

Laminarflow Environment suspended

- for optimal utilization of the available area
- combined modules create a controlled zone with any geometry in ISO5 / ISO 4 or better
- precise control of the process parameters, e.g. temperature stability of $\pm 0.1^{\circ}\text{C}$



Cleanroom Class ISO4, ISO5

Airflow

The treated air is guided by PVC curtains and guarantees stable conditions in the entire clean room environment. Various versions are available to meet special customer requirements (laser safety, ESD-safe)



Fig. 1 attached to existing mounting grid

Precise temperature control

The built-in cooling circuit and cascade control ensure high temperature stability. The deviation from the setpoint is only $\pm 0.1^{\circ}\text{C}$ within the laminar flow zone. The specially developed air ducting ensures a quiet, pleasant working environment with a noise level of 50dBA at an air speed of 0.2-0.45 m/sec.



Fig. 2 suspended air handling unit

Control and Networking

The power and control components are easily accessible in a compact electrical cabinet. Online access and monitoring enable rapid support from our experts.

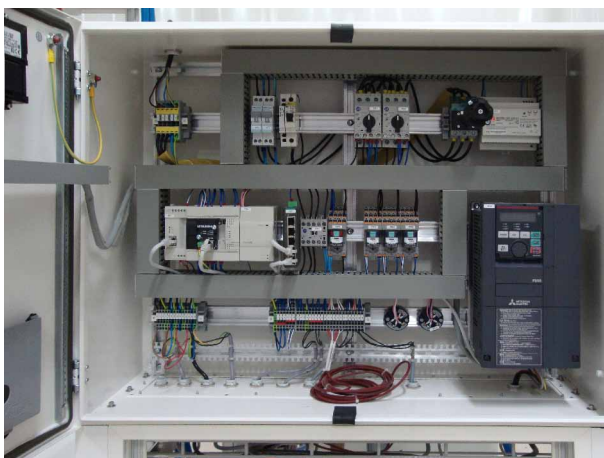


Fig. 3 electrical cabinet with PLC

Monitoring and Operation

Flow velocity and air volume are adjusted and monitored according to customer requirements. The integrated display shows the measured values.

If the pre-filter becomes soiled, the alarm is triggered due to the pressure drop and indicates the necessary filter replacement.



Fig. 4 control panel for status and settings

Design parameters of the standard modules in the module construction

The version with ceiling suspension enables optimum utilisation of the available working area. The modular design of the units allows any combination of different working areas. SIT has specially adapted the air conditioning units of the air-handler series for this application. The air-conditioning units thus fit seamlessly into the concept.

