HYPOXIC - SYSTEM

Welltech Instrument Co. Ltd

HYPOXIC - **SYSTEM**

Welltech's hypoxic system can be intergrated with the environmental chamber, glass house,or sleeping room to simulate altitude control

It can simulate altitude up to 5000m (with 9000m as option)

The hypoxic system consists of

- LCD touch screen controller
- Membrance system
- Air compressor
- Dryer
- Pressure vessel
- Filtering system
- Control valve
- Alarm and safety control

Hypoxic Control
Status: Run   Run Time: 240 Minutes

Altitude	O2
4535 m	12. 33 %
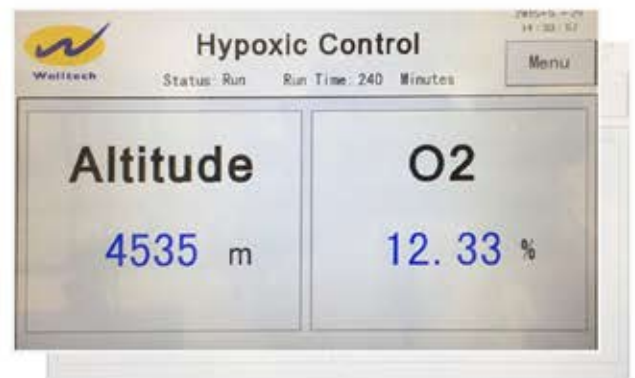
Hypoxic system design

Web: www.hypoxicsystem.com

E-mail: welltechltd@gmail.com   **Tel** 852-23491224

Theory-how to generate the hypoxic air

Hypoxic Modules

The environmental chamber can also integrate with the hypoxic unit to stimulate an altitude up to 7000m.

The hypoxic system comes with hypoxic module to reduce the fresh air (20.9%) into hypoxic condition (low oxygen level). It can reduce the oxygen up to 10.5% which is equal to altitude 5000m (9000m as option)

The hypoxic system consists of an air compressor, hypoxic module, control system and datalogging system.

Inside the hypoxic module , the high pressure air passing through the hollow fiber membrane so that the smaller oxygen molecules are separated and leaving a higher concentration of nitrogen (hypoxic air) out. The hypoxic air is purged into the chamber which is controlled by the non-drifted oxygen sensor.

The hypoxic environmental chamber is suitable for sports training , rehabiliation, body refreshment etc
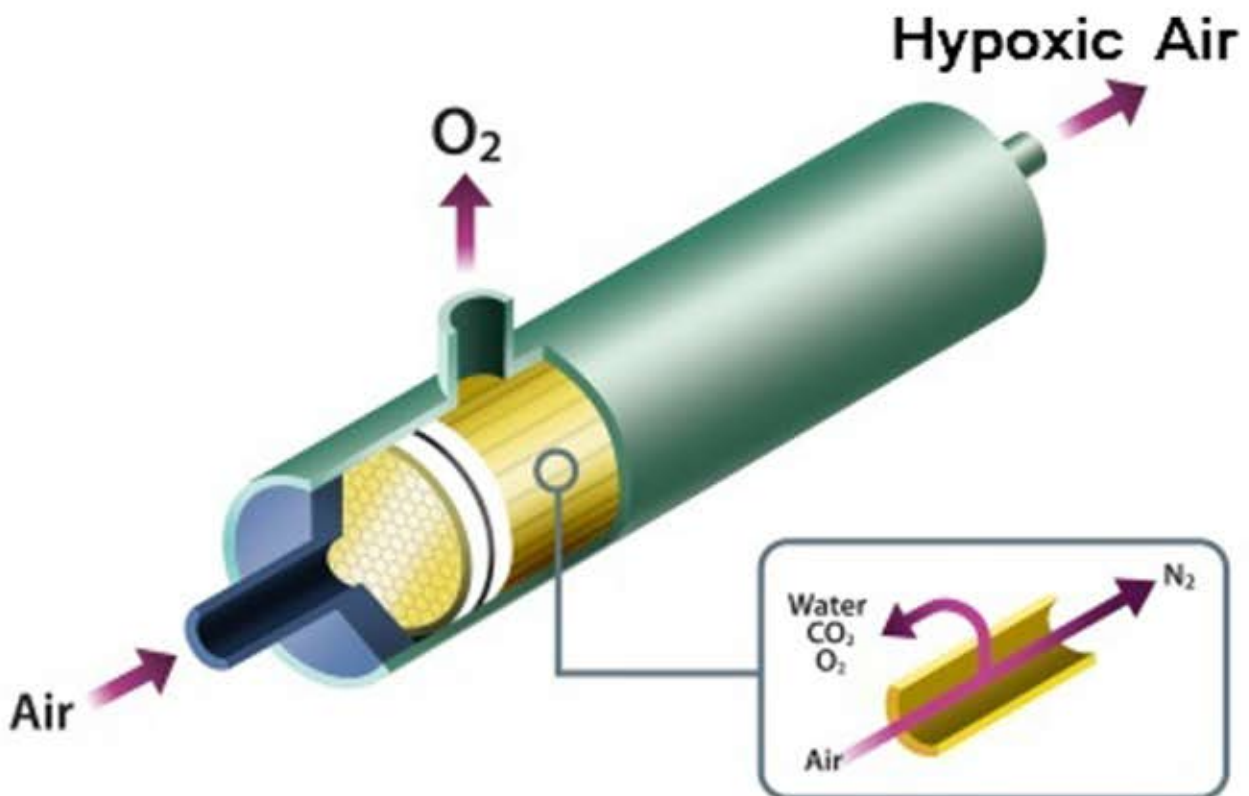
The hypoxic air generated by the physical method which is safe for human use

