

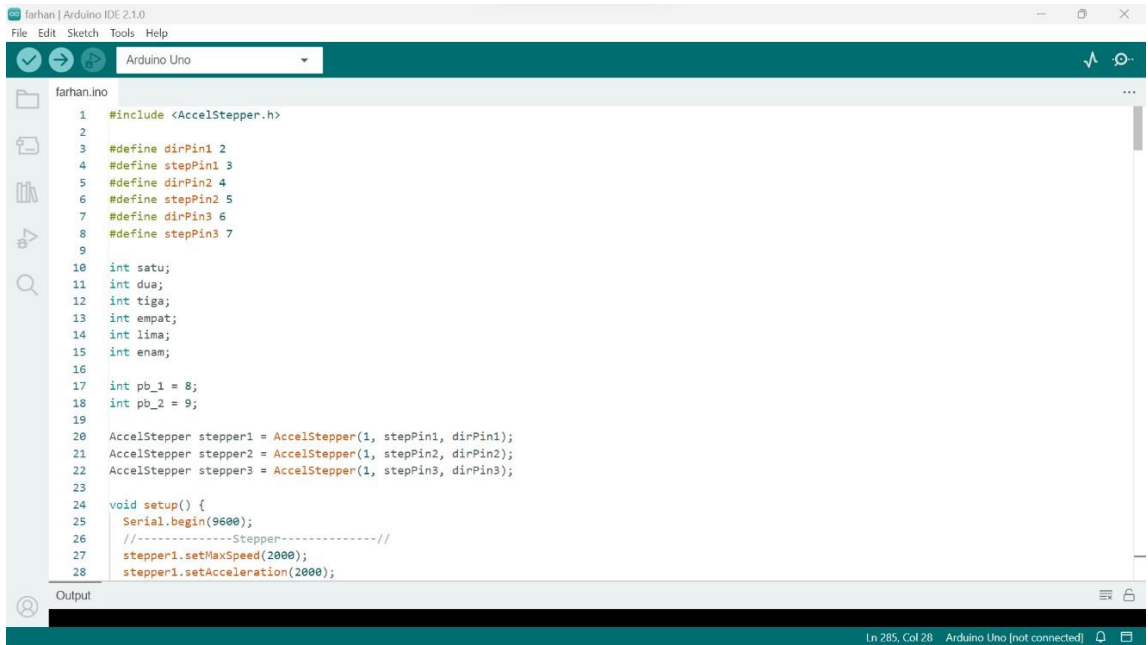
Lampiran 1
Biodata Penulis

Nama : Krisna Mukti Murtanto
Tempat/Tanggal lahir : Cilacap, 30 Agustus 2000
Alamat : Perumahan Rinenggo Asri Blok A4 No.19 RT 07 RW 18,
Gumilir, Cilacap Utara, Kabupaten Cilacap, Provinsi Jawa
Tengah, 53231
Email : krisnasiunyil00@gmail.com
Telepon/HP : 081239012508
Motto : Berjuanglah untuk hidup
Riwayat Pendidikan : 1. SD Negeri Gumilir 02 Cilacap 2006-2012
2. SMP Negeri 4 Cilacap 2013-2015
3. SMA Negeri 2 Cilacap 2015-2018
4. Politeknik Negeri Cilacap 2019-2023



Lampiran 2

Software arduino



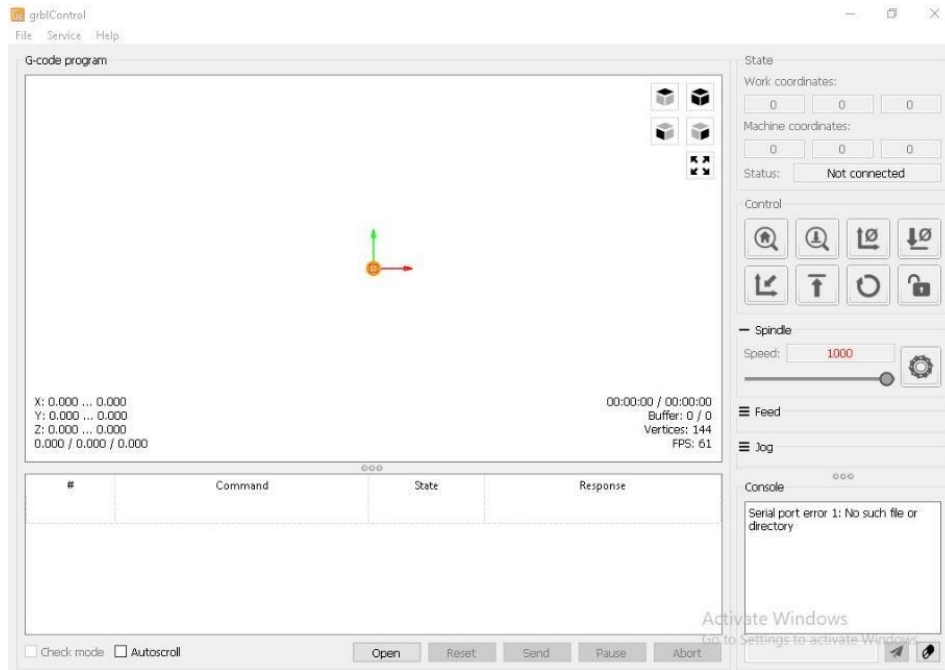
```
1 #include <AccelStepper.h>
2
3 #define dirPin1 2
4 #define stepPin1 3
5 #define dirPin2 4
6 #define stepPin2 5
7 #define dirPin3 6
8 #define stepPin3 7
9
10 int satu;
11 int dua;
12 int tiga;
13 int empat;
14 int lima;
15 int enam;
16
17 int pb_1 = 8;
18 int pb_2 = 9;
19
20 AccelStepper stepper1 = AccelStepper(1, stepPin1, dirPin1);
21 AccelStepper stepper2 = AccelStepper(1, stepPin2, dirPin2);
22 AccelStepper stepper3 = AccelStepper(1, stepPin3, dirPin3);
23
24 void setup() {
25   Serial.begin(9600);
26   //-----Stepper-----//
27   stepper1.setMaxSpeed(2000);
28   stepper1.setAcceleration(2000);
```

Output

Ln 285, Col 28 - Arduino Uno [not connected]

