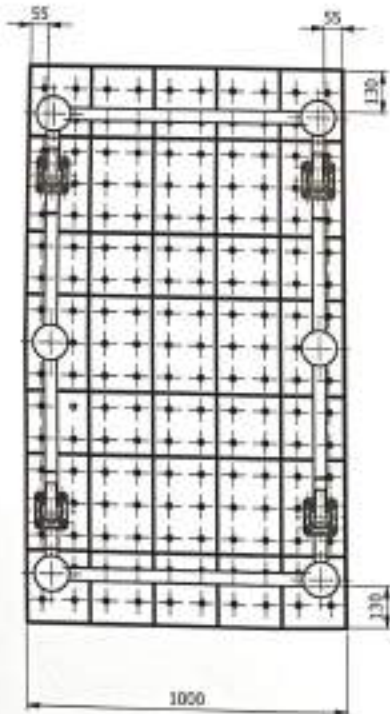
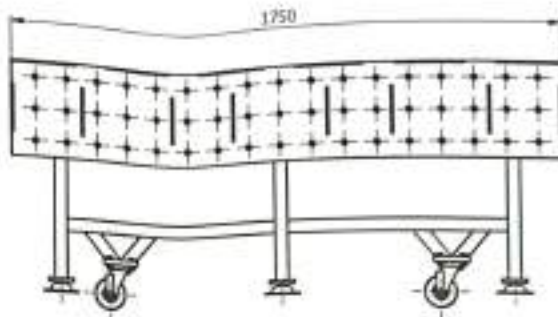
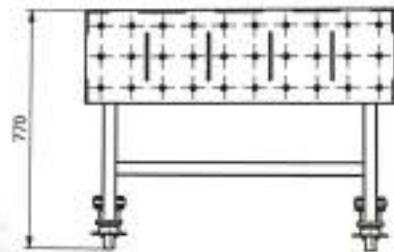


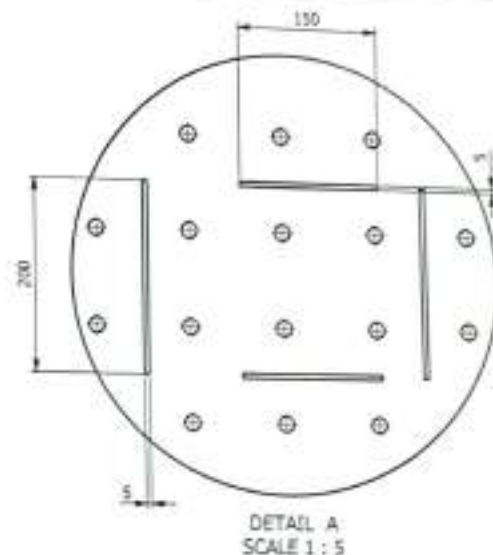
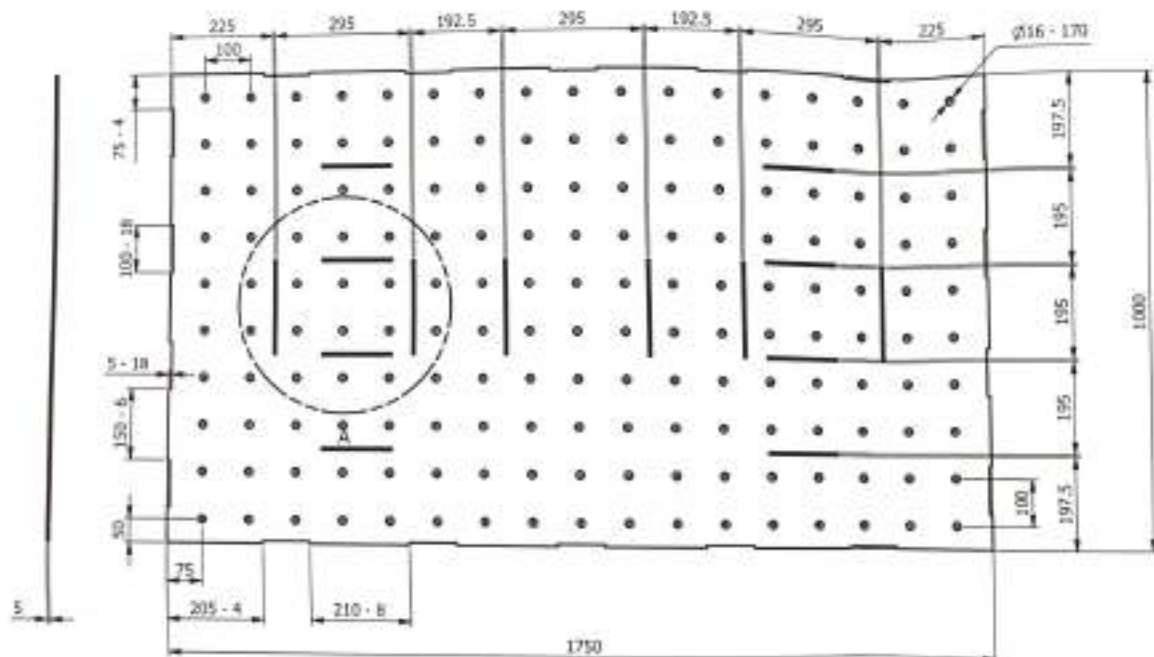
### **Deskripsi Alat Bantu Produksi: *Table Jig Welding***

Proses pembuatan Trailer Jetski melalui beberapa proses, salah satunya proses pengelasan. Pembuatan alat bantu produksi skala terbatas Trailer Jetski adalah dengan membuat universal *Table Jig Welding*. *Jig* ini dilengkapi dengan roda berjumlah 4 roda yang difungsikan untuk memudahkan *jig* untuk dipindah tempatkan. Tingginya sangat ergonomis yakni sudah sesuai kebutuhan operator yang dapat mencegah *musculoskeletal disorder*. *Jig* ini dibuat dengan 2 material yang lebih dominan, yaitu Besi *Hollow* dan *Sheet Metal*. Besi *Hollow* yang digunakan berukuran 40mmx40mm dengan ketebalam 3mm. *Sheet Metal* yang digunakan berukuran tebal 5mm. *Universal Jig Welding* ini mampu digunakan untuk berbagai macam pengelasan, dan dapat memastikan material yang akan di las dapat statis. Dengan pembuatan alat bantu/ *Jig Table Welding* tersebut dapat membantu proses pabrikasi dan pengelasan komponen-komponen Trailer Jetski. Tujuannya adalah untuk meningkatkan produktivitas, menghilangkan waktu *setting*, meningkatkan waktu proses, dan mempermudah operator untuk melakukan proses pengelasan. Perancangan desain *Universal Jig Welding* ini mengacu pada pembuatan Trailer Jet Ski dari segi dimensi dan fitur. *Universal Table Jig Welding* yang dibuat dengan dimensi 1750x1000x770mm.



