

Airzone Plan & Spec Guide (NA)

VAF - Easyzone S62 - Aidoo

A practical 4-page reference to help engineers pre-specify Airzone solutions in mechanical drawings (capabilities, limitations, and best practices).

Version 1.2 | March 26, 2026

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Note: This guide applies to Airzone solutions in North America only and is valid for the VAF, Easyzone S62, and Aidoo systems described herein. Ensure system selection and installation comply with local codes and project requirements.

Prologue

The three Airzone solution families available in North America are:

- **VAF:** Modular zoning system (up to 10 zones). Controls motorized dampers and zone modules. Each zone can operate with air only, supplemental heating only (baseboard, radiant, etc.), or combined air and supplemental heating.
- **Easyzone S62:** Motorized plenum zoning system (3–6 zones, depending on plenum configuration). Compact and fast-to-specify duct zoning solution; no supplemental heating control.
- **Aidoo:** Interface for standalone indoor units. Does not control dampers or perform zoning. Provides full integration and control via Airzone Cloud, BMS, or third-party thermostat integrations (model-dependent).

System selection at a glance

Solution	Best fit for	System scope	Zoning / Units	Notes
VAF	Full-featured duct zoning; modular designs; air + supplemental heating projects.	Zoned ducted unit and/or individual indoor units	Up to 10 zones	Can control a zoned ducted unit (loose dampers) and individual indoor units via dedicated modules. Not compatible with electric duct heaters. Optional supplemental heating relay module (1 per 5 supplemental heating zones).
Easyzone S62	Compact duct zoning with motorized plenum.	Zoned ducted unit with plenum	3 to 6 zones	Motorized plenum solution. Specify collar + gateway + plenum body. No supplemental heating control.
Aidoo	Standalone units requiring integration or remote control.	Individual indoor units	1 indoor unit per device	Select model by application (Pro WiFi / Pro Fan Coil / Pro STI / Pro HUB). Other variants (KNX / Zigbee / Z-Wave) selected by protocol. Feature set is model-dependent.

System notes & design rules

VAF

- Main control board: One VAF main board is required per system. Select the reference that matches your zoned ducted indoor unit and communication gateway. Check the compatibility tool or send email to projects_na@airzonecontrol.com. For systems without a zoned ducted unit (only controlling individual indoor units), use ref. AZVAFCB2.
- Zones: Up to 10 zones per system; all elements connect via the Airzone bus (wired or wireless).
- Controlled elements: Zone Dampers (ZD), Zone Modules (ZMO), Supplemental heating Zone Modules (RZM), optional auxiliary heat outputs.
- Airflow balancing: Manual adjustment available at each damper for both minimum-air strategies and maximum-air settings.
- Multi-element projects: Multiple elements can be linked to a single thermostat: Zone Dampers (ZD) / Supplemental heating Zones (RZM) function as slave elements within the same zone, and Zone Modules (ZMO) can be associated to a single thermostat when one zone represents several indoor units.
- Supplemental heating option: AZVAF5OUTPUTS provides dry contacts for up to 5 heating elements (add second module for zones 6–10; max 2 modules/system). Enables supplemental heating control in addition to existing air zoning; a zone can be controlled as air + supplemental heating or supplemental heating-only from a single thermostat.
- Thermostats: Airzone wired or wireless. One thermostat must be Master (recommended: 1x wired Blueface per system).
- Thermostat distance limits: up to 131 ft (40 m) for wired thermostats and 49 ft (15 m) for wireless thermostats between the thermostat and its zone module.
- Power supply planning: Add external 12 V supply (AZX6POWER) if more than 6 Blueface thermostats.
- Remote/distributed sensing: Any module can support a temperature probe (NTC 10 kΩ, 32–95 °F range, similar to our sensor, ref. AZX6SONDPROTECT). Using a probe disables humidity reading/control for that zone.

