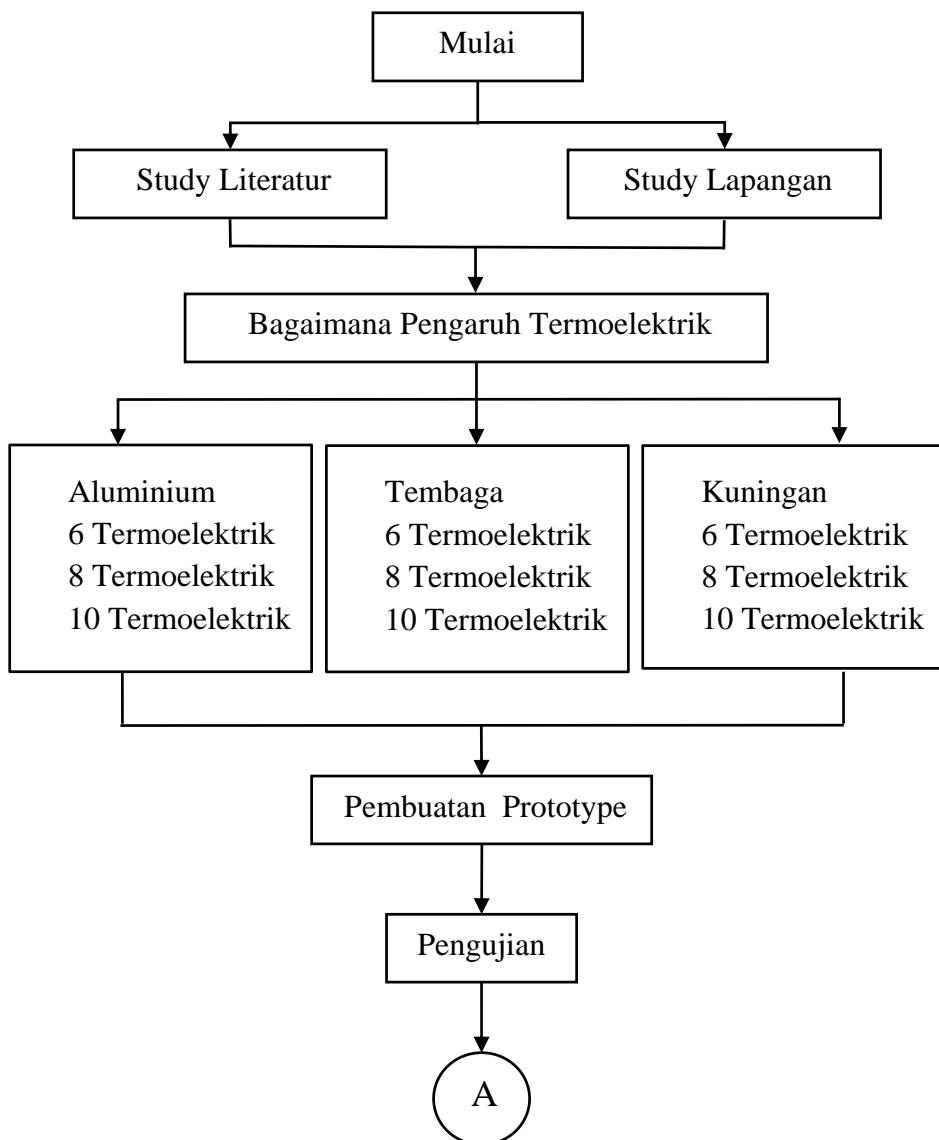
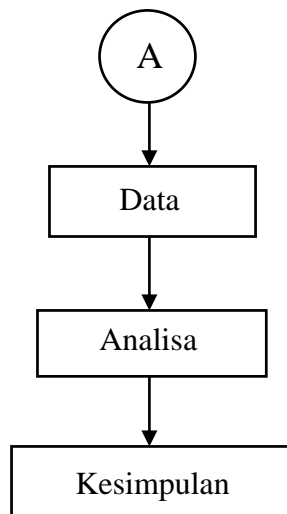


