

Safety solutions for a variety of applications !



GreenFumehoods
an alternative to
ducted fume hoods



Smart Fume Hoods
for your routine
handlings



Captair Smart
Weighing Stations



Captair Smart
Storage cabinets



Chemtrap Midcap
Filtration System



Captair Flow
Clean Air Enclosures



Captair Bio
PCR Workstations



Captair Pyramid
Portable Glovebox



Halo
Laboratory Air
Filtration system



Halo Sense
Lab Air Quality Sensor

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ecosystem



**Captair
Smart**

High precision secure weighing stations

**Combining high weighing accuracy
data stability and user's safety**





Combining high weighing accuracy data stability and user's safety



Standard range*

* Waste box and laminate worktop are optional

| Model | Captair® S321W Smart | Captair® 321W Smart | Captair® 351W Smart | Captair® 392W Smart | Captair® 483W Smart |
|-------------------------------------|---|---------------------|---------------------|---------------------|---------------------|
| Class (according to NFX15-211:2009) | class 2 (1 molecular filter and/or 1 H14 filter per column) | | | | |
| Dimensions (mm) | 804x556x969-1151 | 804x615x1107-1289 | 900x603x956-1138 | 1006x751x1333-1515 | 1298x751x1333-1515 |
| Volume of air treated | 220m³/h | | | 440m³/h | 660m³/h |
| Average air face velocity | 0.3~0.5 m/s | | | | |
| Voltage / Frequency | 100-240 V / 50-60 Hz | | | | |
| Number of column(s) | 1 | | | 2 | 3 |
| Total power consumption | 65 W | | | 105 W | 160 W |
| Max. amperage absorbed | 0.65 A | | | 1.05 A | 1.6 A |
| Noise level | <52 dbA | | <55 dbA | | <58 dbA |
| Door openings | Total | | | | |

Flexible filtration column(s) for a variety of weighing applications

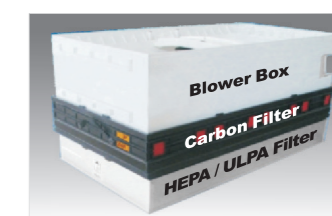
Erlab secure weighing stations can be equipped with HEPA H14 or ULPA17 filters for the weighing of powders, or with high efficiency Carbon filters for the weighing of liquid chemicals or with both, HEPA/ULPA and carbon filters



Type IP: filtration column with HEPA filter for the weighing of powders



Type 1C: filtration column with carbon filter for the weighing



Type 1P1C: filtration column with HEPA and carbon filter for the weighing of powders and liquids

**High user's safety guaranteed by the
"Containment Measurement Testing Method" of the ISPE
(International Society for Pharmaceutical Engineering):**

The containment measurement is designed to verify that the chemical powders used in a fume hood are well "contained" in the enclosure and don't return to the chemist through the front sash or through the HEPAfilter. The International Society for Pharmaceutical Engineering (ISPE) guideline specifies how to measure it with a surrogate (generally lactose) to simulate the powder weighing process. The US testing company Golder Associates Consulting Ltd, assessed* the containment capacity of the Captair 321 W Smart weighing stations with a containment performance target (CPT) set at 1 µg/m³. the results found are as follow:

表1: 高精度无管净气型天平称量罩内乳糖称量过程的检测结果

| Operator / Location | Measured concentration (µg/m ³) | | |
|-------------------------------|---|------------|------------|
| | Test Run 1 | Test Run 2 | Test Run 3 |
| Background prior to operation | <0.0804 | <0.0779 | <0.0791 |
| Background during operation | <0.0524 | <0.0576 | <0.0591 |
| Left side | <0.0517 | <0.0577 | <0.0591 |
| Right side | <0.0513 | <0.0576 | <0.0590 |
| Front opening | <0.0516 | <0.0577 | <0.0592 |
| Waste transfer port | <0.0518 | <0.0578 | <0.0592 |
| HEPA exhaust on the top | <0.0513 | <0.0575 | <0.0590 |
| Operator | <0.0515 | <0.0578 | <0.0599 |

