



Uniflair™ SP Free-Cooling Damper Kit

Application Note

Installation of the free-cooling damper kit in a UCF unit will provide access to fresh, outside air to assist cooling the room when the outdoor air is below the cooling setpoint. This applies to both the UCF0341I unit and the UCF0481I unit.

This kit is only part of the fresh-air cooling system and must be accompanied by a customer-supplied overpressure-relief damper/system that has been sized properly for the inlet requirements of the computer room or telecom equipment space. Schneider Electric recommends that the exhaust/relief damper should be sized for all fresh air requirements of the space.

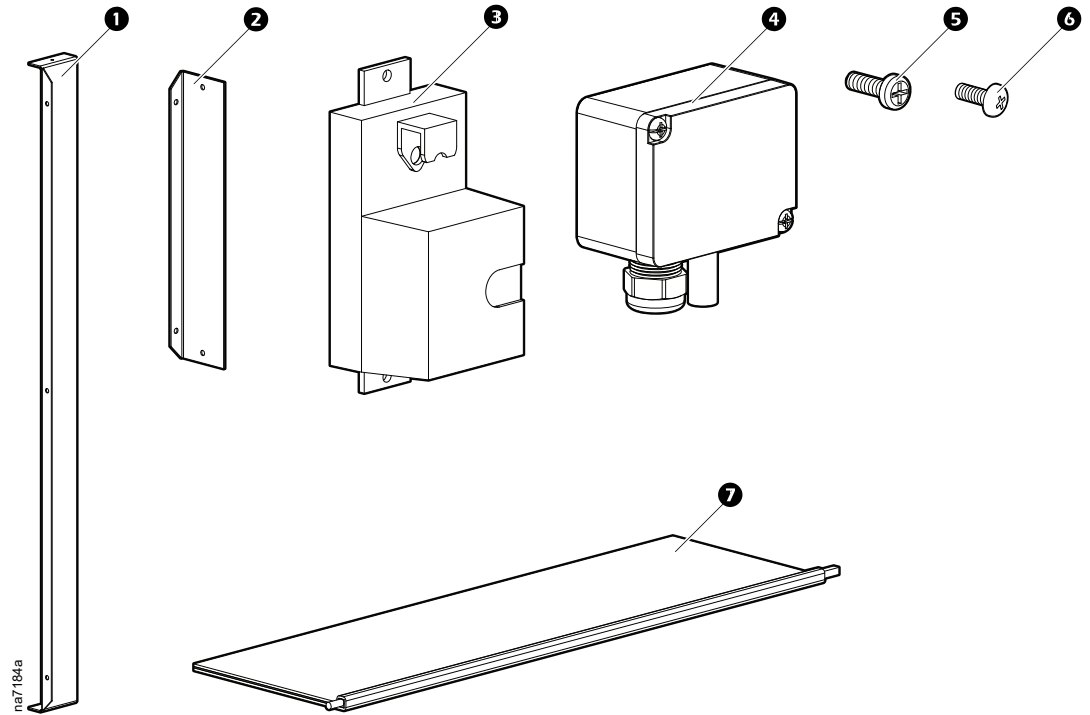
The maximum allowable inlet duct delta-P for the UCF units is 62.2 Pa (0.25 in. Wg) with a recommended value of 37.3 Pa (0.15 in. Wg) for the inlet systems. The system includes any and all items on the inlet duct system of the UCF units: rain-hoods, fresh-air filtration, exterior louvers, etc., and pressure drops should be based on the rated airflow rate of the applicable units.

NOTE: The airflow rates are 1699 m³/h (1000 CFM) for UCF0341I units and 3058 m³/h (1800 CFM) for the UCF0481I.

When grouping units in a single space, it is not necessary to install a free-cooling damper kit in all units unless the space requires it based on the application, which will determine how many units are required to have free-cooling capabilities. The group control understands which units have the free-cooling capability based on the unit controller configuration settings.

