



UTAH HVAC HOMEOWNER FIELD GUIDE · EDUCATIONAL USE ONLY

Utah HVAC Homeowner Field Guide

What the Inspector Checks & What the Code Also Requires — Full Edition

2021 IRC | 2021/2024 IMC | 2021/2024 IFGC | Utah-adopted energy code (2015 IECC + Utah amendments — verify the edition in force with your AHJ) | 2023 NEC | 2021/2024 IBC

Code changes effective July 1, 2026 per Utah HB 65 (verify final adopted values with your AHJ) · Revised edition, July 2026 · © 2026 Polar Breeze LLC · polarbreezeut.com

This guide describes what CORRECT, code-compliant installations look like. Compare what you see in your home against what the code requires. It is educational — not legal advice, and not a substitute for your local Authority Having Jurisdiction (AHJ), whose adopted amendments govern.

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SECTION 1 — Understanding the Four-Way Inspection

When a new home is built in Utah, the building department requires a **Four-Way Rough-In Inspection** before walls can be closed with drywall. This is the only time an inspector ever sees HVAC work in detail. Once drywall goes up, ductwork, venting, gas piping, and refrigerant lines are permanently hidden.

FRAMING	PLUMBING	MECHANICAL / HVAC	ELECTRICAL
Headers, hangers, nail patterns, fire blocking	DWV pressure test, water supply, cleanouts	Ducts, vents, gas lines, condensate, combustion air	Box fill, AFCI/GFCI, cable stapling

IMPORTANT: The HVAC inspector is present **ONCE** — at the four-way rough-in. After walls close, no inspector ever sees ductwork, gas piping, or venting again. The final inspection only checks visible items: thermostat, equipment model/serial, and filter access.

The Six Utah Code Books

Code Book	Edition	What It Governs for HVAC	After July 1, 2026
IRC	2021	Equipment access, clearances, duct construction, venting, gas appliances, condensate, dryer exhaust	No change
IMC	2021 → 2024	Combustion air, ducts, ventilation, exhaust, refrigerants	Upgrades to 2024
IFGC	2021 → 2024	Gas piping, gas venting, gas appliance installation	Upgrades to 2024
IECC (Utah-amended)	2015 + Utah amendments → 2024 + UT (verify with AHJ)	Duct insulation, duct leakage, blower door, energy compliance	2024 IECC + Utah overrides (verify with AHJ)

IBC	2021 → 2024	Shaft enclosures for refrigerant lines in multi-story construction	Upgrades to 2024
NEC	2023	Receptacle/disconnect at equipment, AFCI/GFCI, bonding	No change

Utah HB 65 (2026) updates IMC, IFGC, IBC, and IECC editions effective July 1, 2026. Items marked NEW are new requirements; CHG means an existing rule changed. Energy-code numbers in this guide come from the Utah amendments (Utah Code 15A-3-701) — **confirm the edition and final adopted values with your AHJ**, especially for permits pulled near the transition date.

SECTION 2 — What the Inspector ACTUALLY Checks at the Four-Way

There are 8 active inspection items for HVAC at the four-way. Each item below describes what a correct, code-compliant installation looks like.

Item 1 — Flex Duct: Length, Support, Stretch (IRC M1601 / IMC 603)

Checked: Flex duct must be fully extended — not compressed, coiled, or kinked — installed and supported per its listing (typically strapped every 4 ft with straps that do not pinch the insulation jacket). No sharp bends. **Flexible air connectors are limited to 14 ft (IMC 603.6.2);** listed flexible duct itself has no code length cap, but every extra foot and every kink costs airflow — keep runs short and straight. **Look for:** Every flex run smooth, straight, and held up by straps.

What correct looks like: flex ducts fully stretched and supported — no sags, no kinks.

Item 2 — Boot Sealing (IECC R403.3 / IRC M1601)

Checked: Every register boot sealed with mastic compound or UL 181-listed foil tape. No gap between boot flange and surrounding floor, wall, or ceiling. **Look for:** At every register, the metal boot flange should be sealed all the way around its perimeter. On the tape roll, the words **UL 181** or **UL 181A** must appear on the label — gray cloth duct tape is not code-rated for duct sealing (IECC R403.3 / IRC M1601.4.1).

What correct looks like: boot sealed to floor with mastic paste at all edges; UL 181A mark visible on any tape used.