Model:HS-5000

- O_2 range:20.9% to 9.8% ± 0.1%(or +/- 40m)
- Altitude:up to 5000m (9000m as option)

Includes

- Hypoxic system
- Hypoxic hollow fiber membrane system
- "SPX" four-step filters
- Control valve system
- Control panel for each room
- Feedthrough & air distribution system
- Safety fresh air injection system

Hypoxic system

- Rotary screw compressor
  with10 bar working pressure
- Refrigerated dryer
- Pressure vessel
- Sound reducing silencers

Hypoxic hollow fiber membrane system

- Flow rate: 10m3/hr @ 10bar
  Material: ABS
- Inlet: 3/8"thread with pressure gauge
- Outlet: 3/8" thread
- High O_2 outlet: 3/8" thread

"SPX" four-step filters

- Ultra oil filter , air filter and water filter

Control valve system

- SMC control valve module
- Maximum working pressure:20 bar
- Inlet:3/8" thread
- Outlet:3/8"thread

LCD Touch screen controller

- PLC:Siemens
- With altitude(m) and O_2(%) display
- Control setting:by meter or O_2%
- Data storage:with data storage of time,O_2,CO_2, temperature, humidity & presure on USB flash
- 8 pieces bias calibration of each sensors
- With time reserve on/off function
- With timing system
- With pattern programming to specify time vs altitude
- Can adjust increase & decrease the oxygen level
- Can adjust to normal altitude in case of no training
- With user name and password access
- Can record the usage of room
- With notification for abnormal operation
- History record of any alarm
- Filter life checking
- Alarm display for broken down or error