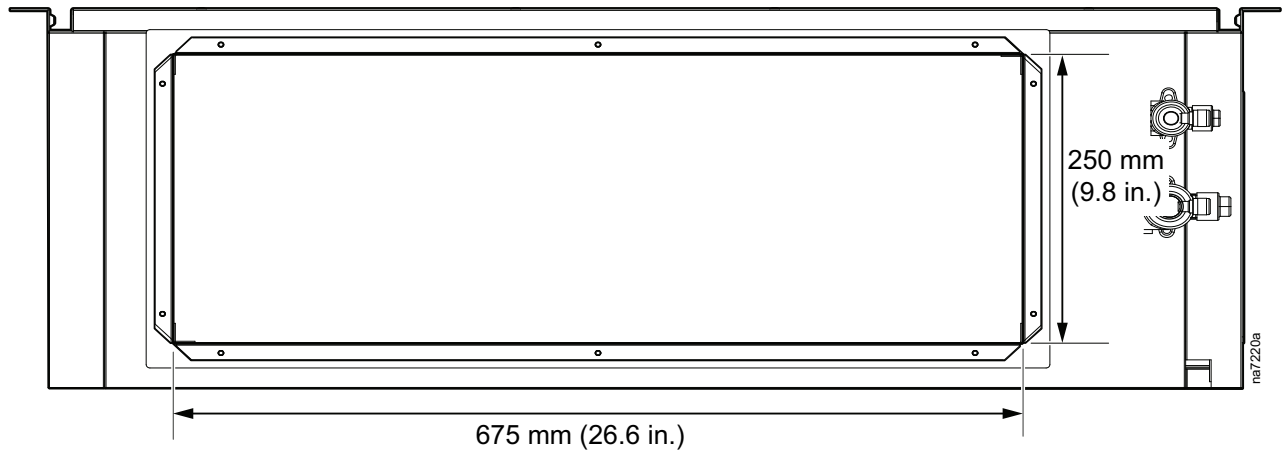
The free-cooling damper only provides the ability to use outdoor air to meet the specified setpoint temperature. It is not, and should not be interpreted as a smoke control or isolation device. These devices and any economizer sealing requirements must be customer supplied.

Inventory



Item	Description	Quantity
1	Duct adapter—long edge	2
2	Duct adapter—short edge	2
3	Actuator	1
4	Remote temperature and humidity sensor	1
5	M4, self-drilling screws	4
6	M4 x 10 pan head screws	3
7	Damper diverter	1

Dimensions

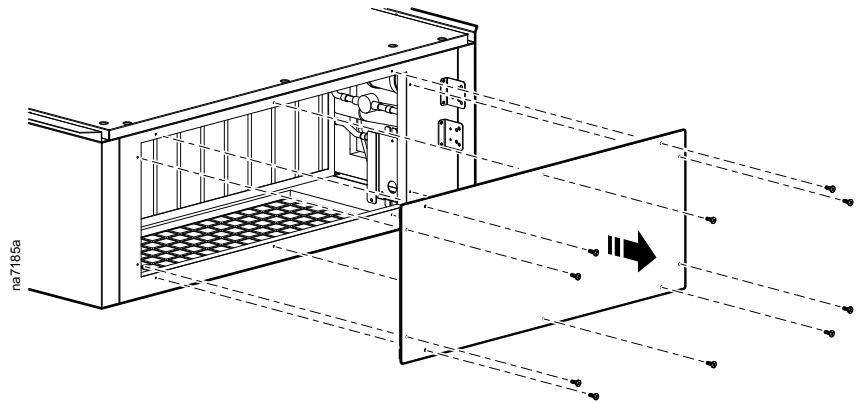


Installation

NOTE: Some components not shown for easier viewing.

1. Remove the damper connection cover panel from the rear of the unit.

NOTE: Keep the screws for use later in the installation process.



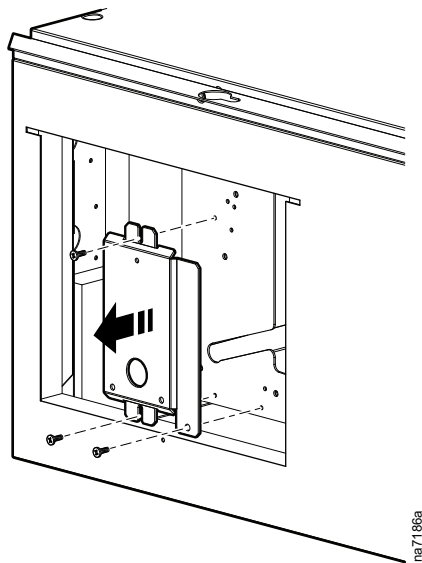
2. Remove the service access panel.