Lampiran 3

Software GRBL Control



Lampiran 4
Software Vectric Aspire



Lampiran 5

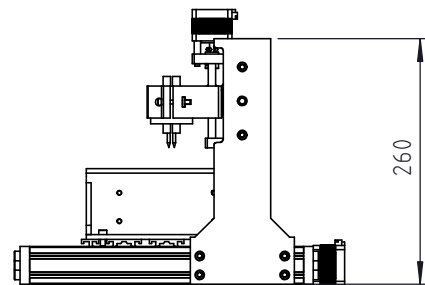
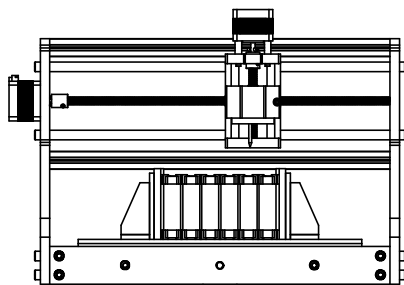
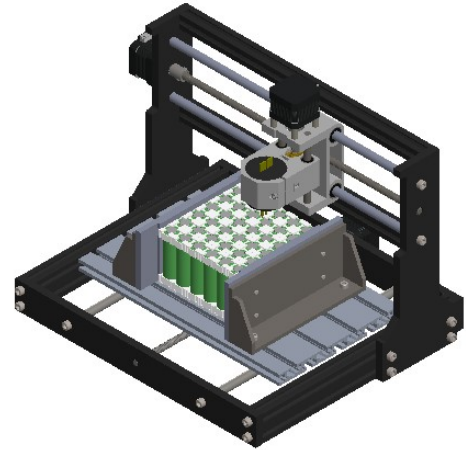
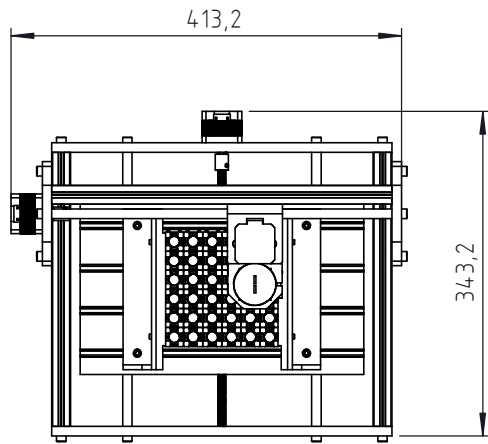
Hasil pengerjaan mesin proses *spot welding battery*



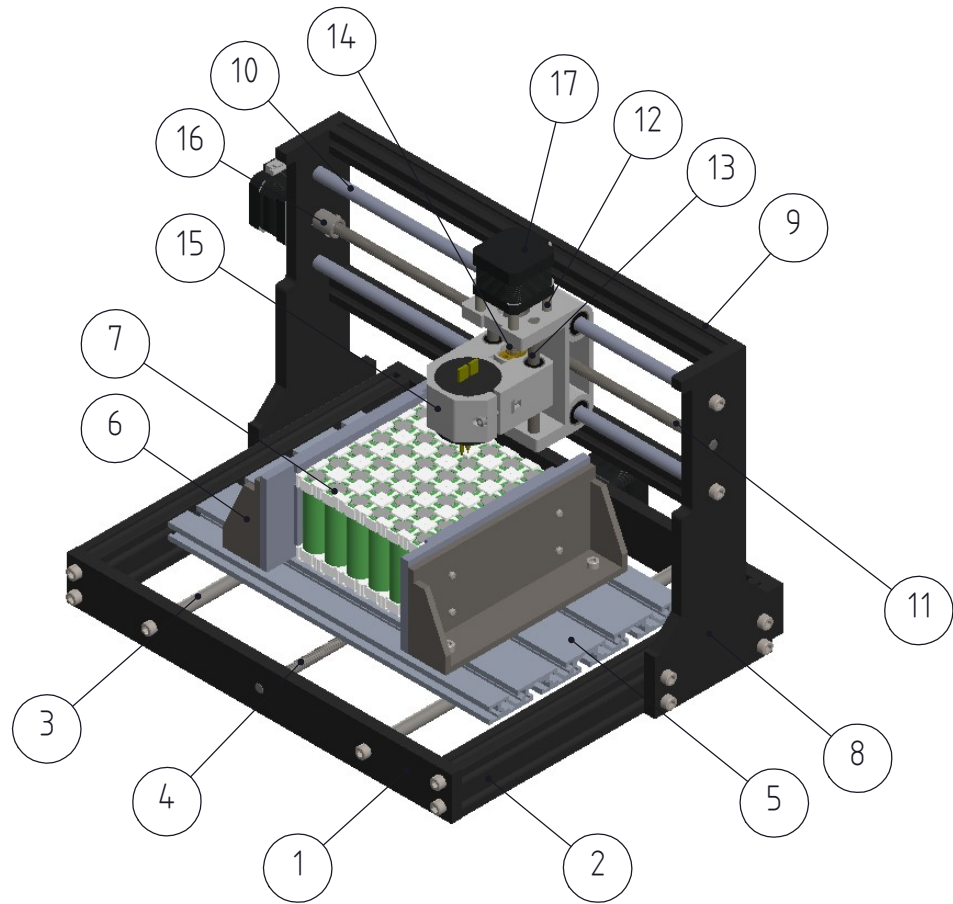
Lampiran 6

Hasil pengerjaan mesin proses grafir akrilik





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SPOT WELDING BATTERY									SKALA	DIGAMBAR	30-05-2023	KRISNA	
									1:8	DIPERIKSA			
										DISAHKAN			
									FORMAT				
POLITEKNIK NEGERI CILACAP									A4	SWB-00			