Item 3 — B-Vent Clearances (IRC M1803 / IFGC G2427)

Checked: Minimum 1-inch clearance from the B-vent pipe to any combustible material along the entire run. Listed vent cap at the roof. Vent slopes continuously upward with no dips. **Look for:** Nothing combustible within 1 inch of the vent at any point along its entire length.

Item 4 — Bath Fan Must Exit Building (IRC M1507)

Checked: Bath exhaust duct terminates outside the building through a cap with a backdraft damper. Terminating into the attic is a code violation. **Look for:** Trace the bath fan duct to a visible exterior cap. If it ends inside attic insulation, that is a code violation.

Item 5 — Gas Pressure Test and Drip Leg / Sediment Trap (IFGC 406 / IFGC 408.4)

Checked — Gas pressure test: The IFGC minimum is a test at not less than 3 psig held for at least 10 minutes with no pressure drop (IFGC 406.4); **many Utah jurisdictions require the common local practice of 10 PSI for 15 minutes — follow your AHJ's requirement.** A readable gauge must be visible at inspection. **Look for:** If there is no gauge on the line at inspection, the test cannot be verified.

Checked — Sediment trap (drip leg): Required at EVERY gas appliance. All four elements must be present: (1) shutoff valve on the supply side, upstream of the tee; (2) tee fitting at the point where the gas line CHANGES DIRECTION toward the appliance; (3) capped nipple pointing STRAIGHT DOWN — this pocket traps sediment and moisture before it reaches the appliance valve; (4) gas exits upward from the tee into the appliance. **Look for:** At each gas appliance, find the tee with a capped nipple hanging straight down. A tee on a flat horizontal pipe with no change of direction is NOT a drip leg — it is a code violation. (IFGC 408.4 / G2419.4)

Item 6 — Condensate Secondary Overflow Protection (IRC M1411.3.1)

Checked (attic and above-finished-space units): Primary condensate drain with trap, plus secondary protection — either a secondary drain pan with a visible drain to exterior, or a float switch that shuts the system off automatically. **Look for:** An attic unit with only one drain line and no float switch fails.

Item 7 — Combustion Air Opening Sizing (IFGC G2407 / IMC 701)

Checked: The two-opening method places one opening within 12 inches of the ceiling and one within 12 inches of the floor. Required sizing depends on where the combustion air comes from. **Indoor method** (all combustion air drawn from inside the building): each opening must provide at least 1 square inch per 1,000 BTU/h of total appliance input, minimum 100 square inches each (IFGC G2407.5.3.1). **Outdoor method** (openings communicating directly with the outdoors or through vertical ducts): each opening must provide at least 1 square inch per 4,000 BTU/h of total appliance input (IFGC G2407.6.1). **Look for:** A solid door with no opening on any non-direct-vent appliance is a code violation.

Item 8 — Dryer Exhaust Material, Length, and Damper (IRC M1502)

Checked: Smooth-wall rigid metal in all concealed locations. Maximum 35 ft equivalent run. Exterior cap with working backdraft damper. Flexible transition duct at the dryer: UL 2158A listed, max 8 ft. **Look for:** Any corrugated foil flex duct inside a wall or ceiling is a code violation.

IMPORTANT: That is 8 active inspection items. Everything in Sections 3, 4, and 5 is Utah law — enforceable, required, and NOT on the four-way checklist.

SECTION 3 — What's NOT Checked: Equipment, Ducts & Return Air

Every item below is Utah law. None of it appears on the four-way checklist.

3A — Equipment Access, Clearances & Appliance Location (2021 IRC / 2023 NEC)

Code requires: Access opening minimum 22 inches wide by 30 inches long. Catwalk from hatch to unit above insulation. Service platform minimum 30 inches deep. Switch-controlled light. Standard outlet within 25 feet. IRC M1305.1.2 / NEC 210.63

Code requires: Any appliance with an open burner or ignitor in a garage must be elevated at least 18 inches above the finished garage floor — unless FVIR-certified. Must also be protected from vehicle damage. IRC M1307.3, M1307.3.1