BAB III
METODOLOGI PENELITIAN

3.1 Flow chart Penelitian



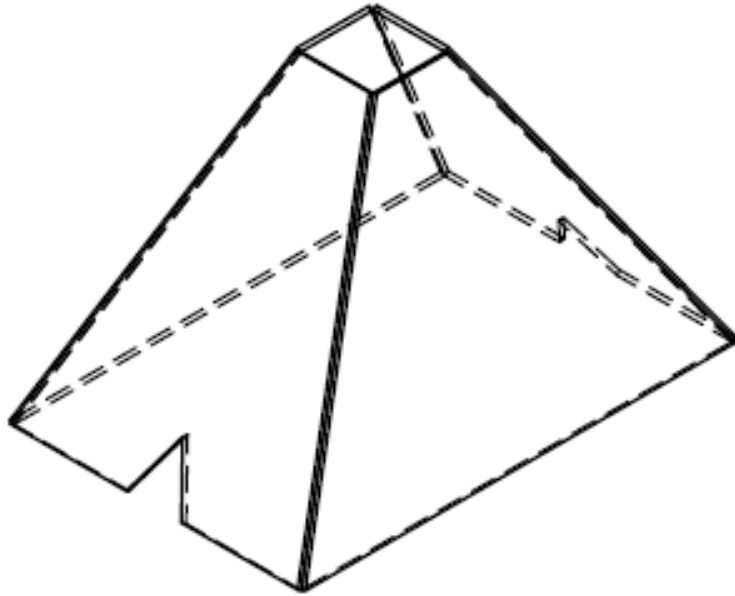


3.2 Alat Uji dan Perlengkapan

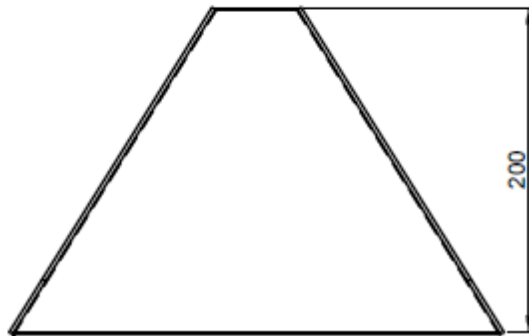
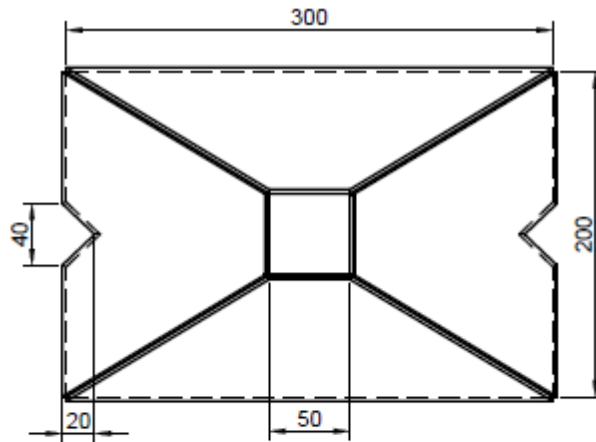
1. Generator Termoelektrik SP1848-27145.
2. Kayu.
3. Lempengan Penghantar Panas (Aluminium, Kuningan, Tembaga).
4. Multimeter Digital.
5. Termometer suhu.
6. Gunting.
7. Isolasi.
8. Lem.
9. Kabel.
10. Heat sink.
11. Elco.
12. Tali.
13. Handuk bekas.

