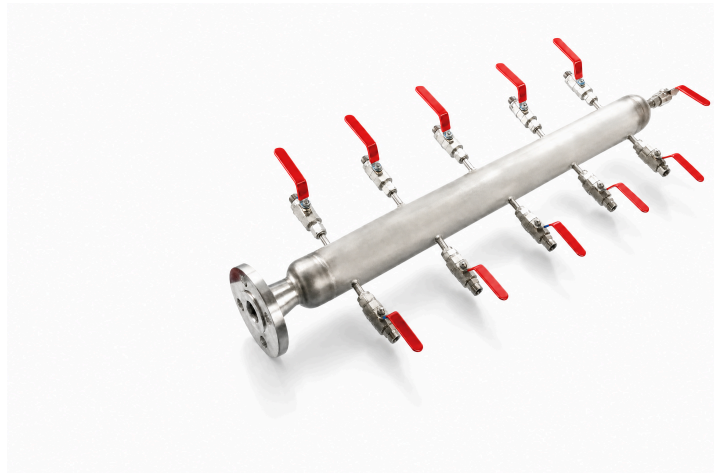


SAFETY-FORWARD SERIES MANUAL

Installation and Operation Manual

AIR HEADER · Model AIRH

A controlled series manual for the safe receipt, installation, commissioning, operation and routine inspection of configurable AIRH instrument compressed-air distribution assemblies.



Illustrative product presentation; final supplied configuration is order-specific.

Read this manual together with the approved order data sheet, product nameplate, GA drawing where applicable and site safety procedures.

NOTICE

This manual does not define numerical pressure, temperature, torque, lifting, testing or dimensional values. Verify all order-specific values and the actual configuration before work begins.

01 VERIFY

Confirm product identity, nameplate and approved order documents.

02 ISOLATE

Control hazardous energy under the site LOTO procedure before intervention.

03 PROTECT

Keep personnel clear of potential leak paths during commissioning.

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HOW TO USE THIS MANUAL

Use the safety section before any physical work. Follow the manual in sequence for installation and commissioning. Where this manual differs from the approved order data sheet, nameplate, GA drawing, site permit, project procedure or applicable safety requirement, the order- and site-specific document takes precedence.

1. Manual Use and Control



MANUAL USE
MODEL AIRH · 01 / 11

DOCUMENT PURPOSE AND PRECEDENCE

This manual provides series-level guidance for the AIRH Air Header. It is intended for trained and authorized personnel performing receipt, installation, commissioning, operation, inspection or maintenance planning. It is not an approved fabrication instruction, lifting plan, pressure-test procedure, process safety study or order-specific installation drawing.

NOTICE

The approved order data sheet, product nameplate, and approved General Arrangement (GA) drawing where applicable, together with project procedures, permits and site requirements, take precedence over this manual. Do not install or operate the assembly until any discrepancy is resolved.

1.1. Document control

MANUAL IDENTIFICATION

- | | |
|---|---------------|
| ☐ Product family | AIR HEADER |
| ☐ Model | AIRH |
| ☐ Document number | AIRH-IOM-R1.1 |
| ☐ Issue date | 19 Aug 2026 |

SITE RECORD — COMPLETE BEFORE USE

- | | |
|--|-------|
| ☐ Order / PO number | |
| ☐ Tag / asset number | |
| ☐ Installation location | |
| ☐ Approved document revision | |

1.2. Read before work

A IDENTIFY

Match the supplied assembly and nameplate to the order documentation.

B ASSESS

Confirm service, operating envelope, connection details and installation orientation.

C CONTROL

Apply permit, isolation, LOTO and local safety requirements before intervention.

2. Safety Information



SAFETY INFORMATION
MODEL AIRH · 02 / 11

REQUIRED SAFETY CONTROLS

The AIRH assembly forms part of a pressurized instrument-air distribution system. Hazards may include stored energy, sudden release of compressed air, noise, ejected debris, unsuitable service, hot or cold surfaces, sharp edges, chemical exposure from the installation environment, and pipe loads transferred to the assembly. These hazards must be controlled by the site risk assessment and approved work process.