Requirement	Code Section
[] Passageway to every appliance: at least 24 inches wide, clear of all obstructions.	IRC M1305.1
[] Working space: level, min. 30 inches deep × 30 inches wide in front of every appliance service panel.	IRC M1305.1
[] Switch-controlled light AND standard outlet at every furnace; outlet within 25 ft on same level.	IRC M1305.1.3.3 / NEC 210.63
[] Attic: access opening min. 22×30 inches. Catwalk above insulation. Service platform min. 30 inches deep.	IRC M1305.1.2
[] Crawl space: appliance suspended minimum 6 inches above grade.	IRC M1305.1.3.1
[] Garage: burners/ignitors elevated min. 18 inches above finished floor unless FVIR-certified.	IRC M1307.3
[] Garage: appliance protected from vehicle damage by bollard, curb, or barrier.	IRC M1307.3.1
[] Fuel-burning appliances prohibited in bedrooms, bathrooms, toilet rooms, or storage closets unless direct-vent.	IRC G2406.2 / IFGC 303.3
[] Clearances to combustibles per the appliance listing AND manufacturer installation instructions.	IRC M1402.2, M1306.1

3B — Duct Construction, Sizing & Materials (2021 IRC / 2021 IMC)

Code requires: Rigid metal ductwork supported at least every 10 feet. System sized per ACCA Manual D. Sheet metal joints overlap minimum 1 inch in the direction of airflow; fastened with at least 3 screws or rivets. IRC M1601 / IMC 603

Requirement	Code Section
[] Duct system sized per ACCA Manual D or equivalent. Documentation on site at rough-in.	IRC M1601.1 / IMC 603.2
[] Sheet metal joints: overlap min. 1 inch in direction of airflow; fastened with min. 3 screws or rivets.	IRC M1601.4.2
[] Rigid metal duct: supported at least every 10 feet per SMACNA standards.	IRC M1601.4.4
[] Underground ducts: approved for below-grade use. Uncoated metallic ducts encased in min. 2 inches of concrete.	IRC M1601.1.2 / IMC 603.8
[] Building cavities must NOT be used as SUPPLY ducts. Stud-wall and solid-joist cavities may serve as RETURN air paths ONLY under the strict conditions of the code: return use only, materials meeting IRC Table M1601.1.1, isolation from adjacent cavities, not part of a fire-resistance-rated assembly, stud cavities limited to one floor — and nothing combustible (cardboard, Romex, PEX, debris) in the airstream. An install that fails any of those conditions fails the code.	IRC M1601.1.1 item 7
[] Vibration isolators between equipment and rigid ductwork: max 10 inches in length.	IRC M1601.2
[] Duct penetrations through fire-rated assemblies must be fireblocked.	IRC M1601.4.5 / R302.11

3C — Duct Insulation R-Values (Utah-Amended IECC)

The residential attic supply-duct insulation minimum is R-8 (R-6 for ducts smaller than 3 inches, and R-6 in other unconditioned spaces) under IECC/IRC R403.3.1 — the same values Utah has adopted. There is no separate R-12 base requirement for these residential attic ducts.

Utah duct insulation minimums: Attic ducts 3 inches or larger: R-8 minimum · Attic ducts smaller than 3 inches: R-6 minimum · Other unconditioned spaces, 3 inches or larger: R-6 · Other unconditioned spaces, smaller than 3 inches: R-4.2 · Underground ducts: R-10. **Look for:** The product label on the wrap should show the R-value. Wrap that compresses flat between two fingers is likely under-rated. Utah Code 15A-3-701 / IECC R403.3.1

Requirement	Code Section
[] Attic ducts 3 inches or larger: R-8 minimum. Attic ducts smaller than 3 inches: R-6 minimum.	Utah Code 15A-3-701
[] Other unconditioned spaces: R-6 for 3 inches or larger; R-4.2 for smaller.	Utah Code 15A-3-701
[] Underground ducts: R-10 minimum with below-grade rated insulation product.	Utah Code 15A-3-701 / IECC R403.3.1
[] Duct insulation must NOT be compressed or displace other required insulation.	IECC R403.3.7
[] All supply and return register boots sealed with mastic, foam, or UL 181-listed tape.	IECC Table R402.4.1.1

3D — Duct Leakage Testing (Utah-Amended IECC)

IMPORTANT: A signed duct leakage test affidavit MUST be on site at rough-in. No affidavit means the test was not done — that is a code violation.

