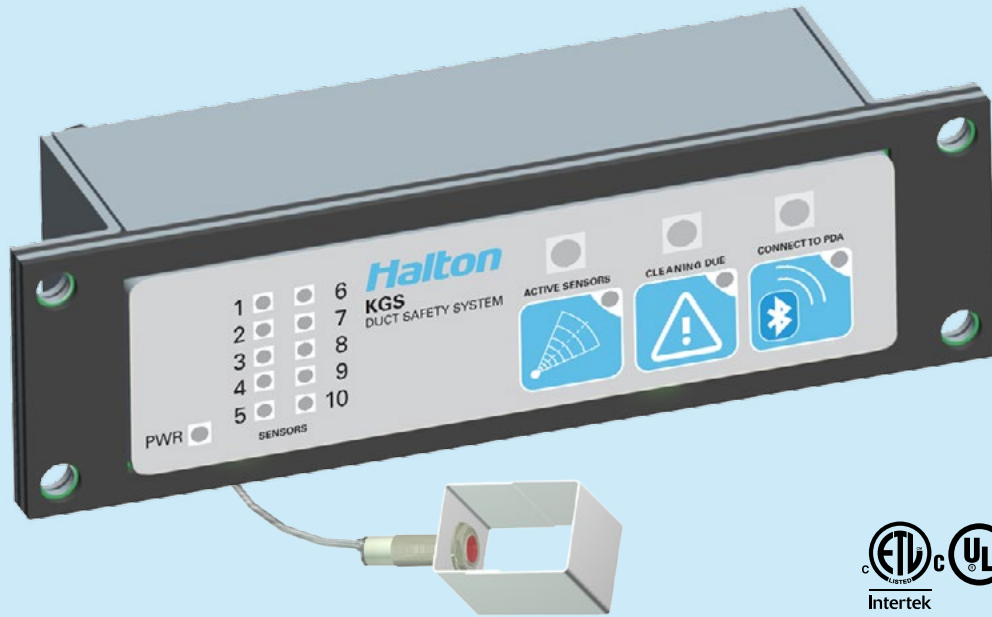


KGS

Duct Safety System



cULus listed Grease Penetration
cETLus listed Signaling Device

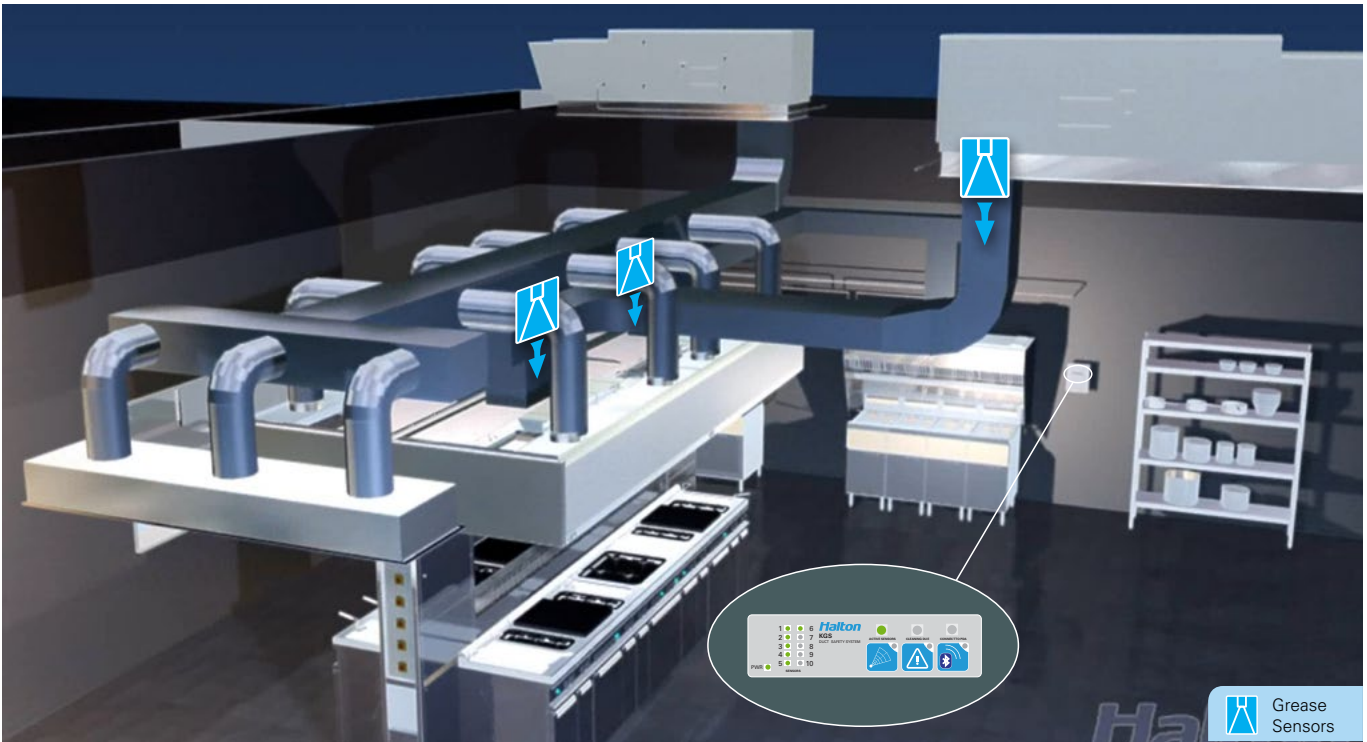
- Monitors the grease deposition levels in all ductwork.
- Mitigates hygiene and fire safety concerns.
- Allows operator to clean ductwork when required by grease deposition levels, not unnecessarily by schedule.
- Compatible with new or existing exhaust ductworks.
- Optical grease sensing device not affected by ambient light.
- Ten grease sensors per system (extendable).
- Operates as a "stand alone" system.
- Optional signal sent to Building Management System (BMS) via "volt free" contact closure.
- Authorized service agents can connect to system via laptop or PDA.
- Grease sensor assembly is listed for duct and hood penetration.

