

## Hood Controller For Commercial Kitchen Exhaust and Supply

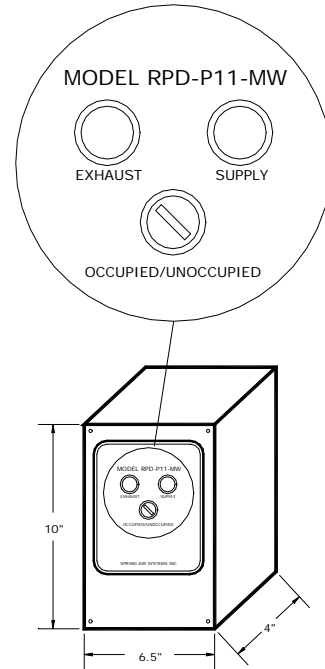
# RPD-P

### General

The RPD-P controller is used in conjunction with a Spring Air System commercial kitchen exhaust and/or supply system.

The RPD-P is CSA/UL certified UL listed, and housed in a stainless steel enclosure with a No.4-finish. The controller includes an Occupied/Unoccupied switch; interlocks to the fire suppression system, interlocks to the kitchen and dining room A/C units and power for a remote shunt trip. Options include:

- Exhaust fan(s) pilot light(s) and interlock(s) to the exhaust fan motor starter.
- Supply fan pilot light and interlock to the supply fan motor starter
- Interlock to supply fan motorized inlet damper.
- Summer/winter switch and interlock to supply fan gas fired heater
- Hood on/off light switch and interlock to the hood lights.
- Exhaust fan motor starter(s) and overload(s) shipped loose for field installation.
- Supply fan motor starter and overloads shipped loose for field installation.
- Interlocks for up to five (5) exhaust fans.
- 24-hour/7-day microprocessor clock.
- Interlock to the Building Management System
- Exhaust motor starter shipped loose with current transformer for interlock to a direct gas fired makeup air unit.
- Hood mounted controller.



RPD-P11-MW Shown above

### Panel Model Number

<b>RPD-P</b>	<b>1</b>	<b>1</b>	<b>M</b>	<b>W</b>	<b>SW</b>	<b>CT</b>	<b>LS</b>
RPD-P = Panels used with Spring Air supply units RPD-PA = panels for other supply unit fabricators							
Number of exhaust fans connected to panel (up to five (5) fans) 00 = One exhaust on/off switch and on canopy on/off switch 05 = One exhaust on/off switch 15 = One exhaust on/off switch and one pilot light							
Number of supply fans connected to panel (maximum one)							
M- Manual Panel A- Automatic Panel with 24 hour clock							
W- Wall mounted panel H - Hood mounted panel							
SW- Summer/winter switch option							
CT - Current transformer option							
LS- Light switch for hood lights							

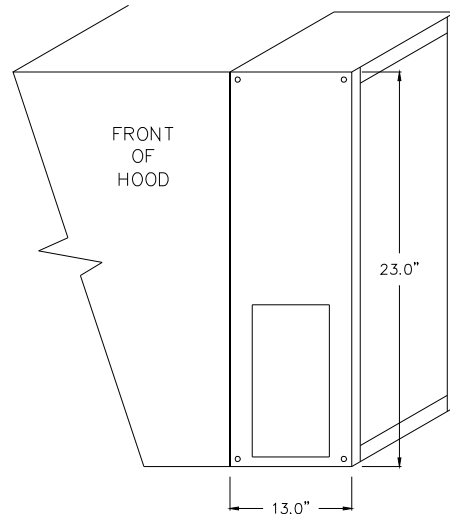
## Description of Typical RPD-P11-MH-SW-LS

The model RPD-P11-MH-SW-LS is shown at the right. The panel is mounted on the end of the hood, including the following options:

- Exhaust fan pilot light and interlock to exhaust fan motor starter
- Supply fan pilot light and interlock to the supply fan motor starter and interlock to the makeup air unit motorized inlet damper/
- Summer/winter switch and interlock to the makeup air burner
- Hood light switch and wiring to the hood lights.