Duct-leakage limit — the practical read: allowed duct leakage is 4–6 CFM25 per 100 sq ft depending on jurisdiction — verify with your city's building department when it's involved.

Background (underlying amendment drafts — confirm final values with your AHJ): the base 2021 IECC limit is 4 CFM25 per 100 sq ft with the air handler installed (3 when it is not); current Utah amendment drafts relax this toward 6 CFM25 (5 without the air handler) and propose exempting systems with all HVAC and ductwork inside conditioned space. Those draft numbers are the endpoints of the range above — not separate rules to apply on their own.

3E — Return Air Requirements (2021 IRC)

Requirement	Code Section
[] Return air openings must be at least 10 feet from any fuel-burning appliance firebox or draft hood in the same space.	IRC M1602.2 item 1

☐ Return air CANNOT be drawn from: closets, bathrooms, kitchens, garages, boiler rooms, furnace rooms, unconditioned attics, or another unit.	IRC M1602.2 item 4
☐ Return air volume from any room cannot exceed the supply air volume delivered to that same room.	IRC M1602.2 item 2

SECTION 4 — What's NOT Checked: Gas Piping, Venting & Combustion Air

All items below are Utah law. None are on the four-way checklist beyond the 8 checked items in Section 2.

4A — CSST Bonding (IFGC 310.1.1 / IRC G2411.1.1)

IMPORTANT: CSST bonding is one of the most commonly skipped life-safety requirements we find in Utah residential HVAC. There are no exceptions.

Code requires: All CSST — yellow or black jacketed — must have a dedicated bond wire connecting the CSST to the electrical grounding system. This prevents a lightning strike from creating an arc that burns through the pipe. **Look for:** Find the CSST in the home. A metal bonding clamp and copper wire must be clamped to the pipe and run to the electrical panel ground. No clamp and wire is a code violation.

4B — Gas Shutoff Valves (IFGC G2420.5)

Code requires: Every gas appliance must have its own dedicated shutoff valve in the same room, within 6 feet, accessible without moving any component. **Look for:** At the furnace, water heater, fireplace, and range, locate the individual shutoff. If you cannot reach it without moving the appliance, it fails. IFGC G2420.5.1–3

4C — Gas Venting Terminal Setbacks (2021 IRC / 2021 IFGC)

Code requires: Direct-vent terminals minimum 12 inches from any door, window, or gravity air inlet. Power-vent terminals not within 10 feet of property line; at least 7 feet above any public walkway. Not within 3 feet of an interior corner. **Look for:** Measure from the PVC termination pipes to the nearest window, door, corner, and any gas or electric meter. All minimums must be met at the same time. IRC M1804.2.6 / IFGC G2427.3.3

Requirement	Code Section
☐ B-vent clearances to combustibles: minimum 1 inch along the entire run.	IRC M1803.3.4 / M1306.1
☐ Single-wall vent connectors CANNOT penetrate a wall, floor, or ceiling without a listed pass-through fitting.	IRC M1803.3.1 / IFGC G2427.7.7
☐ Power-vented terminals: NOT within 10 ft of property line; at least 7 ft above any public walkway.	IRC M1804.2.6 / IFGC G2427.3.3
☐ Vent terminals: NOT within 3 ft of an interior corner formed by two perpendicular walls.	IRC M1804.2.6
☐ Vent terminals: NOT directly above or within 3 ft of a gas meter, oil tank vent, or electric meter.	IRC M1804.2.6 item 5
☐ Direct-vent: minimum 12 inches from any door, window, or gravity air inlet.	IRC M1804.2.6
☐ Gas vent heights above the roof per IFGC Table G2427.6.4 — varies by diameter and roof pitch.	IFGC G2427.6.3
☐ Insulation shields on vents through attics: 26-gauge galvanized sleeve, min. 2 inches above insulation level.	IFGC G2426.4
☐ Common vent for two appliances: total area equals largest connector plus 50% of the smaller flue outlet.	IFGC G2427.10.3.4
☐ Venting systems shall NOT pass through any air duct or furnace plenum.	IFGC G2427.3.4
☐ Vent systems supported throughout their entire run per manufacturer listing.	IRC M1801.7

4D — Combustion Air Requirements (2021 IFGC / 2021 IMC)

Requirement	Code Section
☐ Minimum 3-inch diameter for any combustion air duct.	IFGC G2407.6
☐ One-opening method: 1 sq. in. per 3,000 BTU/h total input; opening within 12 inches of ceiling.	IFGC G2407.6.2