2.1. Signal words

DANGER An immediate hazard that can cause serious injury or death. Stop work and establish safe conditions before proceeding.

WARNING A potentially severe hazard. Follow the stated preventive action and site procedure.

CAUTION A condition that may cause injury, equipment damage or loss of containment if ignored.

NOTICE Information needed for correct use, traceability, configuration control or document compliance.

2.2. Non-negotiable controls

- | | |
|--|---|
| ☐ Authorized personnel | Installation and servicing must be performed by trained, authorized personnel familiar with the actual service and site procedures. |
| ☐ Hazardous-energy control | Before opening, loosening, removing or adjusting any pressure-boundary component, isolate the applicable energy sources under the site lockout–tagout (LOTO) procedure. |
| ☐ Safe depressurization | Vent or drain safely as required by site procedure, then verify a zero-pressure condition before intervention. |
| ☐ No live repair | Do not tighten, disassemble, replace, plug or reconfigure pressurized components to correct leakage or malfunction. |
| ☐ PPE and exclusion zone | Use the personal protective equipment and controlled work area required by the site risk assessment; remain clear of possible leak paths during commissioning. |

DANGER Do not rely on a closed valve as the sole means of energy isolation. The actual isolation, venting, draining and verification steps must follow the approved site procedure.

3. Product Identification and Scope



PRODUCT IDENTIFICATION
MODEL AIRH · 03 / 11

AIRH SERIES — CONFIRMED SCOPE

The AIRH series is a configurable multiple-outlet assembly intended to distribute instrument compressed air from one inlet connection to multiple controlled outlets. Final supplied materials, connection forms, valve arrangement, bracket provision, dimensions, limits and accessories are defined by the approved order documentation and nameplate.

3.1. Series information

CONFIGURATION RANGE

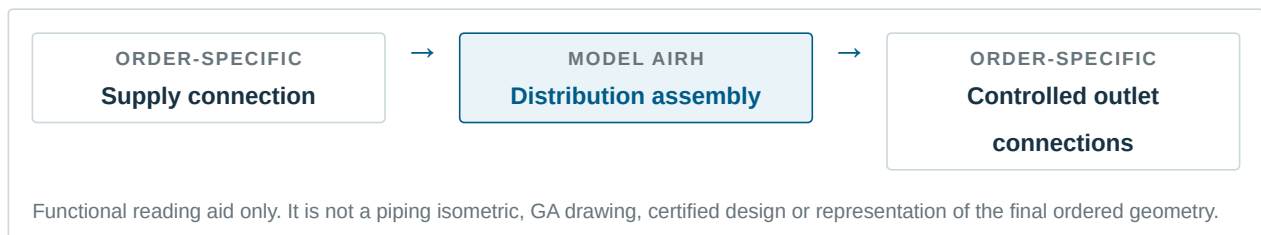
- ☐ **Distribution-pipe size** 1 in to 4 in
- ☐ **Length** 8 in or larger
- ☐ **Outlet quantity** 4-way to 20-way
- ☐ **Valve options** Ball valve or needle valve
- ☐ **Valve ends** Female threaded or male threaded
- ☐ **Body type** Seamless pipe or bar stock
- ☐ **Mounting bracket** Optional

MATERIAL AND PIPE OPTIONS

- ☐ **Materials** SS316, carbon steel, Inconel, Super Duplex, Hastelloy, Monel, 6 MO
- ☐ **Pipe schedules** SCH 40, SCH 80, SCH 160, SCH XXS

These are series options, not a statement of the material or schedule supplied for every AIRH assembly. Confirm the actual ordered materials and specification against the approved order data sheet and nameplate.

3.2. Functional relationship — non-dimensional



NOTICE

The source catalog contains conflicting numerical working-pressure statements. This manual therefore states no numerical pressure or temperature limit. Verify the approved operating envelope from the order data sheet and nameplate before installation or operation.