Easyzone S62

- Integrated motorized plenum: Main control board + damper outputs; outlet dampers available in either 6 in (150 mm) or 8 in (200 mm) only.
- Zones: Supports 3–6 zones depending on plenum size (S/M/L).
- Supported units: Available for horizontal ducted units (collar to outlet) as well as multiposition and vertical AHUs (collar to duct).

- Specification & reference selection: Use the Easyzone Selection Tool to select the correct references. If your indoor unit is not listed, contact projects_na@airzonecontrol.com to verify compatibility and add it to the database.
- Airflow balancing: Manual adjustment available at each outlet for both minimum-air strategies and maximum-air settings.
- Thermostats: One wired Blueface is required per system; additional zones may use Airzone wired or wireless thermostats.
- Thermostat distance limits: up to 40 m (131 ft) for wired thermostats and 15 m (49 ft) for wireless thermostats between the thermostat and the control board.

Aidoo

- Rule: Specify one Aidoo per standalone indoor unit (no zoning or dampers).
- Blueface compatibility: Supported on Aidoo Pro variants (Pro WiFi / Pro Fan Coil / Pro HUB).
- Aidoo Pro Fan Coil: Supports remote temperature probe input (AI1).
- Aidoo Pro HUB: Can be paired with a wired Blueface and expands integration options.
- Aidoo Pro STI: Integrates third-party smart thermostats via 3PTI (W/Y/G) and uses the same 24 Vac supply as the thermostat.
- Aidoo KNX / Zigbee / Z-Wave: Communication-specific variants for direct integration.

Remote connectivity, BMS integration, and wiring essentials

- Webserver HUB (AZX6WSPHUB): Recommended for VAF and Easyzone systems. Enables Airzone Cloud remote control, system configuration, integrations, and remote technical support/troubleshooting. Supports up to 32 systems per HUB and provides BACnet (IP & MS/TP), Modbus, Lutron gateway, and Local API integration.
- Airzone bus cable: use the Airzone shielded twisted-pair 4-wire bus cable (2x24 AWG communication + 2x20 AWG power). References: AZX6CBLBUS300FT (330ft – 100m); AZX6CBLBUS050FT (50ft – 15m).
- Routing: Keep the bus cable separated from mains power conductors. Avoid running in parallel or within the same conduit.

Drawing and schedule guidelines

Naming logic

The identification scheme follows a System → Zone → Item hierarchy to ensure consistency between drawings, schedules, and commissioning.

- System number: The first digit identifies the system number.
- Zone number: The second digit identifies the zone within that system.
- Item number: The last digit identifies the specific item associated with that zone and system.

A zone may be served by one or multiple items (e.g., several dampers or modules linked to the same thermostat), depending on the design.

- Zone ID: AZ [System].[Zone] (example: AZ 1.3). Zone names shall match in plans and schedules.
- Thermostat ID: T [System].[Zone] (example: T 1.3). Thermostat numbering shall be consistent with the associated Zone ID.
- Item IDs: [CODE] [System].[Zone].[Item] (example: ZD 1.3.1). Use .2, .3, etc when multiple items serve the same zone.

Item ID codes

- VAF: ZD (Zone Damper), ZMO (Individual Zone Module), RZM (Supplemental Heating Zone Module), AID (Aidoo), T (Thermostat).
- Easyzone S62: EZ (Easyzone system/plenum), AID (Aidoo), T (Thermostat).