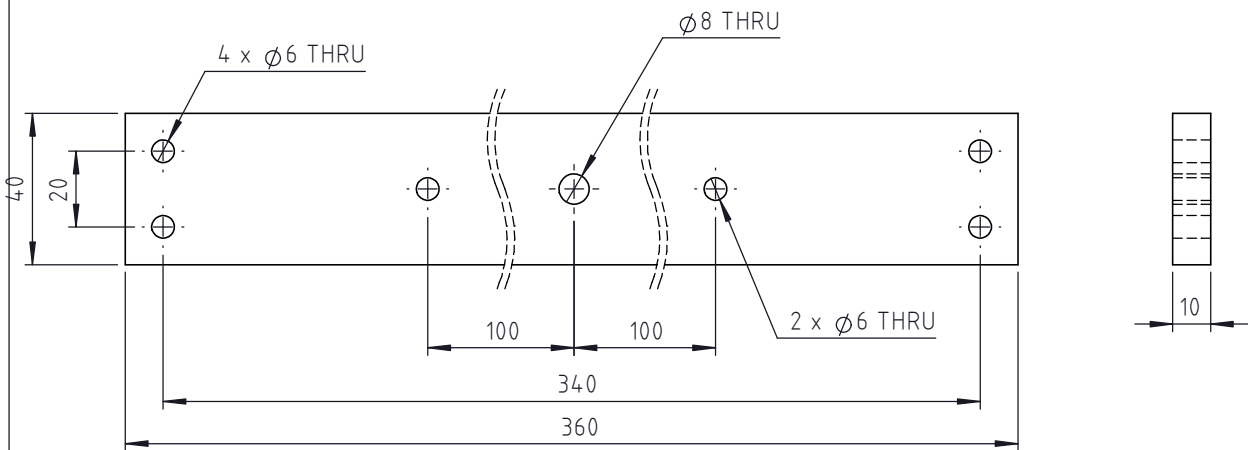
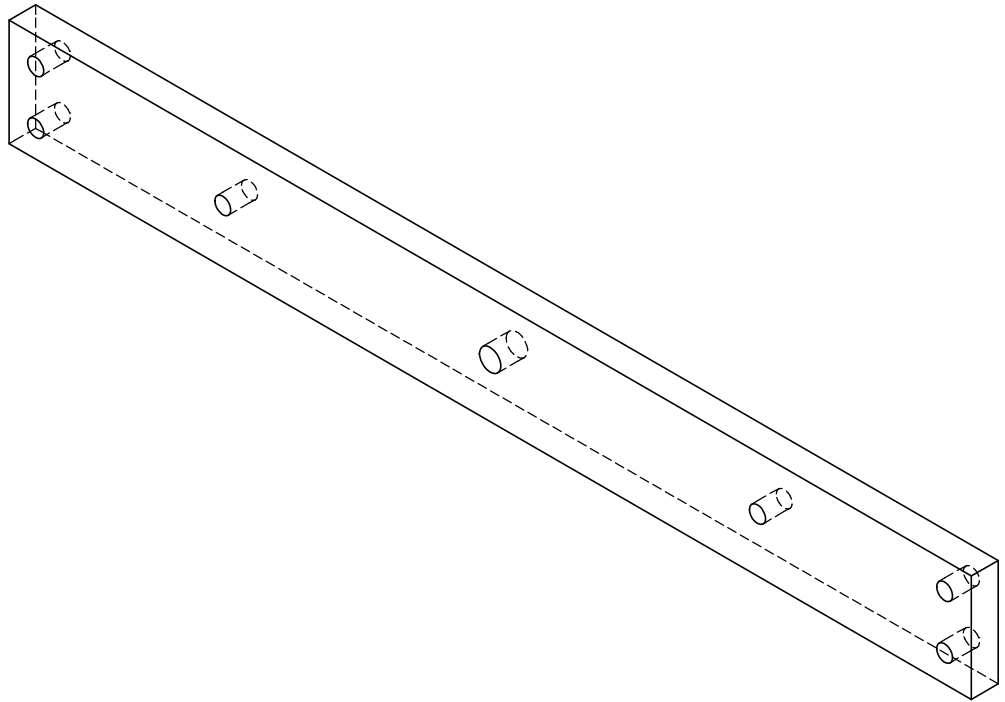


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SPOT WELDING BATTERY									SKALA	DIGAMBAR	30-05-2023	KRISNA
									1:8	DIPERIKSA		
										DISAHKAN		
POLITEKNIK NEGERI CILACAP									FORMAT	NO. GAMBAR		
									A4	SWB-00		




3	MOTOR STEPPER	STD	-	-	-	-
3	COUPLING	STD	-	-	-	-
1	MOUNTING BRACKET	STD	-	-	-	-
1	BOLT SHAFT 3	STAINLESS	LIHAT DETAIL	-	SWB-14	-
2	SHAFT GUIDE 3	STAINLESS	LIHAT DETAIL	-	SWB-13	-
4	SPACER	STAINLESS	LIHAT DETAIL	-	SWB-12	-
1	BOLT SHAFT 2	STAINLESS	LIHAT DETAIL	-	SWB-11	-
2	SHAFT GUIDE 2	STAINLESS	LIHAT DETAIL	-	SWB-10	-
2	FRAME 4	ALUMUNIUM	LIHAT DETAIL	-	SWB-09	-
2	FRAME 3	BAKELIT	LIHAT DETAIL	-	SWB-08	-
2	PAD NYLON	NYLON	LIHAT DETAIL	-	SWB-07	-
2	CLAMP	SPCC	LIHAT DETAIL	-	SWB-06	-
1	BASE	ALUMUNIUM	LIHAT DETAIL	-	SWB-05	-
1	BOLT SHAFT	STAINLESS	LIHAT DETAIL	-	SWB-04	-
2	SHAFT GUIDE	STAINLESS	LIHAT DETAIL	-	SWB-03	-
2	FRAME 2	ALUMUNIUM	LIHAT DETAIL	-	SWB-02	-
2	FRAME 1	BAKELIT	LIHAT DETAIL	-	SWB-01	-

JML	NAMA BAGIAN						BAHAN	UKURAN JADI	UKURAN KASAR	NO. ID	KETERANGAN
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TOL	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2					

