STANDARDS UPDATE NOTICE (SUN)
ISSUED: August 10, 2022

STANDARD INFORMATION

Standard: UL 705
Standard ID: Power Ventilators [UL 705:2017 Ed.7+R:24Aug2021]
Previous Standard ID: Power Ventilators [UL 705:2017 Ed.7+R:30Aug2019]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **August 24, 2023**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard. Reports not updated to this version by the effective date above will be withdrawn.

Overview of Changes: Updating the Standard to Include Additional Requirements for Ventilator for Heat and Smoke Control. Specific details of new/revised requirements are found in table below.

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.

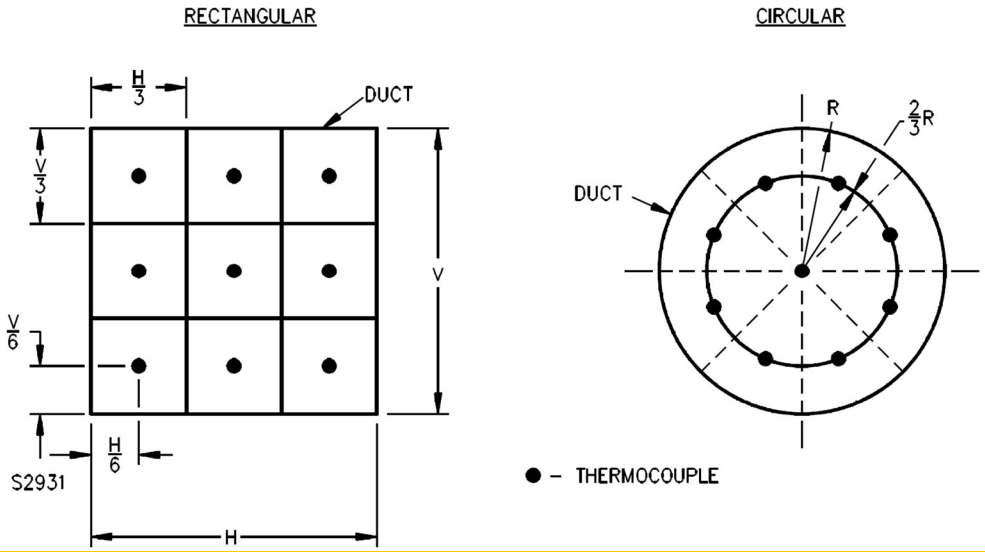
STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
Supplement SD		***New supplement added;*** **POWER VENTILATORS FOR SMOKE CONTROL SYSTEMS**
SD1		**Scope**
SD1.1		These requirements cover power ventilators for smoke control systems.
SD1.2		Power ventilators complying with this standard may be additionally tested for heat and smoke control systems. Ventilators shall be tested to a temperature and time rating specified by the ventilator manufacturer.
SD1.3		Power ventilators for smoke control systems for installation in building in accordance with Smoke-Control Systems Utilizing Barriers and Pressure Differences, ANSI/NFPA 92A, and Smoke Management Systems in Malls, Atria, and Large Space, ANSI/NFPA 92B.
SD1.4		The requirements in this Supplement are in addition to the requirements in Sections 1 – 36.
SD2		**General**
SD2.1		A component of a power ventilator shall comply with the requirements for that Component.
SD3		**Heat and Smoke Exhaust Test**
SD3.1		**Temperature measurement**
SD3.1.1		The inlet airstream temperature is to be determined by a thermocouple grid located 6 inches (0.15 meters) from the ventilator collar in a plane perpendicular to the air flow. The grid is made up of nine thermocouples of identical length wired in parallel. The duct is to be divided into nine equal areas with a thermocouple located in the center of each of the areas. The thermocouples are to be Type K as shown in Figure SD3.1.

CLAUSE	VERDICT	COMMENT

Thermocouple grid

Figure SD3.1



SD3.1.2	The ambient temperature shall be measured at a distance 2 feet (0.61 m) from the nearest part of the ventilator.
SD3.1.3	The temperatures obtained on any portion of the ventilator are for reference purposes only.
SD3.2	**Test Installation**
SD3.2.1	The sample shall be placed on a fixture representing the intended use and operation of the ventilator.
SD3.2.2	A representative sample of the style of ventilator to be installed in accordance with the manufacturer's instructions.
SD3.3	**Test Method**
SD3.3.1	A separate ventilator may be used for each temperature and time rating specified by the manufacturer.

Examples of temperature and time ratings

Table SD3.1

Temperature °F (°C)	Min Time
350 (177)	1 hour
500 (260)	2 hours
752 (400)	2 hours
1000 (538)	15 min
1112 (600)	1 hour

CLAUSE	VERDICT	COMMENT
SD3.3.2		The ventilator must operate at a range between 60 °F to 90 °F (16 °C to 33 °C) airstream temperature until thermal stabilization of motor, once thermal stabilization of motor occurs heat source turns on. Thermal stabilization of the motor windings is defined as three consecutive temperature readings taken at a minimum of 5-minute intervals that indicate no change.
SD3.3.3		The temperature rise must increase to the manufacturer's provided temperature within a minimum of 10-minute of the heat source being turned on.
SD3.4		**Requirements**
SD3.4.1		Parts of the ventilator shall not warp, deteriorate or become damaged to any extent that would cause unsafe operation or prevent the unit from operating. The unit under test must continue to run throughout the entire time specified by the manufacturer.
SD4		**Heat and Smoke Exhaust Damper Test**
SD4.1		Dampers that comply with the Standard for Automatically Operated Roof Vents for Smoke and Heat, UL 793 may be employed to be used on a power ventilator for smoke control.
SD4.2		Dampers that do not comply with Standard for Automatically Operated Roof Vents for Smoke and Heat, UL 793 that are utilized on the ventilator, will need to be tested per UL 793 Sections 1 to 18.