Remarks (use consistently)

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| <ol style="list-style-type: none"> 1. WIRED THERMOSTAT. 2. WIRELESS THERMOSTAT. 3. TEMPERATURE PROBE. 4. MASTER THERMOSTAT. 5. DAMPER ACCESS PANEL REQUIRED. 6. MINIMUM AIR (A-M) DAMPER LEVER MUST BE MANUALLY SET TO POSITION C OR D IN THIS ZONE. 7. MULTIPLE DAMPERS/MODULES SERVING THIS ZONE. 8. WEBSERVER HUB (AZX6WSPHUB). ONE HUB CAN MANAGE UP TO 32 SYSTEMS. ENABLES REMOTE CONTROL VIA AIRZONE CLOUD, INTEGRATION OPTIONS, AND REMOTE TECHNICAL SUPPORT / TROUBLESHOOTING. | <ol style="list-style-type: none"> 9. AIDOO DEVICE FOR STANDALONE UNIT (GATEWAY). IT OPERATES INDEPENDENTLY FROM THE MAIN SYSTEM. ALLOCATE SYSTEM 0 FOR THESE DEVICES. NOT COMPATIBLE WITH REMARKS 11 AND 12. 10. INDIVIDUAL ZONE MODULE FOR STANDALONE UNIT (GATEWAY). * 11. HOT-WATER SUPPLEMENTAL HEATING PRESENT IN THIS ZONE. * 12. ELECTRIC SUPPLEMENTAL HEATING PRESENT IN THIS ZONE. * |
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**Only available in VAF systems.*

General considerations

- Use a fine line to link each damper or module to the thermostat or sensor controlling it.
- When a thermostat controls multiple dampers or modules, use multiple linking lines.
- Access: Specify access panels for plenums, dampers, and control modules.
- Schedule coordination: System and zone identifiers shall be consistent with the HVAC equipment schedule, and the indoor unit serving each system or zone shall be clearly referenced in the schedule.

Airflow weights in VAF (%)

$$\text{Zone Weight (\%)} = \frac{\text{Zone airflow CFM}}{\text{Unit maximum airflow CFM}} \times 100$$

- By default, VAF systems assign equal airflow weight to each zone (total airflow divided by the number of zones). Adjusting the weights based on the actual airflow distribution using the formula above improves commissioning and overall system performance.
- When multiple dampers serve one thermostat/zone, sum their CFMs and assign the total weight to that thermostat/zone.

Thermostat policy notes

- For zoning systems (VAF and Easyzone S62), only Airzone thermostats are permitted. Exception: Lutron Palladium, where applicable.
- For Aidoo, confirm thermostat/probe compatibility by Aidoo model.
- When a third-party thermostat is used, the manufacturer/model may be referenced in the schedule. Airzone remarks remain unchanged.

Ductwork best practices

- Place dampers at each branch take-off from the main trunk.
- For large units (e.g., >3 tons) with small zones, plan a relief strategy (dump zone and/or minimum-air settings) to avoid overpressure/noise.
- Consider the indoor unit minimum airflow: even at minimum fan speed, a small single zone may see excessive airflow.

Tools, templates and support

Associated files

- [Plan & Spec Guide](#): Ensure you have the latest version of this document.
- [Schedules](#): Separate files for VAF + Aidoo and Easyzone S62 + Aidoo.
- [CAD Blocks](#): Simplified and detailed blocks of all Airzone components, ready to be inserted into mechanical drawings.

Online tools

- [Flow Tool \(NA\)](#)
- [Compatibility tool \(VAF/Aidoo\)](#)
- [Easyzone selection tool](#)

If the indoor unit does not appear in the online tool, email projects_na@airzonecontrol.com with the manufacturer, model, and wiring diagram for verification and to obtain the correct reference.

Software

- [Ductzone Software](#)
- [Ductzone course - Academy](#)

Contacts

- Plans & Specs: projects_na@airzonecontrol.com
- Tech support: techsupport_na@airzonecontrol.com | Phone: +1 866-521-0263 | WhatsApp: +1 (404) 734-0492

Manual references

- [VAF Installation Manual](#)
- [Easyzone S62 Installation Manual](#)
- [Easyzone plenum datasheet](#)
- Aidoo Pro guides:
 - [Aidoo Pro WiFi](#)
 - [Aidoo Pro Fancoil](#)
 - [Aidoo Pro HUB](#)
 - [Aidoo Pro STI](#)