3.3 Ukuran – Ukuran Bahan Yang Digunakan

1. Corong

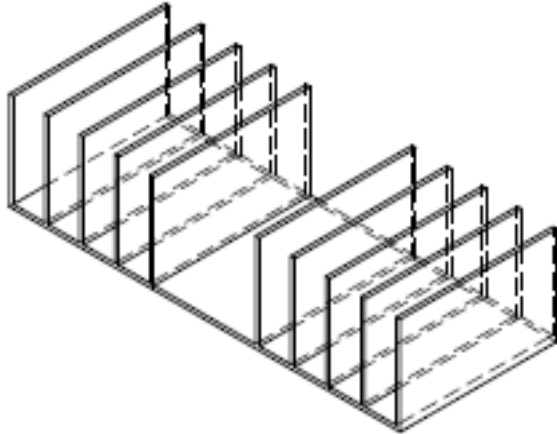


Gambar 3.3.1 3D Corong

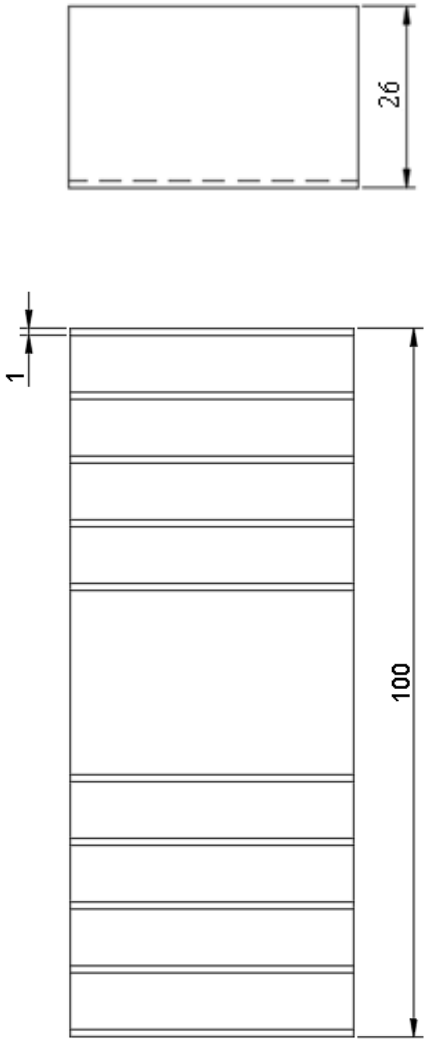


Gambar 3.3.2 Dimensi Corong

2. Heatsink

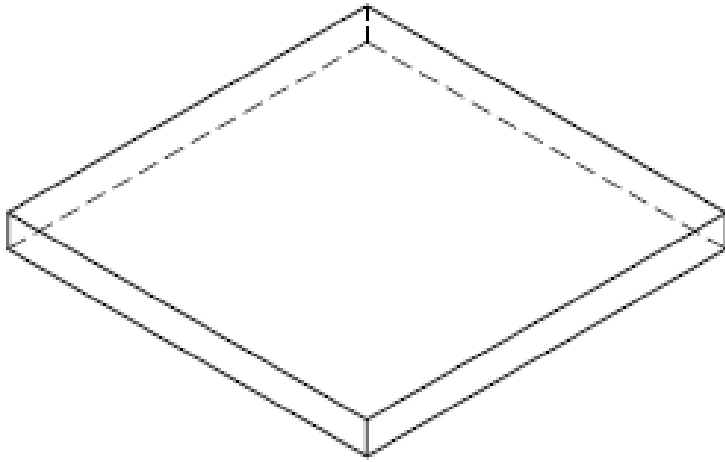


Gambar 3.3.3 3D Heat Sink

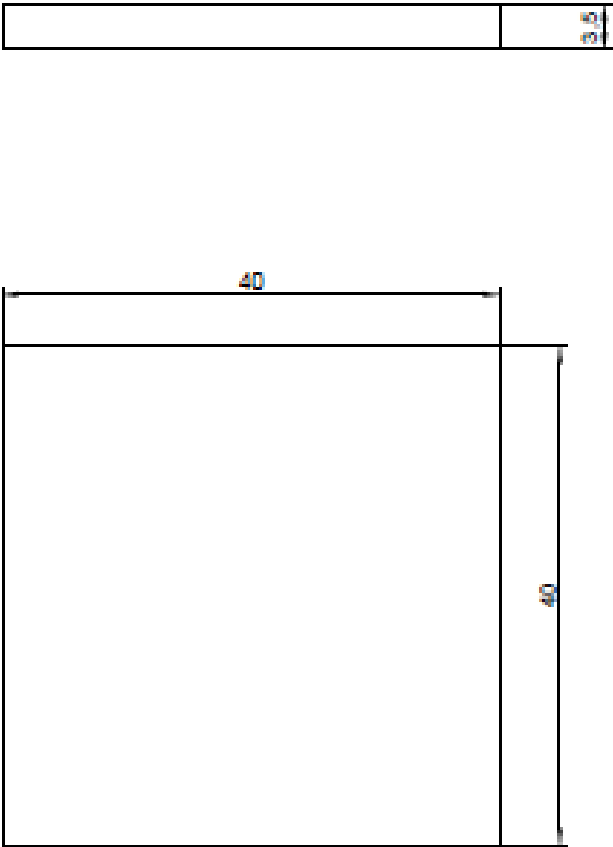


Gambar 3.3.4 Dimensi Heat Sink

3. Termoelektrik

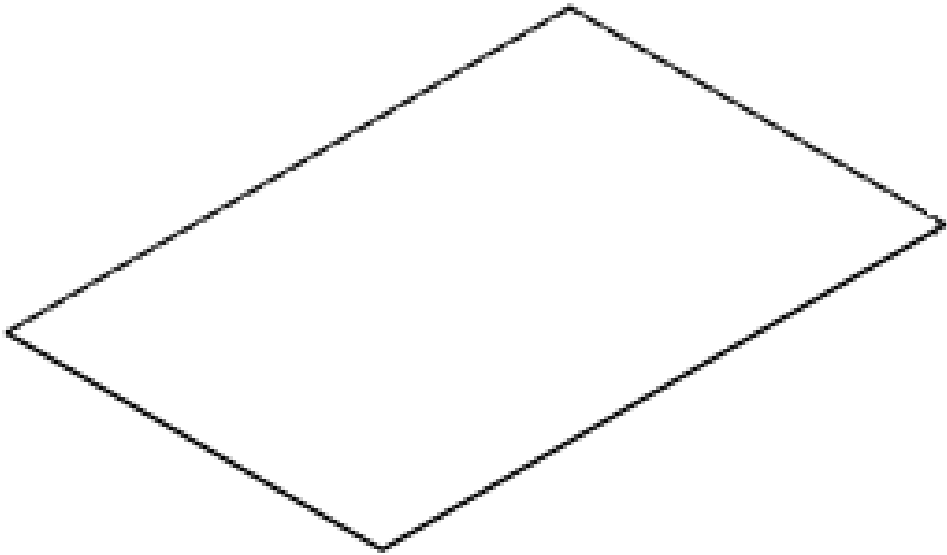


Gambar 3.3.5 3D Termoelektik

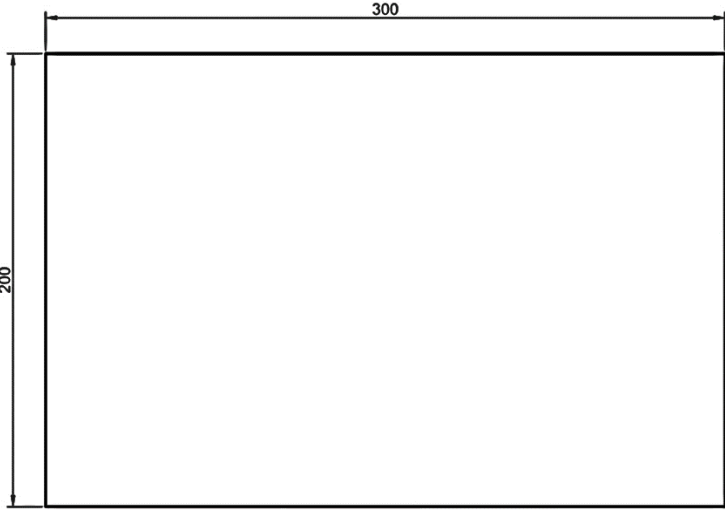


