

# AIR CARE PROJECTS

*We change the climate and Air pressure...*



**COMPLETE  
CLEAN ROOM  
SOLUTIONS  
IN SINGLE  
WINDOW  
SERVICE  
PROVIDER.**

# ➤ Group of Companies

## ❖ **SSV SYSTEMS**

## ❖ **Air Care Projects**

### ➤ We Started in 1999 has two divisions

#### a) Manufacturing    b) Projects

- We manufacture Clean Room Equipments , Ahu, Static & Dynamic pass boxes, Air showers, Laminar air Flow ,Dispensing Booth, Garment Storage, Biosafety Cabinet, Fume Hood, Mobile LAF, Cross Over Bench, Grills, Damper, Fire Damper Modular wall panels , View panels, Walk on Ceiling systems, Incubator Rooms and Cold Rooms Etc...
- Kitchen Exhaust Hood, Air Cooling units, Dust Collection system, Fumes Destroy Scrubbers systems, Etc...
- Clean Room projects for Pharmaceuticals, Hospitals, Electronic, Food Industry and Research Labs.
- Kitchen ventilation for Hospitals ,Resorts and Hotels.

- We have created clean room of class 100,1k,10k and 100k with specialized labs conditions with positive and negative pressure.
- We have expertise to give you Bio Safety Labs (BSL-1,2 &3).
- We have expertise to give you Kitchen ventilation systems.

## ➤ Scope of Work

- ❖ **Conceptual Study**
- ❖ **Design & Detail Engineering**
- ❖ **Manufacture**
- ❖ **Supply & installation of specialized equipments & system.**
- ❖ **Construction & erection**
- ❖ **COMMISSIONING**
- ❖ **Testing & Validation**
- ❖ **Documentations & SOPs**
- ❖ **Maintenance during warranty period**
- ❖ **AMC (Annual Maintenance Contract )**

## ➤ The Focus

- ❖ **Clean Rooms**
- ❖ **Kitchen Ventilation**
- ❖ **Dust Extraction**
- ❖ **Fumes Exhaust**
- ❖ **Equipments**
- ❖ **Utilities**
- ❖ **Services**

# ➤ Clean Rooms



# ➤ Clean Rooms-Wall Panels



# ➤ Flooring



# ➤ Equipments



Air Shower



Horizontal Laminar  
Air Flow Bench



Pass Box



Dynamic Pass Box



Sampling Booth /  
Dispensing Booth



Mobile Dynamic Pass Box



Ceiling Suspended Laminar  
Air Flow





Mobile Dust Collector



Kitchen Exhaust Hood



Cold Room



Laminar Air Flow  
with Sink



Scrubber



Air Shower



Fan Coil Unit



AirWasher Unit



Twin Blower Air Cooling Unit



Two Tier Air Handling Unit



Air Handling Unit  
With Heat Recovery Wheel  
&  
Electrical Heaters

# Air Handling Units



Air Handling Unit With  
Heat Recovery Wheel  
& Electrical Heaters  
For Animal House



# CLEAN ROOM PROJECTS

## CSIR - CENTRE FOR CELLULAR & MOLECULAR BIOLOGY

3<sup>rd</sup> Project Value 63 Lacs Total Area 8230 sft. (3 Projects Completed Total area 13000sft)

Class 100k & 10k Air Condition with 100% Fresh Air Once Through  $22\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}$  50% RH



# SUVEN LIFE SCIENCES

5<sup>th</sup> Project Value 65 Lakhs Total Area 3500sft.( 5 Projects Completed Animal House, Bulk Drugs, Dog House, Pharma Block, Labs. Class 100k & 10k Air Condition with 100% Fresh Air Once Through  $22\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}$  50%RH



# SESIONS MEDICARE , SESIONS HEALTH CARE UNIT

2nd Project Value 56 Lakes Total Area 8230 sft.( 3 Projects Completed Pilot Plant, Labs, Manufacturing Area)  
Class 100k & 10k Air Condition with 100% Fresh Air Once Through 22 °C ± 2 ° 50%RH





