



INSTALLATION • OPERATION •
MAINTENANCE

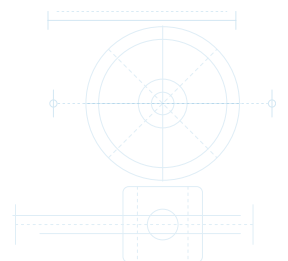
External Chambers

MODEL ECR • IOM.ECR.R5.0826

Safety-forward product-family guidance for
installation, commissioning, operation, inspection
and maintenance.



Representative product image only. Final configuration is governed by
the approved order documents and nameplate.



01 / DOCUMENT CONTROL

Purpose, scope & control

Read this manual before handling, installing, operating or maintaining the supplied chamber.

FIELD	DETAIL
Product family	External Chamber
Model	ECR
Manual revision	IOM.ECR.R5.0826
Issue date	August 2026
Manufacturer	Globe United FZE
Revision history	R1 — initial issue; R2 — seamless cover; R3 — controlled-manual enhancements

Manual status

This IOM provides product-family guidance. Approved GA drawings, order data sheets, nameplate data, site procedures and local requirements take precedence.

1.1 Intended use

Model ECR is an external chamber/cage structure used to mount process level instruments to a vessel. It is applied where instrument isolation supports maintenance and where turbulence or agitation may affect level indication.

WARNING

Use only within the approved duty

Do not infer pressure, temperature, materials, dimensions, flange class, instrument compatibility or drain/vent arrangement from this manual. Confirm the supplied unit's limits and configuration before work.

1.2 Information hierarchy

PRIORITY	GOVERNING INFORMATION
1	Approved order data sheet, GA drawing and nameplate
2	Site risk assessment, permits and operating procedure
3	This IOM product-family guidance
4	Instrument supplier instructions

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Nameplate reference

Before installation or service, identify the supplied unit from its nameplate and approved documents. Record, where provided: tag/reference, serial number, material of construction, design conditions, code/order basis and year of manufacture. Never infer missing data from a representative image or generic manual.

Safety, responsibilities & terminology

Plan the work, isolate the equipment and verify a safe condition before intervention.

WARNING

Hazardous energy and process release

Obtain permits; identify the equipment; positively isolate; relieve pressure through the approved route; drain/decontaminate; control temperature; lock/tag applicable energy sources; and verify zero energy before opening any interface.

2.1 Responsibilities

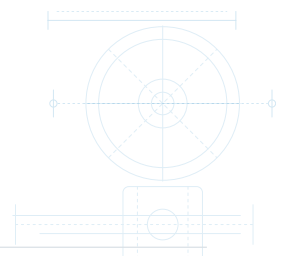
The owner/operator confirms configuration, duty, risk controls and competent personnel. The installer ensures clean alignment and independent support. The maintainer follows documented isolation, inspection and restoration controls.

2.2 Personal protection

Select PPE from the site hazard assessment and process medium. Use appropriate eye/face, hand, body and respiratory protection. Apply a controlled lifting plan where access or mass creates a handling risk.

2.3 Terms

TERM	MEANING
Isolation	Positive separation from process in accordance with site procedure.
Zero-energy condition	Verified condition in which pressure, temperature and hazardous stored energy are controlled.
Instrument interface	Ordered connection used for the associated level instrument.
Approved documentation	Order-specific drawing, data sheet and nameplate.



03 / PRE-INSTALLATION

Receipt, storage & readiness

Protect sealing faces and verify the ordered item before it reaches the installation point.

3.1 Receipt and storage

Inspect packaging and record damage, missing covers or loose parts. Compare the nameplate and supplied documentation with the order record before release. Store in a clean, dry, protected area and support the assembly to prevent bending or impact. Keep protective covers in place until immediately before connection.

Confirm before release

Verify tag/reference, connection interfaces, instrument interface, approved centre-to-centre requirement and supplied accessories against approved documentation.

Protect the pressure boundary

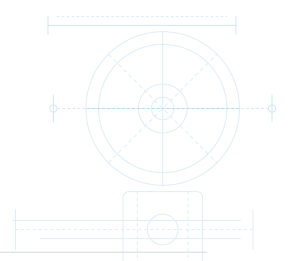
Do not use flange faces, instrument ports, vents, drains or valves as lifting points. Keep exposed openings clean.

