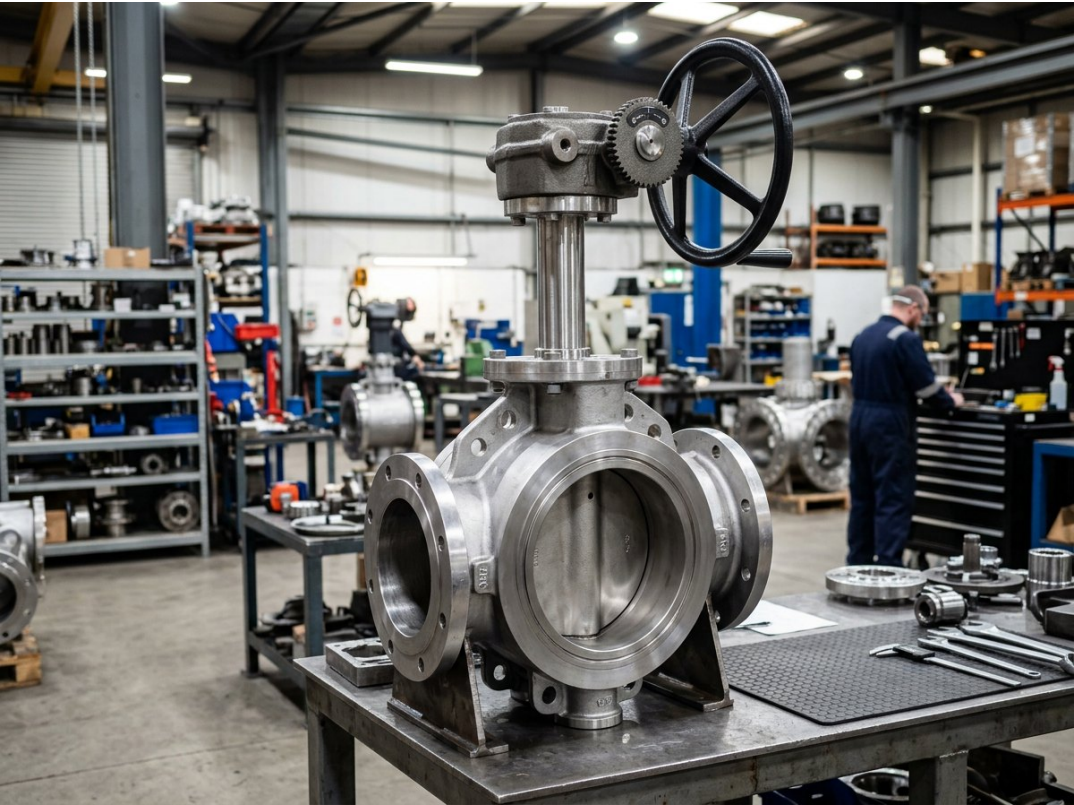


AV-900 technical specification

Triple-offset butterfly valve reference for larger-bore severe-service isolation studies.



Illustrative engineering visualization. Final production geometry may differ.

DOCUMENT CODE	AXO-AV-900-TDS-R02
REVISION / DATE	R02 / 23 OCTOBER 2026
STATUS	ENGINEERING REVIEW
PUBLICATION CLASS	Uncontrolled public review copy
INTENDED USE	Preliminary technical orientation and enquiry preparation only

**PRE-RELEASE TECHNICAL
INFORMATION**

Do not use this document for procurement, fabrication, installation, operation, maintenance, or safety decisions. Final values require approved project data and controlled engineering release.

Purpose, authority, and limits

This issue improves technical clarity and document control while preserving a strict boundary between a draft reference platform and released equipment.

Document purpose

AV-900 is presented as a reference configuration for preliminary duty review. It does not establish guaranteed performance, approved dimensions, pressure-temperature rating, material grade, certification, code compliance, manufacturing completion, or fitness for a particular service.

Authority hierarchy

Priority	Authority
1	Client-controlled product master, approved drawings, certificates, and test records
2	Project requisition, approved datasheet, specifications, and purchase order
3	Released calculations, drawings, inspection/test records, and manuals
4	This public engineering-review document

Visual and content status

Item	R02 status
Product identity	Client draft; approval pending
Numeric ranges	Reference only; conditions and evidence pending
Image	Illustrative; provenance and public-use approval pending
Standards	Applicability pathway only; no conformance claim
Contact/facility claims	Not published until client-confirmed

02 / REFERENCE CONFIGURATION

What the model currently means

Triple-offset butterfly valve reference for larger-bore severe-service isolation studies.

