



# PSI, F.Y.I.

Engineering... Training... and YOU

### Headlines:

- NFPA 90A... Where Required
- NFPA 72... Means of Installation
- NFPA 72... Alarm or Supervisory
- NFPA 90A... Shut-Down
- NFPA2001... Clean Agent

## IN-DUCT SMOKE DETECTORS

### NFPA 90A... Where Required

**SUPPLY:** Any unit *greater than* 2000cfm.

**RETURN:** Any unit *greater than* 15,000cfm.

Downstream of air filters and ahead of any branch connections.

At each story prior to the connection to a common return and prior to any recirculation or fresh air inlet.

If you can't get ahead of any branch connections - you must have one provided in each branch .

Not required where the entire space is protected by area smoke detection.



In-Duct Smoke Detector

### NFPA 72... Means of Installation

Not a substitute for open area detection.

Detectors are installed more than 10'-0" A.F.F. or where the detector is not visible to responding personnel

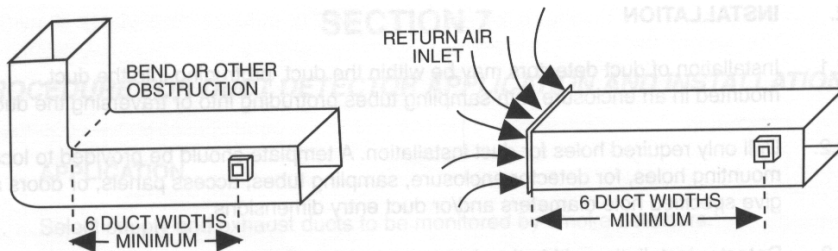
tor, remote indicators are **not** required.

Distance of a minimum of 6 duct-widths from a bend or other obstruction

Where acceptable to the AHJ - the detector is clearly announced at the FACP and annuncia-

Location of duct detectors shall be permanently and clearly identified and recorded

Remote Indicators: Where in duct smoke de-



### Upcoming Events!

- FASA Certification, Orlando, 13-14 May 2010
- Periodic Tests & Maintenance, Orlando, 17 May 2010
- Electrical Standards, Orlando, 11 June 2010
- PSI Alarm Training, S. Florida: 14-15 June 2010
- NICET Review, Orlando, 9 July 2010

## Today's

### References:

- **NFPA 90A, 2002ed.**  
6.4.2.1; 6.4.2.2
- **NFPA 72, 2007ed.**  
5.16.2.1; 5.16.5.8;  
5.16.5.9
- **System Sensor's Guide  
for Proper Use of Smoke  
Detectors in Duct Appli-  
cations**
- **NFPA 72, 2007ed.**  
6.16.5.3
- **NFPA 90A, 2002ed.**  
6.4.3.1
- **NFPA2001, 2004ed.**  
5.3.5; 5.3.5.1

## Alarm/ Supervisory & Fire Alarm Shut Down

NFPA 90A: In-duct smoke detectors shall automatically stop their respective fans.

In-Duct smoke detectors shall be connected to the building FACP.

Spot-type detectors protecting plenum returns in place of in-duct smoke detectors may initiate the required fan shutdown.

NFPA 72: In-duct smoke detectors can be ELTHER Alarm-Initiating OR Supervisory-Initiating

**PSI STANDARDS REQUIRE IN-DUCT  
SMOKE DETECTORS TO REPORT AS  
SUPERVISORY.**

## Duct Detectors & Clean Agent

### CLEAN AGENT

NFPA 2001: Forced air ventilation systems shall be shut down or closed automatically (dampers) where their continued operation would adversely affect the performance of the fire extinguishing system.

Completely self-contained recirculating ventilation systems (i.e. Liebert units) shall be

not required to be shut down.



CRAC Unit:  
Computer Room Air Conditioning

Protective Systems, Inc. places a high value on individual education. We are dedicated to providing ongoing training for our managers, designers, and technicians who are expected to maintain a minimum NICET II certification is fire alarm and/or fire special hazards.

As codes, applications and enforcements are continually changing, Protective Systems, Inc. feels it is important to highlight specific topics to provide clarification and encourage discussion.

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