

South Africa Test

Results of Blind Measurements

Test Procedure

- Three offices were instrumented
 - LJ Grobler (Blinds fitted)
 - Ilze Combrinck (Hanging Blinds)
 - Johan Markgraaf (Normal Office)
- Measurements (10 minutes)
 - Room temperatures
 - Outdoor temperatures
 - Power consumption of Ac units

Test Procedure

- AC units were set on 24°C
- AC units were set to operate 24 hours of the day
- Measurements were taken every 10 minutes and integrated to an hour
- Measurements used for this analysis were for the periods 27-28 June and 1-3 July 2008

Blinds

Prof. LJ Grobler's office with new blinds



Ilze office with new blinds



Blinds

Prof. Markgraaff office without new blinds



Installation Of Meters



Downloading of Meters



Meters Used

Micro data logger

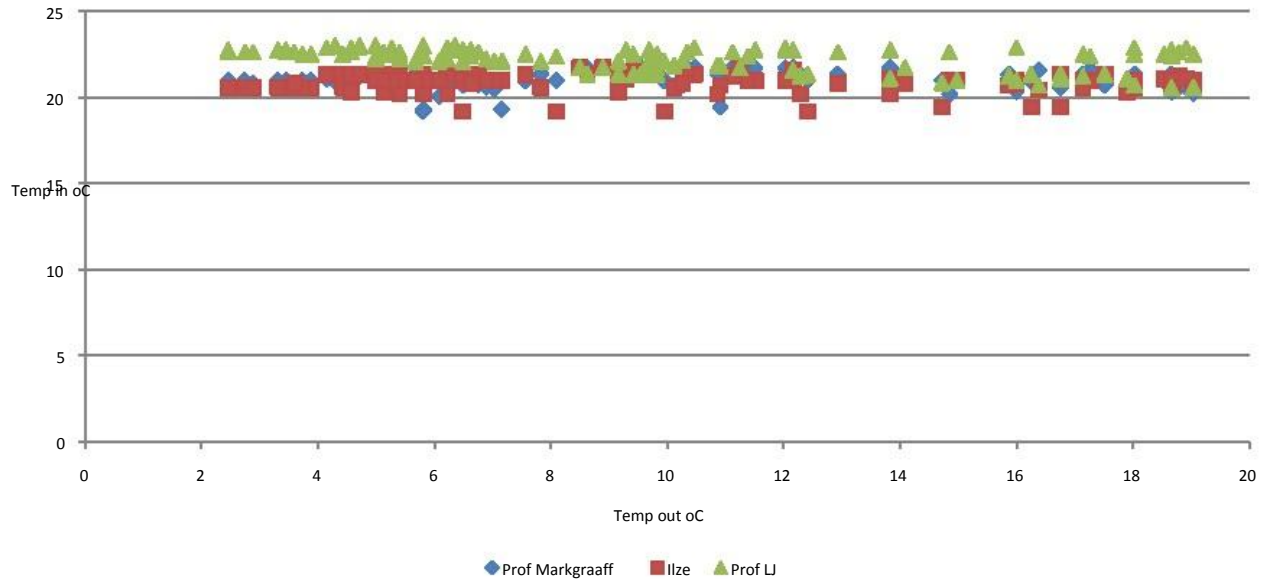


Hobo RH Temp



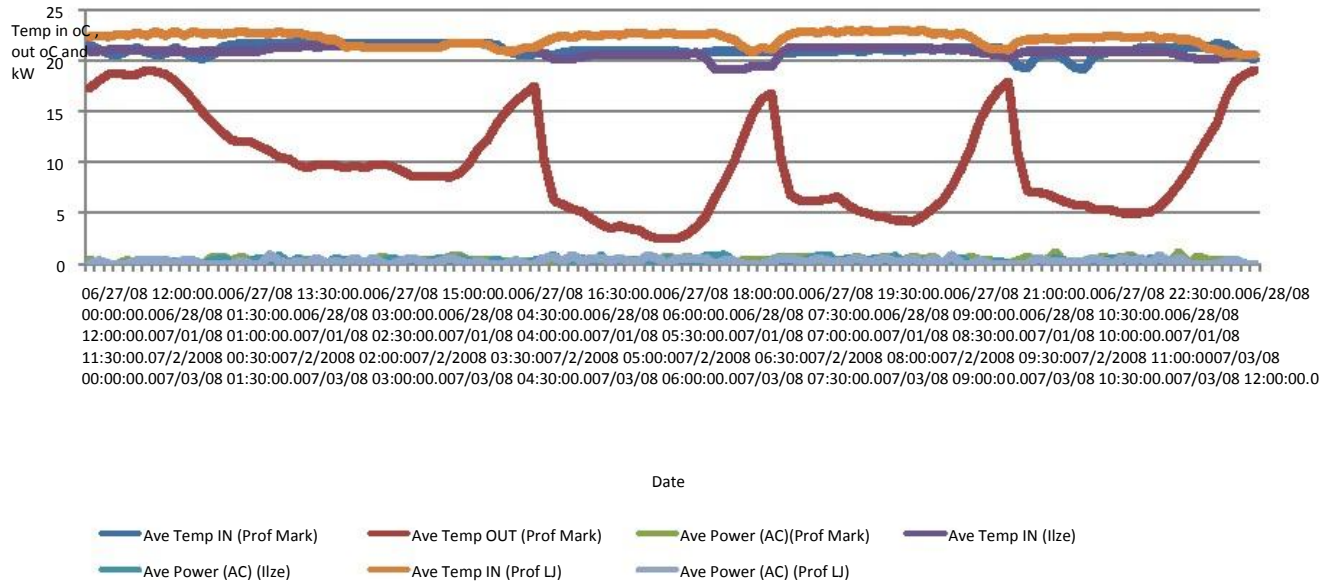
Room Temperatures

3 offices Temperature in vs Temperature out 27-28 Jun 08 Fri, Sat
and 1-3 July 08 Mon, Tue, Wen (Data in 30 min Interval)



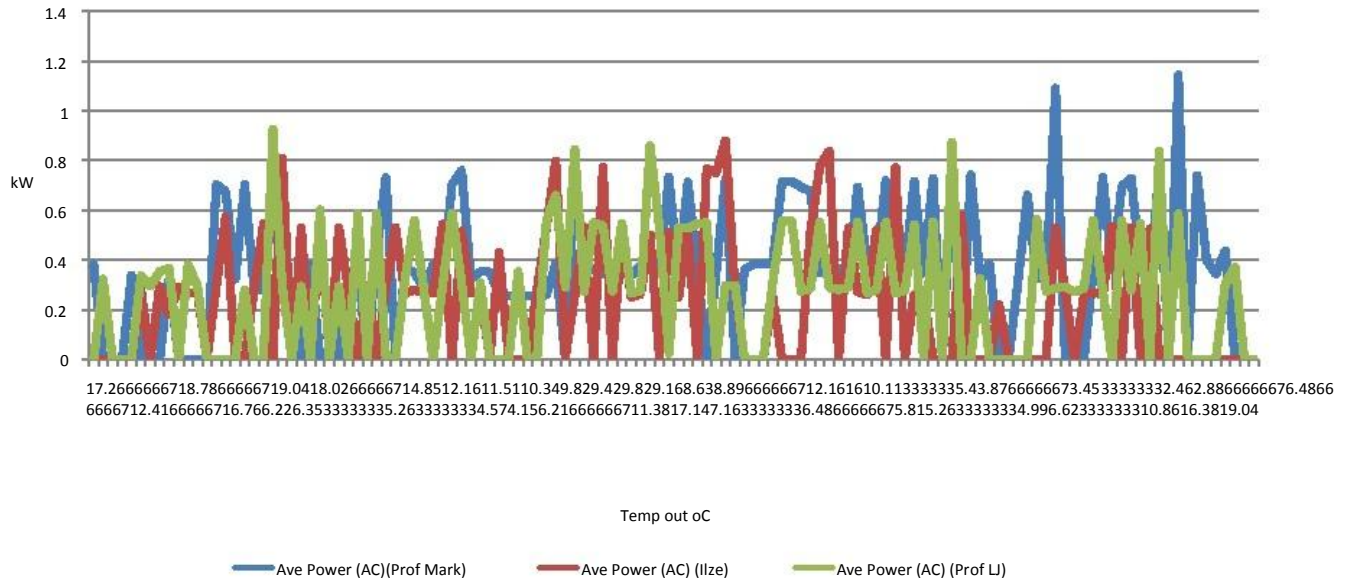
Room Temperatures

3 offices Temperature in, kW and Temperature out 27-28 Jun 08
 Fri, Sat and 1-3 July 08 Mon, Tue, Wen (Data in 30 minutes interval)



