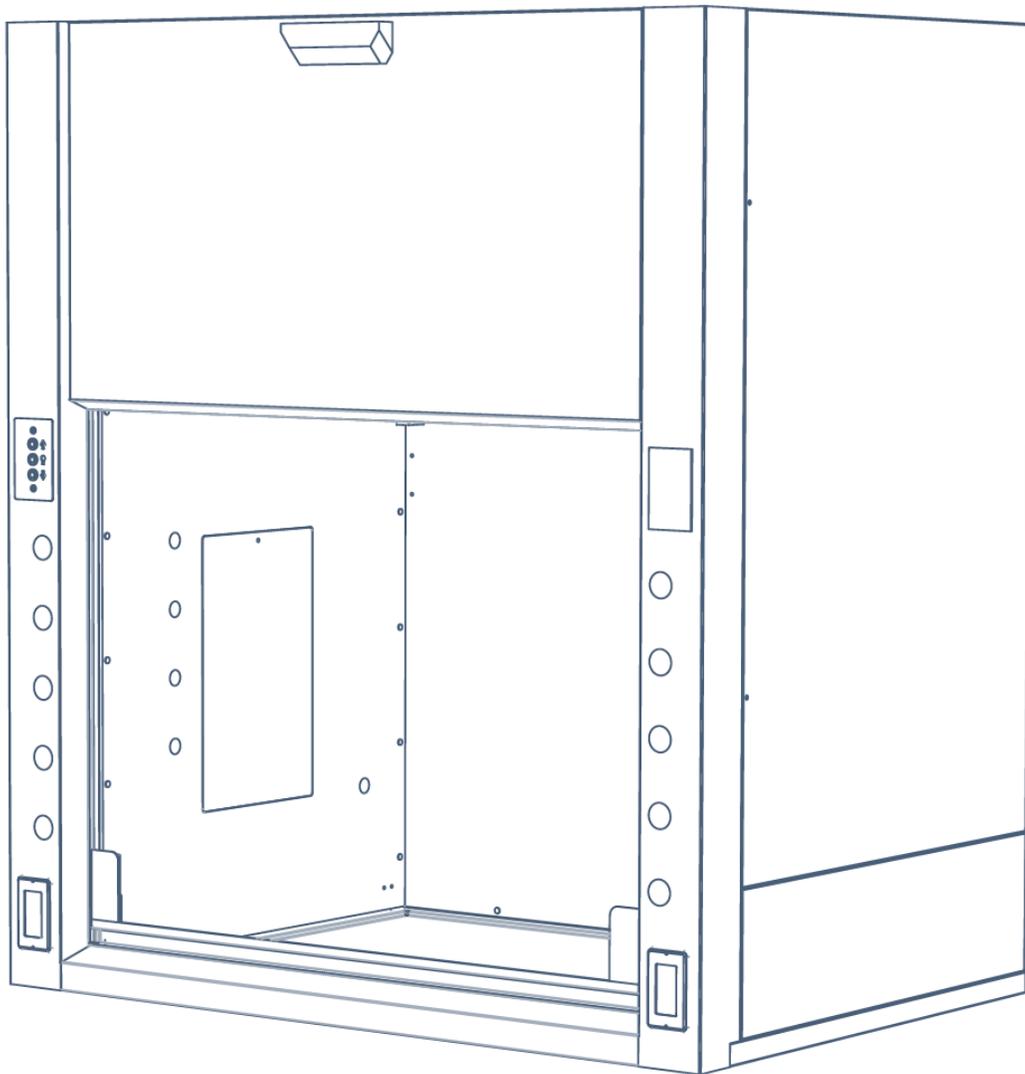




SASHMATIC SYSTEM FOR FUME HOODS

USER MANUAL



Designed to save energy day after day

SASHMATIC FUNCTION

The Sashmatic is a motor driven assembly assisted by a team of sensors that will automatically close or open the fume hood sash upon the chamber access requirements for the laboratory technicians.