Gambar 3.3.6 Dimensi Termoelektrik

4. Plat logam



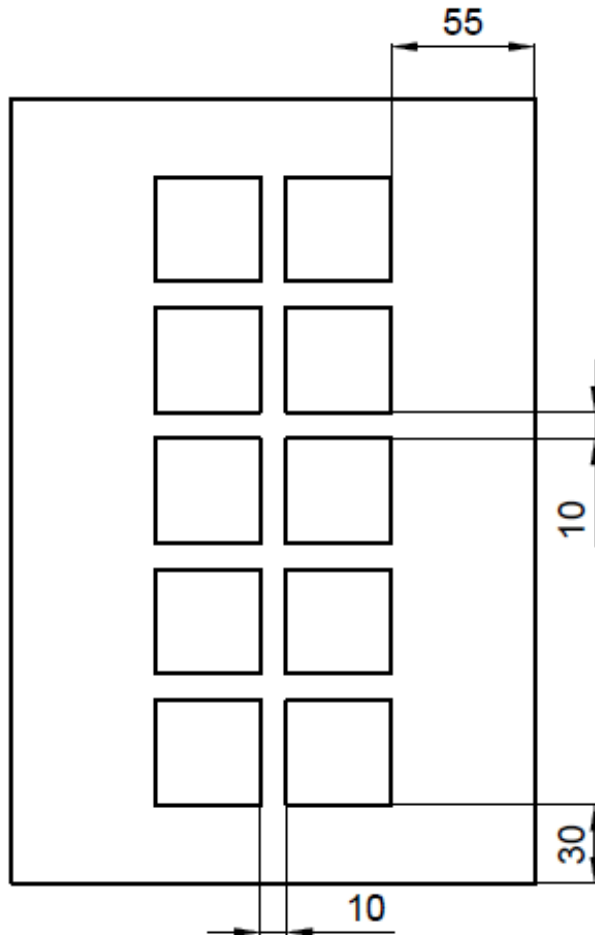
Gambar 3.3.7 Plat Logam



Gambar 3.3.8 Dimensi plat logam

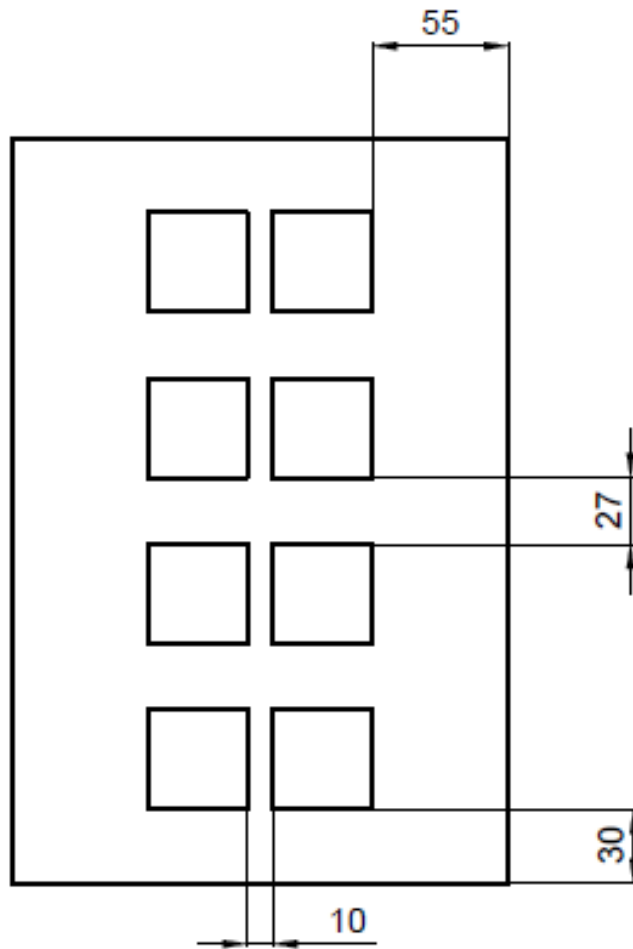
3.4 Dimensi Pemasangan Termoelektrik

1. 10 Termoelektrik



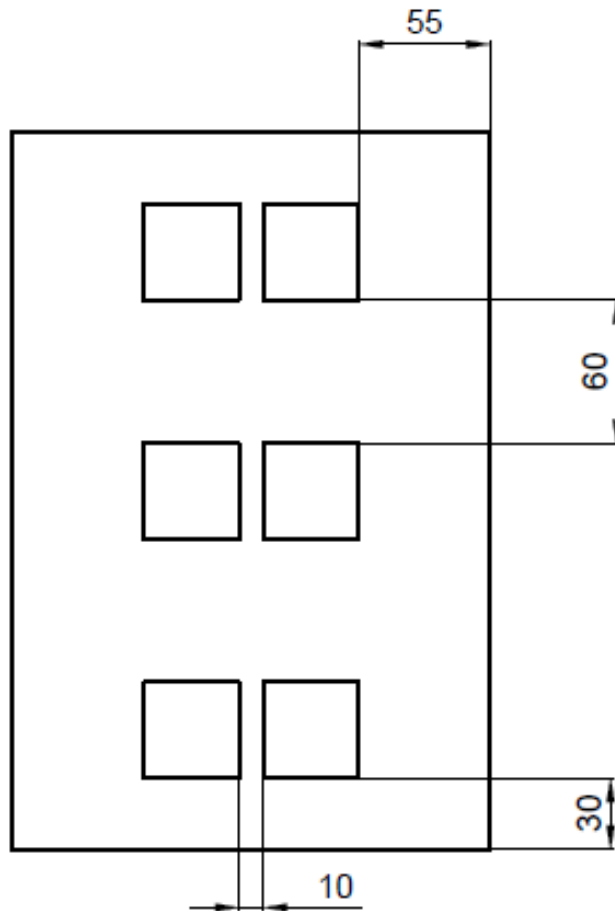
Gambar 3.4.1 Dimensi pemasangan 10 termoelektrik

2. 8 Termoelektrik



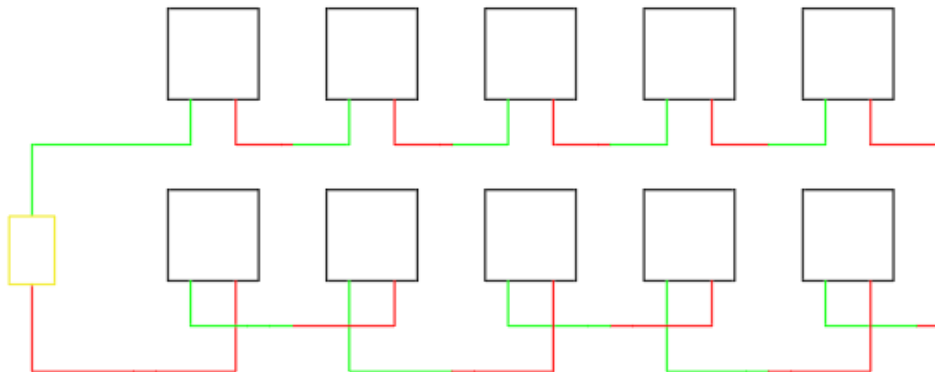
Gambar 3.4.2 Dimensi pemasangan 8 termoelektrik

3. 6 Termoelektrik