Published draft facts

Attribute	R02 reference basis
Draft size range	DN80-DN1200; client draft, not approved
Draft class range	ASME Class 150-600; material/temperature dependent
Seat	Metal-seated torque-seated concept
Cryogenic option	Extended bonnet and low-temperature materials by duty

Intended study contexts

Application	Qualification boundary
LNG and cryogenic studies	Suitability depends on approved fluid, operating cases, interfaces, hazards, and project requirements.
Power generation	Suitability depends on approved fluid, operating cases, interfaces, hazards, and project requirements.
Refining	Suitability depends on approved fluid, operating cases, interfaces, hazards, and project requirements.
Large-bore gas systems	Suitability depends on approved fluid, operating cases, interfaces, hazards, and project requirements.

Configuration boundary

Valve platform for preliminary isolation, throttling, and severe-service configuration studies. Equipment scope, geometry, materials, auxiliaries, controls, dimensions, ratings, and tests remain project-specific.

03 / SELECTION INPUTS

Data required before selection

Selection must use the complete operating envelope. A nominal model, flow, size, or pressure class cannot replace the approved project basis.

- 01 Fluid, solids, corrosion, erosion, toxicity, and emissions requirements
- 02 Design and operating pressure-temperature cases plus transients
- 03 Function, flow direction, shutoff, leakage, emergency action, and fail position
- 04 Piping class, size, class, ends, bore, actuation, accessories, and interfaces
- 05 Inspection, shell/seat testing, NDE, fire testing, certificates, and preservation

Operating-case matrix

Case	Minimum data to record
Normal / rated	Composition, phase, flow, pressure, temperature, utilities, control state
Minimum / turndown	Stable operating requirement, recycle/bypass, control margin
Maximum	Maximum continuous conditions and duration
Start-up / shutdown	Sequence, ramp rates, thermal state, utilities, permissives
Trip / upset	Initiating event, transient conditions, safe state, relief interfaces

Enquiry output

Engineering should return a data-gap register, preliminary selection basis, responsibility boundary, standards list, proposed verification plan, and controlled document schedule.

04 / ENGINEERING VERIFICATION

Work required to close the release gate

The following checks are not optional marketing detail. They are the evidence required to convert a reference platform into a project configuration.

- 01 Pressure-temperature rating for the selected material group and construction
- 02 Body, trim, stem, seat, packing, seals, and bolting compatibility
- 03 Hydraulic/flow review where throttling, noise, cavitation, flashing, or erosion may occur
- 04 Actuator sizing, travel, fail action, stroking time, and functional checks
- 05 Applicable product standard, test standard, purchaser options, and evidence

Open model checks

- 01 Confirm API 609 category, body style, direction, seat, and shutoff.
- 02 Release cryogenic qualification and torque data by configuration.

Release evidence

Discipline	Expected controlled output
Process / application	Approved duty cases, calculations, operating envelope, assumptions
Mechanical / materials	Configuration, ratings, materials, interfaces, drawings, design reviews
Controls / instrumentation	Narrative, cause-and-effect, alarms, trips, set points, interfaces
Quality / testing	ITP, procedures, results, deviations, traceability, release status
Lifecycle	Installation, commissioning, operation, maintenance, spares, preservation

05 / STANDARDS PATHWAY

Applicability, edition, and evidence

A standards reference identifies a review path. It is not a statement that this model is certified, stamped, licensed, monogrammed, or compliant.

Reference	R02 use
ASME B16.34-2025	Covers pressure-temperature ratings, materials, dimensions, examination, testing, and marking for covered valve constructions.
API valve standards	API 6D, 608, 609, 600, or 602 may be pathways depending on valve type and purchase scope.

Standards review questions

- 01 Does the selected equipment type fall inside the standard scope?
- 02 Which edition, addenda, errata, purchaser supplements, and jurisdiction apply?
- 03 Which optional or supplemental requirements are invoked by the project?
- 04 What design, manufacturing, examination, testing, marking, and documentation evidence is required?
- 05 Who has authority to approve exceptions and issue the conformance statement?

Source identifiers

CLIENT-DRAFT-001; ASME-B16.34-2025; API-VALVE-UPDATES

06 / RELEASE CHECKLIST & SOURCES

Before this document can become approved product data

Release item	Required evidence
Identity	Approved product master and variant/model mapping
Performance / rating	Calculations, curves/tables, conditions, tolerances, and test basis
Materials / dimensions	Controlled material schedule and approved drawings
Quality / certification	Applicable ITP, reports, certificates, approvals, and release authority
Media / rights	Confirmed ownership, licence, or approved illustrative-use basis
Approval	Named engineering, quality, legal, and document-control sign-off

Sources used for R02

Source ID	Publisher / location	Use
CLIENT-DRAFT-001	Existing Axoventra workspace product and document draft	Client-controlled draft; engineering approval not provided
API-VALVE-UPDATES	American Petroleum Institute - valve standard updates	https://www.api.org/products-and-services/api-monogram-and-apiqr/latest-updates
ASME-B16.34-2025	ASME B16.34-2025 product page	https://www.asme.org/codes-standards/find-codes-standards/b16-34-valves-flanged-threaded-welding-end/2025

END OF DOCUMENT

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