SPOT WELDING BATTERY								SKALA	DIGAMBAR	30-05-2023	KRISNA
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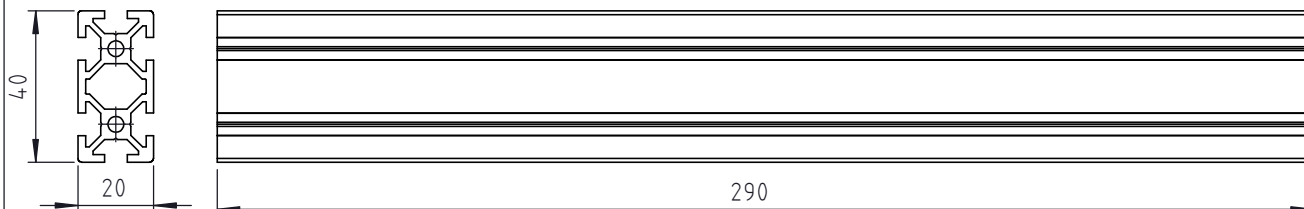
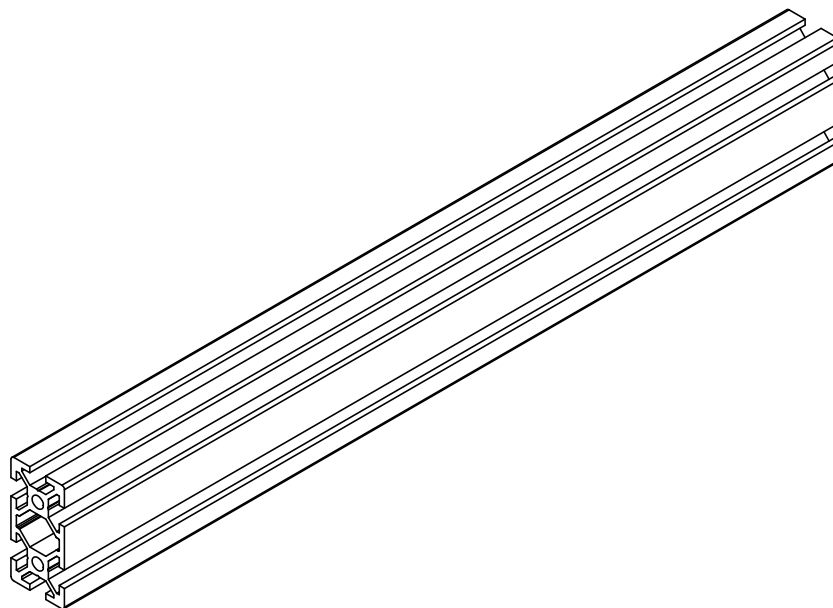



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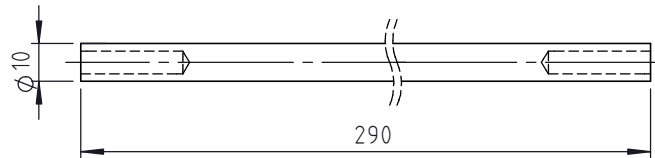
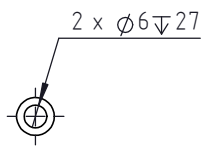
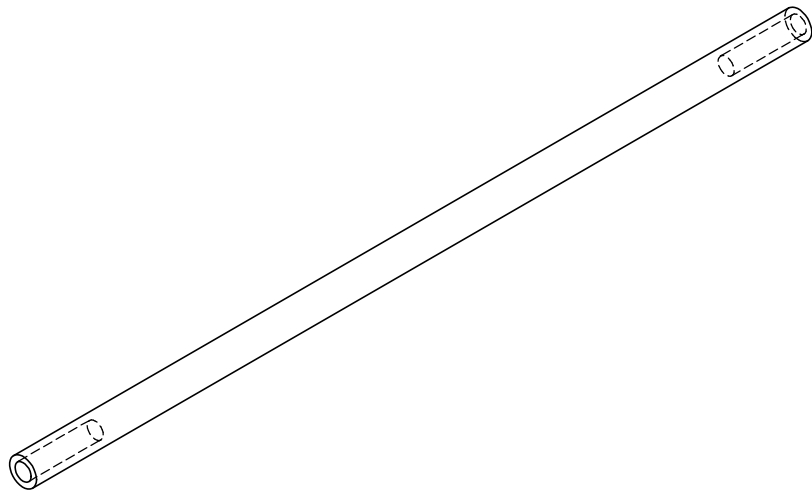
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NO	PERUBAHAN	TANGGAL	NAMA	NO	PERUBAHAN	TANGGAL	NAMA																			
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SKALA	DIGAMBAR																									
	DIPERIKSA																									
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NAMA :								<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">FORMAT</td> <td colspan="3" style="text-align: center;">A4</td> </tr> </table>		FORMAT	A4															
FORMAT	A4																									
NO. ASSY. :																										
 POLITEKNIK NEGERI CILACAP, JURUSAN TEKNIK MESIN JL. dr. SOETOMO, NO. 01, SIDAKAYA, CILACAP, 53212 TELP : 0282 - 533329, E-mail : tmpnc@politeknikcilacap.ac.id																										

PERUBAHAN DARI :

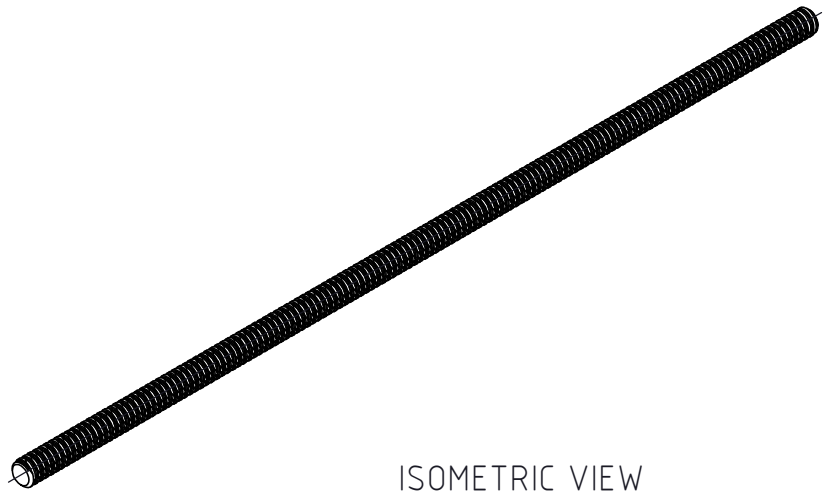
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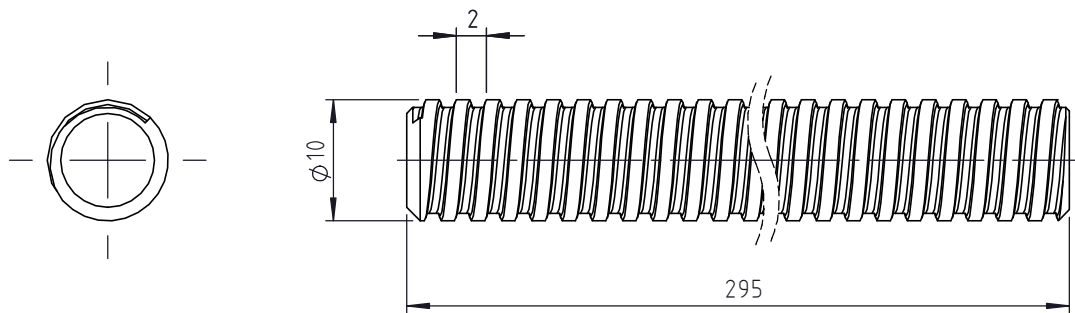
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FRAME 2									SKALA	DIGAMBAR	30-05-2023	KRISNA
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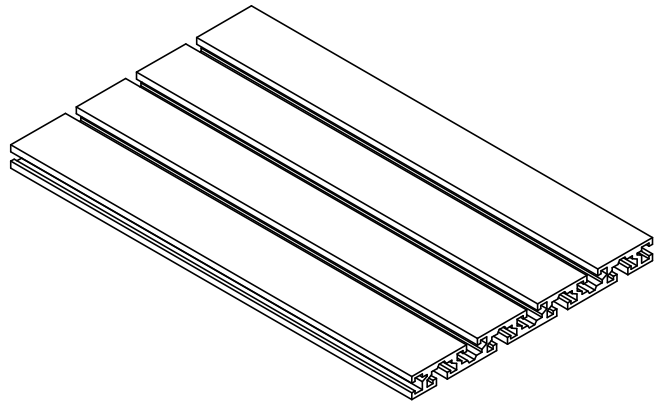
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SHAFT GUIDE									SKALA	DIGAMBAR	30-05-2023	KRISNA
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										DISAHKAN		
POLITEKNIK NEGERI CILACAP									FORMAT	NO. GAMBAR		
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ISOMETRIC VIEW
SCALE 1 : 2