See the *Uniflair SP Installation Manual* for instructions on removing the panel.


3. Remove the actuator mounting bracket from the unit.

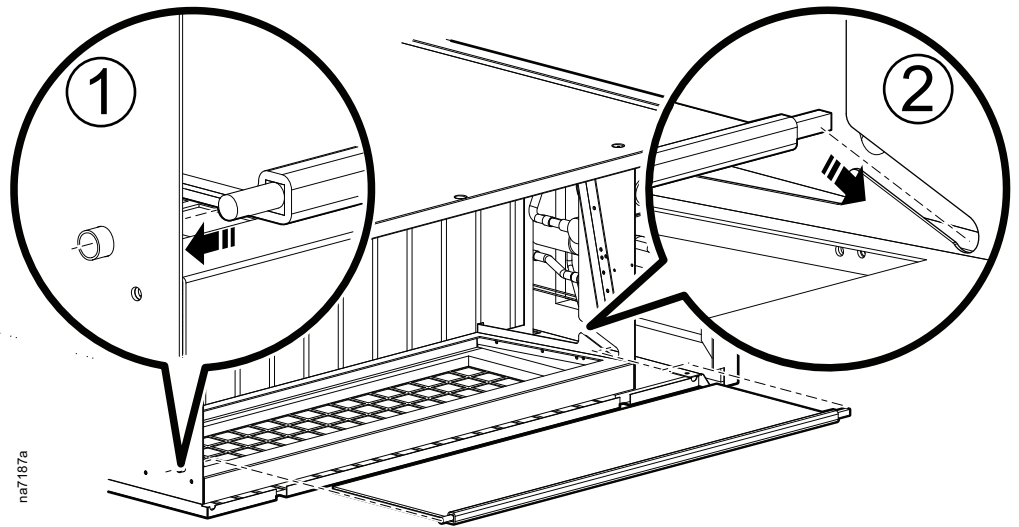
NOTE: Keep the bracket and screws for re-installation later.



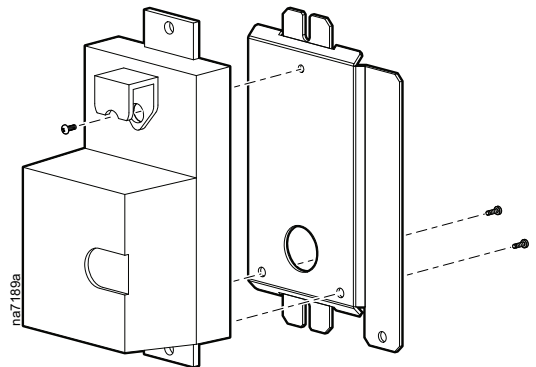
4. Insert the damper diverter into the unit through the rear or through the filter access panel opening.

NOTE: Some panels not shown for easier viewing.

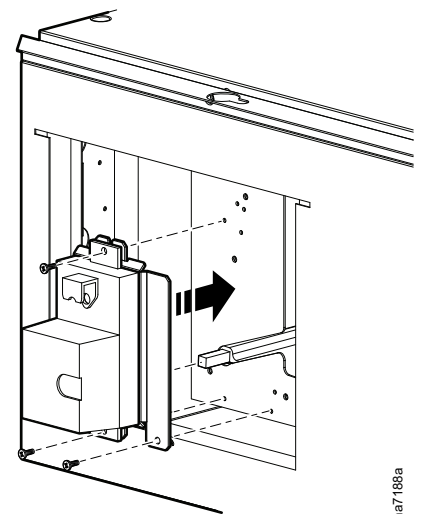
 See the "Panel Removal" section in the *Uniflair SP Installation Manual* for instructions on opening the filter access panel.