The purposes of the Sashmatic system are mainly to minimize the daily exhaust air volume through the fume hood and to maintain at all time a safe utilisation of the hood into the laboratory environment.

With the installation of the Sashmatic, the fume hood becomes an equipment that combines energy economy, safe use and ease of utilisation.

SASHMATIC COMPONENTS

The Sashmatic system includes the following components:

PRESENCE DETECTOR

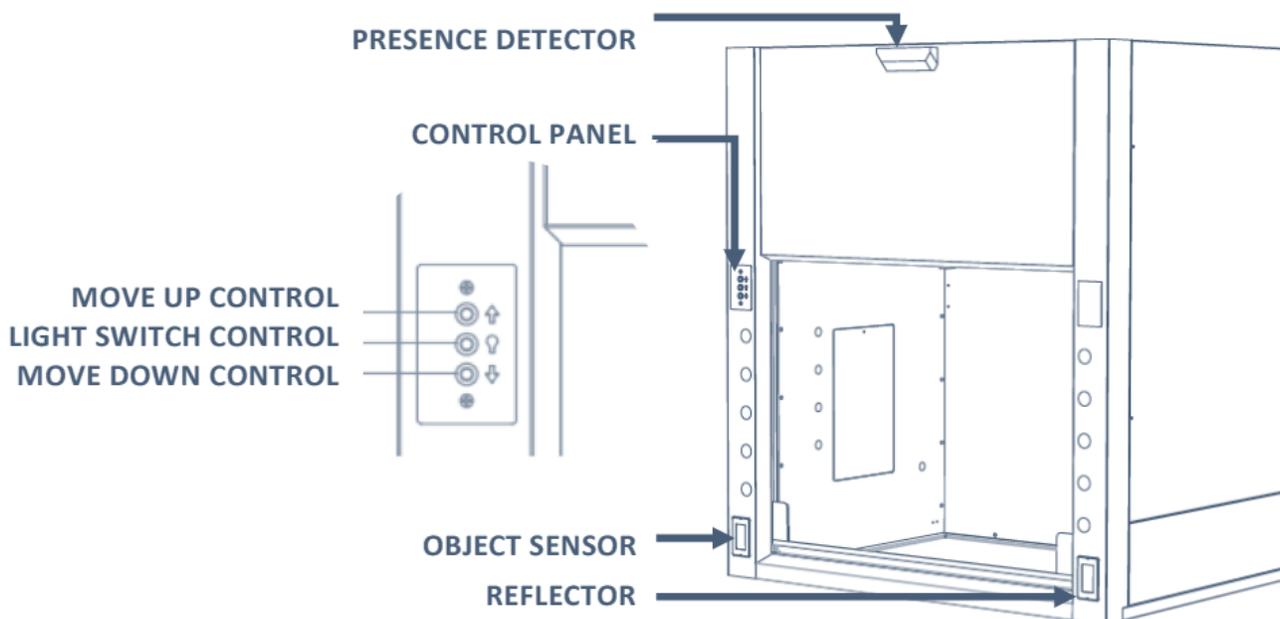
- The presence detector is positioned on the fume hood front upper panel to properly detect human presence directly in front of the hood sash
- The sensor detects the human presence at any location into a 24" corridor in front of the hood

CONTROL PANEL

- The Control panel is located on the left fume hood front post at a height easily accessible for all laboratory technicians
- It is used to control:
 - The fume hood light
 - The sash opening and closing features
- **UP** and **DOWN** buttons have a built-in LED light
- The Control panel includes three control buttons:
 - A push button **UP** to move the sash upward (with integrated LED light) and active the light
 - A push button in the center to only activate the light
 - A push button **DOWN** to move the sash downward (with integrated LED light)

OBJECT DETECTOR

- The object detector senses the presence of any object obstructing the sash movement during the sash closing process and automatically stops the sash before it touches the object
- The object detector consists on the elements:
 - The object sensor attached to the bottom sash left side
 - A reflector sensor attached to the bottom sash right side