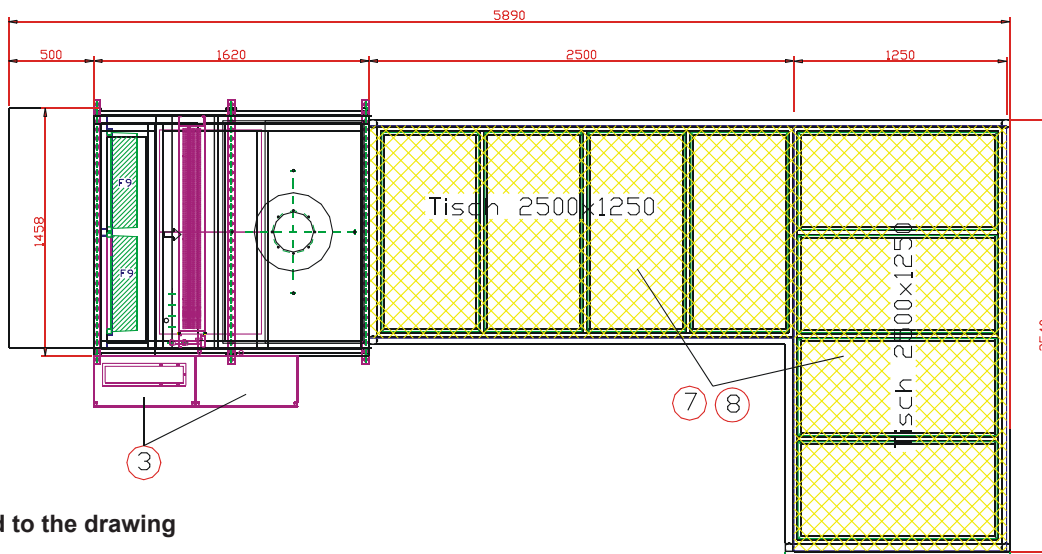
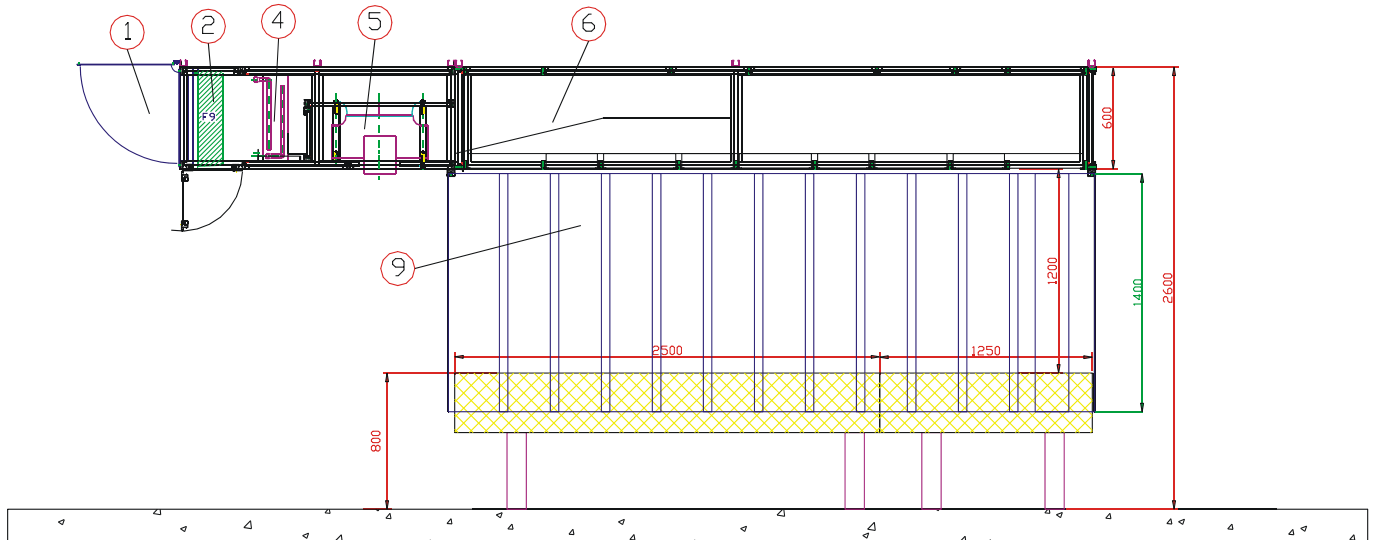
Laminarflow Units

Parameter Module	LFs 2400x1600	LFs 2400x1200	LFs 3200x1600	LFs 3200x1200
Hight Flow Box [m]	0.6	0.6	0.6	0.6
Length Flow Box [m]	2.4	2.4	3.2	3.2
Depth Flow Box [m]	1.6	1.2	1.6	1.2
Laminar Flow Area [m2]	3.83	3	5.1	3.76
Air Volume [m3/h]	2755 / 6200	2162 / 4856	3672 / 8200	2704 / 6085
Laminar Flow Velocity [m/s]	0.2 – 0.45	0.2 -0.45	0.2 – 0.45	0.2 – 0.45

Airconditing Units

	Airhandler AH4000h		Airhandler AH7000h	
Length Airhandler [m]	1.62	1.62	1.62	1.62
Depth Airhandler [m]	1.41	1.41	1.41	1.41
Length Silencer [m]	0.63	0.63	0.63	0.63
Air Volume [m3/h]	2755 / 6200	2162 / 4856	3672 / 8200	2704 / 6085
Cooling	(7 kW)	(7 kW)	(7 kW)	(7 kW)
Electrical Power	1.7 kW	2.4 kW	2.4 kW	2.4 kW

Layout of Laminar Flow Environment



Legend to the drawing

1. Intake silencer
2. Prefilter
3. Electrical cabinet with control and regulation technology
4. Cooler with condensate management
5. EC-Ventilator
6. Supply air silencer
7. HEPA filter
8. Laminarflow area
9. Curtain made of PVC film, ESD-safe