Halton's KGS Duct Safety & Monitoring System belongs to the Halton High Performance Kitchen concept. It verifies when cleaning is required by monitoring grease deposition and providing the operator with an indicator when this is necessary.

This system provides an objective method for determining cleaning intervals based on grease deposition levels consistent with NFPA-96 guidelines for cleaning or local regulations. The system also gives an indication whether the cleaning was done satisfactorily.

KGS is compatible with new or existing kitchens.

PATENT PENDING



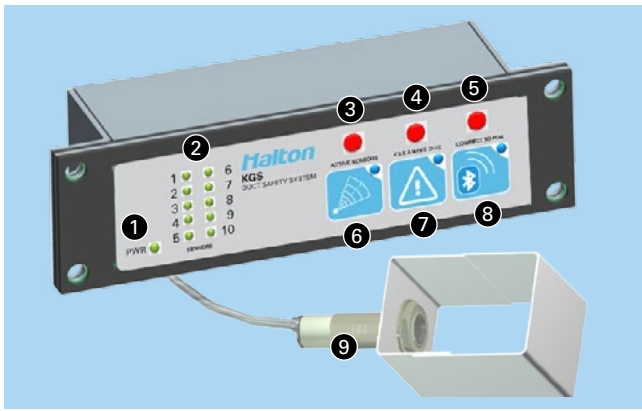
Operation and Description

Halton's Duct Safety System is a signalling device that monitors the grease deposition levels in all ductwork. Once the level of grease exceeds the NFPA-96 threshold or a local regulation requirement, an alarm is displayed on the user interface or a signal is sent to the Building Management System (BMS) via a "voltage free" contact closure. The operator is then alerted that the ductwork needs to be cleaned. Hence, fire safety and hygiene concerns are mitigated.

The system is based on the use of Grease Sensors, installed along the ductwork and inside the exhaust plenums of exhaust hoods which cover the heaviest cooking appliances. The innovative optical system which equips the sensors is able to determine the grease deposition level on the surface of the ductwork.

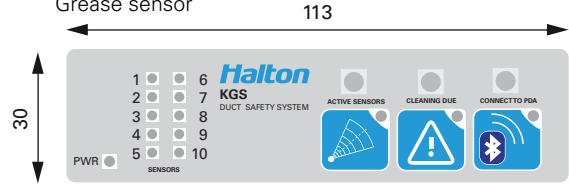
As soon as this level exceeds the system threshold, the user interface displays a visual alarm and shows which grease sensor(s) is concerned. Hence, it allows to execute the cleaning operations when it is really needed and not unnecessarily by schedule. Depending on the strategy applied before the installation of a KGS system (cleaning operations too frequent or not frequent enough), the kitchen manager benefits from money savings or from a total safe activity with minimum maintenance costs.