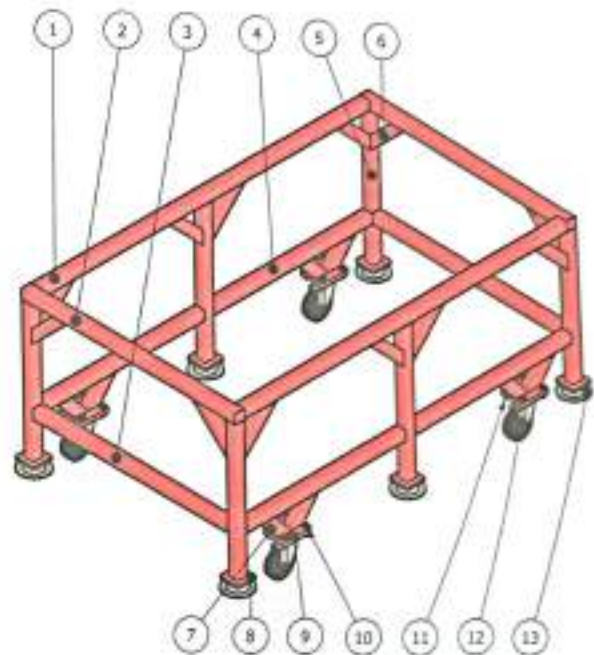
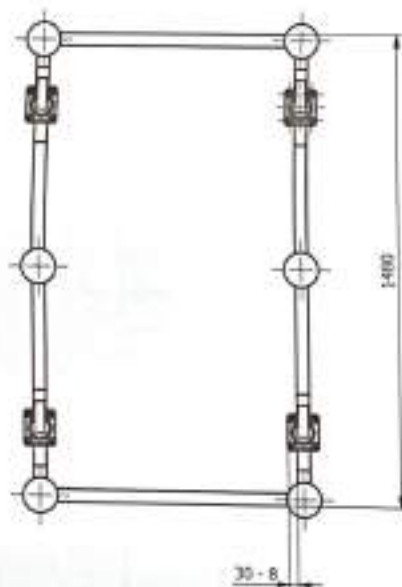
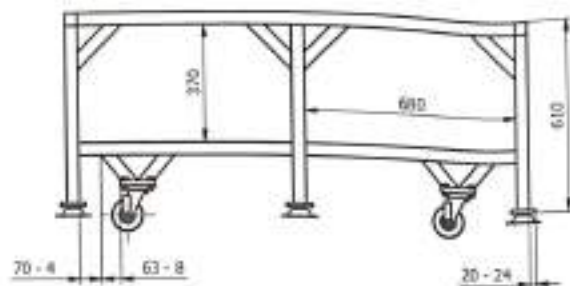
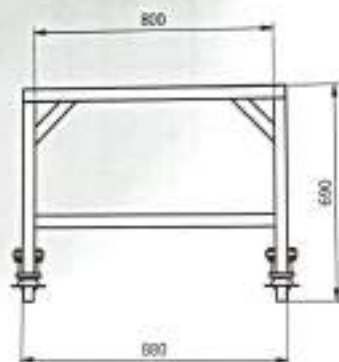


2	Lower Assy			1	B-WV-SA-02
1	Upper Assy			1	B-WV-SA-01
No	Description	Material	Dimension	Qty	Remark
Scale	1 : 15	Hard	Roughness	Checked	Approved
Finish	Faint			<i>[Signature]</i>	<i>[Signature]</i>
Tolerance	Middle	HRC	70 (✓) (✓)	Ring	Heavy
			⊕	pl. 7.55	Drawn
				Ass	AKG
No.	Revision	Date	Sign	 ASTRA POLYTECHNIC 3, Gajah Mada St. No. 1 Lingsi Cikarang, Cirebon - 17936 Telp: (021) 451355, Fax: (021) 4513631	
				<b>Jig Welding Universal</b>	
				Assy No.	B-WV-MA-00
				Drawn	B-WV-MA-00
				No. order	
				Sheet	A3
				Total of sheet	1 of 1



1		Top Cover		Sheet Metal	1750x1000x5	1												
No	Description	Material		Dimension	Qty	Remark												
Scale	1:20	Hard	Roughness	Checked	Approved	ASTRA POLYTECHNIC												
Finish	Cutting	HRc	N/A (✓)	Ring	Henry	B Cahaya Blok P3 No.1 Upper Cheong, Cheras - 11530												
Tolerance	Abstrak			Designed	Drawn	488 (021)-851916, Fax (021)-8519823												
<table border="1"> <tr> <th>No.</th> <th>Revisi</th> <th>Uraian</th> <th>Tgl</th> <th>Sign</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>		No.	Revisi	Uraian	Tgl	Sign								<b>Jig Welding Universal</b> Top Cover		No. order: B-JW-S4-01 No. drawing: B-JW-S41-PRT-001		
No.	Revisi	Uraian	Tgl	Sign														
<table border="1"> <tr> <th>Rev</th> <th>Revisi</th> <th>Uraian</th> <th>Tgl</th> <th>Sign</th> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> </table>							Rev	Revisi	Uraian	Tgl	Sign	1	1	1	1	1	No. order: B-JW-S4-01 No. drawing: B-JW-S41-PRT-001	
Rev	Revisi	Uraian	Tgl	Sign														
1	1	1	1	1														