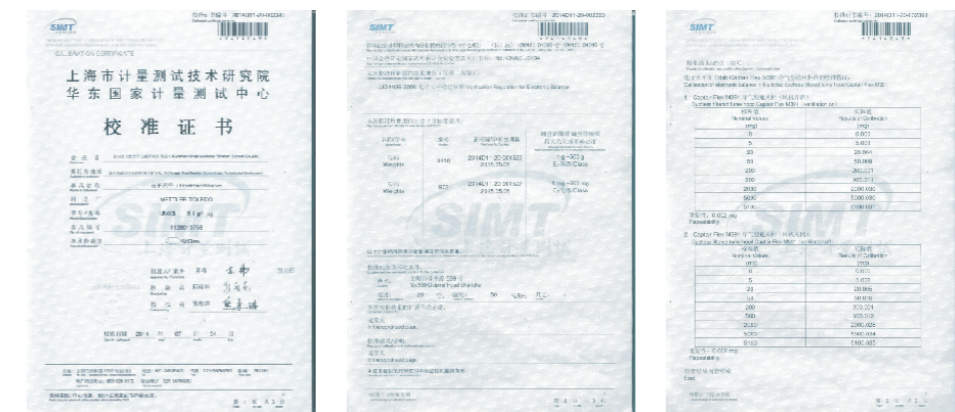
All values are much below 1µg/m³ and show that the Captair 321 W Smart can be used with chemical powders classified as OEB 5 (Occupational Exposure Band 5, the highly dangerous ones!) by most pharmaceutical companies !



* Report dated November 14, 2018 available on request.

Weighing accuracy and stability certificate

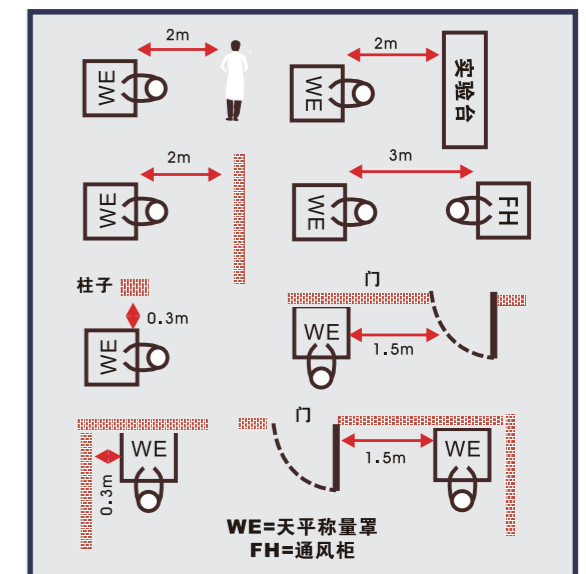
The reliability of the weighing results have been officially tested by SIMT (Shanghai Institute of Measurement and Testing Technology) using a high precision balance (10⁻⁶ g) installed in a 321 W (Copy delivered on request).



Installation recommendations of a Erlab secure weighing stations

1 Install the weighing stations in a turbulent-free zone

As much as possible choose a quiet environment to install the Captair Smart weighing cabinet workstation. Turbulences provoked by people waling in front of the cabinet ,or air supply diffusers located near the cabinet, or doors being frequently opened near the cabinet or even other cabinets facing the weighing cabinet might disturb very much the stability of the air penetrating the cabinet and generate unstable data readings.