[] Indoor confined space: minimum 50 cubic feet per 1,000 BTU/h of ALL appliances combined.	IFGC G2407.5.1
[] Two-opening method: one within 12" of ceiling, one within 12" of floor; min. 1 sq. in. per 1,000 BTU/h; min. 100 sq. in. each.	IFGC G2407.5.3.1
[] Combustion air ducts terminating in the attic shall NOT be screened.	IFGC G2407.11 item 5
[] Outdoor combustion air openings: screened with corrosion-resistant mesh, minimum 1/4-inch opening size.	IFGC G2407.10
[] Dampened combustion air: must interlock with the appliance firing cycle. Manual dampers are prohibited.	IMC 701.2
[] Combustion air must NOT be taken from hazardous locations or below the design flood elevation.	IMC 701.6

4E — Condensate — All Locations (2021 IRC)

The four-way only checks attic units. These requirements apply to ALL air handlers and evaporator coils in all locations.

Code requires: Condensate drain minimum 3/4-inch diameter, sloped minimum 1/8 inch per foot continuously, with no sags or flat runs. Secondary protection required at ANY location where a drain backup could damage structural components or finishes. IRC M1411.3, M1411.3.1

Requirement	Code Section
[] Condensate drain: min. 3/4-inch diameter; sloped min. 1/8 inch per foot continuously; no sags or flat runs.	IRC M1411.3, M1411.3.2
[] Condensate pump in uninhabitable space: must shut down the appliance automatically if pump fails.	IRC M1411.4
[] Secondary drain protection required at ANY location where overflow would damage structural components or finishes.	IRC M1411.3.1.1–4
[] Condensate must NOT discharge to a public street, alley, or in any manner that creates a nuisance.	IRC M1411.3
[] Evaporative cooling units connected to potable water: must have a listed backflow prevention assembly.	IRC M1413.1

4F — Whole-House Mechanical Ventilation (2021 IMC / Utah IECC)

Requirement	Code Section
[] If the building envelope meets IECC air leakage requirements, whole-house mechanical ventilation is MANDATORY.	IMC 401.2
[] Bathroom exhaust: minimum 50 CFM intermittent or 20 CFM continuous. Kitchen: minimum 100 CFM.	IRC M1505.4 / Table M1505.4.4
[] Range hoods over 400 CFM require makeup air supplied at approximately the same rate.	IRC M1503.6
[] Each exhaust system must be independent — no shared exhaust between different systems.	IMC 502.1.1
[] Air handler used for whole-house ventilation must be powered by an ECM motor.	IECC R403.6.2 / Utah amendment
[] Ventilation fans must meet Utah fan efficacy minimums shown in Section 6 of this guide.	Utah Code 15A-3-701 / IECC R403.6

4G — Additional Gas Piping Requirements (2021 IFGC)

Requirement	Code Section
[] All unused gas outlets must be capped gas-tight with a listed cap.	IFGC 404.15
[] Gas piping support: rigid metallic pipe every 6 feet; CSST every 4 feet.	IFGC Table 415.1
[] Flexible connectors: maximum 6 feet in length; one connector per appliance.	IRC G2422.1.2.4
[] Gas piping systems: designed/operated per code pressure limits — NG systems inside residences are limited to 5 psig except where higher pressure is specifically approved (LP: per code). Verify design pressure with the AHJ.	IFGC 402.6
[] Drip legs must be accessible — not buried in walls without an approved access panel.	IFGC 408.4
[] NEW (July 1, 2026): Abandoned gas piping must be purged before being capped in place.	2024 IFGC 406.7.3.1

☐ NEW (July 1, 2026): Gas leak detection must use a LISTED combustible gas detector as the primary method.	2024 IFGC 406.5.1
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SECTION 5 — What's NOT Checked: Appliances, Refrigerant Lines & Energy Docs

All items below are required by Utah law. None appear on the four-way checklist.

5A — Refrigerant Lines (2021 IRC / 2021 IMC)

IMPORTANT: Under the federal EPA AIM Act, new residential systems must use low-GWP A2L refrigerants — the installation cutoff for new R-410A residential systems was **January 1, 2026** (equipment manufacture cutoff January 1, 2025). Utah's July 1, 2026 code update adds the 2024 IMC A2L installation rules (charge limits, shaft ventilation). Refrigerant line requirements matter more than ever.