KGS DESCRIPTION



CODE DESCRIPTION

- 1 Power light (green LED)
- 2 Sensor lights (green LED)
- 3 "Active Sensor" alarm light (red LED)
- 4 "Cleaning Due" alarm light (red LED)
- 5 PDA connection light (red LED)
- 6 Active Sensor button
- 7 "Cleaning status" button
- 8 "Bluetooth port" button
- 9 Grease sensor



The controls of the KGS system are integrated inside a control panel. To simplify its installation, different models of control panels are available, completed by a remote display panel.



Master Control Panel with display

This control panel is stand-alone. It can handle up to 10 sensors. On its own, it is used ideally for kitchens, with a single cooking area. To simplify the wiring in complex or large kitchens, it can be combined with a slave control panel.



Slave Control Panel

The slave control panel is connected to the master control panel. It allows the splitting of the sensors installed on the ductwork into two groups (maximum 5 sensors each) to simplify the wiring, depending on the kitchen configuration.



Master Control Panel without display

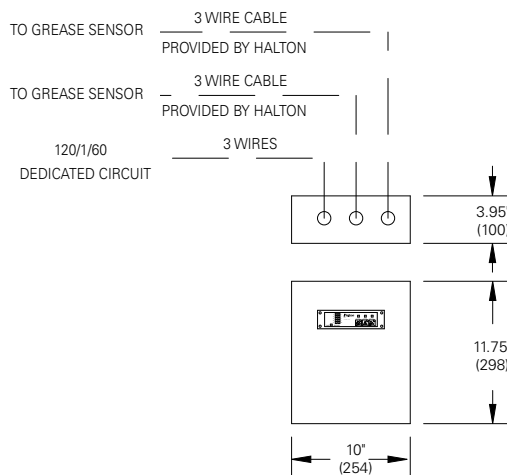
This control panel has to be combined with a remote display. It can handle up to 10 sensors. On its own, it is used ideally for kitchens with a single cooking area. To simplify the wiring in complex or big kitchens, it can be combined with a slave control panel.



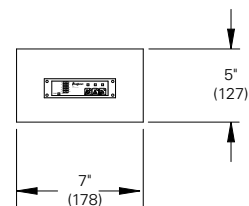
Remote display panel

This is used when the display needs to be in a remote location from the master control panel.