4. Receipt, Handling and Storage



RECEIPT AND HANDLING
MODEL AIRH · 04 / 11

PROTECT PRODUCT IDENTITY AND PRESSURE BOUNDARY

4.1. Receipt inspection

On receipt, compare the product identity and visible configuration to the purchase order, packing documentation and approved order data. Record any transit damage, missing protection, loose components, contamination or document discrepancy before installation.

☐ Identity	Verify model, tag / order reference and nameplate details against approved documentation.
☐ External condition	Inspect for impact damage, bent fittings, distorted flanges, damaged threads, corrosion, loose valves or missing protective caps.
☐ Configuration	Confirm ordered connection forms, material, number of outlets, valve type, bracket option and orientation only from the approved order data and GA drawing where applicable.
☐ Documentation	Confirm the approved order data sheet, GA drawing where applicable, project procedures and site permits are available to the installation team.

4.2. Handling

WARNING	Weight, center of gravity, lifting points and permitted lifting devices are not defined in the supplied source. Use an approved handling plan. Do not lift the assembly by outlet valves, nipples, small-bore fittings, threaded ends, drain connections, nameplate hardware or unapproved attachments.
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Support the assembly to prevent shock loading or bending. Protect sealing faces, threaded connections and open ports from impact and debris. If the supplied configuration includes a mounting bracket, use it only in accordance with the approved GA drawing and project procedure.

4.3. Storage before installation

Store the AIRH assembly in a clean, dry, protected location. Keep protective caps or covers in place where supplied. Prevent ingress of dust, moisture, foreign material or corrosive contaminants. Do not stack or place loads on the assembly unless a project-approved packing or storage instruction permits it.

5. Installation Preparation



INSTALLATION PREPARATION
MODEL AIRH · 05 / 11

VERIFY BEFORE MAKING ANY CONNECTION

Installation must be based on the final ordered configuration. The installation team must not infer orientation, connection detail, support requirement, drain arrangement, service limits, fasteners, gaskets, torque values or piping geometry from this series manual or from illustrative product imagery.

5.1. Pre-installation hold points

DOCUMENT HOLD POINT

- ☐ **Order data sheet** Available and reconciled to the physical unit.
- ☐ **Nameplate** Legible and verified against the approved operating envelope.
- ☐ **GA drawing** Available where applicable; final orientation and connections confirmed.
- ☐ **Site procedure** Permit, isolation, testing and commissioning steps approved.

PHYSICAL HOLD POINT

- ☐ **Access** Adequate safe access for installation, operation, inspection and emergency response.
- ☐ **Support** External piping support strategy confirmed; no pipe load to be transferred to the AIRH assembly.
- ☐ **Cleanliness** Mating piping and connections clean; no loose debris or contamination.
- ☐ **Protection** Sealing faces, threads and ports protected until immediately before connection.

5.2. Installation principles

1 ALIGN

Bring the external piping into correct alignment. Do not use the AIRH assembly to pull misaligned pipe into place.

2 SUPPORT

Provide and verify external supports as required by the approved installation arrangement.

3 PROTECT

Maintain cleanliness and protect all pressure-boundary interfaces from damage or foreign material.

CAUTION

Do not machine, weld, heat, bend, drill, force, substitute fittings on, or otherwise alter the assembly unless the change is approved in writing by the responsible engineering authority and remains within the approved order documentation.

6. Installation Sequence



CONTROLLED FIELD INSTALLATION

The following sequence is general guidance. It must be integrated with the approved order documents, site permit and project procedure. Stop work if the physical product does not match the documents or if the work cannot be completed without forcing, modifying or improvising a pressure-boundary connection.

6.1. Sequence

01 CONFIRM

Verify order data, nameplate, GA drawing where applicable, configuration and service compatibility.

02 INSPECT

Confirm the unit and mating connections are clean, undamaged and protected from debris.

03 POSITION

Orient and support the assembly only as defined by the approved installation arrangement.

04 CONNECT

Make piping connections using the approved project procedure, correct components and specified tightening method.