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<	6	30	120	400	1000	2000					
TOL	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2					
BOLT SHAFT								SKALA	DIGAMBAR	30-05-2023	KRISNA
								2:1	DIPERIKSA		
									DISAHKAN		
POLITEKNIK NEGERI CILACAP								FORMAT	NO. GAMBAR		
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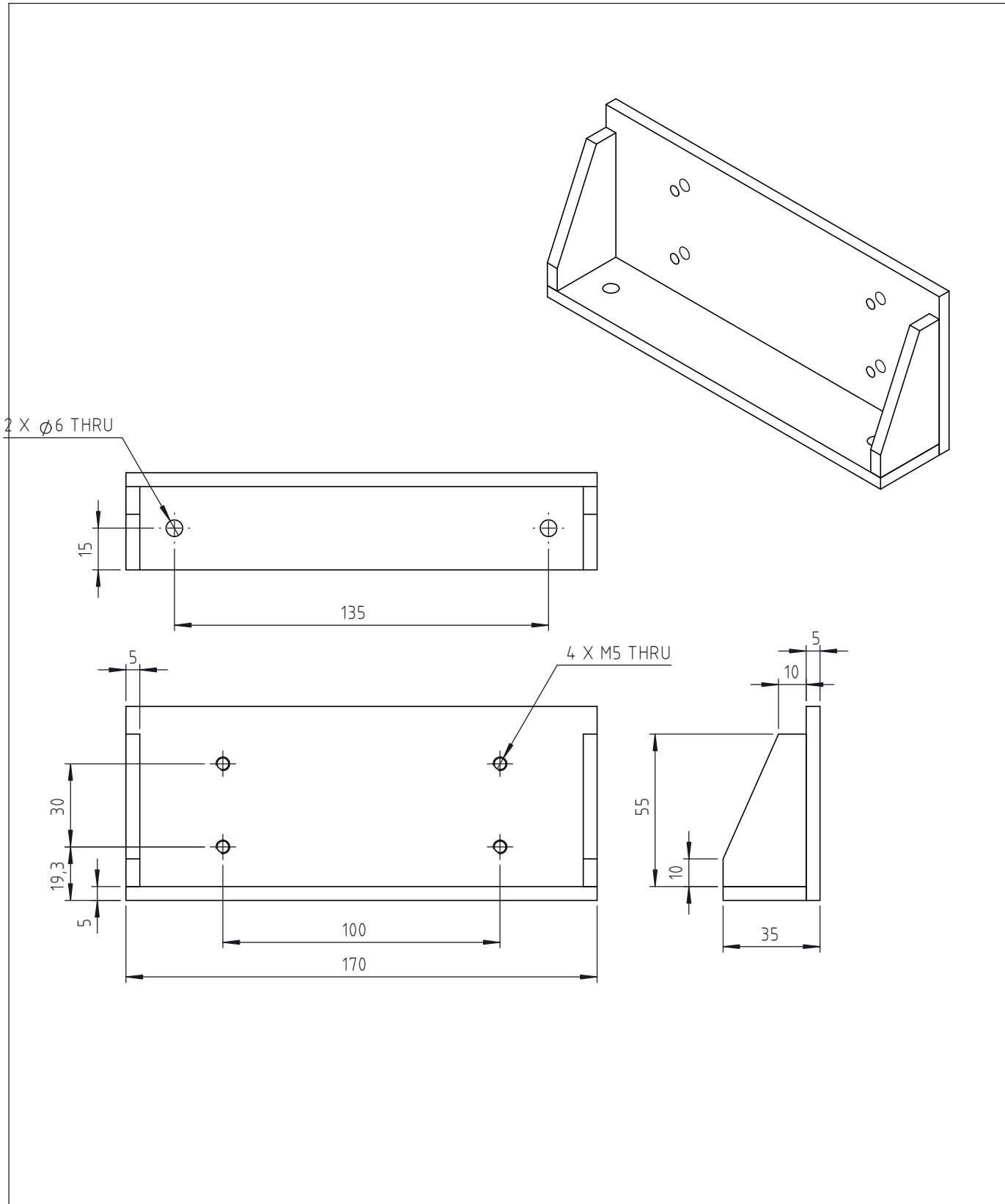
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TOL	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2						
BASE									SKALA	DIGAMBAR	30-05-2023	KRISNA
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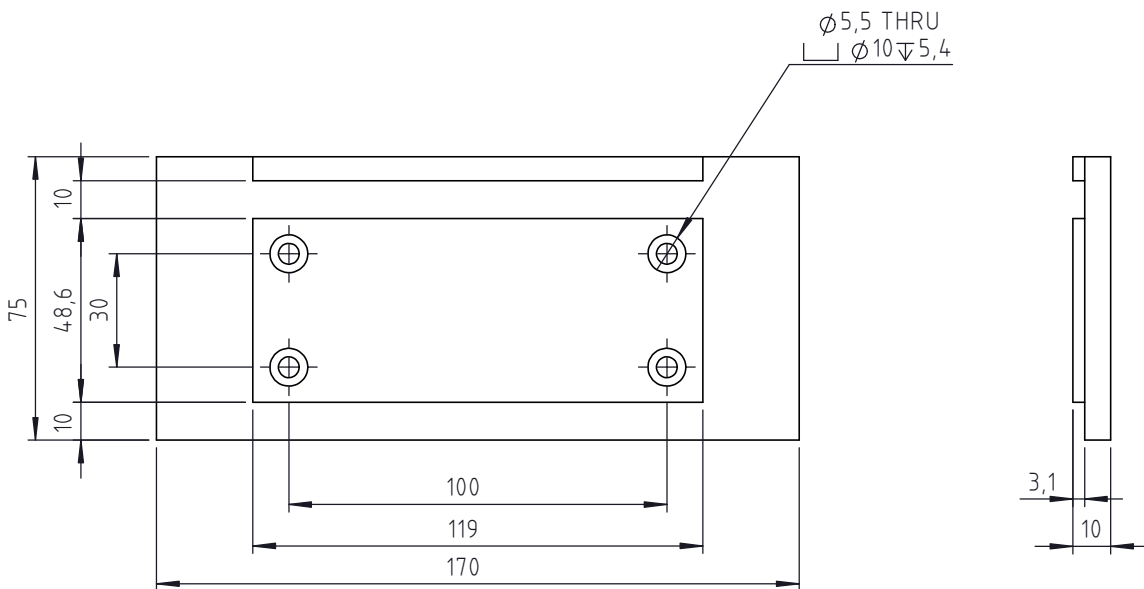
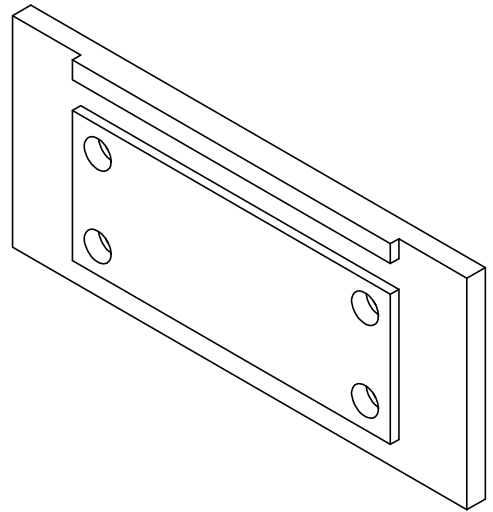
POLITEKNIK NEGERI CILACAP