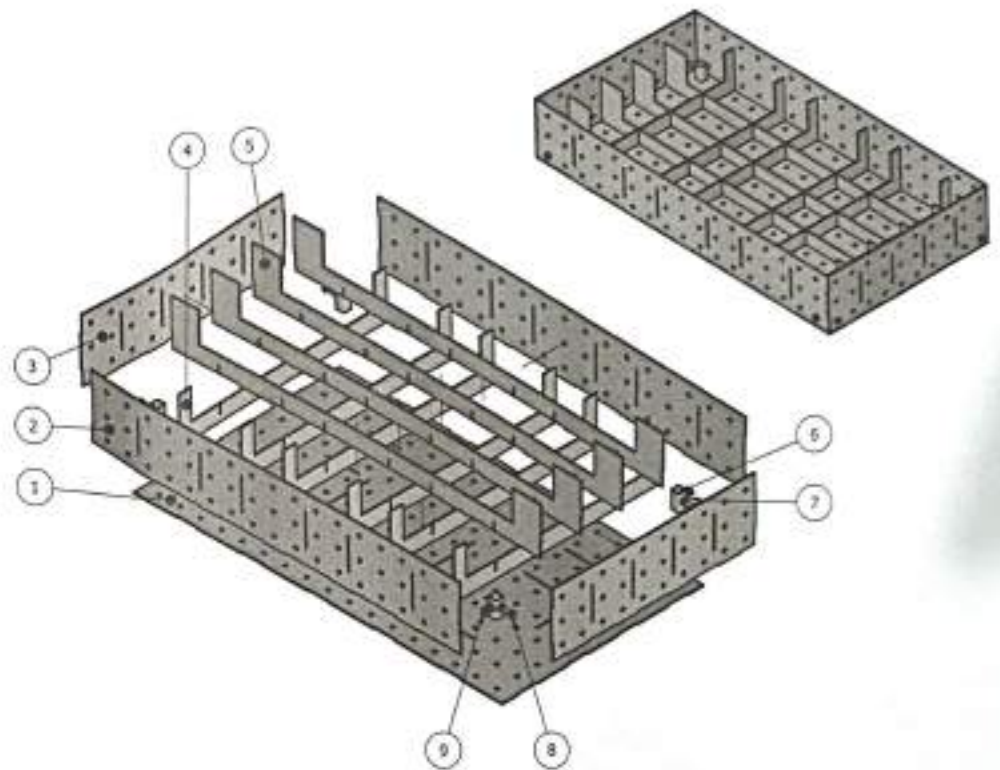
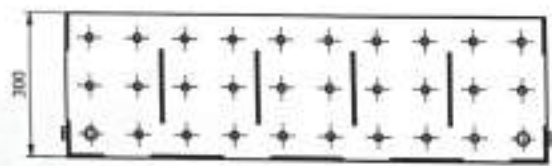
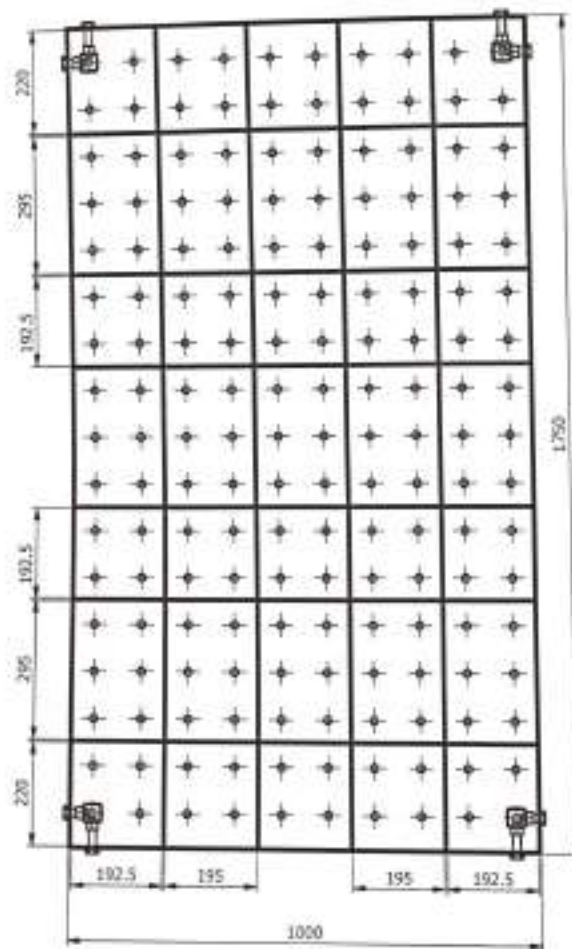




No	Description	Material	Dimension	Qty	Remark
13	Adjuster Foot	Standard	-	6	
12	Castor Wheel	Standard	-	4	
11	ISO 4161 - M10	Standard	-	16	
10	AS 1427 - M10 x 30	Standard	-	16	
9	Castor Wheel Holder	SS41	113 x 100 x 16	4	
8	Shoes Foot	SS41	80 x 80 x 10	6	
7	Hollow Support Holder	Hollow 3mm	138 x 40 x 40	6	
6	Hollow Support Frame	Hollow 3mm	200 x 40 x 40	12	
5	Hollow 560	Hollow 3mm	560 x 40 x 40	6	
4	Hollow 680	Hollow 3mm	680 x 40 x 40	4	
3	Hollow 800	Hollow 3mm	800 x 40 x 40	2	
2	Hollow 800	Hollow 3mm	880 x 40 x 40	2	
1	Hollow 1400	Hollow 3mm	1400 x 40 x 40	2	

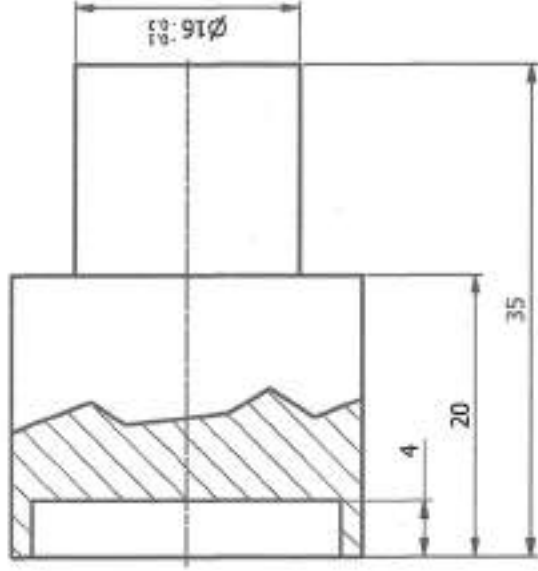
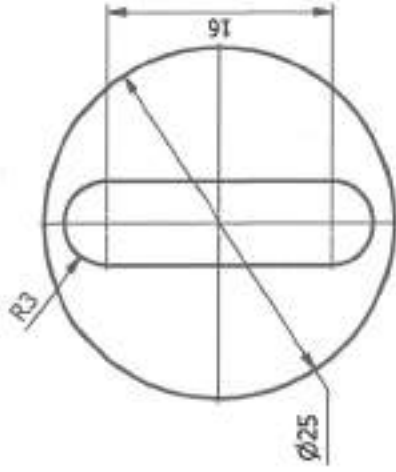
Scale	1 / 15	Hard	Roughness	Checked	Approved	 ASTRA POLYTECHNIC 3, Gajah Mada Rd No.1 Upper Claring, Cikau - 17031 Telp (021) 4611955, Fax (021) 46119621
Finish	Paint	HRc	RV (✓)			
Tolerance	Mobile	HRc				
Designed		Drawn		Title: <b>Jig Welding Universal Lower Assy</b> Ass no: <b>B-JW-MA-00</b> Dep no: <b>B-JW-SA-02</b>		
No. Revision		Date		No order:      Drawn:		
Acc:      1      2      3      4      5      6      7      8      9      10      11      12      13      14      15      16      17      18      19      20      21      22      23      24      25      26      27      28      29      30      31      32      33      34      35      36      37      38      39      40      41      42      43      44      45      46      47      48      49      50      51      52      53      54      55      56      57      58      59      60      61      62      63      64      65      66      67      68      69      70      71      72      73      74      75      76      77      78      79      80      81      82      83      84      85      86      87      88      89      90      91      92      93      94      95      96      97      98      99      100				No order:      Drawn:		



No	Description	Material	Dimension	Qty	Remark
9	AS 1110 - M16 x 40	Standart	-	4	
8	AS 1110 - M16 x 65	Standart	-	4	
7	AS 1112 - M16	Standart	-	8	
6	Locked Base	Hollow 3mm	80 x 40 x 40	4	
5	Support Rib	Sheet Metal	1750 x 225 x 5	4	
4	Support Flange	Sheet Metal	1000 x 225 x 5	6	
3	Front Cover	Sheet Metal	1000 x 305 x 5	2	
2	Side Cover	Sheet Metal	1750 x 305 x 5	2	
1	Top Cover	Sheet Metal	1750 x 1000 x 5	1	

