

PATENT PENDING



- Partial and total cage changing
- Maximum flexibility
- Cost reduction
- Enhanced efficiency
- Contamination control
- High safety
- Well being of the operator



LAMINAR FLOW

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*innovation through passion*SM



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CSM P/T Cage Changing Automation

Partial and Total Cage Changing



Maximum Flexibility



1/Partial and Total Cage Changing

CSM - P/T(Change Speed Motion) is an automated device which opens and closes Sealsafe Plus Individually Ventilated Cages, under a laminar flow inside an ISO 5 Class CS5 Changing Station.

2/Maximum Flexibility

A sliding system, a removable gripper, an innovative cage locking system, a new electronic control board and software make the CSM P/T suitable for total cage changing or base only.

3/Cost Reduction

Simultaneous Operations(time saving). When changing a cage, several operations are carried out: thanks to the CSM P/T, some of these are performed at the same time (e.g. clean and dirty cages are opened and closed simultaneously by the machine). This translates into a reduction of manual operations performed by the operator, which has been calculated at - 27%. Such a reduction in manual operations makes for a significant time reduction in manual operations (-50% by "CSM P/T).

4/Enhanced Efficiency

Repetitive operations during cage changing become automatic processes performed by "CSM P/T": this makes for increased speed and accuracy. The operator doesn't need to modify his/her manual operation procedures, but simply part of them (the most repetitive ones) are performed by the machine.

5/Contamination Control

The precision of the operations performed by the machine avoids common human mistakes like inadvertently putting bottles and cage tops outside the laminar flow area (air barrier grid) of the changing cabinet: this reduces the risk of procedural mistakes (no cross-contamination).

6/Reliability, Robustness, Cleanability

The CSM P/T needs no ordinary maintenance (no lubrication): it can perform more than 30,000 cycles without stopping. The system is very easy to clean, and is compatible with a variety of chemical disinfectants. Lastly, it is also very easy to remove it or lift it from the working surface: a mechanical device blocks the machine in a "cleaning" position and allows to clean the working area, or even to remove the working area panels and clean the pre-filters.

7/High Safety

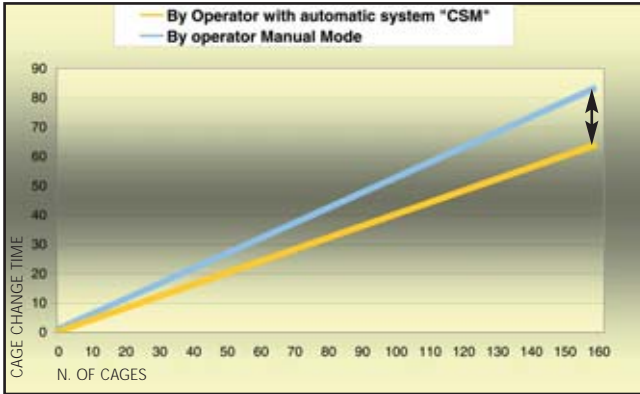
CSM P/T, thanks to the so called "Protector System", prevents damage resulting from robot crashes: the Protector is designed to send a signal to the robot to perform an instantaneous emergency stop when it detects obstacles, minimizing damage to the tooling, providing safety to animals and operator. After a possible collision the system opens again and an alarm is switched on (Stop and Automatic Reset). This perfectly safe management of the speed and of the closing power is determined by the 4-coil motors on the device. Furthermore, the device is supplied with a rear closure panel to avoid any accidental risk.

8/Well being of the operator

The operator does not have to concentrate on the precision of movements required by the procedure: this results in reduced fatigue and stress, which means that the incidence of musculo-skeletal disorders drastically decreases (e.g. carpal tunnel syndrome).

Cost Reduction

3



= 20 minutes less for a 2GM160 rack.

Enhanced Efficiency & Contamination Control

4&5



Reliability, Robustness, Cleanability

6



High Safety

7



Related Products

To maximise operational efficiency and learn more about these products contact your local representative.



CS5 changing station.
Compact and light double side mobile Changing Station that allows the user to easily move the cabinet inside the animal room.



Sealsafe Plus: high containment, certified protection from allergens, high density and practicality of use. The IVC (r)evolution.



Logistic trolleys offer safety and ergonomic features that enable high load-density for moving cages and bottles, crates, pallets and covers.

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