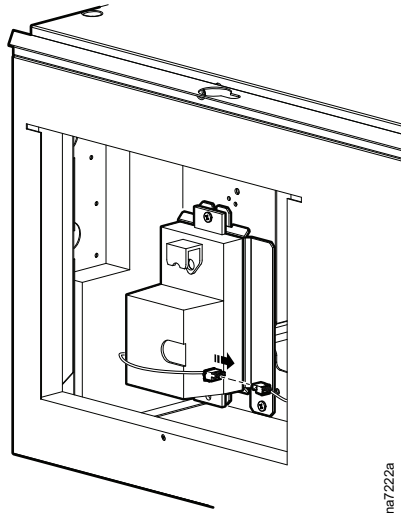
5. Attach the actuator to the bracket with the three M4 x 10 pan head screws.



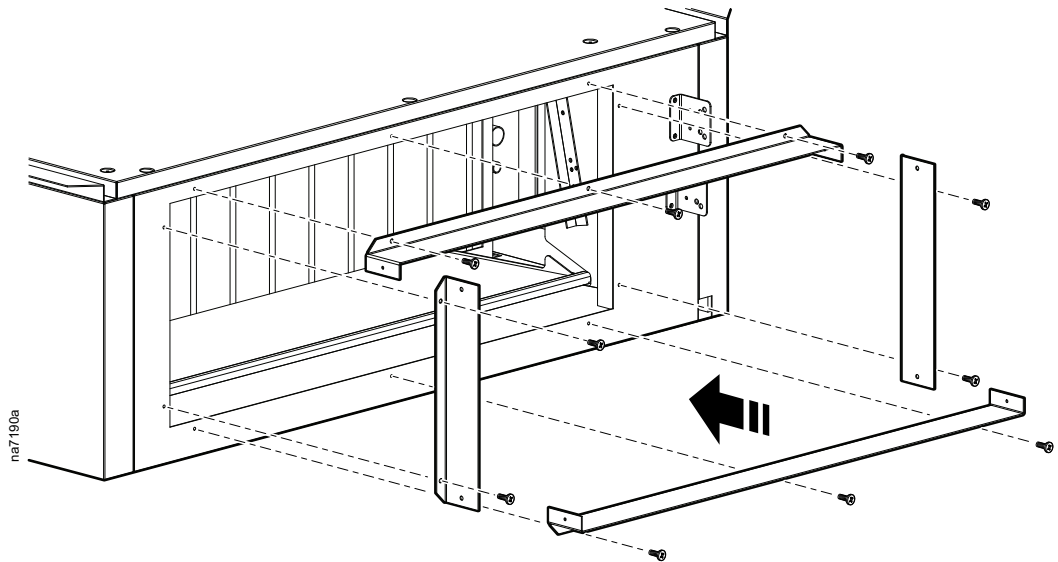
6. Re-install the bracket with the actuator inside the unit with the screws from step 3.



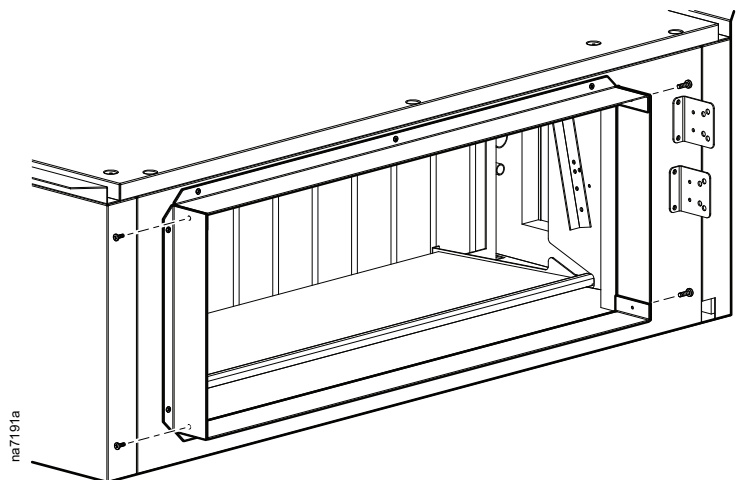
7. Connect the actuator wire to the connector provided inside the unit.



