

Case Study: SUPERMARKET APPLICATION

Supermarket Sees Overall Energy Savings, Solutions to Problems of Sweating Doors, Hot/Cold Areas, Severe Energy Loss, Customer Safety

Supermarket Challenges:

Our subject supermarket had three problem areas that are typical of most groceries:

- 1) refrigerated product areas;
- 2) sales check out area; and
- 3) receiving areas.

The problems resulted in numerous employee and customer comfort complaints.

Air-Row Fan Solutions:

The Air-Row fans now serve as the first step in the supermarket's air distribution system. Large air handlers (heating and cooling) come on only when there is a need for thermal change. They cycle off as soon as this thermal change is satisfied.

Refrigerated Product Areas

- Corrected the problem of fog and condensation on the refrigerated doors, making products more visible to customers.
- Reduced the build-up of water on floors underneath refrigerated doors, reducing the potential for accidents and improving customer safety.
- Water no longer builds up under the cases, eliminating concerns for mold build-up.

Sales Check-Out Areas

- Customers and employees no longer complain that check-out areas are warm and uncomfortable.
- The fans have successfully reduced the heat and humidity that comes with the continual open and closing of doors.
- Fans have kept the air circulating in the store, taking the trapped air from the ceiling and rotating it for more adequate air distribution.

Receiving Area and Stock Rooms

- Air-Row F-18 fans reduced the burn time on the natural gas heating and cooling units by 40-50%.
- Thermostats in the store were reset 3-5 degrees lower.
- Supermarket realized 9-15% energy savings.

From Our Customer:
We have space now to add a quote from a customer like we have on the other case studies. Let me know what you want here.



Air-Row F-18
For Open Ceilings



Air-Row F-18R (round)
For Open Ceilings

Statistical Results:

Air-Row Fan Location	Temperature & Temperature Difference					
	Before Air-Row			After Air-Row		
	Floor	Ceiling	Dif	Floor	Ceiling	Dif
Main Receiving Area	50	85	35	56	73	16
E. Stock Area at Sales Doors	52	67	15	61	64	3
Stock Room by Hot Water Tanks	58	78	20	67	74	7

Air-Row Fan Location	Temperature & Temperature Difference					
	Before Air-Row			After Air-Row		
	Floor	Ceiling	Dif	Floor	Ceiling	Dif
Main Receiving Area	61	75	14	67	73	6
East Receiving Area	51	62	11	63	65	2
East Stock Room	54	62	8	66	69	3
Rear Deli Sales Area	59	65	6	66	69	3
Glass Door Freezer Aisle #6	58	66	8	65	68	3
Glass Door Freezer Aisle #9	54	63	9	67	68	1
Check Out Exit Area	60	66	6	66	67	1

All temperature readings were taken at the fan inlet and at the floor impact area.