

STANDARD INFORMATION

Standard: NFPA 496

Standard ID:

Purged and Pressurized Enclosures for Electrical Equipment [NFPA 496:2023 Ed.2024]

Previous Standard ID:

Purged and Pressurized Enclosures for Electrical Equipment [NFPA 496:2020 Ed.2021]

Purged and Pressurized Enclosures for Electrical Equipment [NFPA 496:2016 Ed.2017]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **June 1, 2027**

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 Reports not updated to this version by the effective date above will be withdrawn.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:

2021 edition:

- Revisions to alarms on pressurizing systems
- Revisions to enclosures

2024 Edition:

- Revisions to Positive pressure air systems

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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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
		<i>Additions to existing requirements are <u>underlined</u> and deletions are shown lined-out below.</i>
		The following changes reflect the 2021 edition:
4	Info	General Requirements for Pressurized Enclosures
4.3		Enclosure
4.3.1		The protected enclosure, including windows <u>and other components through the enclosure walls that complete the enclosure</u> , shall be constructed of material that is not likely to be damaged under the conditions to which it might be subjected.
4.4		Pressurizing System
		<i>New clause added;</i>
4.4.5		If the pressurizing system is equipped with a bypass function, the bypass function shall have an alarm and shall require a tool, password, or similar protection to be actuated.
4.5	Info	Protective Gas System
		here applicable, electrical power for the protective gas supply source shall be supplied <u>by either of the following options:</u>
4.5.5		<u>(1) Power is supplied before any device provided to de-energize power to the protected enclosure upon failure of the protective gas supply to maintain positive pressure.</u> <u>(2) Power is supplied by a separate power source.</u>
4.9	Info	Type Z Pressurizing
		<i>New clause added;</i>
4.9.2.1		4.9.2.1 The protected enclosure shall be permitted to be equipped with an indicator where the isolation is done with a valve(s) that complies with the following: (1) The valve(s) is immediately adjacent to the protected enclosure. (2) The valve(s) is intended for use only during servicing of the protected enclosure. (3) The valve(s) is marked as required in 4.12.5.



CLAUSE	VERDICT	COMMENT
4.11	Info	Type X Pressurizing
		Except as permitted in 4.11.1.1, a device shall be provided to automatically de-energize all circuits and equipment within the protected enclosure that are not identified for Division 1 or Zone 1 upon failure of the protective gas supply to maintain positive pressure, <u>in accordance with the following:</u>
4.11.1		<u>(1) The device provided to de-energize power upon failure of the protective gas supply to maintain positive pressure shall be actuated by flow or pressure sensors.</u> <u>(2) The flow or pressure sensor shall be identified for the location in which it is installed.</u> <u>(3) No valves shall be permitted between the flow or pressure sensor and the protected enclosure.</u> <u>(4) The sensor shall take its signal from the protected enclosure and shall not be installed between the enclosure and the protective gas supply.</u>
		<i>New clause added;</i>
4.11.1.1		Power shall be permitted to be continued for a short period if immediate loss of power would result in a more hazardous condition, and if both audible and visual alarms are provided at a constantly attended location.
5	Info	Pressurized Enclosures for Class I, or Zone 1, or Zone 2
5.4	Info	Additional Requirements for Type Y or Type Z Pressurizing
		<i>New clause added;</i>
5.4.1.1		Motors, generators, and other rotating electric machinery shall not be energized until ten volumes of the protective gas have passed through the enclosure while maintaining an internal pressure of at least 25 Pa (0.1 in. of water).
7	Info	Pressurized Control Rooms
7.4	Info	Requirements for Positive Pressure Air Systems
		<i>New clause added;</i>
7.4.1.1		Doorways or other openings that are used solely for infrequent movement of equipment in or out of pressurized control rooms or analyzer rooms shall be permitted to remain closed where all of the following conditions are met: (1) The control room is under management control. (2) The doors are marked to restrict use. (3) The doors are not used for egress. (4) The doors are secured in the closed position.
		<i>New clause added;</i>
7.4.1.2		Gland or bulkhead plates or other similar covers that cannot be removed without the use of a key or tool shall be permitted to remain closed.



CLAUSE	VERDICT	COMMENT
		<i>New clause added;</i>
7.4.5.1		Power to the circuits shall be permitted to be continued for a short period of time if immediate loss of power would result in a more hazardous condition.
9	Info	Pressurized Analyzer Rooms Containing a Source of Flammable Gas, Vapor, or Liquid
9.3	Info	Specific Requirements
		<i>New clause added;</i>
		Automatic shutdown shall not be required under any of the following conditions:
9.3.8.1		<p>(1) The anticipated release is “none,” the analyzer room is unclassified, and the area outside the analyzer room is unclassified.</p> <p>(2) The anticipated release is “none,” the analyzer room is unclassified, and the area outside the analyzer room is classified Class I, Division 2 or Zone 2.</p> <p>(3) The anticipated release is “limited,” and the analyzer room is classified as Class I, Division 2 or Zone 2.</p> <p>(4) The analyzer room is classified as Class I, Division 1 or Zone 1.</p>
The following changes reflect the 2024 edition:		
7	Info	Pressurized Control Rooms
7.4	Info	Requirements for Positive Pressure Air Systems
		Doorways or other openings that are used solely for infrequent movement of equipment in or out of pressurized control rooms or analyzer rooms shall be permitted to remain closed where all of the following conditions are met:
7.4.11		<p>(1) The control room is under management control.</p> <p>(2) The doors are marked to restrict use.</p> <p>(3) The doors are not used for egress.</p> <p>(4) The doors are secured in the closed position.</p> <p>(5) <u>An airlock meets the following requirements:</u></p> <p style="padding-left: 20px;">(a) <u>Ignitable vapor hazards shall be addressed by one of the following:</u></p> <p style="padding-left: 40px;">i. <u>Ventilation with a continuous flow of clean air equivalent to at least 6 volumes of the airlock per hour</u></p> <p style="padding-left: 40px;">ii. <u>Gas detectors installed within the airlock arranged to alarm at 25 percent of the limiting value</u></p> <p style="padding-left: 20px;">(b)* <u>Each door of the airlock shall be fitted with a device to indicate when both doors are not closed.</u></p> <p style="padding-left: 20px;">(c) <u>All electrical equipment within the airlock shall be suitable for the hazardous area classification of the area without pressurization required external to the room.</u></p>



CLAUSE	VERDICT	COMMENT
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(d) Warning signs shall be viewable upon entry or egress that indicate that one door must be closed before the other is open.

(e) The airlock shall be marked with the following: "WARNING – Verify other door is closed before opening this door."