FEATURES

Sensor Box

O$_2$ sensor

- No-drift oxygen sensor
- Range: 0-25%
- Accuracy: +/-50ppm

CO$_2$ sensor

- Range: 0-20000ppm
- Accuracy: +/-50ppm

Temperature sensor

- Range: -80-180C
- Accuracy:+/-0.1C

Humidity sensor

- Range: 0-100%RH
- Accrcay；+/-0.1%RH

Pressure sensor

- Range: +/-100Pa
- Accrcay；+/-0.1Pa

Welltech Instrument Company Limited

📍 **Web:** www.hypoxicsystem.com
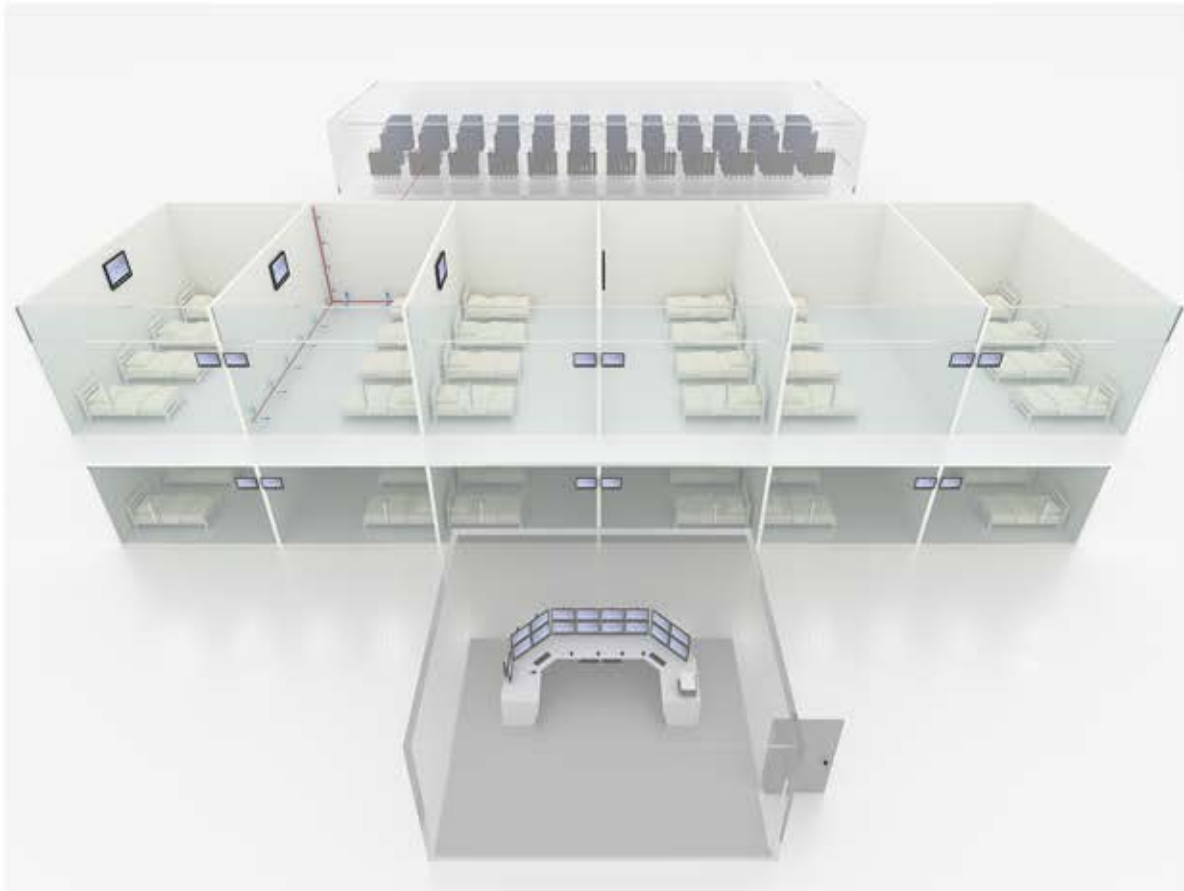
✉️ **E-mail:** welltechltd@gmail.com

📞 **Tel:** 852-23491224

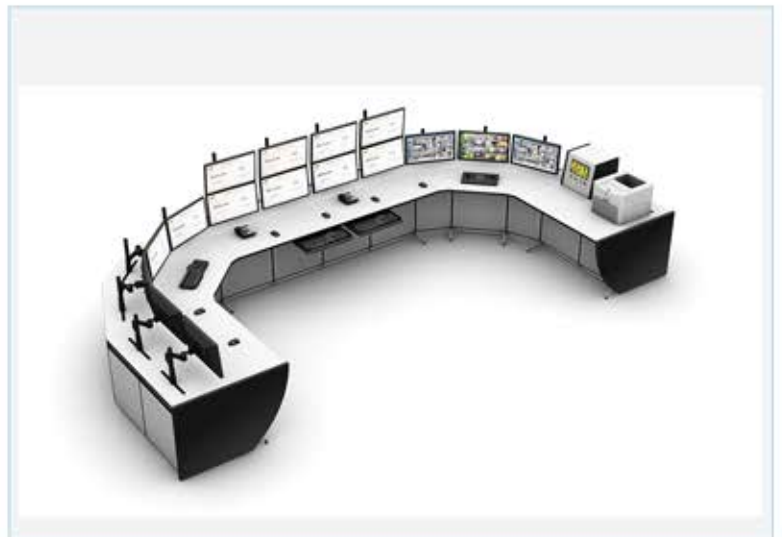## Multi-rooms control with security control center

- With display and control monitoring
- With alarm alert function
- With on/off control
- User name access monitoring
- Plant room condition monitoring

Security control centre

Welltech Instrument Company Limited

📍 **Web:** www.hypoxicsystem.com

✉ **E-mail:** welltechltd@gmail.com

📞 **Tel:** 852-23491224