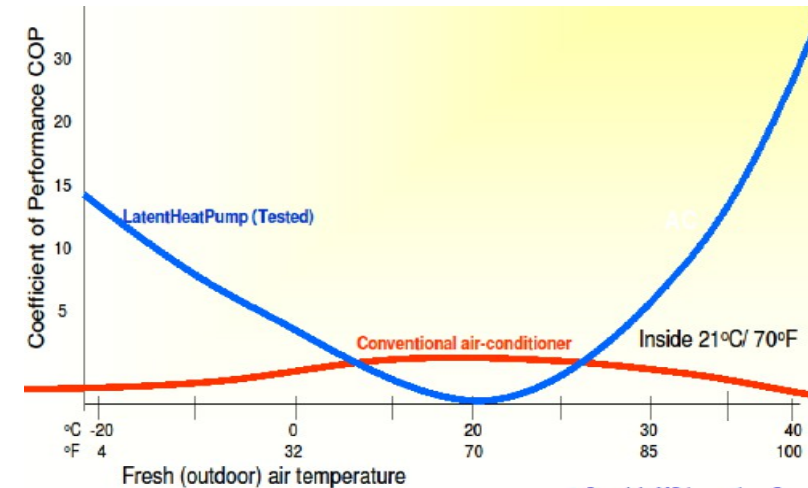


# AC + LHP

- COP of AC best when internal and outdoor temp. diff. 0
  - Unlike LHP max.
- AC no fresh supply air
  - LHP pre-cools by 30-70%
  - LHP pre-dehumidifies by 30-70%
  - LHP reduces energy and capital cost by 30-70%
- AC bacteria growth
  - LHP non-bacteria



LHP is locally optimized

LHP+AC can be combined in a same casing

# Bacteria Growth

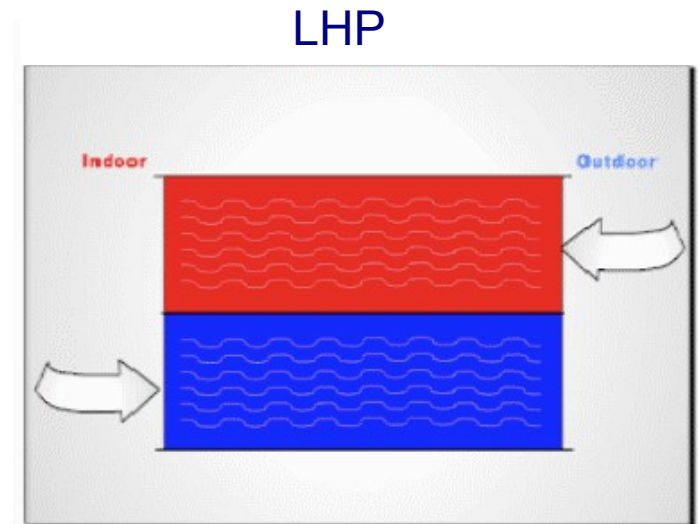
Bacterium	Generation Time (minutes)
Escherichia coli	17
Bacillus megaterium	25
Streptococcus lactis	26
Streptococcus lactis	48
Staphylococcus aureus	27-30
Lactobacillus acidophilus	66-87
Rhizobium japonicum	344-461
Mycobacterium tuberculosis	792-932
Treponema pallidum	1980

Generation times for some common bacteria under optimal, **constant thermal and humid** conditions of growth.

# Latent Heat Pump (LHP)

non-bacteria  
self-cleaning

- LHP's two metal enthalpy recovery cells are in every 30 second cycle dry and cool that eliminates constant platform for growth of bacteria, germ and mould.
- LHP is self-cleaning without any additional arrangements



# Latent Heat Pump (LHP)

100%

- Thermal efficiency 100%
- COP 33 in summer
- COP 15 in winter
- Reduces cooling and heating peak load and operating cost by half (average)
- No drain
  - \* free evaporative cooling
  - \* non-freezing