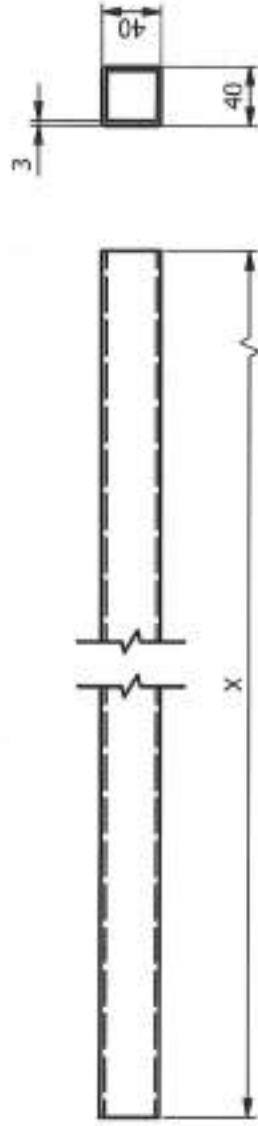
  

Scale	J : 10	Hard	Roughness	Checked	Approved	<b>ASTRA POLYTECHNIC</b> Jl. Gegeran Blok F3 No. 1 Lippo Cikarang, Cikarang - 17935 Telp. (021) 4511805, Fax. (021) 4511943
Finish	Paint	HRC	10/ (✓)			
Tolerance	Mold					<b>Jig Welding Universal</b> Upper Assy
No.	Revisi	Date	Sign	Designed	Drawn	
No. Order	B-JW-UM-00		Drawn	B-JW-SA-01		No order (Maksimal 40 sheet page 1)



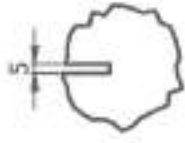
1		Bushing Slot		SS41		Dia. 25 x 35		10		10	
No		Description		Material		Dimension		Qty		Remark	
Scale	2 : 1	Hard	Roughness	Checked	Approved	ASTRA POLYTECHNIC					
Finish	Turn		N7/ (✓)	<i>[Signature]</i>	<i>[Signature]</i>	Jl. Gaharu Blok F3 No.1 Lippo Cikarang, Cikarang - 17530					
Tolerance	Fine	HRC		Rina	Merry	telp.(021)-651955, fax.(021)-6519621					
4				21.7.23		Title.					
3				Designed	Drawn	Clamping Bushing Slot					
2				<i>[Signature]</i>	<i>[Signature]</i>	Dwg no.					
1				Aziz	Bangkut	B-JW-CL-PRT-001					
No.	Revision	Date	Sign	No order :							
Accur	0.5 - 3	7 - 6	6 - 30	30-120	120-315	315-630	630-800	Original :			
Fine	±0.05	±0.05	±0.1	±0.15	±0.2	±0.3	±0.5	Deburred all sharp edge 0.3			
Middle	±0.1	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2				
Rough	±0.15	±0.2	±0.5	±0.8	±1.2	±2	±3				
File name : C:\Users\35010027\Documents\Astr_2023\717\New_dwg\Clamping Bushing Slot.dwg											
1 of 1											

No	Title	X	Qty	Dwg no.
1	Hollow 1400	1400	2	B-JW-SA2-PRT-001
2	Hollow 880	880	2	B-JW-SA2-PRT-002
3	Hollow 800	800	2	B-JW-SA2-PRT-003
4	Hollow 680	680	4	B-JW-SA2-PRT-004
5	Hollow 560	560	6	B-JW-SA2-PRT-005

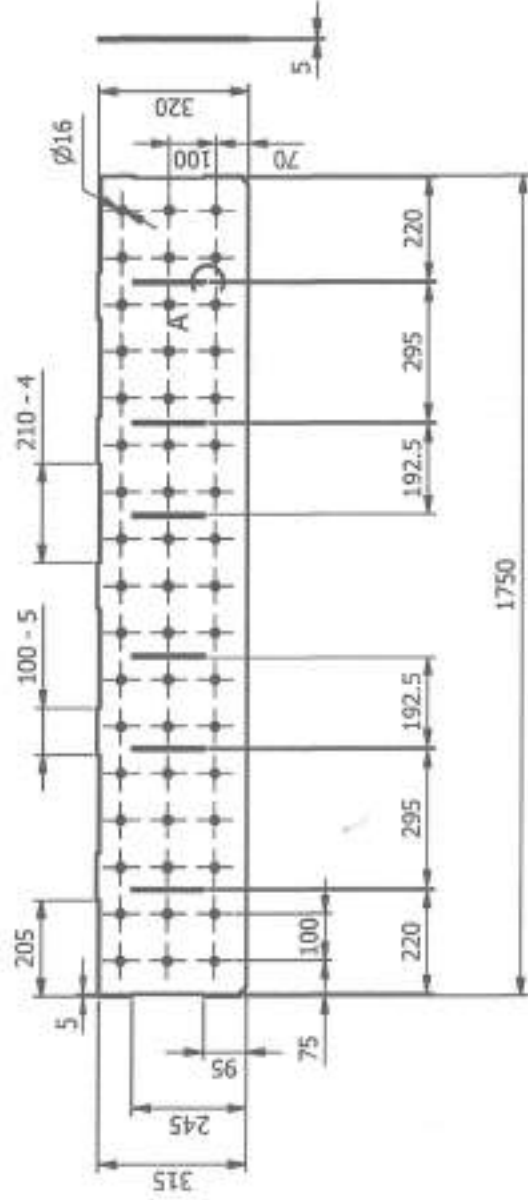


1	Hollow		Hollow 3mm		40 x 40	16	
No	Description		Material		Dimension	Qty	Remark
Scale	1 : 5	Hard	Checked	Approved			
Finish	Cutting						
Tolerance	Middle	HRC	Designed	Drawn			
4			Rina	Herry			
3							
2							
1							
No.	Revision	Date	Sign				
Accur	0.5 - 3	3 - 6	6 - 30	30 - 120	120 - 315	315 - 1000	1000 - 5000
Fine	±0.05	±0.05	±0.1	±0.15	±0.2	±0.3	±0.5
Middle	+0.1	+0.1	+0.2	+0.3	+0.5	+0.8	+1.2
Rough	+0.15	+0.3	+0.5	+0.8	+1.2	+2	+3
File name : C:\Users\B20270002\Desktop\Ver. 2023-12\Astr Polytec\Ver. 2023-12\Astr Polytec\Lower Assembly\B-JW-SA2-PRT-001.dwg							
<b>ASTRA POLYTECHNIC</b> Jl.Gaharu Blok F3 No.1 Lippo Cikarang, Cibatu - 17530 Telp.(021)-6519555, fax.(021)-6519821							
<b>Jig Welding Universal</b> Hollow							
Assy no. <b>B-JW-SA-02</b> Dwg no. <b>B-JW-SA2-PRT000</b> No order : Origin : Deburred all sharp edge 0.3							
<b>A4</b> 1/0ct 1.4							



