



Imperial Brown's Walk-in and WA State Energy Code

This document covers the following codes:

2021 Washington State Energy Code, WAC [51-11C](#) (Commercial) 2nd Edition (Jan 2024) Sections C410.3 and 410.3.1

C410.3 & C410.3.1	Efficiency Regulation Requirements	Imperial Brown Walk-in Components
1	Automatic door-closers shall be provided that fully close walk-in doors that have been closed to within 1 inch (25 mm) of full closure. Exception: Automatic closers are not required for doors more than 45 inches (1143 mm) in width or more than 7 feet (2134 mm) in height	Door closers are a standard feature on our walk-ins
2	Doorways shall be provided with strip doors, curtains, spring-hinged doors or other method of minimizing infiltration when doors are open	Spring hinges are standard hardware on Imperial Brown walk-ins. Additional protection is available with option strip curtains or vinyl doors.
3	Walk-in coolers and refrigerated warehouse coolers shall be provided with wall, ceiling, and door insulation of not less than R-25 or have wall, ceiling and door assembly U-factors no greater than U-0.039. Walk-in freezers and refrigerated warehouse freezers shall be provided with wall, ceiling and door insulation of not less than R-32 or have wall, ceiling and door assembly U-factors no greater than U-0.030. Exception: Insulation is not required for glazed portions of doors or at structural members associated with the walls, ceiling or door frame.	Imperial Brown walk-ins use polyurethane foam and meet or exceed these requirements based on industry standard ASTM C-518 testing.
4	The floor of walk-in coolers shall be provided with floor insulation of not less than R-25 or have a floor assembly U-factor no greater than U-0.40. The floor of walk-in freezers shall be provided with floor insulation of not less than R-28 or have a floor assembly U-factor no greater than U-0.035. Exception: Insulation is not required in the floor of a walk-in cooler that is mounted directly on a slab on grade.	Imperial Brown walk-ins use polyurethane foam and meet or exceed these requirements based on industry standard ASTM C-518 testing.
5	Transparent fixed window and reach-in doors for walk-in freezers and windows in walk-in freezer doors shall be provided with triple-pane glass, with the interstitial spaces filled with inert gas or be provided with heat-reflective treated glass.	All glass reach-in doors and glass view windows supplied by Imperial Brown meet or exceed these requirements.

198 SE 223rd Ave., Gresham, OR 97030 – Phone: 503.665.5539 / 800.238.4093 – Fax: 503.665.2929

209 Long Meadow Dr., Salisbury, NC 28147 – Phone: 704.636.5131 / 800.438-2316

2115 W. Main St., Prague, OK 74864 – Phone: 405.567.1960 / 800.238.4093

www.imperial-brown.com

6	Transparent fixed window and reach-in doors for walk-in coolers and windows for walk-in coolers doors shall be provided with double-pane or triple-pane glass, with interstitial space filled with inert gas, or be provided with heat-reflective treated glass having the interstitial space gas filled.	All glass reach-in doors and glass view windows supplied by Imperial Brown meet or exceed these requirements.
7	Evaporator fan motors that are less than 1 hp (0.746 kW) and less than 460 volts shall be provided with electronically commutated motors, brushless direct-current motors, or 3-phase motors.	All evaporator fan motors are electronically commutated.
8	Condenser fan motors that are less than 1 hp (0.746 kW) shall use electronically commutated motors, permanent split capacitor-type motors or 3-phase motors.	Imperial Brown supplies EC or PSC motors as required. These high efficiency motors provide considerable energy savings by emitting less heat and use less electricity to start up.
9	Antisweat heaters that are not provided with antisweat heater controls shall have a total door rail, glass and frame heater power draw of not greater than 7.1 W/ft ² (76 W/m ²) of door opening for walk-in freezers and not greater than 3.0 W/ft ² (32 W/m ²) of door opening for walk-in coolers.	All door and window anti-sweat heaters draw less power than the maximum allowed without controllers. Anti-sweat controllers are not required on Imperial Brown walk-in coolers and freezers but are available as an option for additional energy savings.
10	Antisweat heater controls shall be capable of reducing the energy use of the antisweat heater as a function of the relative humidity in the air outside the door or to the condensation on the inner glass plane.	Not applicable.
11	Light sources have an efficacy of not less than 40 lumens per watt, including any ballast losses or shall be provided with a device that automatically turns the lights off within 15 minutes of when the walk-in cooler or walk-in freezer was last occupied.	LED lights are standard on Imperial Brown walk-ins. All interior lights have a light output higher than 40 lumens per watt. Timers and occupancy sensors to turn off lights are available for added energy savings.
C410.3.1(1) C410.3.1(2) C410.3.1(3)	Site-assembled and site-constructed walk-in coolers and walk-in freezers shall meet the requirements of Tables C410.3.1(1), (2), and (3)	Equipment supplied by IB meets all requirements of tables C410.3.1((1), (2), and (3) as documented by DOE approval listing for panels and doors. See DOE web site.

7/15/2025