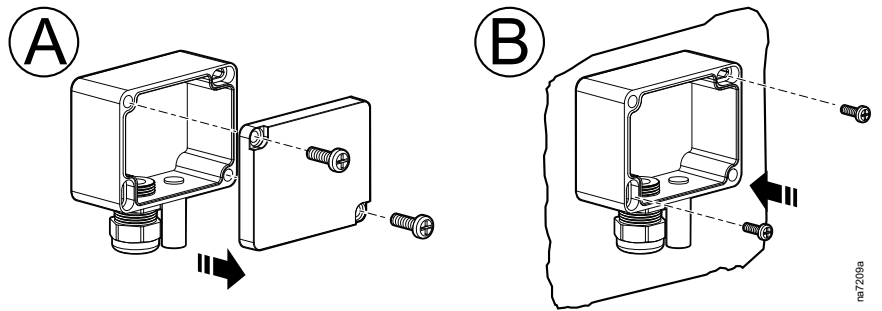
8. Attach the duct adapters to the rear of the unit with the screws saved from step 1.



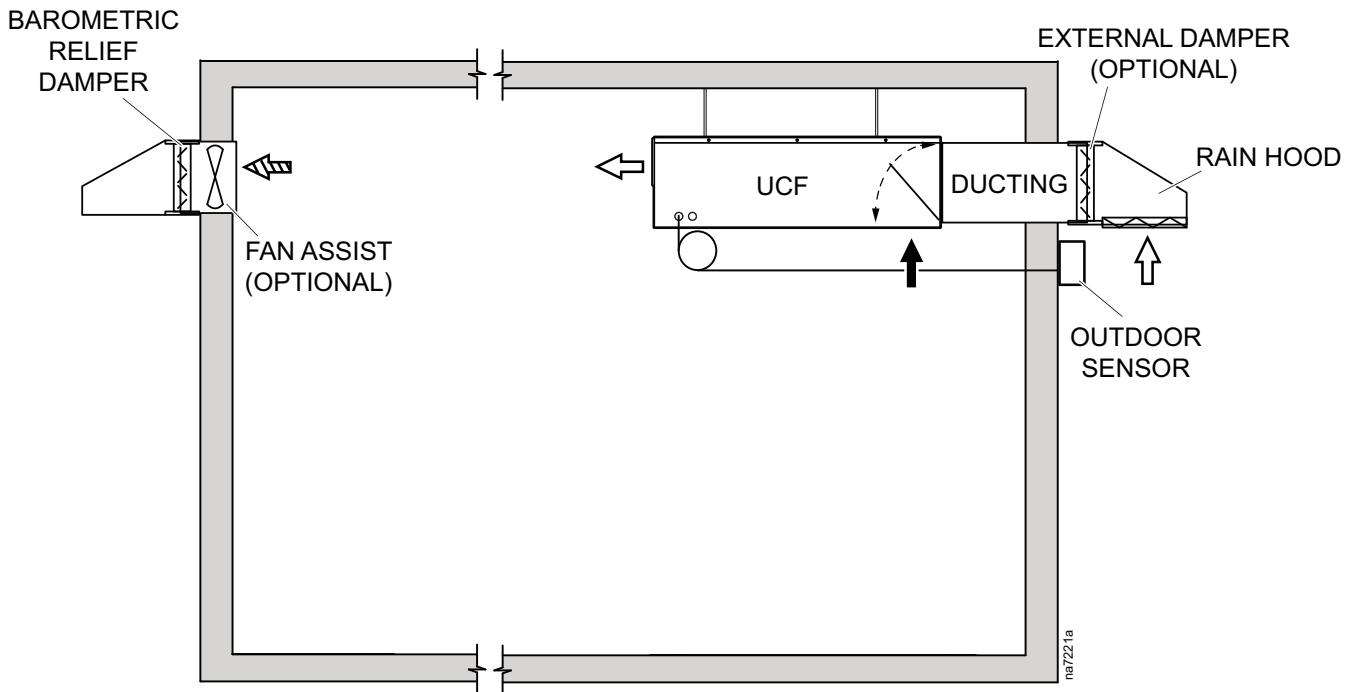
9. Connect the corners of the duct adapter pieces with the M4, self-drilling screws.



10. Install the remote temperature and humidity sensor.
 - a. Remove the cover of the sensor.
 - b. Use two field-supplied screws to mount the sensor to the selected location.



NOTE: Make sure the sensor is in a location with access to outdoor air. The below image shows an example of the application.



- c. Connect the wiring for the sensor to the cooling unit.



See the wiring diagram for wiring information.

- d. Replace the sensor cover.
11. Replace the service access panel and close any open panels.