FORMAT
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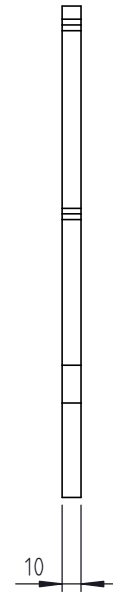
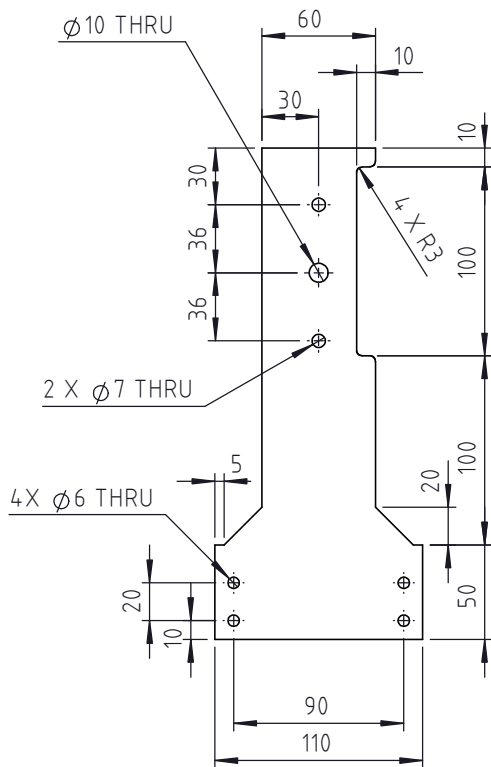
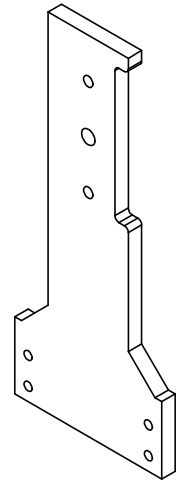
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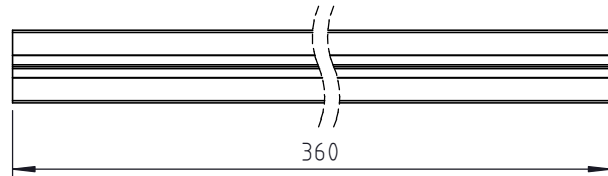
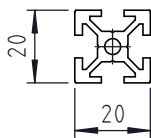
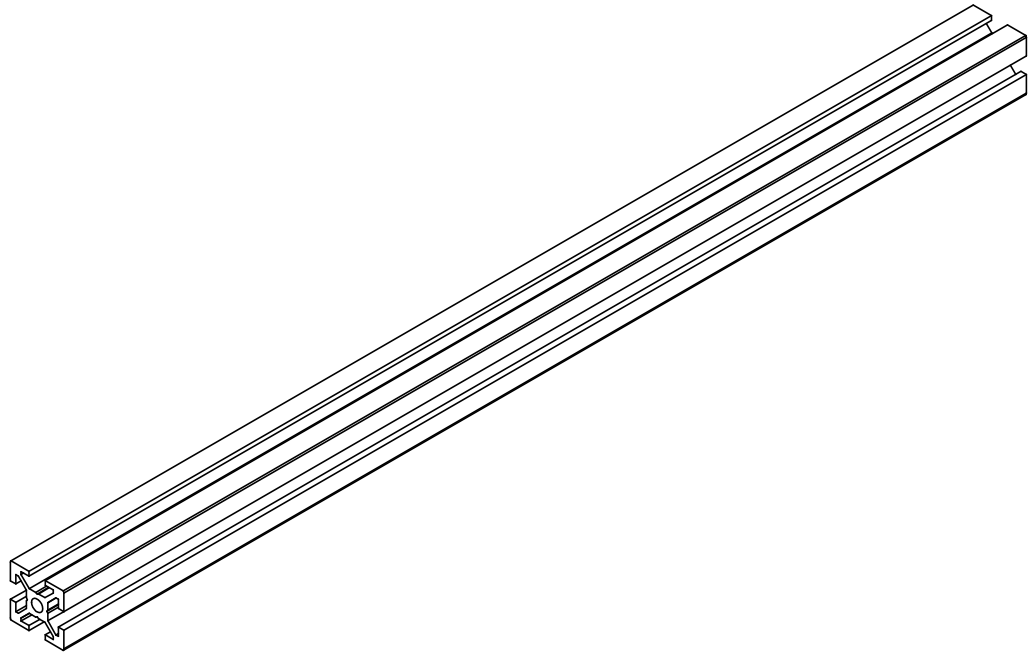
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CLAMP								SKALA	DIGAMBAR	30-05-2023	KRISNA
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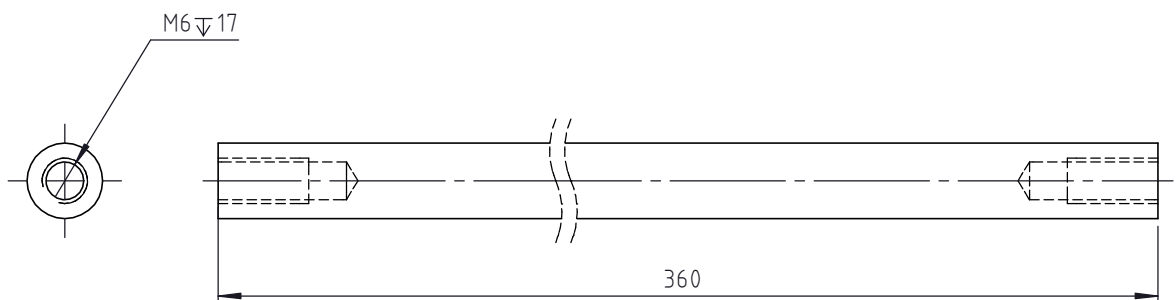
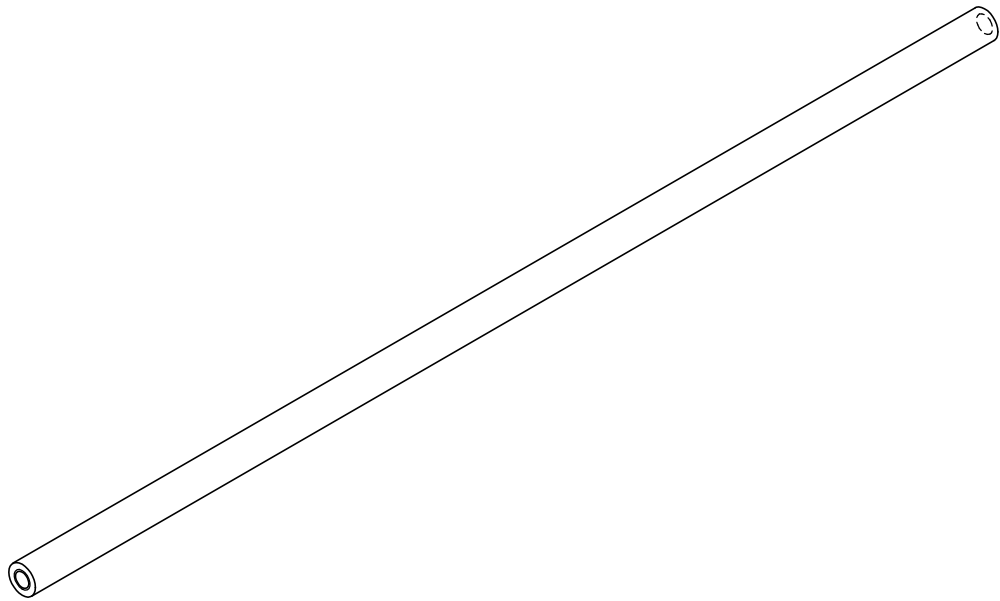
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TOL	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2					
PAD NYLON								SKALA	DIGAMBAR	30-05-2023	KRISNA
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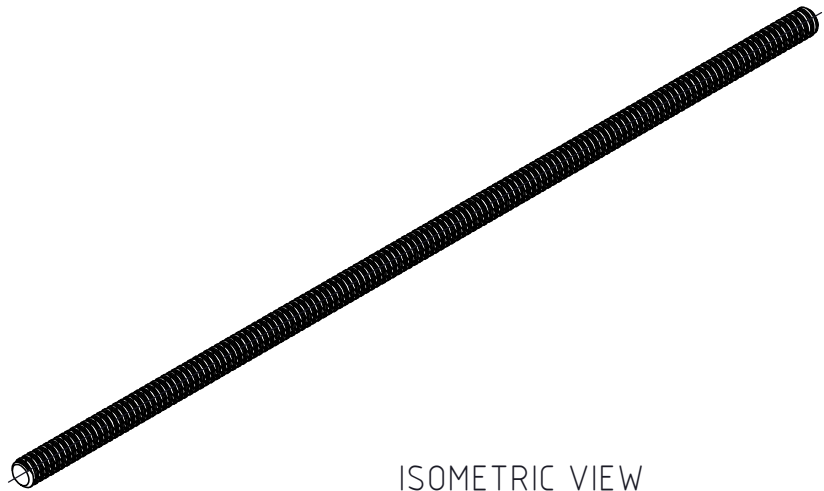
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FRAME 3								SKALA	DIGAMBAR	30-05-2023	KRISNA
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A4	SWB-08										