Gambar 3.4.3 Dimensi pemasangan 6 termoelektrik

3.5 Gambar Susunan Rangkaian Termoelektrik



Gambar 3.5.1 Rangkaian susunan seri termoelektrik

Keterangan :

1. Kotak hitam = Termoelektrik
2. Kotak kuning = Alat ukur (Voltmeter dan Amperemeter)
3. Garis hijau = Kabel positif (+)
4. Garis merah = Kabel negatif (-)

3.6 Pengambilan Data

Material Plat	Jumlah Termoelektrik	T_1 (°C)	T_2 (°C)	T_s (°C)	T_∞ (°C)	T_{1P} (°C)	T_{2P} (°C)	T_{sH} (°C)	$T_{\infty H}$ (°C)
Kuningan	10								
	8								
	6								
Aluminium	10								
	8								
	6								
Tembaga	10								
	8								
	6								

Tabel 3.6.1 Contoh tabel pengambilan data

Dimana:

- T_1 = Suhu Permukaan Dalam Plat (°C)
 T_2 = Suhu Permukaan Luar Plat (°C)
 T_s = Suhu Permukaan Benda Padat, (°C)
 T_∞ = Suhu Gas Buang Knalpot, (°C)
 T_{1P} = Suhu Permukaan Bagian Panas, (°C)
 T_{2P} = Suhu Permukaan Bagian Dingin, (°C)
 $T_s H$ = Suhu Sirip Heat Sink, (°C)
 $T_{\infty H}$ = Suhu Udara Sekitar Heat sink, (°C)