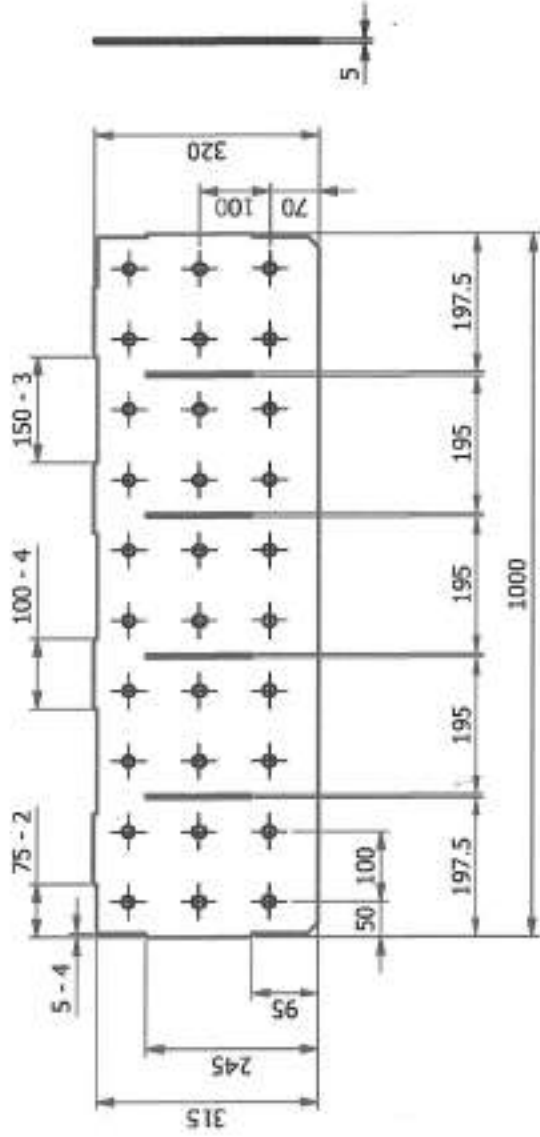


DETAIL A  
SCALE 1 / 4

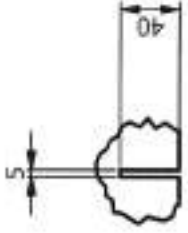


2	Side Cover	Sheet Metal	1750 x 305 x 5	2	
No	Description	Material	Dimension	Qty	Remark
Scale	1 : 15	Checked	ASTRA POLYTECHNIC		
Finish	Cutting	Approved	Jl. Gaharu Blok F3 No.1 Lippo Cikarang, Cikatu - 17530		
Tolerance	Middle	Designed	Telp. (021)-651955, Fax. (021)-6519821		
4		21.7.23	Tribu.		
3		Rina	Jig Welding Universal		
2		Herry	Side Cover		
1		Drawn	Assy no. B-JW-SA-01		
No.	Revision	Date	Sign	Dwg no. B-JW-SA-PRT-002	
Accur	0.5 - 3	3 - 4	6 - 20	20-120	139-315
Fine	±0.05	±0.05	±0.1	±0.15	±0.2
Middle	±0.1	±0.1	±0.2	±0.3	±0.5
Rough	±0.15	±0.2	±0.5	±0.8	±1.2
File name : C:\Users\20220303\Documents\2022\Part\20220303\Side Cover.dwg					
Deburred all sharp edge 0.3					
Origin :					
A4					
of					

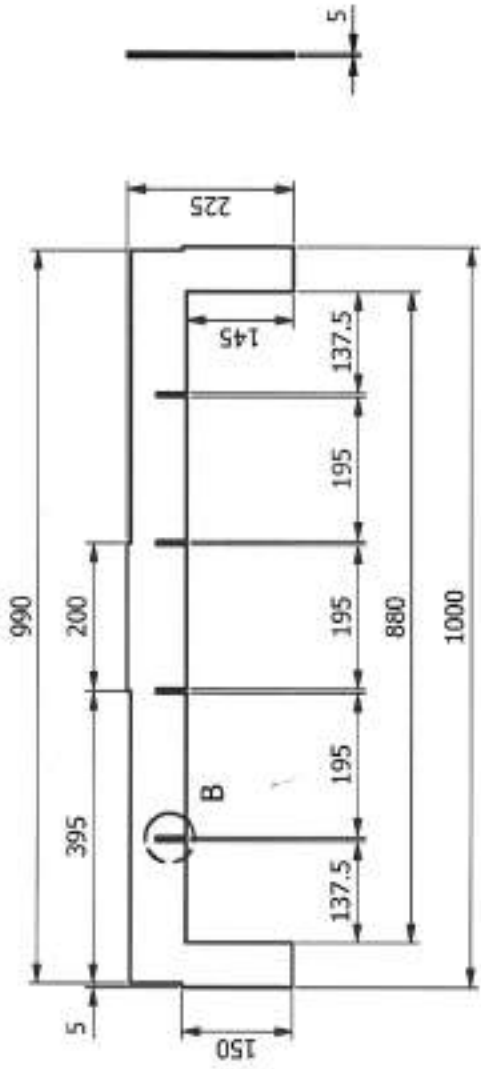




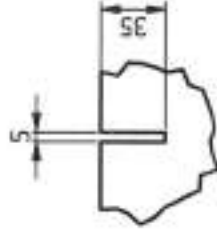
3	Front Cover	Sheet Metal	1000 x 305 x 5	2			
No	Description	Material	Dimension	Qty	Remark		
Scale	1 : 10	Hard					
Finish	Cutting						
Tolerance	Middle	HRC					
4							
3							
2							
1							
Accur	0.5-3	1-6	6-30	30-120	120-300	315-1000	1000-1000
Fine	+0.05	+0.05	+0.1	+0.15	+0.2	+0.3	+0.3
Middle	+0.1	+0.1	+0.2	+0.3	+0.5	+0.8	+1.2
Rough	+0.15	+0.2	+0.3	+0.5	+0.8	+1.2	+1.5
File name : C:\Users\W32030\Desktop\107\Net\Develop\Print\Cover.prt							
ASTRA POLYTECHNIC		Checked		Approved			
Jl. Gaharu Blok F3 No.1 Lippo Cikarang, Cibatu - 17530		21.7.23					
telp. (021)-651955, fax. (021)-6519821		Rina		Herry			
Title:		Designed		Dyallyn			
Jig Welding Universal		Aziz					
Front Cover		Rama					
Asy no.		21.7.23					
B-JW-SA-01		21.7.23					
Draw no.		21.7.23					
B-JW-SA-PRT-003		21.7.23					
Origin :		21.7.23					
A4		21.7.23					
of		21.7.23					