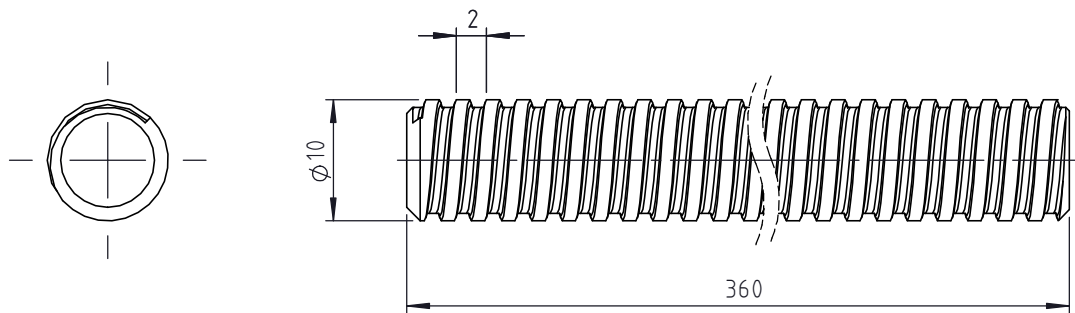
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FRAME 4									SKALA	DIGAMBAR	30-05-2023	KRISNA
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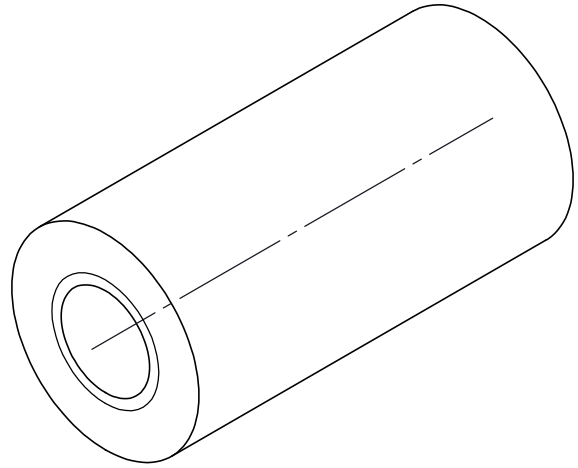
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TOL	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2						
SHAFT GUIDE 2									SKALA	DIGAMBAR	30-05-2023	KRISNA
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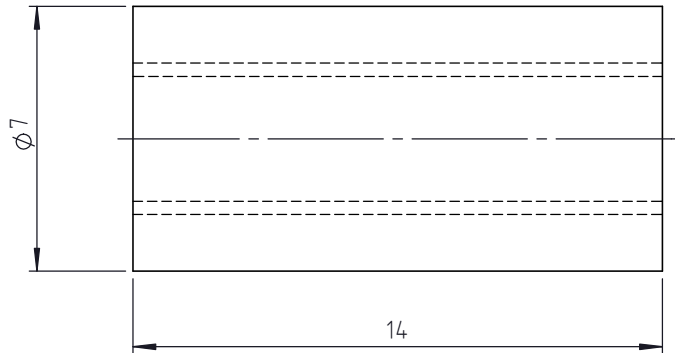
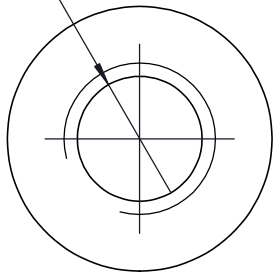
ISOMETRIC VIEW
SCALE 1 : 2