Code requires: The suction/vapor line (the larger line) must be insulated to a minimum R-4 with a vapor permeance of 0.05 perm or less. All access ports must have locking tamper-resistant caps. In multi-story homes, lines through two or more floor or ceiling assemblies must be inside a fire-rated shaft. IRC M1411.6, M1411.9 / IMC 1109

Requirement	Code Section
☐ Suction/vapor line: insulated to min. R-4; vapor permeance 0.05 perm or less.	IRC M1411.6
☐ All refrigerant circuit access ports: locking-type tamper-resistant caps installed.	IRC M1411.9
☐ Refrigerant piping through two or more floor/ceiling assemblies: must run in a fire-rated shaft.	IMC 1109.2.5 / IBC 713
☐ Refrigerant line sets penetrating fire-rated assemblies: listed firestop systems required.	IMC 1109 / IBC 714
☐ R-410A cannot be installed in new residential systems — federal EPA AIM Act, effective January 1, 2026. (Utah's 2024 IMC Ch. 11 adoption on July 1, 2026 adds the A2L installation rules.)	EPA AIM Act / 2024 IMC Ch. 11
☐ NEW (July 1, 2026): Maximum A2L refrigerant charge per circuit per 2024 IMC Table 1103.1.	2024 IMC 1103
☐ NEW (July 1, 2026): Multi-story A2L refrigerant shaft must be naturally or mechanically ventilated.	2024 IMC 1109.3.2

5B — Energy Compliance Documentation (Utah IECC / 2021 IRC)

IMPORTANT: Energy compliance documents must be ON SITE at rough-in inspection. Without them, there is no way to verify HVAC sizing or energy code compliance.

Code requires: A Manual J heating and cooling load calculation must be completed and on site. Equipment sizing must match. A Manual S equipment selection document is also required. **Look for:** Before drywall goes up, ask for the Manual J and Manual S. If the contractor cannot produce both, sizing compliance cannot be verified. IECC R403.7 / ACCA Manual J

Requirement	Code Section
☐ Manual J load calculation: completed, documented, on site at rough-in. Sizing must match.	IECC R403.7 / ACCA Manual J
☐ CHG (July 1, 2026): Manual J must be prepared by an ACCA-trained individual or licensed contractor with certification.	Utah IECC R403.7.1
☐ Manual S equipment selection: confirms equipment matches Manual J loads. Must be on site.	IRC M1401.3 / ACCA Manual S
☐ HVAC equipment SEER, AFUE, and HSPF efficiency ratings must be documented on energy compliance forms.	IECC R103.2
☐ Blower door test: max 5.0 ACH50 (current Utah value). After July 1, 2026: max 4.0 ACH50 as drafted — TIGHTER (CHG; confirm with AHJ).	Utah Code 15A-3-701 / IECC R402.4.1.3
☐ Continuous air barrier at all envelope transitions: top plates, rim joists, and all penetrations.	IECC R402.4.1.1

5C — Dryer Exhaust Additional Requirements (2021 IRC)

Code requires: The flexible transition duct at the dryer must be UL 2158A listed and no longer than 8 feet, and must NOT be concealed inside construction. Any concealed dryer duct must be rigid smooth-wall metal only. Dryer exhaust must never share a duct with any other system. IRC M1502.4.3

Requirement	Code Section
[] Transition duct at dryer: UL 2158A listed; max 8 feet; NOT concealed inside construction.	IRC M1502.4.3
[] If screws fasten dryer duct joints, screw tips may protrude no more than 1/8 inch into the duct interior.	IRC M1502.4.2
[] Dryer duct within 1-1/4 inches of framing: 0.062-inch steel shield plate, min. 2 inches beyond each framing member.	IRC M1502.5
[] Gas dryer connectors: max 6 feet; one connector per appliance; shutoff valve immediately upstream.	IRC G2422.1.2.1, G2422.1.2.4
[] Dryer exhaust: dedicated independent system — cannot share a duct with any other system.	IRC M1502.2
[] CHG (July 1, 2026): Dryer exhaust termination setbacks updated — verify with 2024 IMC 504.	2024 IMC 504