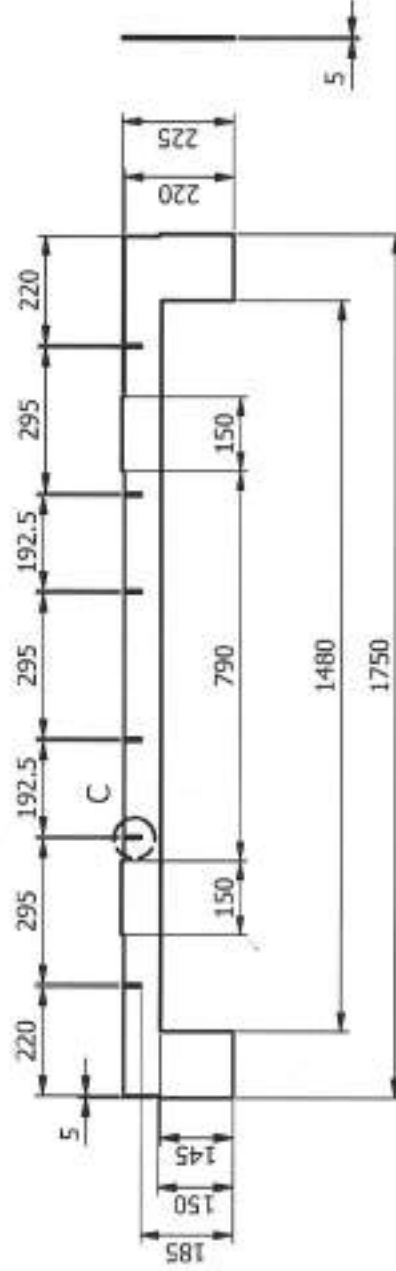
DETAIL B  
SCALE 1 : 5



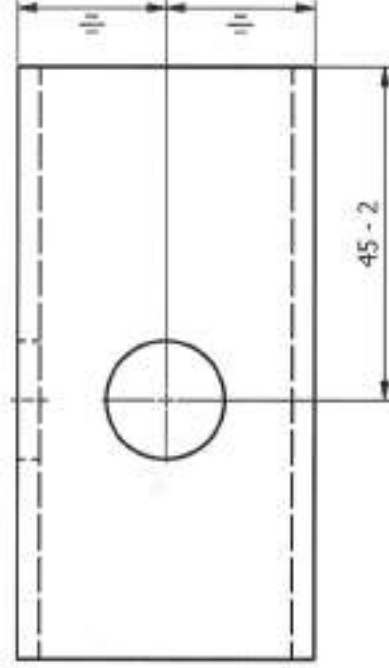
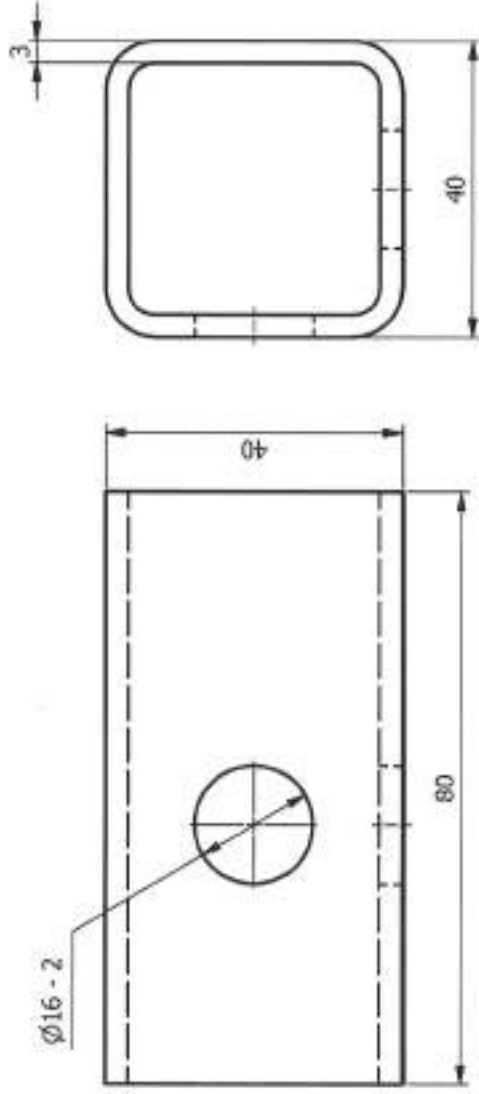
4		Support Flange		Sheet Metal		1000 x 225 x 5		6		Remark	
No		Description		Material		Dimension		Qty		Remark	
Scale	1 : 10	Hard	Roughness	Checked	Approved						
Finish	Cutting		N7 (√)								
Tolerance	Middle	HRC		Rina	Herry						
				21.7.23	Designed						
					Drawn						
No.	Revision	Date	Sign								
Accur	0.5 - 3	3 - 6	6 - 30	30-120	158-315	305-3008	1000-2000				
Fine	+0.05	±0.05	±0.1	±0.15	±0.2	±0.3	±0.5				
Middle	+0.1	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2				
Rough	+0.15	±0.2	±0.5	±0.8	±1.2	±2	±3				
File name : C:\080510\20230812\Download\08 Nov_2023 7:52\Main Assy\08 Nov_2023 7:52\Upper Assy\Support Flange.dwg											
				Title:				ASTRA POLYTECHNIC			
				Jl.Gaharu Blok F3 No.1 Lippo Cikarang, Ciketu - 17530				Telp.(021)-651955, fax.(021)-6519821			
				Title:				Jig Welding Universal			
				Support Flange							
				Assy no.				B-JW-SA-01			
				Dwg no.				B-JW-SA1-PRT-004			
				No order :				Origin :			
				Designed all sharp edge 0.3				A4			
								7 of 14			



DETAIL C  
SCALE 1 / 4

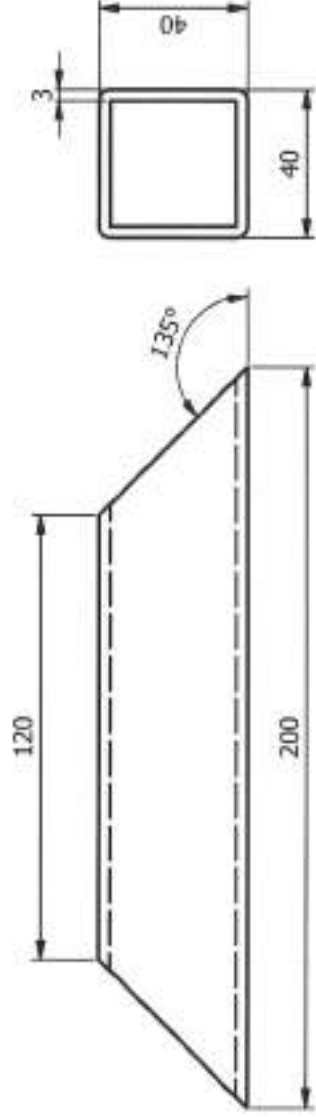


5	Support Rib	Sheet Metal	1750 x 225 x 5	4			
No	Description	Material	Dimension	Qty	Remark		
Scale	1 : 15	Hard					
Finish	Cutting	Roughness					
Tolerance	Middle	HRC					
4							
3							
2							
1							
No.	Revision	Date	Sign				
Accur	0.5 - 3	3 - 6	6 - 30	30 - 120	120 - 315	315 - 1000	1000 - 2000
Fine	+0.05	+0.05	+0.1	+0.15	+0.2	+0.3	+0.5
Middle	+0.1	+0.1	+0.2	+0.3	+0.5	+0.8	+1.2
Rough	+0.15	+0.2	+0.5	+0.8	+1.2	+2	+3
File name : c:\users\luciano\Documents\Veri\2023-7-12\Astrajig\Astrajig Support Rib.dwg							
ASTRA POLYTECHNIC		Jl.Gaharu Blok F3 No.1 Lippo Cikarang, Cibatu - 17530		Telp.(021)-651955, fax.(021)-6519821			
Title:		Jig Welding Universal Support Rib		Drawg no. B-JW-SA1-PRT-005			
Asy no. B-JW-SA-01		Herry		17 Origin :			
Designed		Aziz		No order : 21.7.21			
Checked		Rina		21.7.23			
Approved		Herry		Deburred at sharp edges 0.3			
Drawn		Rania		A4			
8 of 14							