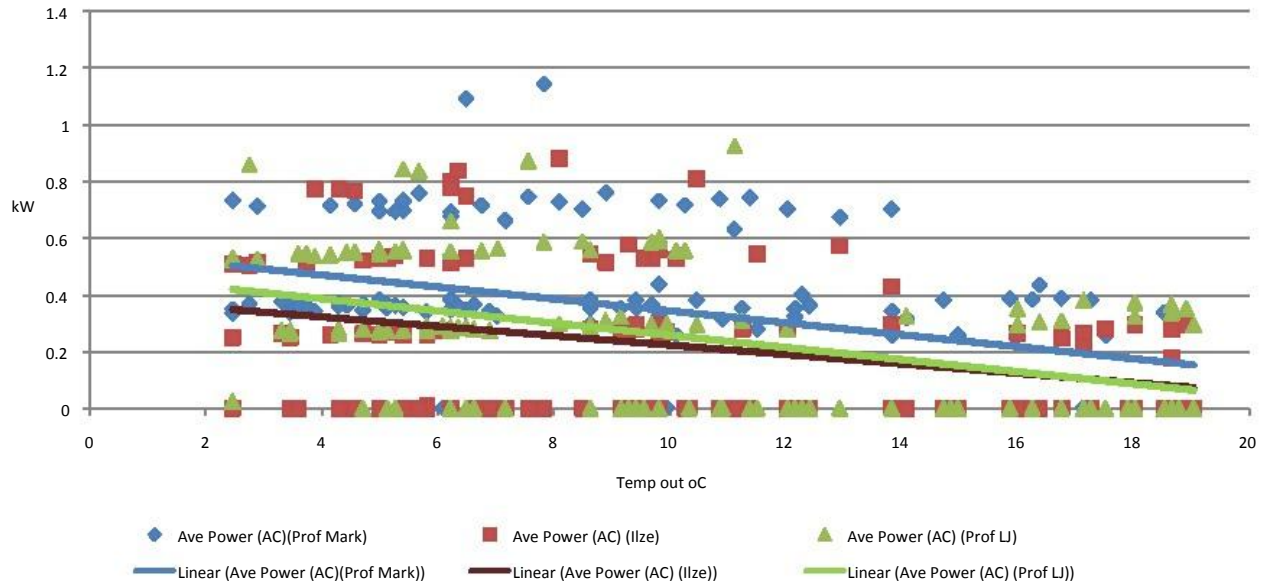
Power Graphs

3 offices kW vs Temperature out 27-28 Jun 08 Fri, Sat and 1-3 July 08
Mon, Tue, Wen (Data in 30 minutes interval)



Power vs Temperature

3 offices kW vs Temperature out 27-28 Jun 08 Fri, Sat and 1-3 July 08
Mon, Tue, Wen (Data in 30 minutes interval)



Summary of Results

Description	Prof Markgraaf	Ilze Combrick	LJ Grobler	Units
Average	0.35	0.23	0.26	kW
Average/day	8.39	5.46	6.33	kWh
Rate	40	40	40	c/kWh
Cost/day	3.36 R	2.19	2.53	
Saving/day	R	R	1.17 R	0.82
% Saving			35% R	25%
COP			3.00	3.00
Electric Heating Cost/day	3.00	6.56	7.60	
Electric Heating Saving/day	R	10.07 R	3.52 R	2.47
		R	R	

Discussion of results

- The office of LJ Grobler used 25% less energy than the standard office of Prof Markgraaf
- The office of Ilze Combinck used 35% less energy than the standard office of Prof Markgraaf
- Both Ilze and LJ Grobler's offices were fitted with the blinds
- Ilze Combrinck's 35% savings compared to LJ Grobler's 25% cannot be explained. It is expected that external factors influenced this. The office is also slightly smaller.