3.2 Long-term storage / preservation

For extended storage, retain clean protective covers, inspect protection periodically, maintain a dry protected environment, and use moisture-control measures where required by the site preservation plan. Record periodic checks and investigate condensation, contamination, damaged protection or corrosion before installation.

3.3 Readiness checklist

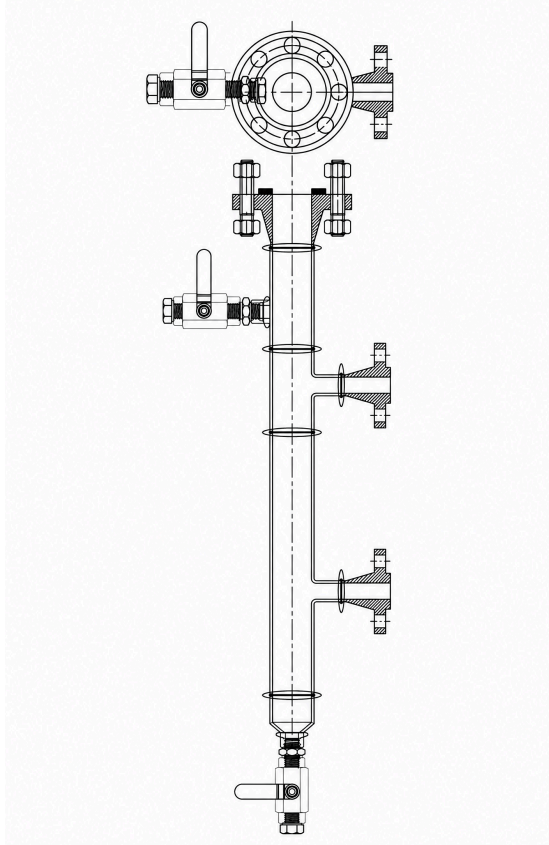
CHECK	ACCEPTANCE CRITERION
Documents	GA, data sheet, nameplate and method statement are available.
Location	Access, clearance and orientation suit the approved arrangement.
Connections	Mating interfaces are clean, undamaged and compatible.
Supports	The chamber and piping are independently supported.
Isolation	Site isolation and controlled vent/drain routes are identified.



04 / INSTALLATION

Installation

Install only in the approved orientation; protect the pressure boundary from piping strain and unapproved modification.



Non-dimensional representative elevation — not an installation drawing.

4.1 Positioning

Install only as shown on the approved GA. Process connections must align without forcing fit-up. Do not use the chamber to correct pipe misalignment or carry unplanned load.

4.2 Connections

Inspect mating faces and use the approved gasket/seal and tightening procedure. Do not substitute fasteners, seals or sealants without authorization.

4.3 Supports

Provide supports as required by the approved GA or piping design. Do not obstruct instrument access, isolation controls, drains, vents or maintenance points.

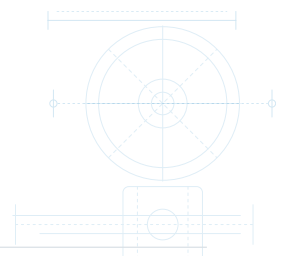
4.4 Handling & lifting

Use a lifting plan appropriate to the delivered mass, site access and ordered geometry. Where lifting is required, support the chamber body with suitably rated slings or lifting equipment as defined by the plan, maintain the approved orientation, prevent uncontrolled rotation, and protect machined sealing faces and instrument interfaces from impact. Do not lift by flanges, vents, drains, valves or instrument connections.

WARNING

No pressure-boundary modification

Do not weld, drill, machine, grind, re-rate or alter the chamber, closures, process interfaces or instrument interface without written engineering authorization and an approved procedure.



05 / COMMISSIONING

Commissioning & return to service

Use the site's controlled start-up sequence; introduce process conditions gradually.

5.1 Pre-commissioning

Confirm installation inspection completion, required supports, approved joint assembly, correct instrument installation and removal of temporary covers/tools. Confirm that the chamber configuration and instrument arrangement have been accepted for the application.

5.2 Controlled start-up

Follow the approved site start-up procedure. Where the ordered arrangement includes isolation, vent or drain controls, operate them only as defined by the approved GA and site procedure. Monitor for leakage, vibration, abnormal noise, unstable indication or unexpected temperature effects.