5D — Fireplaces, Gas Fireplaces & Wall Furnaces (2021 IRC / 2021 IFGC)

Requirement	Code Section
[] Factory-built fireplaces: listed per ASTM E2558. Hearth extension per the fireplace listing document.	IRC R1004.1, R1004.2
[] Chimney shrouds at termination: must be listed for use with that specific chimney system.	IRC R1004.3, R1005.2
[] Decorative gas logs in a solid-fuel fireplace: shutoff valve in same room, within 6 ft, accessible.	IFGC G2432.1 / G2420.5
[] Vented gas fireplace appliances: listed per ANSI Z21.50/CSA 2.22.	IFGC 604.1
[] Vented wall furnaces: listed per ANSI Z21.86/CSA 2.32; door swing must leave min. 12 inches from air inlet.	IFGC 608
[] All appliances listed by an approved testing agency. Installation must follow listing AND manufacturer instructions.	IMC 301.1 / IRC M1302.1
[] High-efficiency Category IV condensing furnaces: stainless steel or listed plastic vent material only.	IMC 803 / IRC M1801

5E — Range Hood / Kitchen Exhaust (2021 IRC)

Requirement	Code Section
[] Range hood must terminate outside the building with a backdraft damper; independent of all other exhaust.	IRC M1503.3
[] Range hood duct material: galvanized steel, stainless steel, or copper with a smooth interior surface.	IRC M1503.2.1
[] Gas cooking appliance minimum vertical clearance to combustibles: 30 inches, or per manufacturer label.	IRC M1901.1 / IFGC G2447.5

SECTION 6 — Code Changes Effective July 1, 2026 (Utah HB 65)

Utah HB 65 (2026) updates IMC, IFGC, IBC, and IECC to their 2024 editions. The 2021 IRC and 2023 NEC remain unchanged.

Hedge: rows marked (CHG)/(NEW) reflect the Utah amendments as drafted at publication. Confirm final adopted values with your AHJ — especially the duct-leakage relaxation, blower-door tightening, and ERI values.

Area	Before July 1, 2026	Effective July 1, 2026	Code Reference
Duct insulation	R-8 attic / R-6 other	R-8 attic / R-6 other — SAME (no change under HB 65). Matches the IECC/IRC R403.3.1 baseline.	Utah Code 15A-3-701 / IECC R403.3.1
Duct leakage with air handler	Max 4 CFM / 100 sq. ft.	Max 6 CFM / 100 sq. ft. — relaxation as drafted (CHG; confirm with AHJ)	IECC R403.3.3 + UT
Duct leakage without air handler	Max 3 CFM / 100 sq. ft.	Max 5 CFM / 100 sq. ft. — relaxation as drafted (CHG; confirm with AHJ)	IECC R403.3.3 + UT
Duct test exemption	No exemption	NEW: All HVAC and ducts inside conditioned space — no test required (as drafted; confirm with AHJ)	Utah amendment
Blower door	5.0 ACH50 (Utah)	4.0 ACH50 — TIGHTER (CHG; confirm with AHJ)	IECC R402.4.1.3 + UT

Refrigerants	R-410A install cutoff already in force (federal EPA AIM Act, Jan 1, 2026)	2024 IMC Ch. 11 A2L installation rules adopted in Utah (NEW)	EPA AIM Act / 2024 IMC Ch. 11
A2L charge limits	No specific limit	Maximum charge per circuit per 2024 IMC Table 1103.1 (NEW)	2024 IMC 1103
A2L shaft ventilation	Not required	Multi-story A2L refrigerant shaft must be ventilated (NEW)	2024 IMC 1109.3.2
Fan efficacy	Prior Utah Table	New Utah Table R403.6.2 applies. ECM motor required for whole-house ventilation air handler. (CHG)	Utah Code 15A-3-701
Load calc qualification	No requirement	Manual J must be prepared by ACCA-trained individual or licensed contractor with certification. (CHG)	Utah IECC R403.7.1
ERI compliance path	CZ-5: 55 / CZ-6: 54	CZ-5: 69 / CZ-6: 68 — as drafted (CHG; confirm with AHJ)	Utah IECC R406.5
Abandoned gas piping	No purge requirement	Must be purged before being capped in place (NEW)	2024 IFGC 406.7.3.1
Gas leak detection	Any method allowed	Must use a LISTED combustible gas detector as the primary method (NEW)	2024 IFGC 406.5.1
Dryer exhaust setbacks	Per 2021 IMC 504	Setback distances updated — verify against 2024 IMC 504 (CHG)	2024 IMC 504