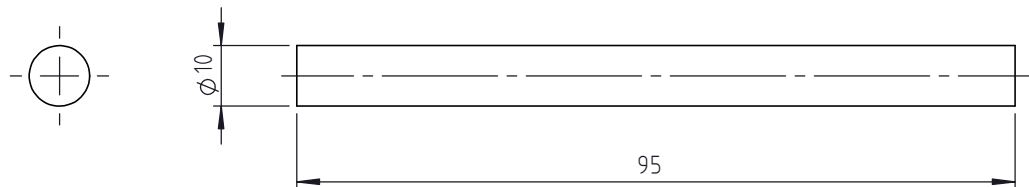
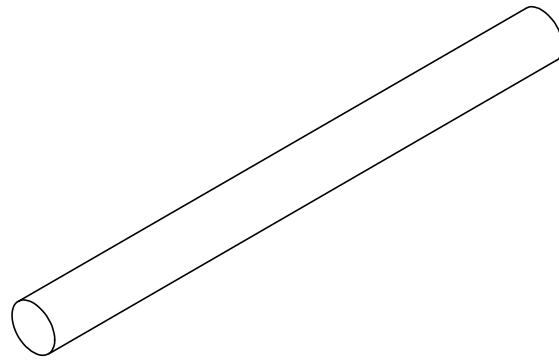
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TOL	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2					
BOLT SHAFT 2								SKALA	DIGAMBAR	30-05-2023	KRISNA
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POLITEKNIK NEGERI CILACAP								FORMAT	NO. GAMBAR		
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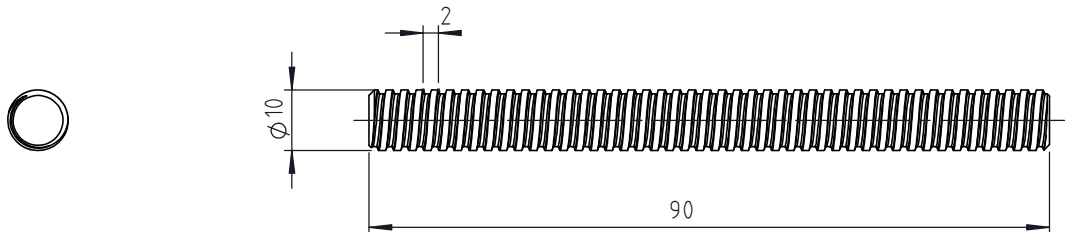
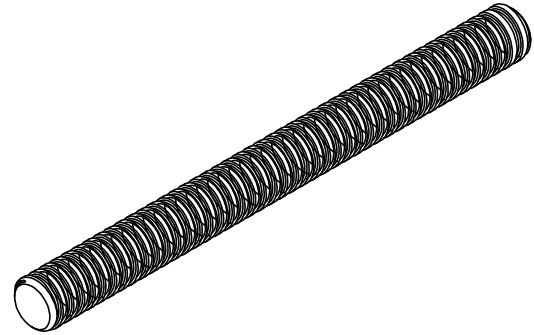
M4 THRU




JML	NAMA BAGIAN						BAHAN	UKURAN JADI	UKURAN KASAR	NO. ID	KETERANGAN	
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<	6	30	120	400	1000	2000						
TOL	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2						
SPACER									SKALA	DIGAMBAR	30-05-2023	KRISNA
									5:1	DIPERIKSA		
										DISAHKAN		
 POLITEKNIK NEGERI CILACAP									FORMAT	NO. GAMBAR		
									A4	SWB-12		



JML	NAMA BAGIAN						BAHAN	UKURAN JADI	UKURAN KASAR	NO. ID	KETERANGAN	
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<	6	30	120	400	1000	2000						
TOL	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2						
SHAFT GUIDE 3									SKALA	DIGAMBAR	30-05-2023	KRISNA
									1:1	DIPERIKSA		
										DISAHKAN		
									FORMAT	NO. GAMBAR		
POLITEKNIK NEGERI CILACAP									A4	SWB-13		



JML	NAMA BAGIAN						BAHAN	UKURAN JADI	UKURAN KASAR	NO. ID	KETERANGAN
>	0	6	30	120	400	1000	Pengerjaan Lanjut		NO. ORDER	PROYEKSI	
<	6	30	120	400	1000	2000					
TOL	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2					
BOLT SHAFT 3									SKALA 1:1	DIGAMBAR 30-05-2023	KRISNA
									DIPERIKSA		
									DISAHKAN		
 POLITEKNIK NEGERI CILACAP									FORMAT A4	NO. GAMBAR SWB-14	