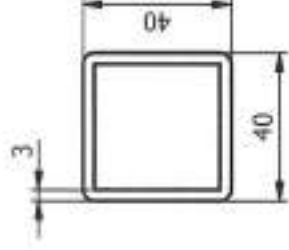
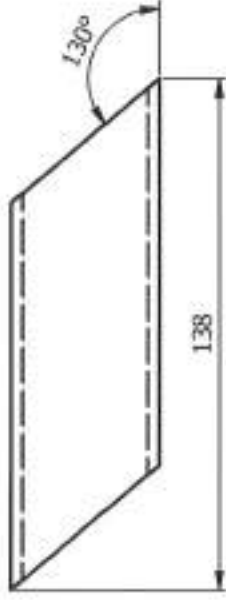
6	Locked Base	Hollow 3mm	80 x 40 x 40	4	
No	Description	Material	Dimension	Qty	Remark
Scale	1 : 1	Checked			
Finish	Cutting	Approved			
Tolerance	Middle	HRC			
No.	Revision	Date	Sign		
Accur	0.5 - 1	3 - 6	16 - 30	30-120	120-315
Fine	+0.05	+0.08	+0.1	+0.15	+0.2
Middle	+0.1	+0.1	+0.2	+0.3	+0.5
Rough	+0.15	+0.2	+0.5	+0.8	+1.2
					+2
					+3
File name : C:\Users\A212862\Documents\rev_2023-7-27_Holo Assy\Rev_2023-7-27_Upper Assy\Locked Base.dwg					
<p><b>ASTRA POLYTECHNIC</b>          Jl. Gaharu Blok F3 No.1 Lippo Cikarang, Cikatu - 17530          telp. (021)-651955, fax. (021)-6519821</p> <p><b>Jig Welding Universal</b>          Locked Base</p> <p>Assy no. <b>B-JW-SA-01</b>      Dwg no. <b>B-JW-SA1-PRT-006</b>          No order :                      Origin :          Decimated all sharp edge 0.3</p>					
					<b>A4</b>
					9 of 14



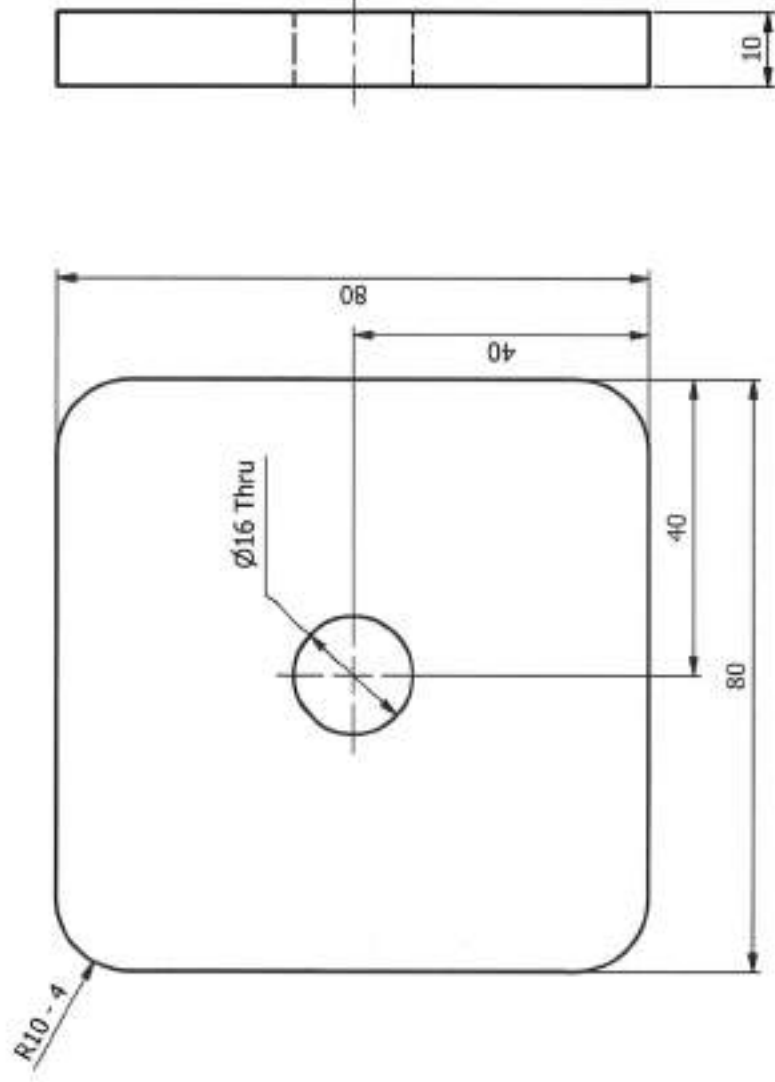


6	Hollow Support Frame		Hollow 3mm		200 x 40 x 40	12	
No	Description		Material		Dimension	Qty	Remark
Scale	1 : 2	Hard	Checked / Approved				
Finish	Cutting						
Tolerance	Middle	HRC	Rina	Herry			
4			21.7.23				
3			Designed	Drawn			
2							
1			Aziz	Rafma			
No.	Revision	Date	Sign				
Asclur	0.5 - 3	3 - 6	6 - 30	30 - 120	120 - 515	515 - 1000	1000 - 2000
Fine	+0.05	+0.05	+0.1	+0.15	+0.2	+0.3	+0.5
Middle	+0.1	+0.1	+0.2	+0.3	+0.5	+0.8	+1.2
Rough	+0.15	+0.2	+0.5	+0.8	+1.2	+2	+3
File name : C:\Users\B201002\Documents\2023-24\Aster\Asy\Wor_2023-24\Lower Assy\Lower Support Frame.dwg							
Title:				Jig Welding Universal Hollow Support Frame			
Asy no.				Dwg no.			
B-JW-SA-02				B-JW-SA2-PRT-006			
No order :				Origin :			
Deburred all sharp edge 0.3							
A4							
1.1 of 1.6							