Utah Fan Efficacy Table — Effective July 1, 2026 (Utah Code 15A-3-701)

Fan Type	Min CFM	Min Efficacy (CFM/Watt)	Max CFM
HRV or ERV — any location	Any	1.2	Any
Range hood — any location	Any	2.8	Any
In-line fan — any location	Any	2.8	Any
Bathroom or utility room — low flow	10	1.4	90
Bathroom or utility room — high flow	90	2.8	Any

Exception: An air handler that is integral to listed HVAC equipment and used for whole-house ventilation must be powered by an ECM motor.

SECTION 7 — How to Use This Guide: Exact Words for Every Situation

Use this section before and during the four-way inspection, and any time you need to push back on a contractor, inspector, or builder.

Situation	What to Do	What to Say
Inspector at the four-way	Walk the site with Section 2. Watch which items are checked versus skipped.	"I would like to walk through this inspection with you. I have the code requirements right here."
Inspector passes something you question	Write it down. Take photos. Reference the exact code section.	"The code for this is [Section]. Can you confirm this passes and note it on the inspection report?"
Contractor says something is not required	Ask the contractor to show you in writing where the exception applies.	"I have the code section right here. Can you show me the specific exception that applies to this installation?"
Builder says house passed inspection, everything is fine	Explain the four-way is a spot-check of 8 items, not a full code review.	"Passing the four-way confirms 8 items were visually reviewed. The full HVAC code has over 40 enforceable requirements. Can we walk through the checklist?"
Duct leakage test affidavit missing	Ask for it before drywall. No affidavit means the test was not done.	"Can I see the duct leakage test affidavit? IECC R403.3.3 requires it to be on site at rough-in."
Problem found after walls close	Document it. Contact the building department in writing with the specific code section.	"I am filing a complaint with the building department. The specific violation is [code section]: [description]."
CSST bonding missing	Point to the yellow corrugated pipe. This is a life-safety issue.	"IFGC 310.1.1 requires a bond wire from the electrical panel ground to all CSST. I do not see this installed."

Drip leg installed wrong	Point to the tee fitting. Show Section 2 Item 5 in this guide.	"The drip leg must be where the gas line changes direction — capped nipple straight down, gas exits up. A tee on a flat horizontal pipe is not a drip leg."
Refrigerant suction line not insulated	Point to the bare pipe.	"IRC M1411.6 requires the suction line to be insulated to R-4 minimum. This line has no insulation."
No Manual J or Manual S on site	Ask for it before drywall closes.	"IECC R403.7 requires the Manual J to be on site at rough-in. Can you provide it now?"

Utah Building Department and Code Authority Contacts

Salt Lake County (unincorporated): msd.utah.gov	Utah Div. of Professional Licensing: dopl.utah.gov
Summit County: summitcountyutah.gov	Utah Energy Code: utahenergycode.com
Davis County: daviscountyutah.gov	Utah Community Development: codev.utah.gov
Millcreek Building: millcreekut.gov	Utah Building Commission: bcb.utah.gov

IMPORTANT: An inspection pass does NOT equal full code compliance. The four-way is a spot-check of 8 items out of more than 40 enforceable HVAC requirements in Utah law. This guide is your tool to make sure the work was done right.

About Polar Breeze

Polar Breeze LLC is an HVAC forensics, design, and consulting firm based in Orem, Utah. We do the work — service, installation, design, consults, second opinions — and teach while doing it: **measurement drives the diagnosis, never the sale.** On audits and second opinions our judgment is independent — findings never bend toward whoever pays. Built on 30 years of HVAC field experience (Texas and Utah).

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Sources: 2021 IRC | 2021/2024 IMC | 2021/2024 IFGC | Utah-adopted IECC + Utah Code 15A-3-701 | 2023 NEC | 2021/2024 IBC | Utah HB 65 (2026) | utahenergycode.com | Compiled May 2026, revised July 2026 | For educational and informational use only. Always confirm with your local Authority Having Jurisdiction (AHJ). This text edition omits the photographs of the original illustrated edition; descriptions of correct installations are retained.