## Operation of Typical RPD-P11-MH-SW-LS

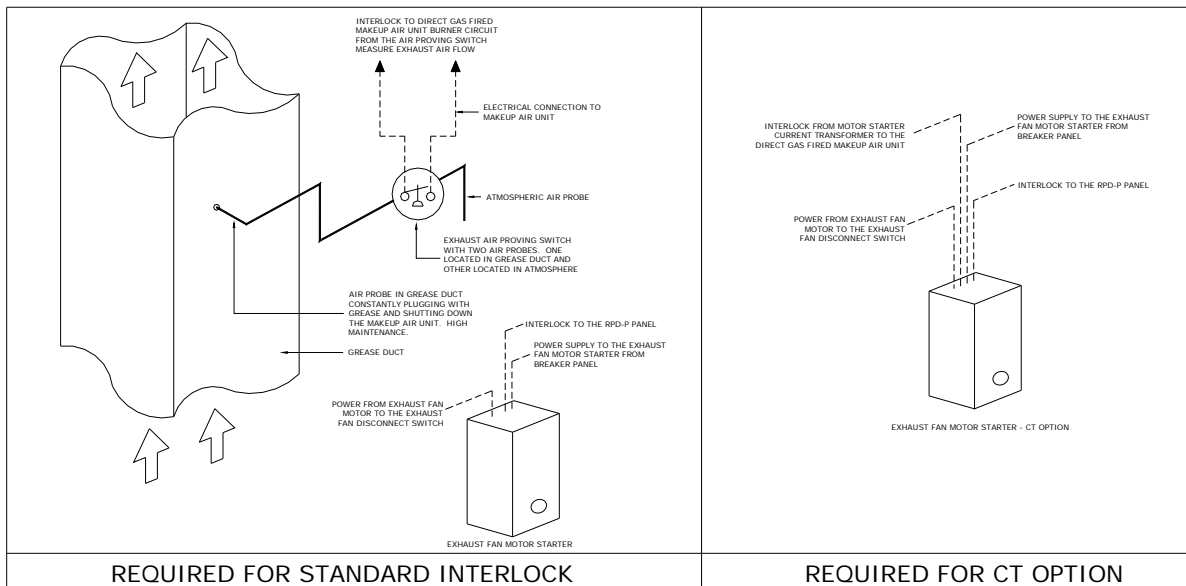
At the start of the cooking day the operator rotates the occupied/unoccupied switch to the occupied position. The exhaust fan starts operation and the exhaust pilot light activates. After about a one-minute time delay for the motorized inlet damper to open the supply fan starts operation and the supply pilot light activates. When the summer/winter switch is in the winter position the makeup air unit burner will automatically modulate the supply air discharge temperature to the setting in the makeup air unit. When the summer/winter switch is in the summer position the burner is de-activated and the (optional DX or Evaporative) cooling system is activated. At the end of the cooking day the operator rotates the occupied/unoccupied switch to the unoccupied position. The exhaust and supply fans stop. Rotating



the hood light switch to the on position turns on the hood lights.

In the event of the activation of the surface fire suppression system the supply fan is shut off and power is sent to the remote shunt trip. (The RPD-P panel must be wired to a normally open micro switch in the surface fire suppression system.)

## Why use the Current Transformer Option?



In most North American jurisdictions a direct gas fired makeup air unit must be interlocked with the commercial kitchen exhaust fan so that the burner will not operate unless the exhaust fan is running. In the past this interlock has been mechanical by using an air-proving switch with a pressure probe mounted directly in the exhaust air duct.

The pressure probe leading to the switch is prone to plugging with dirt and grease from within the exhaust duct and shutting down the systems. Not acceptable for most restaurant operations.

The CT system works electronically with a RIB relay by measuring the magnetic field surrounding the exhaust fan power wiring to not only determine if the exhaust fan is operating but that it is operating enough to provide adequate exhaust to ventilate the kitchen. There are no moving parts and nothing will come in contact with the kitchen grease within the exhaust duct. The systems will operate for years with little or no maintenance