MASTER & SLAVE CONTROL PANEL

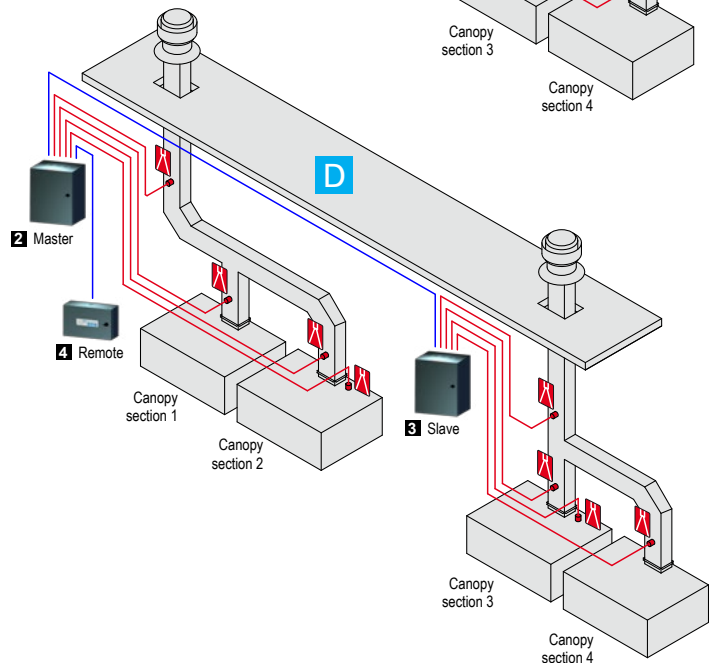
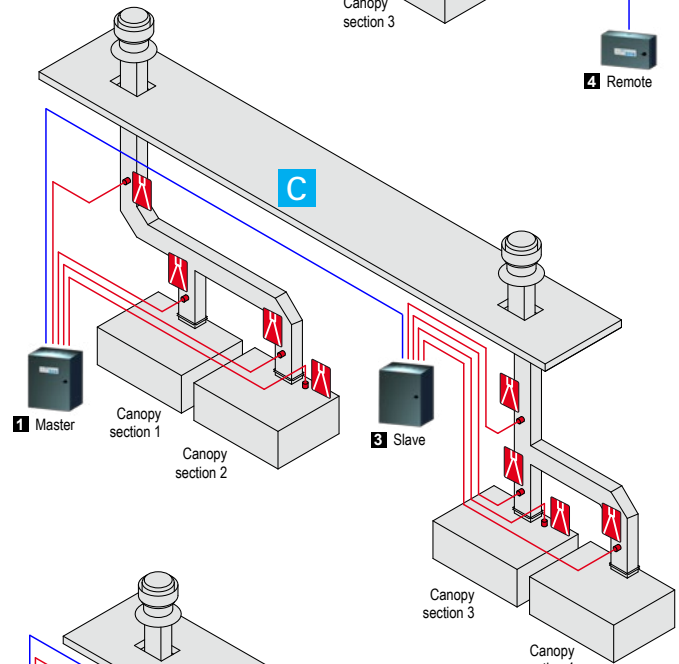
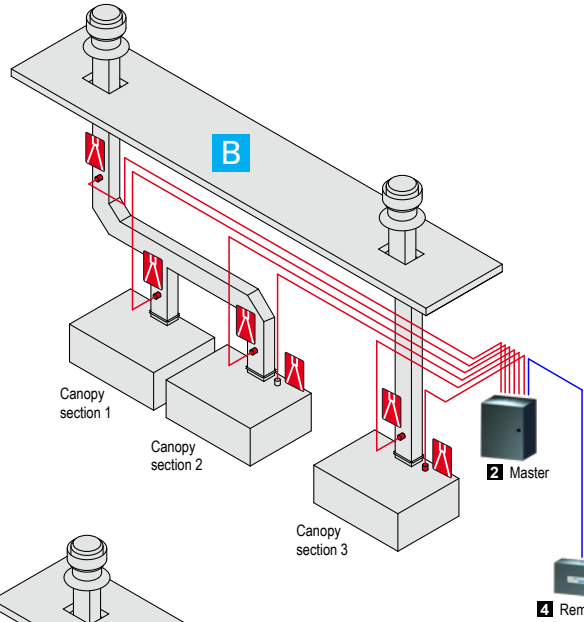
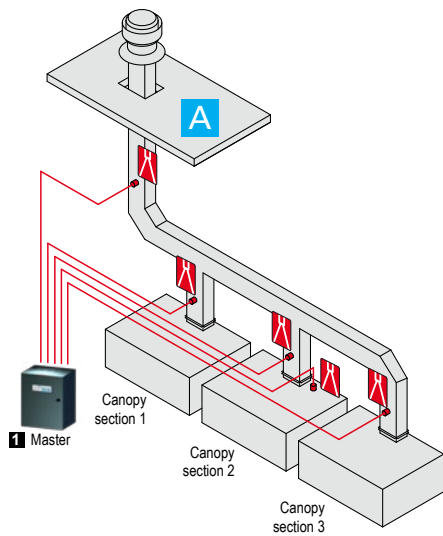


REMOTE DISPLAY PANEL










PATENT PENDING

KGS DESIGN PRINCIPLES



- A** One single area managed by one single Master Control Panel with display
- B** One single area managed by a Master Control Panel and a Remote Display Panel
- C** Two areas managed by one Master Control Panel combined with one Slave Control Panel
- D** Two areas managed by one Master Control Panel combined with one Slave Control Panel and a Remote Display Panel

-  **1** Master Control Panel with Display (requires a 120 V power supply)
-  **2** Master Control Panel without Display (requires a 120 V power supply)
-  **3** Slave Control Panel (requires a 120 V power supply)
-  **4** Remote Display Panel
-  Grease sensors
-  Sensors wiring
-  Panels and remote display wiring

PATENT PENDING

Suggested Specification

The cooking area of the kitchen and the exhaust plenums of the exhaust hood covering the heaviest cooking appliances shall be equipped with Halton's KGS system.

Halton's Duct Safety System (KGS) is a signalling device that monitors the grease deposition levels in all monitored ductwork. Once the level of grease exceeds the setpoint threshold an alarm is displayed on the system console alerting the operator that the ductwork has accumulated grease and should be cleaned.

The architecture of the system shall be based on the use of Master and Slave Control Panels and - if required - a remote display panel. If not required, one master control panel shall be equipped with the standard display as user interface of the system.

Optionally, a signal can be sent to the Building Management System (BMS) via a "volt free" contact closure.

Type: KGS Manufacturer: Halton

PATENT PENDING

The company has a policy of continuous product development, therefore we reserve the right to modify design and specifications without notice.

For more information, please contact your nearest Halton agency. To find it: www.halton.com