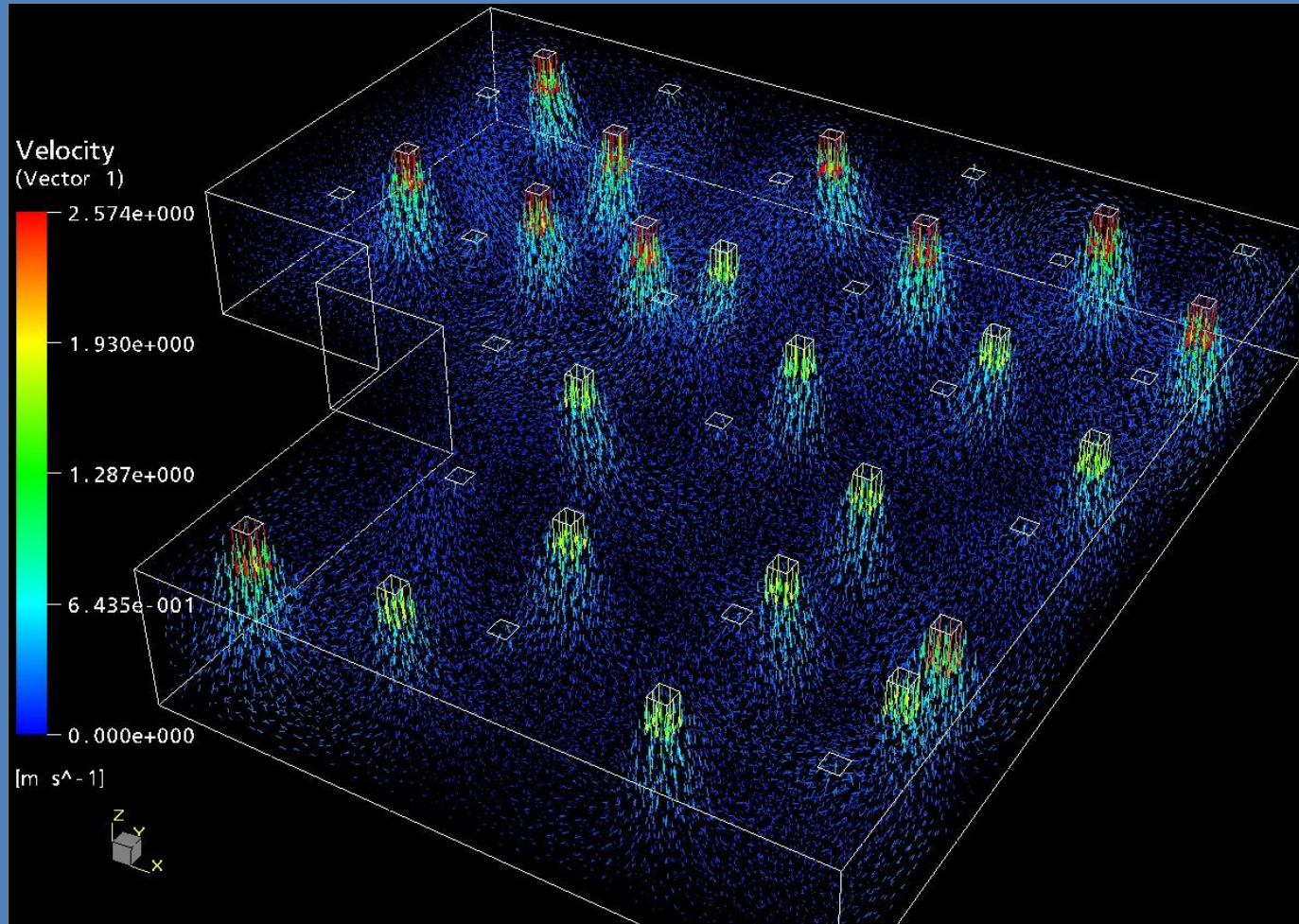


Puttaparthi CTVS  
Operation Theater  
Unfinished



Operation Theater

# ➤ Air Paten system



# HVAC [Clean Room Design Criteria]

1999 ASHRAE

## Handbook

Cleanliness Class	ISO Class	Airflow Type <sup>1</sup>	Average Airflow Velocity	Air Changes Per Hour
M7 & M6.5 (Class 100,000)	8	Nonunidirectional, mixed	(4-8 fpm)	
M6 & M5.5 (Class 10,000)	7	Nonunidirectional, mixed	(8-15 fpm)	
M5 & M4.5 (Class 1,000)	6	Nonunidirectional, mixed	(25-35 fpm)	
M4 & M3.5 (Class 100)	5	Unidirectional, Nonunidirectional, mixed	(40-60 fpm)	As per ISO 14644-1 , As per ISO 14644-4, 11 Documents as Clean Room Standards, 1999 ASHRAE, USFDA, ISO 209E
M3 & M2.5 (Class 10)	4	Unidirectional	(60-70 fpm)	
M2 & M1.5 (Class 1)	3	Unidirectional	(70-85 fpm)	
M1 & Cleaner		Unidirectional	(85-100 fpm)	

