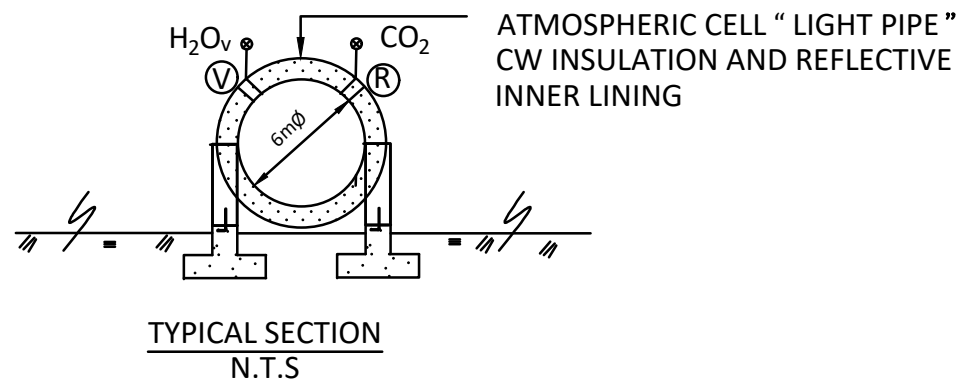
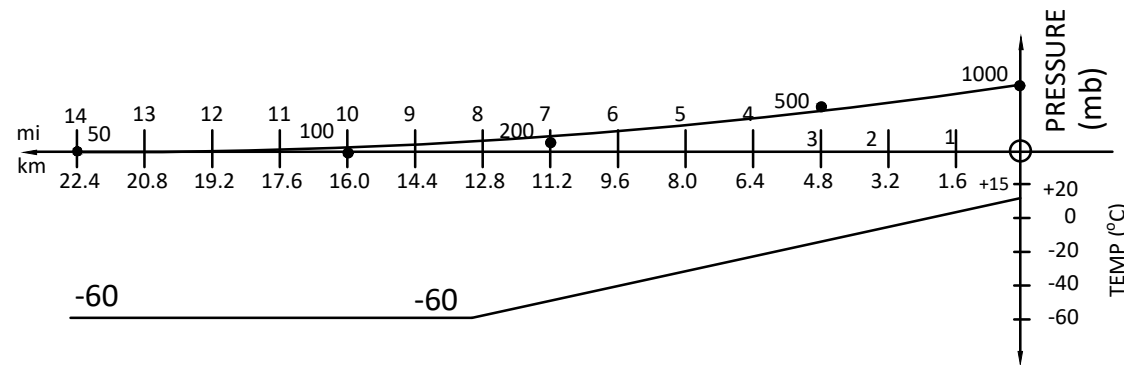


**STANDARD ATMOSPHERE**

N = 79%  
O = 20%  
A<sub>R</sub> = .9%  
CO<sub>2</sub> = .04% to .12%  
H<sub>2</sub>O<sub>vap</sub> = 0% to 4%



**Notes**

- Concrete globe to be built to scale at 1m=2100kms. Light weight concrete can be used but minimum density to be 2tnes/m<sup>3</sup>.
- Refrigerated poles are recommended for the purpose of assisting in heat energy balance and achieving realistic T<sub>d</sub> and T<sub>n</sub> values.
- General test procedure is as follows:
  - 3.1 Fill entire system with manufactured atmospheric gases and CO<sub>2</sub> set at .04%, H<sub>2</sub>O<sub>vap</sub> at 0% and circulation ducts closed.
  - 3.2 Starting from ozone layer and working downstream, activate vacuum and refrigeration systems in each cell using P and T graphs shown as a guide.
  - 3.3 Activate solar reactor and globe rotation. Adjust input power, V and R controls to achieve steady state of T<sub>d</sub> = 15° C & T<sub>n</sub> = 2° C. Run for 72 hrs and record settings.
  - 3.4 With settings fixed as per 3.3, double CO<sub>2</sub> content to .08% and record effect on T<sub>d</sub> and T<sub>n</sub> for next 72 hrs.
  - 3.5 Repeat 3.4 at triple CO<sub>2</sub> of .12%
  - 3.6 Repeat entire procedure at H<sub>2</sub>O<sub>vap</sub> = 1% and 4%.
  - 3.7 Repeat entire procedure for T<sub>d</sub> = 20°C and 25°C using same ΔT = 13°C.
  - 3.8 Repeat entire procedure with open circulation ducts and activate fans to create mixing velocities of 20, 60 and 100 km/hr.

**DEXTRAS** ENVIRONMENTAL ENGINEERING LP

ATMOSPHERIC CLIMATE TESTING SIMULATOR®

GENERAL CONCEPT PLAN

DATE: DEC. 29/21  
SHEET: 1 of 1  
DWG NO.  
ACTS 100

DRAWN: L.Z.,  
DESIGNED: K.D.  
CHECKED:  
APPROVED  
CADD.FILE  
SCALE: N.T.S.

SEAL