05 CHECK

Confirm all required external supports, clearances, access routes and protective measures are in place.

06 RELEASE

Release for commissioning only after the authorized site review confirms installation readiness.

6.2. Controlled installation path — non-dimensional

STEP 1
Approved documents



STEP 2
Installed AIRH



STEP 3
Authorized readiness check

This sequence communicates the work-control path only. It does not define an installation topology, connection sequence, torque value, test method or final piping arrangement.

WARNING

Never place personnel in a line of fire while aligning, tightening, testing or commissioning pressurized equipment. Establish the exclusion zone required by the site procedure.

7. Commissioning and Operation



INTRODUCE ENERGY IN A CONTROLLED MANNER

Commissioning may begin only after the authorized site review accepts the completed installation. Confirm that the approved operating envelope, service compatibility, isolation arrangement, protective measures, external supports and required documentation are in place. No numerical pressure or temperature limit is provided in this manual.

7.1. Pre-commissioning confirmation

☐ Installation complete	Connections, supports, access and protection verified against approved documents.
☐ Isolation readiness	The site-approved isolation, venting and emergency-response arrangements are understood by the commissioning team.
☐ Personnel control	Only authorized personnel remain in the work area; the required exclusion zone is established.
☐ Valve state	Outlet-valve state and downstream readiness are set in accordance with the site commissioning procedure.
☐ Leak response	The team understands the shutdown and escalation action if leakage, damage, abnormal noise or unexpected restriction is observed.

7.2. General commissioning sequence

A AUTHORIZE

Obtain the required permit / release and confirm the approved operating envelope.

B INTRODUCE

Introduce compressed air gradually in accordance with the approved site procedure.

C OBSERVE

Observe from a safe position for abnormal sound, movement, leakage or unexpected restriction.

DANGER

If leakage, abnormal movement, unexpected noise, loss of containment or an incorrect configuration is suspected, stop the commissioning process. Isolate, vent / drain safely, verify zero pressure and investigate under the approved site procedure. Do not attempt live repair.

7.3. Normal operation and planned shutdown

Operate outlet valves deliberately and in accordance with the process requirement and the approved operating envelope. Do not use the assembly as a ladder, pipe support, lifting point or substitute for an isolation arrangement not defined by the site procedure. For a planned

shutdown, follow the site process sequence, isolate the relevant energy sources and use the approved venting / draining and LOTO process before maintenance work.

8. Inspection and Maintenance



CONDITION-BASED ROUTINE CARE

The supplied source does not provide a preventive-maintenance interval, torque schedule or spare-parts list. Establish inspection frequency and maintenance scope from actual duty, service conditions, site maintenance strategy, approved order documents and observed condition.

Record findings and corrective actions in the site asset record.

8.1. Condition checks

EXTERNAL CONDITION

- ☐ **Leakage** Look for signs of leakage only from a safe condition and according to the site procedure.
- ☐ **Damage** Check for impact damage, corrosion, vibration-related looseness or distorted external pipework.
- ☐ **Identification** Keep the nameplate and tag information legible and traceable.

FUNCTIONAL CONDITION

- ☐ **Outlet control** Confirm intended valve response only under a safe, approved operating condition.
- ☐ **Access** Keep valves, connections, supports and any required drain arrangement accessible for inspection.
- ☐ **Cleanliness** Address external contamination and protect open interfaces during any approved maintenance.

8.2. Before any intervention

DANGER Before opening, loosening, removing, replacing or adjusting any component: isolate the applicable energy sources; follow the site LOTO procedure; vent or drain safely; verify zero pressure; control any residual hazard; and obtain the authorization required by the site procedure.

Do not disassemble a valve, fitting, nipple, flange, threaded connection or manifold body without approved maintenance instructions and verified replacement parts. If a pressure-boundary component is damaged or the actual configuration cannot be confirmed, keep the unit out of service until it has been assessed by the responsible authority.