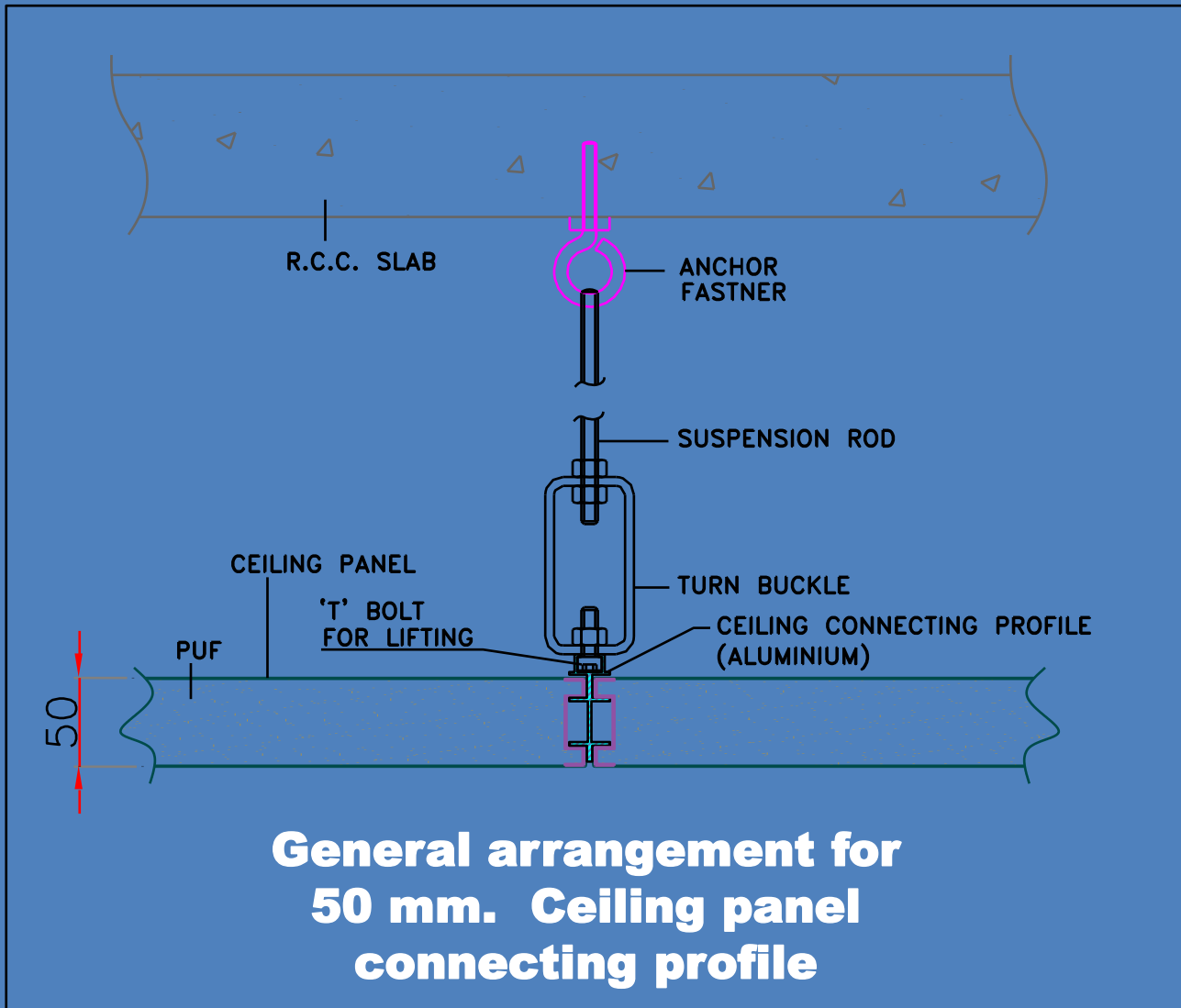
# ➤ Air Filtration system **1999 ASHRAE Handbook**