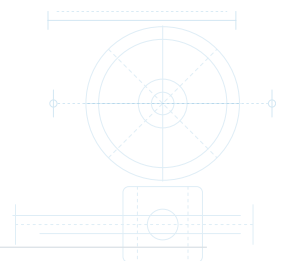
Record

Log date, tag/reference, operator, instrument status, visual result and corrective action after commissioning.

WARNING

Stop and investigate

If leakage, damaged fasteners, unexpected vibration or abnormal indication is observed, return to a safe condition and escalate through the site process.



06 / OPERATION

Operation & monitoring

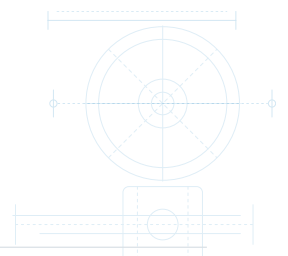
Operate the chamber as part of the approved process and instrument system. During normal service, monitor the associated level instrument and the external condition of the chamber. The chamber is not a substitute for correct instrument selection, control strategy or process safeguards.

OBSERVATION	CONTROLLED RESPONSE
Leakage, stains or wet insulation	Escalate promptly; do not tighten or disturb a pressurised joint without approved procedure.
Unexpected indication	Use the instrument supplier diagnostic process and confirm process condition before opening the chamber.
Corrosion or mechanical damage	Record condition and refer for integrity assessment.
Vibration or mechanical contact	Investigate supports and adjacent piping; do not brace against the chamber.

NOTICE

Configuration dependence

Exact operation of isolation, vent, drain, float/indicator or accessories is configuration-dependent. Follow the approved GA, instrument instructions and site operating procedure for the supplied unit.



07 / INSPECTION & MAINTENANCE

Inspection, isolation & maintenance

Plan work so that instrument maintenance never compromises process containment.

7.1 Inspection planning

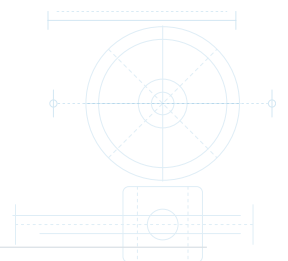
Set intervals through the site integrity program, process severity, maintenance history and approved order documentation. Increase attention after upset, leakage, corrosion exposure, vibration, abnormal indication or intrusive maintenance.

WARNING**Safe-state sequence reference**

Apply the safe-state sequence in Section 2 before opening any chamber, instrument interface, vent, drain or connection.

7.2 Instrument maintenance and reassembly

Follow the approved isolation arrangement and instrument supplier instructions. Protect clean sealing faces and prevent foreign material entering the chamber. Reassemble with approved replacement seals, fasteners and parts; use the approved tightening procedure; inspect; verify joint integrity per the site leak-test requirement during controlled repressurisation; then return to service under the authorized commissioning process.



08 / TROUBLESHOOTING

Troubleshooting, records & support

Use a controlled diagnostic path; do not defeat containment or safeguards to obtain a reading.

SYMPTOM	CHECK FIRST	CONTROLLED RESPONSE
Unstable indication	Instrument diagnostics and process condition	Use supplier diagnostics; confirm process and installation before opening.
External leakage	Location and containment status	Make safe under site procedure; do not dismantle while pressurised.
Access difficulty	Clearance, supports and isolation plan	Review the GA and access plan; do not remove supports or alter piping.

8.1 Additional troubleshooting

SYMPTOM	CONTROLLED RESPONSE
Sluggish or frozen level response	Check the approved diagnostic path, drain condition and process-solids exposure. Flush only under the approved isolation and drain procedure.
Cold-service or wet-gas blockage concern	Escalate for engineering assessment. Do not apply heat, force or unapproved chemical treatment.

8.2 Records and lifecycle support

Maintain tag/reference, serial number, work scope, safe-state evidence, approved parts used, inspection result and return-to-service authorization. Order replacements only against approved documentation and nameplate; do not select parts from representative drawings.

8.3 Decommissioning & disposal

Before removal, isolate, depressurize, drain, decontaminate and verify a safe handling condition in accordance with the site procedure. Dispose of contaminated materials and the retired assembly in accordance with local requirements and the owner's waste-management controls.

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NOTICE

Final governing statement

Final supplied configuration, materials, dimensions, limits and accessories are governed by the approved order documentation and nameplate.