**CONTROLLER CHASSIS**

Located over the fume hood and protected by a metal enclosure

AUTOMATIC CLOSING

The Automatic closing feature is always functional but will remain passive as long as the presence sensor detects any human movement in front of the sash during the pre-set period

The Automatic closing feature will active when human movement ceases in front of the fume hood sash into the 24" deep corridor for a pre-set amount of time (5 minutes pre-set as a standard which can be programmed from 30 seconds up to one hour). At that moment the following will happen:

1. The fume hood sash will automatically close down to the level of the limit switch (fully closed position) or to a height limited by the object detector.
2. The light will automatically shut down.
3. During the lowering process, the LED light on the **DOWN** button with light up.

If the presence sensor detects a movement during the lowering process, the sash will automatically stop its decent and return to the closest preprogrammed sash position which can be:

1. 18" user sash operation height
2. 26" maximum raised position
3. If the **UP** or **DOWN** button is pressed during automatic closing, the door will stop at that position.
4. If the sash was manually forced down to the closest position, the light will remain turned on until the five minutes pre-set time has been reached at which time the light will automatically shut down.
5. If the object detector detects an object during the lowering of the fume hood sash, the sash will automatically stop its decent and stay at that height
 - a. The sash can be raised to the first preprogrammed height by pressing once the UP button.
 - b. The sash can be raised to the maximum height opening by pressing twice the UP button.
 - c. At all times, the 2 lights (yellow and green) on the object detector should be on. This indicate that the object sensor and reflector are properly functioning.

AUTOMATIC OPENING (OPTIONAL)

The Automatic opening feature will activate as soon as the Presence sensor detects human movement in front of the fume hood sash into the 24" deep corridor. At that moment the following will happen:

1. The fume hood sash will automatically open up to the level of the limit switch (fully open position or to the 18" operation opening upon program decision established by the project team).
2. The light will automatically light up
3. During the opening process, the LED light on the **UP** button will light up

The Automatic opening feature can be activated/desactivated anytime by the user by pressing simultaneously **UP** and **DOWN** buttons twice.

MANUAL USE OF THE CONTROL PANEL

At all time it is possible to manually open or close the sash.

MANUAL OPENING

1. With one click on the **UP** button, the door will rise to the closest preprogrammed sash opening height (normally 18") and then stop automatically
2. With a double click on the **UP** button, the door will rise up to the highest preprogrammed sash height (normally at 26") and then stop automatically
3. If the **UP** button is pressed and held down, the door will move up as long as the button remains pressed or until the sash is fully raised

MANUAL CLOSING

1. If the **DOWN** button is pressed and held down, the door will move down as long as the button remains pressed or until the sash is fully closed.

MANUAL LIGHT OPENING (WHEN SYSTEM USED WITH NON-AUTOMATIC OPENING OPTION)

1. By pressing the light switch while the sash is fully down
2. If the light was manually switched on, it will need to be manually switched off or it will remain on.

MANUAL SASH OPENING

1. If the sash is opened manually with the user hands, the Sashmatic will not recognise the action and the sash will remain open until the user press the **DOWN** or **UP** button on the control panel.
2. It is **strongly not recommended** to manually (by hands) open or close the sash.

SASH SEQUENCE HOMING

This will be required if the fume hood electrical power was disabled or at any time the sash is malfunctioning:

1. The purpose of the sequence homing is to reinitialize the fume hood sash full travel path and preprogrammed sash opening height settings.
2. The sequence homing is performed by holding down the light button, then pressing twice the **UP** button and after one second, releasing the light button.
3. The system should go back to all normal sequences.

TECHNICAL SERVICES

If you require any additional information, please contact the following addresses for prompt responses.

Supplier and distributor

Bedcolab Ltd
2305 Francis Hughes Avenue
Laval, Quebec, Canada
H7S 1N5
Telephone: 514-384-2820 or 1-800-461-6414
Fax: 514-384-9292
Web site: www.bedcolab.com
Email address: information@bedcolab.com