<b>Cleanliness Class</b>	<b>ISO Class</b>	<b>Filter Type</b>	<b>Filter Coverage</b>
M7 & M6.5 (Class 100,000)	8	HEPA	
M6 & M5.5 (Class 10,000)	7	HEPA	
M5 & M4.5 (Class 1,000)	6	HEPA	
M4 & M3.5 (Class 100) Service corridor	5	HEPA	As per ISO 14644-1 , As per ISO 14644-4, 11 Documents as Clean Room Standards, 1999 ASHRAE,
M4& M3.5 (Class 100) Gown room	5	HEPA	USFDA, ISO 209E
M4& M3.5 (Class 100)	5	HEPA	
M3& M2.5 (Class 10)	4	ULPA	
M2& M1.5 (Class 1)	3	ULPA	

# ➤ Door Interlocking system



# ➤ Ceiling panel arrangement



# ➤ Supply Diffuser & pressure gauge





## ➤ Erection



# ➤ Testing & Validation of Clean Rooms

- ❖ Particle test of cleanliness
- ❖ As per ISO 14644 Standards
- ❖ Air Velocity Test
- ❖ Air pattern Smoke Test
- ❖ Light Intensity Test
- ❖ Noise Test
- ❖ Vibration Test
- ❖ Induction Leak Test



# ➤ Operations

- ❖ Scheduling
- ❖ Maintenance Planning
- ❖ Monitoring the system
- ❖ Pressure Balancing
- ❖ Room Pressure Analysis
- ❖ Temperature & Humidity Maintenance

# ➤ CLIENT LIST – for our Entire Product Range

## **PHARMACEUTICALS & LAB**

- » SUVEN LIFE SCIENCES
- » DOCTORS LIFE SCIENCE (INDIA) LTD.
- » SEASONS HEALTHCARE LTD.
- » SRI SATHYA SAI SUPER SPECIALTY LAB
- » CIMMYT C/o ICRISAT
- » OPTIMUS DRUGS PVT. LTD.
- » EPSILON PHARMACEUTICALS PVT LTD.
- » GODAVARI DRUGS LIMITED.
- » APTUS BIOSCIENCES PVT LTD
- » PHARMA PACK
- » APEX DRUGS & INTERMEDIATES LIMITED
- » VIVO BIOTECH
- » HEISEIGH SOFTWARE SOLUTIONS
- » NATIONAL INSTITUTE OF NUTRITION
- » GRANULES INDIA LIMITED.
- » SUVEN NISHTAA
- » INDUS MEDICARE
- » CPK ENGINEERS
- » ROHINI HATCHERIES
- » STANEX DRUGS & CHEMICALS PVT. LTD.
- » SATYADEEPTHA PHARMACEUTICALS
- » SURYA KIRAN LABS
- » ANVIJA PHARMACEUTICALS
- » CUDDAPHA CONVENTION CENTER
- » SOLICI LABS & CHEMICALS PVT. LTD.
- » SHIVA SHAKTHI BIOTECH

## **HOTELS /RESORTS / SHOPPING COMPLEXES / BANKS / THEATERS**

- » SWAGATH DE-ROYAL
- » SRISAILAM BHRAMARAMBHA MALLIKHARJUNA  
SWAMI DEVASTHANAM
- » GRAND SOLITARY
- » DARUSSALAM BANK
- » LAKSHMI GARDEN
- » PRERANA WALDORF SCHOOL
- » VIVEN FARM
- » LEO MERIDIAN RESORTS
- » NEWS CAFÉ HOSPITALITY SERVICES
- » HOTEL QUALITY INN
- » BAR ONE
- » UTSAV
- » HAVELI
- » FUSION 9

## **HOSPITALS**

- » SRI SATHYA SAI SUPER SPECIALTY HOSPITAL
- » PRINCESS ESRA HOSPITALS
- » SVS MEDICAL COLLAGE
- » ESSRA HOSPITAL
- » MEDIVISION Eye Care Centre
- » Sri Manjunatha

## **GOVERNMENT ORGANIZATIONS and INSTITUTIONS**

- » SRISAILAM BHRAMARAMBHA MALLIKHARJUNA SWAMI DEVASTHANAM
- » VBRI DEPARTMENT OF ANIMAL HUSBANDRY SHANTINAGAR
- » NATIONAL INSTITUTE OF NUTRITION - NIN
- » CENTRE FOR CELLULAR AND MOLECULAR BIOLOGY - CCMB

# Thank You

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