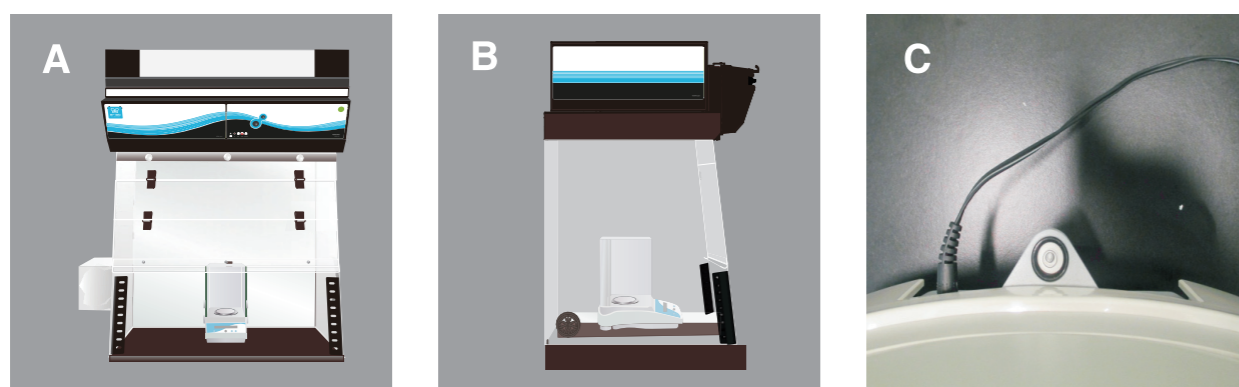


2 Install the weighing cabinet preferably on a stable, vibration-free work surface

Ideally use a balance table equipped with a marble top of a 50mm thickness, specifically designed to prevent the transfer of vibrations to the balance. Optionally you can also use an anti-vibration mat placed under the balance.

3 Install the high precision balance in the middle of the worktop and at a certain distance of the sash opening (Pict. A and B)

4 Adjust the horizontality of the balance and verify that the control bubble is positioned at the very center of the circle. The balance should be turned off during the horizontality adjustment **(C)**.



5 Adjust air face velocity

Air face velocity (air speed at the sash opening area) shall be well adjusted to guarantee a perfect protection of the operator and to limit air turbulences in the enclosure.

A- Check the set - up in user manual.

B- Adjust the fan speed according to the table below.

C- The average air face velocity for the Smart weighing stations units to be 0.3-0.5 m/s.

| 型号 / 过滤模块 | 1P | 1C | 1C1P |
|----------------------|------|------|------|
| Captair® S321W Smart | 2100 | 2000 | 2300 |
| Captair® 321W Smart | | | |
| Captair® 351W Smart | 1650 | | |
| Captair® 392W Smart | | | |
| Captair® 483W Smart | | | |

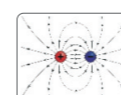
6 Preheating of the balance (very important!)

After the fan speed has been adjusted, turn on the balance and keep it heating for up for 30 minutes before starting using it.

High precision weighing requires many precautions to ensure its reliability. Please find hereunder important advises.



- Avoid the influence of electromagnetic waves (such as from mobile phones or printers placed too near to the balance)!



- Avoid electrostatic charges (inappropriate container material which can easily accumulate electrostatic charges)!



- Set the sample with the tare at room temperature before weighing!



- Avoid temperature and humidity fluctuations. They can create unstable readings. Recommended T 20°C ±5°C. Recommended humidity: 45%-75% (better 50%) !

- If the sample to be weighed is too hot, the weighing value might be reduced !

- If the sample to be weighed is too cold, the weighing value might be increased! Start the weighing procedure: tare at 0 !

- Use the lowest tare weight to reduced the effects of air flow !



- Do not touch the tare with your fingers, but use gloves or better handling tongs. A finger print can weigh as much as 0.0004g !

- Weigh hygroscopic samples in a closed tare !

- Unit / Type of filtration column 1P1C1C1P

- Avoid fast movements !

- Do not rest your elbows on the edge of the table or on the arm rest of the fume hood !

- Close the doors of the balance cage well !

- Wait for the balance to stabilize before reading the measurement !

Very important !

- Verify once a month the accuracy of the balances with calibration weights !

- Your balance shall be recalibrated by a certified company once a year !