9. Troubleshooting and Return to Service



TROUBLESHOOTING
MODEL AIRH · 09 / 11

SAFE RESPONSE TO OBSERVED DEVIATIONS

The table below is a safe-response guide, not a root-cause diagnosis. It does not authorize live adjustment, disassembly, torque changes, component substitution or operation outside the approved envelope.

OBSERVATION

External leakage or damaged component

Safely stop the affected activity. Isolate, vent / drain, verify zero pressure and inspect under the site procedure. Do not attempt live repair.

OBSERVATION

No flow, low flow or unexpected restriction

Confirm the actual configuration, valve state, upstream / downstream process condition and approved service requirement before any intervention. Escalate if condition is not resolved by authorized operating checks.

OBSERVATION

Unexpected flow or outlet-valve concern

Use the site shutdown / isolation procedure. Do not assume the final isolation arrangement from this generic series manual.

OBSERVATION

Uncertain tag, material, rating or configuration

Do not return the unit to service until the product identity and approved order documentation have been reconciled by the responsible authority.

9.1. Return-to-service gate

Return the AIRH assembly to service only after the responsible authority confirms that the maintenance or corrective work is complete, the pressure boundary is restored, external supports and protective measures are in place, configuration remains correct, the work area is clear and the approved site commissioning process has been completed.

10. Site Record and Support



SITE RECORD AND SUPPORT
MODEL AIRH · 10 / 11

COMPLETE THIS RECORD BEFORE HANDOVER

Use this page as a controlled prompt for the site handover record. Complete it from the approved order documentation and actual installed configuration; do not populate it from assumptions or illustrative product imagery.

PRODUCT AND SITE RECORD

- ☐ Order / PO number
- ☐ Product tag
- ☐ Nameplate checked
- by / date
- ☐ Approved order data
- sheet
- ☐ GA drawing where
- applicable
- ☐ Installation location

COMMISSIONING / HANDOVER RECORD

- ☐ Installation released
- by
- ☐ Commissioning
- authorization
- ☐ Site procedure
- reference
- ☐ Operating envelope
- confirmed
- ☐ Outstanding actions
- ☐ Handover date

10.1. Technical support

EMAIL info@globeunitedae.com
WEB www.globeunitedae.com
PHONE +971 50 330 1384

When requesting support, provide the order / tag number, approved order data sheet and GA drawing where applicable, nameplate details, application service, observed condition, photographs of the installed condition where allowed by site rules, and the safe isolation status.

11. Terms and Reference Statement



DEFINED TERMS AND DOCUMENT BASIS

11.1. Defined terms

AIRH – Air Header: A configurable multiple-outlet instrument compressed-air distribution assembly covered by this manual.
GA drawing – General Arrangement drawing: The approved order-specific drawing that defines final applicable geometry, connections and mounting details.
LOTO – Lockout-tagout: The site procedure used to control hazardous energy before work begins.
Nameplate – Product nameplate: The product-specific identification and limit-marking device that must be checked before use.
order data sheet – Approved order data sheet: The order-specific technical document that takes precedence for final configuration, materials, limits and service conditions.
zero pressure – Verified zero-pressure condition: A confirmed condition in which the applicable pressure boundary has been isolated, vented or drained safely, and verified free of pressure in accordance with site procedure.

11.2. Technical and safety boundary

NOTICE

This manual is a series-level operational guide based on the supplied AIR HEADER — Model AIRH catalog. It does not replace the approved order data sheet, nameplate, GA drawing where applicable, project procedures, site permits, applicable legal requirements or the site risk assessment.

No claim is made in this manual regarding product-specific numerical pressure or temperature limits, dimensions, weights, lifting points, torque values, test medium, test pressure, certifications, warranty, spare parts, material certification, connection class, final piping geometry or maintenance frequency. Obtain those requirements from the approved order-specific documentation.

11.3. Revision record

REVISION	DATE	DESCRIPTION
R1.0	19 Aug 2026	First issue: Installation and Operation Manual for AIR Header Model AIRH.
R1.1	19 Aug 2026	Technical audit: clarified first-use safety terminology and maintained order-document precedence.