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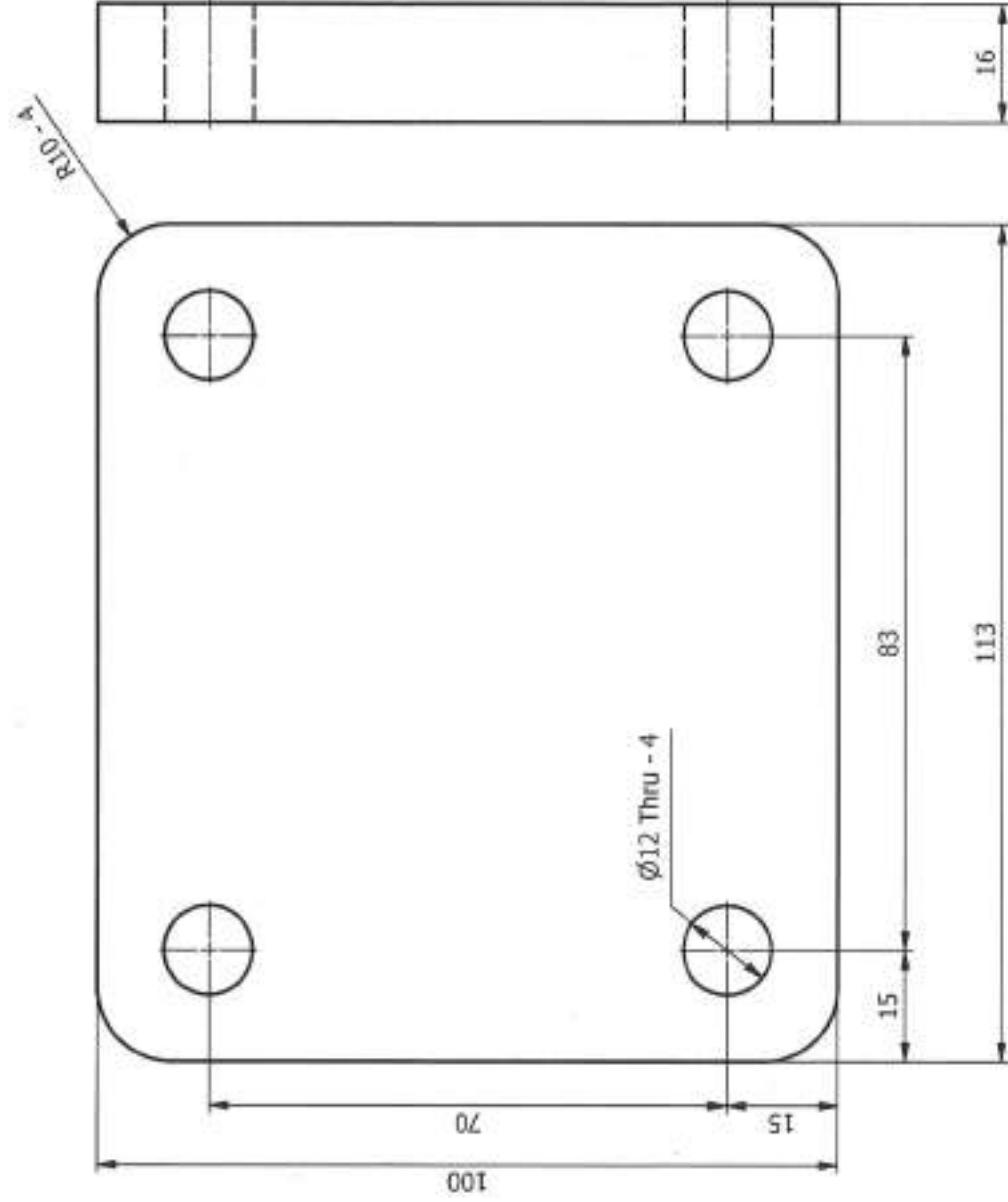


7	Hollow Support Holder			Hollow 3mm	138 x 40 x 40	8	
No	Description			Material	Dimension	Qty	Remark
Scale	1 : 2	Hard	Roughness	Checked / Approved			
Finish	Cutting		N7 (▽)	<i>[Signature]</i>			
Tolerance	Middle	HRC		<i>Rina</i>			
				<i>21.9.23</i>			
				Designed			
				<i>[Signature]</i>			
				<i>Aziz</i>			
				<i>[Signature]</i>			
No.	Revision	Date	Sign				
Accur	0.5 - 3	3 - 6	6 - 30	30 - 120	120 - 315	315 - 1000	1000 - 2000
Fine	±0.05	±0.05	±0.1	±0.15	±0.2	±0.3	±0.5
Middle	±0.1	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2
Rough	±0.15	±0.2	±0.5	±0.8	±1.2	±2	±3
File name : C:\Users\jir\Documents\Drawings\Wc_2023\1-17 Main Assy Wc_2023\1-17 Lower Assy\Color Wheel Holder Support.dwg							
ASTRA POLYTECHNIC Jl. Gaharu Blok F3 No.1 Lippo Cikarang, Cibatu - 17530 Telp. (021)-651955, Fax. (021)-6519821				Title: <b>Jig Welding Universal</b> Hollow Support Holder			
Assy no. <b>B-JW-SA-02</b>				Dwg no. <b>B-JW-SA2-PRT-007</b>			
No order :				Origin :			
Deburred all sharp edge 0.3							
				<b>A4</b>			
				1.2 of 1.6			



8	Shoes Foot		SS41	80 x 80 x 10	6	
No	Description		Material	Dimension	Qty	Remark
Scale	1 : 1	Hard	Checked Approved			
Finish	Mill		<i>[Signature]</i>			
Tolerance	Middle	HRC	Rina			
			21.7.23			
			Designed			
			<i>[Signature]</i>			
			Aziz			
			21.7.23			
			21.7.23			
No.	Revision	Date	Sign	Title		
Accurf	0.5 -> 3 -> 4 -> 6 -> 30 -> 120	120 - 315	315 - 1000	ASTRA POLYTECHNIC		
Fine	±0.05	±0.1	±0.15	Jl. Galuh Blok F3 No.1 Lippo Cikarang, Cibatu - 17530		
Middle	±0.1	±0.2	±0.3	Telp. (021)-6519555, Fax. (021)-6519821		
Rough	±0.15	±0.2	±0.5	Jig Welding Universal		
			±0.8	Shoes Foot		
			±1.2	Asy no. B-JW-SA-02		
			±1.2	Dwg no. B-JW-SA2-PRT-008		
			±3	No order : Origin :		
				Deburred at sharp edge 0.3		
				A4		
				1.3 of 1.4		

File name : C:\Users\K2023002\Documents\2023-2024\Lower Assy Shoes Foot.dwg



9	Caster Wheel Holder		SS41		113 x 100 x 16		4				
No	Description		Material		Dimension		Qty		Remark		
Scale	Hard		Checked		Approved						
Finish	Mill		Rina		Henry						
Tolerance	HRC		21.7.23		Drawn						
4			Designed		Yusuf						
3			21.7.23		21.7.23						
2			Aziz		21.7.23						
1			21.7.23		21.7.23						
No.	Revision		Date		Sign						
Accur	0.5-3	3-6	6-30	30-100	100-215	105-200	100-200				
Fine	+0.05	+0.05	+0.1	+0.15	+0.2	+0.3	+0.5				
Middle	+0.1	+0.1	+0.2	+0.3	+0.5	+0.8	+1.2				
Rough	+0.15	+0.2	+0.5	+0.8	+1.2	+2	+3				
File name : C:\Users\022010861\Documents\2023-7-27\New Assy\Rev. 2023-7-27\New Assy\Caster Wheel Holder.dwg											
Title:				Jig welding Universal Caster Wheel Holder							
Asy no.				B-JW-SA-02				Dwg no.			
No order :				B-JW-SA2-PRT-009				Origin :			
Defurred all sharp edge 0.3								A4			
								14of 14			


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