

# LAPORAN HASIL TEST *PERFORMANCE REPORT*



**PT. MENTARI MEGAH PERKASA  
KIMBERLY CLARK'S DISTRIBUTOR  
BALIKPAPAN  
EAST KALIMANTAN**



[nicool@environac.com](mailto:nicool@environac.com)  
[amico.teknik@yahoo.com](mailto:amico.teknik@yahoo.com)

## PENDAHULUAN

### INTRODUCTION

Coolnomix mengadakan uji coba di Gudang Kimberly Clark's Distributor Balikpapan pada tanggal 25 November 2013 sampai dengan tanggal 29 November 2013 dengan AC Split merk SHARP ¾ PK AC difungsikan untuk menjaga suhu ruangan Gudang tetap stabil selama 24 jam nonstop agar barang yang disimpan tidak mudah rusak.

*Kimberly Clark's Balikpapan had invited Coolnomix to do a trial at their Warehouse. The trial started on November 25th, 2013 until November 29th, 2013 with a ¾ PK SHARP Split Air Conditioning. The air conditioning use for stabilize temperature of their storage goods and operate for 24 hours.*



Foto 1. Gudang Kimberly Clark's Balikpapan

Figure 1. Balikpapan Kimberly Clarks's Warehouse

## PROSEDUR TEST

### TEST PROCEDURE

Pertama dilakukan pengukuran suhu pada ruangan tanpa menggunakan Coolnomix dengan remote AC diset pada suhu 16°C. Hasilnya dicapai :

Suhu Ruangan : 23.5°C

Suhu Ketinggian Plafon : 24.8°C

Sehingga Coolnomix diset 2 kali percobaan yakni pada suhu 25°C dan 24°C

Percobaan dimulai pada tanggal 25 November 2013 pukul 14.25 WITA dan diakhiri tanggal 27 November 2013 pukul 14.25 WITA tanpa Coolnomix.

Dilanjutkan tanggal 27 November 2013 pukul 16.28 WITA sampai tanggal 28 November 2013 pukul 11.27 WITA dengan Coolnomix diset pada 25°C kemudian tanggal 28 November 2013 pukul 11.36 WITA sampai tanggal 29 November 2013 pukul 13.03 WITA dengan Coolnomix diset pada 24°C.

*Firtsly, we calculate the room temperature without Coolnomix while AC set on 16°C at the remote.*

*The result is :*

*Room Temperature : 23.5°C*

*High Level Temperature : 24.8°C*

*So Coolnomix will set two times trial each 25°C and 24°C.*

*The trial started on Nov 25th, 2013 on 02.25 PM until Nov 27th, 2013 on 02.25 PM without Coolnomix.*

*And continued with Coolnomix set on 25°C started on Nov 27th, 2013 on 04.28 PM until Nov 28th, 2013 on 11.27 AM. The second time trial set on 24°C started on Nov 28th, 2013 on 11.36 AM until Nov 29th, 2013 on 01.03 PM.*



Foto 2. Hasil suhu ruangan pada saat AC menyala 16°C di remote

Figure 2. Room temperature results when remote AC set on 16°C



Foto 3. Ujicoba tanpa menggunakan Coolnomix

Figure 3. Trial' started without Coolnomix

## HASIL TEST

### TEST RESULT

Setelah dilakukan percobaan tanpa Coolnomix, diperoleh hasil konsumsi Daya sebesar 27.54 kWh selama 48 jam. Jadi rata-rata per 24 jam adalah :

*After tested without using Coolnomix obtained power energy consumption by 27.54 kWh for 48 hours. It means the power energy consumption for 24 hours is :*

$$\frac{24}{48} \times 27.54 = \mathbf{13.77 \text{ kWh / Day}}$$

Selanjutnya pada percobaan pertama menggunakan Coolnomix dengan di set suhu 25°C agar diperoleh suhu 24°C pada ketinggian plafon. Setelah ditest selama ± 19 jam diperoleh suhu ruangan 23.6°C namun

konsumen merasa kurang puas, maka kami lakukan percobaan kedua dimana suhu Coolnomix di set 24°C dan setelah ditest menyala selama ± 25 jam diperoleh suhu ruangan 23.8°C dengan konsumsi Daya sebesar 9.48 kWh, berarti daya rata-rata per 24 jam adalah :

*The next is tested using Coolnomix which has been set at 25°C in order to obtain the high level temperature at 24°C within ± 19 hours and get the room temperature at 23.6°C. For this first trial, the client was not satisfied with the results. So we continued for the second trial which is the Coolnomix set on 24°C and tested for ± 25 hours. And the result was reached room temperature at 23.8°C and the power consumption reached at 9.48 kWh, it means the power energy consumption for 24 hours is :*

$$\frac{24}{25.45} \times 9.48 = \mathbf{8.94 \text{ kWh / Day}}$$

Berarti penghematan yang bisa didapat adalah :  
*And the final energy saving is :*

$$\frac{(13.77 - 8.94)}{13.77} \times 100 \% = \mathbf{35.07\%}$$



Foto 4. Konsumsi daya selama 48 jam tanpa Coolnomix

Figure 4. The power energy results for 48 hours without Coolnomix



Foto 5 (Figure 5)

Foto 6 (Figure 6)

Foto 5,6. Suhu ruangan yang dicapai setelah menggunakan Coolnomix

Fig 5,6. Room temperature results after using Coolnomix



Foto 7. Konsumsi daya selama 25 jam menggunakan Coolnomix

Figure 7. The power energy results for 25 hours using Coolnomix

## KESIMPULAN

### CONCLUSIONS

Percobaan Coolnomix yang dilakukan di Kimberly Clark's Distributor Balikpapan dimulai pada tanggal 25 November 2013 sampai dengan tanggal 29 November 2013 telah selesai. Dengan hasil sebagai berikut :

*The Coolnomix trial at Kimberly Clark's Distributor Balikpapan start from November 25th, 2013 until November 29th, 2013 has finished. And the final results is :*

|                          | WITHOUT COOLNOMIX | WITH COOLNOMIX |           |
|--------------------------|-------------------|----------------|-----------|
| Room Temperature         | 23.5°C            | 23.8°C         | REDUCTION |
| High Level Temperature   | 24.7°C            | 24.9°C         |           |
| Energy Consumption (day) | 13.77 kWh         | 8.94 kWh       | 35.07%    |



Foto 8. AC di test menggunakan Coolnomix

Figure 8. The Air Conditioning tested using Coolnomix



Foto 9. AC di test menggunakan Coolnomix

Figure 9. The Air Conditioning tested using Coolnomix

**PT. MENTARI MEGAH PERKASA  
KIMBERLY CLARK'S DISTRIBUTOR**

Company

**CV. AMICO TEKNIK PERSADA  
COOLNOMIX DISTRIBUTOR**

Company

Sonny Pichie A.  
Name

Nico Yunsasurya Ardian  
Name



Signature & Company Chop



Signature & Company Chop